

Reem Khamis Hamdan  
Amina Buallay *Editors*

# Artificial Intelligence (AI) and Customer Social Responsibility (CSR)

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Reem Khamis Hamdan · Amina Buallay  
Editors

# Artificial Intelligence (AI) and Customer Social Responsibility (CSR)



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# Preface

In the rapidly evolving landscape of technology and its impact on society, the intersection of artificial intelligence (AI) and customer social responsibility (CSR) has emerged as a critical area of discussion and exploration. This book, consisting of 89 chapters divided into four parts, delves into the multifaceted relationship between AI and CSR, shedding light on its implications, challenges, and opportunities. Each chapter has undergone rigorous peer review by at least two reviewers, ensuring the quality and validity of the contributions.

The first part, “AI, Decision-Making and Participatory Rights, Public Engagement,” sets the foundation for understanding the complex dynamics between AI, decision-making processes, and civic participation. It explores the ethical dimensions of AI-driven decision-making, emphasizing the importance of public engagement in shaping AI systems to align with societal values and inclusivity.

The second part, “Socioeconomics Based Technology and Sustainability,” examines the socioeconomic impacts of AI and technology, with a focus on promoting sustainability. The chapters in this part delve into topics such as the digital divide, ethical considerations in AI-driven economies, and the potential of AI in advancing sustainable development goals. By addressing the social and economic dimensions of AI, this part highlights the significance of responsible technological advancements for a more equitable and sustainable future.

The third part, “FinTech and Social Impact,” explores the transformative potential of financial technology (FinTech) in driving social impact and promoting financial inclusion. The chapters in this part examine the role of AI and FinTech in addressing societal challenges, such as poverty alleviation, access to finance, and the democratization of financial services. By showcasing innovative approaches and successful case studies, this part illustrates the positive influence of AI-driven FinTech on social well-being.

The fourth part, “Implementation of AI and Technology and Education for Social Responsibility,” focuses on the practical aspects of implementing AI and technology for social responsibility. It delves into the role of education in fostering a responsible and ethical approach to AI, equipping individuals with the necessary skills to

navigate the AI-driven world. This part also discusses the importance of industry practices, regulations, and collaborations in ensuring responsible AI development and deployment.

An exceptional aspect of this book lies in the diverse range of authors and their contributions. Drawing from various countries and backgrounds, the chapters offer unique insights and experiences that enrich the book's knowledge base. The rigorous peer-review process, with input from multiple reviewers and the book's editors, ensures the reliability and credibility of the content, making it a valuable resource for academics, professionals, and individuals interested in the intersection of AI and CSR.

Through its comprehensive coverage and multidisciplinary approach, this book aspires to bridge the gap between theory and practice, fostering a deeper understanding of the interplay between AI and CSR. The chapters collectively provide a roadmap for harnessing the potential of AI to address societal challenges while upholding ethical principles and social responsibility.

As technology continues to shape our world, the need for thoughtful and responsible AI implementation becomes increasingly vital. This book serves as a guide, offering insights, perspectives, and practical recommendations to navigate this ever-changing landscape. It is our hope that readers, armed with knowledge and experiences shared within these pages, will be inspired to contribute to the responsible development and deployment of AI, ensuring a future that benefits all of humanity.

Manama, Bahrain  
Uxbridge, UK  
April, 2024

Reem Khamis Hamdan  
Amina Buallay

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# **AI, Decision-Making and Participatory Rights, Public Engagement**

# Violations of Community Participatory Rights: Testing the Ladder of Public Participation Model on the Road Development Program in Indonesia



Nelson Simanjuntak and Manotar Tampubolon 

**Abstract** This study aims to investigate community participation in the process of road construction in Indonesia. Using the qualitative research method, this study specifically examines the roles and responsibilities involved in increasing community participation in the process of monitoring road construction. Primary data, which are obtained through a questionnaire method from 100 participants in 5 big cities in Indonesia, namely, Jakarta, Surabaya, Medan, Semarang, and Makassar, between June 10 and August 25, 2022, are used. To measure the level of community participation, the authors use Arnstein's ladder of public participation model and the International Social Capital Association's model of public participation. Based on the study's findings, community involvement in road construction is still low. The low level of community involvement has resulted in uncontrolled corruption that is detrimental to the rights of the community. This of course needs to be considered by the government, especially the Public Works and Spatial Planning Office, to increase community involvement even further. The position of feedback from the community is an important indicator vis-à-vis the progress of road construction in the future.

**Keywords** Participation · Community · Road · Development

## 1 Introduction

Roads significantly contribute to development, investment, and economic growth, and they are an essential element in alleviating poverty [1–5]. Each country's road construction process contributes differently to society. For instance, road construction in developing countries, such as Nepal, has a positive impact on child nutrition [6], increases the income of rural communities, and makes villages independent in Indonesia [7], as well as having a significant positive impact on other developing countries [8, 9].

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Aside from the positive contribution, there are several negative aspects of road construction, including environmental damage and wildlife loss, decreased biodiversity due to ecosystem imbalance, and disruption of the lives of existing species [10–13]. Traffic congestion can also be induced by road building [13], thereby impacting people's livelihoods, health, and safety [14].

The community plays an important role in road construction, as regulated by the Law of the Republic of Indonesia Number 38 of 2004 as amended to Law Number 2 of 2022 concerning Roads and Government Regulation Number 34 of 2006 concerning Roads, Regulation of the Minister of Public Works Number: 01/PRT/M/201, in connection to the Guidelines for the Role of the Community in Road Implementation [15, 16]. Community participation is an important part of infrastructure development, as service providers, in addition to the government, in this case, the Ministry of Public Works and Public Housing (PUPR) and contractors [16–20].

Even though Indonesia acknowledges the concept of community participation in development [15], involving them in development remains uncommon because the government has yet to grasp the true meaning of the concept of participation [21]. Some regulations have explicitly required public participation in road construction in this case (highways and environmental roads). The restriction of community rights in road construction contravenes the legal requirements, needs, and constitutional rights of the community, as stated in Article 33 of the 1945 Constitution. Mandatory road construction is based on community participation (Article 4 of Law No. 2 of 2022) and community rights in participatory sustainability [22, 23].

This restriction on participatory rights is contrary to the public participation spectrum, which has been developed and is used internationally to determine the public participation level in every public policy process around the world [24]. In the context of community participation in road construction, the Indonesian government, specifically the PUPR, appears to marginalize people by outlawing community rights [17]. Several road construction projects in Indonesia were also problematic in 2022, costing the state budget hundreds of billions of rupiah. These include the KBB Road Project in West Java [25], the road construction bribery in Toba Regency, North Sumatra [26], issues with the opening of the Padang–Pekanbaru toll road [27], the case of clearing land for a toll road connecting Padang and Pekanbaru [28] and road construction corruption in Katingan, Kalimantan [29], and 36 other instances of bribery in building infrastructure from spending plan talks to implementation [30].

As a result, people's rights are no longer preferred in development. Moreover, dialogue is lacking between the government and the community, while community anhedonia is present because there is no community obligation requiring participation [31], thus making such an involvement futile. Corruption will spiral out of control if active community participation in road construction ceases [32].



## 2 Literature Review/Study Site

### 2.1 *Community Participation*

Prior studies have identified community participation from various angles. According to some previous researchers, community participation entails theory and practice related to the direct involvement of citizens or community groups in decisions affecting their rights [33]. Effective participation, according to Wilcox [34], includes community engagement, empowerment, and partnership. Lane, as quoted by Claridge [35], notes that the only way to ensure that individuals have the right or power to reject the causes of underdevelopment is for them to participate in all phases of the development process, including planning. This right entitles people's participation in all decisions impacting their lives, at all levels.

Meanwhile, Apgar and Thorpe [36] state that the most fundamental idea of participation is the involvement of people in decisions that affect their lives to not only determine opportunities and strategies for action but also build solidarity for change. Meanwhile, community participation itself differs between developing and developed countries. According to Swapan [37], community participation in developing countries focuses primarily on institutional reform whilst also ignoring the social, political, and psychological factors that affect individuals' desire to engage in the planning stage.

However, participatory development, which is the type practiced in developed countries, promotes sustainable and self-sufficient development and aims to achieve social justice by enhancing the quality of community participation [38]. This participation not only benefits the community but also serves as an asset in legitimizing the government's efforts to achieve its objectives [39, 40] (Konisky and Beierle 2011).

Furthermore, the following rules govern community participation and engagement in road construction: (a) benefit; (b) safety; (c) safety and comfort; (d) unity and integrity, efficiency and effectiveness; (e) justice; (f) harmony and balance; (g) cohesiveness; (h) togetherness and partnership, sustainability; (j) transparency and accountability; and (k) participatory approach.

Participation in Roads Law No. 2 of 2022 is an effort to protect the rights of the community as citizens so that they can participate in government and build society, nation, and state, as regulated in Article 27 Paragraph (1) and Article 28C Paragraph (2) UUD 1945. Hence, limiting the right to participate in development is a violation of human rights.

### 2.2 *Road Construction*

Roads are defined in Article 1 Paragraph (4) of Law No. 38 of 2004 as amended into Law No. 2 of 2022 as "all parts of the road, including connecting buildings, complementary buildings, and equipment intended for traffic, which are on the ground

surface, above ground level, below ground level, and/or water, as well as above ground level, except for railroads, lorry roads, and cable roads.”

Every time and culture have the same concept of development, but the meaning behind the concept differs [41, 42]. According to Seers [43], development exists in a country when it can reduce or eliminate poverty, inequality, and unemployment. In the premodern era, the concept of development focused only on economic growth, which meant quantitative rather than qualitative changes in economic performance [44]. This is in contrast to the modern era concept of development, which encompasses inclusive community participation [45] (Damayanti 2016), and public participation must be integrated with the government [22, 46].

### 3 Participation of the Community in Road Construction

Previous researchers have been drawn to community participation in development, which some experts argue to be a universal right that cannot be revoked [47–53]. This participatory right is the power of citizen participation inside and outside of planning [54] and must be fulfilled per the law [55] because it affects people’s lives [56]. Hence, community engagement in the allocation of development funds is critical to avoiding a lack of development priorities and accountability [22].

Community participation in development is defined differently in developing and developed countries. According to Swapan [37], community participation in developing countries primarily focuses on institutional reform while ignoring the social, political, and psychological factors that influence individuals’ willingness to participate in the planning process. Most governments, however, prefer to exclude citizens from decision-making and government regulation and rarely involve the community in exercising its participatory rights [57].

The Indonesian government, particularly the PUPR, is required to involve the community in all road-building projects.

- (1) The public has the right to the following:
- (2) Provide input to road operators in the context of regulating, fostering, building, and supervising roads;
- (3) Participate in road operations;
- (4) Obtain benefits for road operations following the stipulated Minimum Service Standard;
- (5) Obtain information about road operations;
- (6) Obtain appropriate compensation due to errors in road construction; and
- (7) File a lawsuit in court against loss.

Community development is not only hampered by the concept of community participation that ignores social factors [58] but also based on several values such as human rights, equality, social justice, diversity, and respect for humans [59]. Respect for participatory rights is also a form of power distribution that stems from the democratic spirit in making more legitimate decisions [40].

Furthermore, the right to public participation is measured using the “ladder of public participation” model, developed by Arnstein [60], as the fundamental standard of public participation in a democracy:

1. Manipulation
2. Therapy
3. Informing
4. Consultation
5. Placation
6. Partnership
7. Delegated Power
8. Citizen Control

Meanwhile, the practice of community participation varies by author. According to the International Association of Public Participation [24], the public’s role in the policy process is to inform, consult, involve, collaborate, and empower, with levels of involvement classified as non-participation, tokenism, and citizen control. However, participation practices can be carried out formally and informally, without the direct involvement of the community, but through a network of public bodies and other entities [40, 61, 62], p. 1. This study focuses on formal and informal community participation in (road) development, which has yet to be resolved.

## 4 Materials and Methods/Methodology

Descriptive research methods are used to thoroughly examine the research topic. This research method was chosen because the researcher could collect data to answer questions about the research subject’s status. Descriptive research identifies and reports what is, while assisting researchers in describing a phenomenon in terms of attitudes, values, and characteristics [63]. Descriptive case studies, according to Buschle et al. [64], are methods of gathering information by interviewing or administering questionnaires to individual samples.

The author’s questionnaire questions are related to the study’s theme and include the following:

1. Participants’ experience as a community leader in road construction;
2. Discrimination against participation in road construction.

The questionnaire comprises 10 questions designed to help participants gain knowledge, experience, and practice in community participation in road construction. Field researchers distributed 100 questionnaires to community leaders in 5 cities (see Table 1). Data were collected between June 10 and August 25, 2022, with approval obtained from the Research Ethics Committee of the Christian University of Indonesia. The questionnaire was prepared in Indonesian and then translated into English by a sworn translator in the field to ensure the accuracy of the language. The

accuracy of the information provided in the questionnaire was verified through cross-checking with interview transcripts and observations made during data collection in the field to increase the validity of the study.

After receiving the questionnaire responses, the researcher carefully read through them to elicit a deeper meaning. To construct the reality of respondents' interactions, beliefs, and experiences with the government in road construction, the author employs a constructionist epistemology [65, 66]. The data were analyzed using the cross-tabulation model to simplify data analysis and avoid errors [67]. The data analysis approach employed includes both quantitative and qualitative procedures, and the results are presented in a tabular format.

## 5 Results

The thematic analysis and notes from detailed stories of participants reveal the main themes that describe their experiences with factors that disregard community participation rights in road construction in the 2018–2021 period. The results are categorized as follows:

- (1) The positions of community leaders and the authorities who formulate development policies are disparate (considering that community leaders are not involved in development);
- (2) Local community leaders are not involved, thus allowing the budget to be used illegally;
- (3) Community leaders are not involved, hence allowing development to be aimed at specific places and interests; and
- (4) Development is not based on people's participatory rights in a democratic country.

Table 1 summarizes all the findings in these four categories.

### 5.1 *The Disparity between Community Leaders' Positions and the Authorities Who Make Development Policies*

The respondents indicated that policymakers avoided involving community leaders in road construction because they believed that the power in their hands (the government) was absolute, so the community did not become involved in the development process. For example, in this category, 87% of the respondents in this study stated that they were not involved in the development process because they were not a part of it. One of the respondents describes how the government treats community leaders in development processes as follows:

**Table 1** Demographic and community leaders' participation in the road development project cycle

No	City	Number of key respondents	Road development cycle	Number of respondents involved	Percentage		
1	Medan	20	Planning	17	17%		
			Informing, consultation, and placation	2		2%	
			Partnership, delegated power, and citizen control	1			1%
2	Jakarta	20	Planning	18	18%		
			Informing, consultation, and placation	2		2%	
			Partnership, delegated power, and citizen control	0			0%
3	Semarang	20	Planning	18	18%		
			Informing, consultation, and placation	2		2%	
			Partnership, delegated power, and citizen control	0			0%
4	Surabaya	20	Planning	16	16%		
			Informing, consultation, and placation	3		3%	
			Partnership, delegated power, and citizen control	1			1%
5	Makassar	20	Planning	18	18%		
			Informing, consultation, and placation	1		1%	
			Partnership, delegated power, and citizen control	1			1%
Total		100		100	87%	10%	3%

*The government does not include us (community leaders) in development because they do not consider us to be part of them. They see us as third parties who do not need to be present during the road construction process (Ramli Siregar, Medan City Community Leader).*

In development policies, the government (in this case, the road construction policymakers or the PUPR), is exclusive. The government (PUPR) is regarded as an anti-marginal power in road construction. The government is terrified of citizen participation and public empowerment. The involvement of the community threatens their position when the government has the authority to develop development policies.

*They [the PUPR] prevent people from carrying out road development policies. This occurs because the community is only used for specific purposes (Slamet, Jakarta's community leader).*

The ruler (government) has complete power. Community leaders, however, simply wait to see who takes over the ministry in charge of developing policies. The comment that follows demonstrates this:

*We do not have the authority to select the officials in the PUPR/PUPR Service who make road construction policies. They do not introduce themselves to us, even if they have been elected to their positions (the Society). (Yusuf, Surabaya City Community Leader).*

During road construction, authorized officials and service providers (contractors) only inform community leaders that roads will be constructed in their area and people are not asked to participate in supervising its implementation. In fact, the government and service providers (contractors) regard the role of community leaders as secondary. Such government practices have harmed the community's enthusiasm for development. The following statement demonstrates that the government and service providers grant permission to the community only through leaders during road construction:

*They (the government and contractors) believe that we are insignificant in terms of development. Representatives of the government and service providers occasionally come to tell us about developments in our area and ask for our approval, and we don't know whether the next implementation has been done correctly or not (Abdul Aziz, Makassar City Community Leader).*

The government clearly has total control over development and does not want ordinary people to be involved in policymaking. As power holders do not want them to be empowered to challenge government policies, public participation is viewed as a process of empowering the masses. One respondent's comment, as stated below, demonstrates this:

*Every government has its own watchdog. They are not pleased when we ask them (the government) to monitor them. They (the government) are rarely willing to allow us to participate (Suprpto, a Semarang City community leader).*

Respondents appear to be aware that the law on roads requires local communities to supervise road construction. However, these legal documents are simply rules, and the government prevents people from implementing them. The central government appears to be merely an intermediary between the PUPR and the PUPR Service. In

other words, the central authority has no desire to delegate this control to the general public. The right to supervise is only a contract between the central government, PUPR, and regional offices, not the community. One respondent, for example, stated:

*The PUPR Service must provide supervision of the development to the local community and not avoid the community for this supervision (Yunaedi, community leader in Jakarta).*

The comments quoted above demonstrate that the government's power belongs solely to itself, allowing the government and service providers to prevent the community from exercising their participatory rights. This situation occurs because those in positions of power in the regions are aware of the central government's unwillingness to implement the law on community empowerment. Therefore, people are aware that no positive change can come about under the current administration. The comments that follow demonstrate this:

*The truth is that from the beginning of the central and local government, they have been vulnerable to involving the community; thus, development is controlled by the government and a few elites. Participation in society is always avoided (Saiful, Medan City community leader).*

Saiful realizes that the central and local governments are two interrelated parties in one interest; both forms of government alienate people from participating in development.

## **5.2 Local Community Leaders Are Not Involved. The Budget Can Be Used Illegally**

According to the findings, 87% of the respondents answered that the main reason for the lack of public participation (public figures) was the corruption motive in the use of the budget. Majority of the respondents believed that the prevalent culture of corruption within local government agencies prevented the community from participating in development activities. The goal of maintaining community participation in development projects is to prevent government officials from misusing available funds that should be used for community development. The comments that follow are a good example of the second theme.

*In this ostensibly transparent era, governors, mayors, and their staff are actually considering how to keep people away from corruption because it is difficult to commit corruption when the community is involved. Furthermore, if they invited the community to participate, the community will be aware of their rights and will demand that they be restored. They (government officials) will never invite public participation in order to perpetuate corrupt behavior (Mohammad Safaruddin, a community leader in Jakarta).*

The respondents believe that public participation will prevent corrupt officials from misusing funds. Furthermore, while public participation is considered a means of public empowerment, the government is unwilling to empower the community through the mechanism of community participation. Thus, public participation is

viewed as a threat by the government, which has a history of abusing power. The following quotation exemplifies this:

*The primary reason for not enforcing the community participation law is the government's desire to perpetuate corruption. Otherwise, inviting the public to participate will make it difficult for them to commit corruption (Ismawan, a Semarang City community leader).*

A strong link has been established between a corrupt culture and the suppression of public participation. If rampant corruption flourishes within the government, community participation in the development process will be nearly impossible. Thus, corruption is a significant barrier to community participation and empowerment. This finding is consistent with the literature, which reveals that when there is a conflict of interest between the individual and the state, alienation occurs between the government and the governed [68, 69].

The respondents also state that the fear of government officials being exposed impedes community participation in the development process. According to the participants, if the government invites the public to participate in corrupt activities in government institutions, their abuse of power will be exposed. Citizens' participation is thus avoided for the fear of their actions being exposed. One participant, for example, expresses the following viewpoint on why public participation is perceived as a threat to a corrupt government:

*As far as I know, the government does not involve the general public in development. If they invite the public, the public will expose their corruption. They cannot continue to commit corruption if their actions are exposed. Public voices intend to correct them, but if their actions are exposed, they will face lawsuits (Faisal, Surabaya City community leader).*

The participation of the public can expose abuse of government power. Hence, there is a fear that if the community is involved in decision-making processes, the community will discover how their development budget has been mismanaged.

### **5.3 Community Leaders Are Not Involved, Allowing Development to Be Aimed at Specific Places and Interests**

A culture of favoritism will stymie public participation if the government does not make a strong commitment to implementing democratic and participatory reforms. When there is no checks and balances mechanism, the government will prioritize certain groups, causing development to be unevenly distributed. One respondent elaborated:

*The government deliberately silences public participation. Governments involved in investing the budget will prioritize their groups or cronies (Hendra Sulaksono, community leader in Semarang City).*

These comments imply that community participation is being intentionally hampered so that government officials can direct development projects and funding



to their preferred areas. According to Indrawan et al. [70], regional governments tend to assign development work to specific parties. Excessive focus on one area of development will result in societal inequality [71]. The following situations can occur if the budget is not used appropriately:

*From 2018 to 2020, the government mostly created projects that benefited its cronies, wasted money, and were not useful to the community at large (Sutrisna, a community leader in Jakarta).*

When the government adopts a favoritism culture, the majority of the available state budget goes to a few people. Hence, the government is unwilling to engage the community. This demonstrates that the government is aware that they do not have greater authority than that of the community as those who benefit from development. This is explained by the following respondents:

*The main reason for not involving the public is that the government does not want to collaborate with other communities outside the group, so that development belongs only to those in the circle of power (Amril Harahap, Medan City community leader).*

As the current regime is unwilling to involve the community, public participation is not carried out. The government is discriminatory toward other citizens.

#### **5.4 Development Is Not Based on People's Participatory Rights in a Democratic Country**

People believe that the state has violated their rights due to a lack of community participation in development. For example, 87% of the respondents said the government did not respect the community's right to participate in development. The following quote exemplifies how people's participation rights are violated:

*The government in charge of development does not value democracy or our rights as citizens. We've never seen our neighbors get involved in discussions about local development projects (Ade Suripto, Semarang City community leader).*

The government and its staff should have implemented a government system that is transparent and respects citizens' rights, as mandated by the 1945 Constitution, but in reality, the government does not respect the community's participatory rights. The government is uninterested in community empowerment. The following quotation is an excellent example of what supports this theme:

*Actually, the government first asked us (the people) about what development was needed in our area, but the government listened to us because the government has other people who share their interests (Hendra, a Semarang City community leader)*

The respondents appeared to have little faith in the government's ability to empower the community through participatory democratic mechanisms. Although

the government should have encouraged community involvement, this has never transpired. According to these comments, the government dislikes community participation, as it interferes with their development interests. The government benefits from the existence of people who are unaware of their rights to participate in development.

## 6 Analysis

The right of community participation in development (roads) is one guaranteed by the 1945 Constitution and is a form of community participation in a democratic government. This is the people's power in the state, which includes participation, involvement, or a collaborative process of understanding, planning, analyzing, and acting by both the community and the government. The Indonesian government ensures community participation because the community is the party most knowledgeable about its own problems and needs.

However, the findings presented above show that the community's participatory rights in development have been reduced to a tool used by power holders (in this case, the PUPR and PUPR Service) to benefit themselves and their cronies. The government's approach to keeping people out of participatory rights in development planning is consistent with the Dubbio concept (2018).

The high corruption in the development budget and the poor quality of infrastructure are evidence of the abolition of participatory rights [72]. Anti-Corruption Clearing Hous [73] concurs, citing the absence of community-based oversight in Indonesia. The low level of community participation rights is caused by internal factors, such as a lack of knowledge about community rights, as well as external factors, such as policymakers' dominance in the planning and development process [74].

### 6.1 *Alleviation of Community Participation Rights and Human Rights Violations*

Because public participation in Indonesia is so low, especially in the field of budgeting, it is merely a formality [75]. As a result, the public sector has a high level of corruption. Transparency International (2022) ranks Indonesia as one of the world's most corrupt countries, with a score of 37/100 in 2020 rising to 38/100 in 2021, placing it 98th out of 180 countries. The state has taken away public rights to benefit a few, destroyed entire industries, and killed democracy [76]. The state then implemented policies that amputated public rights and harmed other human rights.

While the slogans of accountability, transparency, and anti-corruption continue to be repeated, the people's rights are being eroded in their interests. Many development projects have been neglected due to the improper allocation of public funds.

According to the Indonesian Corruption Watch [77], there were 1282 corruption cases in 2021, with 1404 defendants and a total state loss of IDR 26.83 trillion.

Therefore, many developments cannot be enjoyed by the community because they have been neglected as a result of policymakers' embezzlement of their funds. The most significant victims of this corruption are road users and schoolchildren. Students cannot study because the construction of the school building has stalled, in addition to the road that cannot be used by road users. According to Sandi [78], several toll road constructions in Indonesia have been abandoned, as well as seven schools that cannot be used due to neglected construction [79]. The delay in the construction of roads and school buildings continues to jeopardize the rights of road users and students to receive lessons.

Finally, the community is unable to use several other public facilities due to the corruption of construction funds. The power plants constructed in several regencies on the island of Java are facilities that the general public require but cannot use because they have been neglected [80].

## ***6.2 The Ladder of Public Participation Model and Practice of Community Participation for Road Construction in Indonesia***

Community participation in development can be viewed from two perspectives: participation in planning and implementation. Both have advantages and disadvantages. The positive side of participation in planning is that it can encourage emotional involvement in jointly planned development programs, while the negative side is that it can spark unavoidable conflicts between groups in society, which can delay or even prevent the achievement of a joint decision. The benefit of participating in program implementation is that the majority of the program (in terms of needs assessment and program planning) has been completed. On the negative side is the tendency to make community members objects of development, where community members are made implementers of development without being encouraged to understand and be aware of the problems they face, and without a desire to overcome the problem. The level of community participation in road construction will be measured based on eight steps and divided into three categories, namely, the un-participatory, pseudo, or community strength (Table 2).

## ***6.3 Manipulation and Therapy***

As many as 87% of the respondents said they had never been involved in road construction from start to finish. According to the International Association for Public Participation [24], the public is not involved at this level because several people

**Table 2** Comparison between Indonesian public participation in road development and international social capital association (ISCA) model of public participation

International social capital association (ISCA) Model of public participation (ISCA 2018)	Indonesian public participation model (Pseudo-Participation)
<i>Inform:</i> Provide opportunity for access to information (1) Information dissemination (2) Inform (3) Education	<i>Conceal:</i> Access to information for road development is guaranteed by Indonesian Constitution 1945, Law No.2 Year 2022 on Road Development, however, (1) As long as legal rules and administrative requirements are met, it doesn't matter whether there is public approval or not (2) The process is artificial, and the result is often manipulation and coercion (Ministry of Environment and Forestry, 2017) (3) The skills development system is not distinct (UNICEF, 2019)
<i>Consult:</i> Provide opportunity for input (Submissions) (1) Pre-visit (2) Pre-hearing (3) Environmental scan	<i>Ignore:</i> Limited opportunity for input (submissions) (1) Almost non-existence (2) Limited pre-hearing (3) Limited environmental scan
<i>Involve:</i> Provide opportunity for dialogue and interaction (1) Hearing (2) Sitting (3) Participation	<i>Exclude:</i> Does not provide opportunities for dialogue and interaction (1) Ignoring (2) In-cooperative (3) Avoidance
<i>Feedback:</i> Provide feedback to stakeholders (1) Follow up visits (2) Monitoring and evaluation (3) Communication	<i>Nonresponse:</i> (1) People are not asked by officials or contractors to participate in supervising road construction projects (2) In the planning phase, government officials and service providers ask for approval from local community prior to the development. However, people would not know whether the implementation has done correctly (3) Monitoring is done by government watchdog. Government does not allow public monitoring

have been elected as public representatives. Hence, the public will be completely unaware of the decision information or not involved at all, but the government conveys development information.

6.4 Informing, Consultation, and Placation

As many as 10% of the respondents stated that they were informed by the government that road construction was underway and that they were involved in the implementation but not in the planning. At this level, the community is only informed that development will take place or that public suggestions will be accepted but it is not implemented [24].

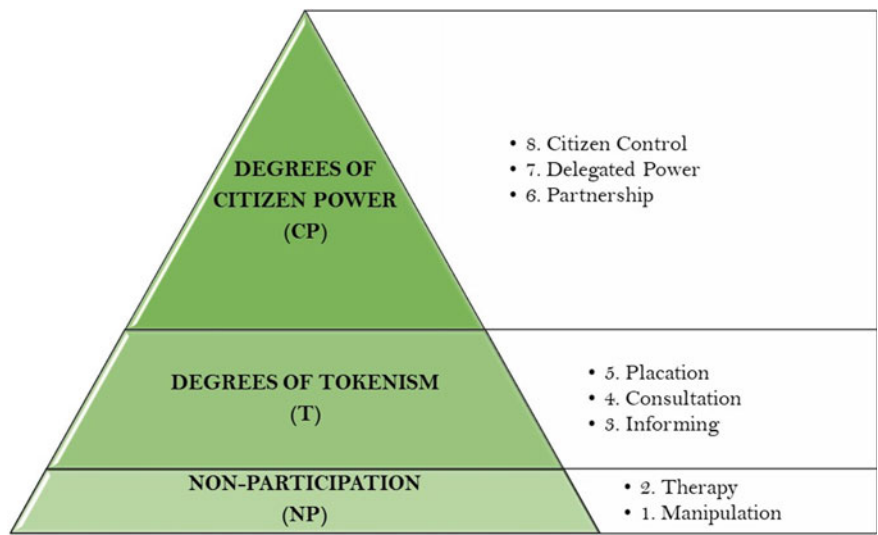
6.5 Partnership, Delegated Power, and Citizen Control

Only 3% of the respondents said that they were involved in road construction from planning to implementation or that at this level, the public participates in policy formulation and implementation, or is delegated policy formulation authority, or has the authority to evaluate government performance [24]. The Indonesian model of public participation as shown in Table 3.

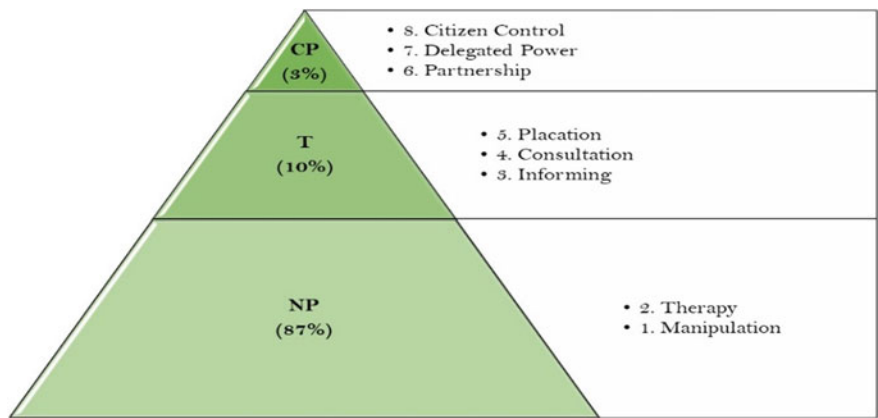
Finally, the general public participation pyramid describes ranges of public participation, and this can be a non-participation nation inside the lowest level, tokenism inside the center level, and citizen power inside the maximum level. In the ladder of public participation version, citizen power dominates the pyramid, as shown in Fig. 1. However, public participation in Indonesia forms an opposite shape, as shown in Fig. 2, wherein the non-participation state dominates it.

Table 3 Level of community leaders’ participation in road development in Indonesia

The ladder of public participation model [60]		Indonesian level of community participation in road development	
8. Citizen control	Degrees of citizen power	8. Citizen control	3%
7. Delegated power		7. Delegated power	
6. Partnership		6. Partnership	
5. Placation	Degrees of tokenism	5. Placation	10%
4. Consultation		4. Consultation	
3. Information		3. Information	
2. Therapy	Non-participation	2. Therapy	87%
1. Manipulation		1. Manipulation	



**Fig. 1** The Ladder of public participation and indonesian public participation in the road development participation model comparison



**Fig. 2** Public participation in road development in Indonesia

7 Conclusion

The right of people to participate in road construction is the community’s right as owners of power to be involved in road construction because it affects their lives. This participatory right involves people in all aspects of development and can be measured to determine whether it is not participatory, false, or community strength. The participatory rights of road construction in Indonesian Law No. 2 of 2022 concerning

roads do not include the community, resulting in uncontrolled corruption that harms other people's rights such as economic rights, education rights, and the right to development.

According to the ladder of public participation model, the implementation of community participatory rights in road construction in Indonesia falls under the non-participatory criteria and does not meet participatory standards. The elements of participation regulated in human rights law in the constitution and Law No. 2 of 2022 concerning roads, namely, citizen control, delegated power, and partnership, are not met by community participation in road construction. The government's public participation in road construction appears to be manipulative (contrary to public participation principles) and violates human rights, particularly the right to know public information and the right to participate in development.

Thus, the government must consistently implement community participation in road construction by referring to Law No. 2 of 2022. The government (in this case, the PUPR) is obligated to carry out the mandate of the Law on Roads No. 2 of 2022, particularly in fulfilling the community's participatory rights per international standards of public participation. The Indonesian government must terminate all efforts to exclude people from road construction. To effectively realize the right of community participation in road construction, public participation regulations must adhere to the elements outlined in the ladder of public participation model, including the criteria of delegated power, partnership, and citizen power, to avoid human rights violations.

## 8 Ethical Approval

This research has received ethical approval from the Ethics Committee of Universitas Kristen Indonesia in 2018.

## 9 Grant Information/Funding

The authors received no funding.

**Data Availability** All data underlying the results are available as part of the article and no additional source data are required.

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# Does Participation in Decision-Making Empower Local People? Understanding Empowerment Through Hannah Arendt's Theory of Power



Nor Ardyanti Ahmad, Khauthar Ismail, Firdaus Ramli, and Mahazir Ismail

**Abstract** The great interest in participation and empowerment is because they provide positive outcomes and are still favoured by international governmental organisations. However, very scant research has been conducted to examine if and how empowerment through participation empowers local people, especially in the complex political and economic aspects of the country. It argues that in complex economic and political situations, Arendt's theory of power is needed to examine whether the local villagers were empowered to improve their wellbeing in the rural development programme in Malaysia. From the findings, public participation in the case study village was not visible, let alone empowerment. The elements such as deliberation and dialogue between local villagers and local leaders were not visible, the collective decisions were made only between local leaders and public officials and the introduction of the Co-operative as a means to empower local villagers was not successful. The suggestions were made to improve the findings of the research.

**Keywords** Empowerment · Participation · Desa Lestari · Hannah Arendt

## 1 Introduction

Over the decades, participation and empowerment have been the most prominent initiatives employed by international governmental organisations, policy makers and development economists to reduce poverty in many developing countries. The great interest in participation and empowerment is because it upholds the democratic rights of people [16] and is a part of the democratic structure [22]; the proposed solutions to people's problems can be more orderly, relevant, and accepted by the people

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[19]; it provides a platform for deliberation; people have chances to express their voice on problems that they encounter daily [13] and it significantly improves the performance of the public agencies [27]. Not only that there are various studies that focus on ways to improve public participation such as through democratic innovations in participatory programmes [5, 8]. While much research has been conducted to explain ways for people to participate and platforms to actively participate, very scant research has been conducted to examine whether participation and empowerment benefit local people's wellbeing, especially in the complex political and economic aspects of the country.

Empirically, very few is known about the views of local people on the benefits of participation and empowerment. Many researchers found that participation often did not empower local people because participation of local people did not change any power differences between public officials and local people [29] and public officials were unlikely to encourage engagement of local people, which consequently led to unsuccessful public participation [17]. As well as the problems of the public officials, the limited participation benefits were also due to the concentration of power in the hands of the local elite [1] and the existence of unequal power relations that reinforce the lack of public participation [1, 13, 14] and thus disempower local people. Others have stated that public participation is valuable to public officials and not the public because public participation often has limited influence on political decisions [10]. Despite these situations, participation and empowerment are still favoured by international governmental organisations, where, through instruments such as the Sustainable Development Goals (SDGs), concepts such as participation, empowerment, sustainability, and good governance are still embedded in the policies and plans in the participants' countries.

Following that, this article examines if and how empowerment through participation improves the wellbeing of local people. It argues that in complex economic and political situations, Arendt's theory of power is urgently needed to explain participation and empowerment of rural people. As such, building on insight from one of the participation and empowerment programmes in a rural village in Malaysia, the theory of power is utilised as a conceptual framework to understand and explain whether participation and empowerment programmes for local people known as the sustainable village programme or Program Desa Lestari empower local people to improve their lives and wellbeing. This article provides new perspectives on participation and empowerment from power theory by focusing on communication and dialogue between local people and public officials in the complex social structure and development of Malaysia's context.

## 2 Public Participation in Decision-Making

The concept of participation has been attracting the attention of mainstream political actors, development agencies, policy makers, academics, international donors and IGOs since the 1970s. It has been considered one of the main components of democratic societies and the rights of citizenship and democratic governance [9], and these have been extensively discussed in studies on political participation and participation in development [9, 15]. Debates on the contribution of public participation have been influenced by the breakdown of liberal democracy and the failure of the ‘trickle-down’ development approach. As such, the concept of participation was believed to provide more power to people, solve the problem of centralised administration, and improve the development allocations to the targeted groups [20]. It has been assumed that as an instrument for effectiveness, it is a good means of fund-raising, and as a concept, it is able to attract private sector investment in developments.

The popular idea that people’s participation benefits development policy is based on two assumptions: a reduction in costs and the successful use of resources; and the involvement of people contributing to the success of the intended policies and programmes. People’s participation also provides benefits to the rural poor in terms of projects and programmes that can enhance their social wellbeing and reduce social exclusion. It is believed that when people participate and are involved in a collective action, they gain more control over the resources and assets to improve their lives, which in turn improves their quality of life and makes access to markets and basic necessities more equitable.

Despite its importance, substantial research on public participation in decision-making has found that the most common level of public participation in decision-making is pseudo-participation or non-participation [7, 28], and this situation has contributed to the failure of the participation programme at the local level. In fact, participation may not necessarily encourage the engagement of local people, but instead encourages the existing power structure at the community level [25]. Even so, participation has been considered important to empower local people because being empowered requires local people to actively participate in deciding their own economic and development affairs. It is therefore important for this research to employ the theory of power to understand if and how empowerment through participation improves the wellbeing of local people.

## 3 Arendt’s Theory of Power

Participation and power are two interrelated concepts because in order to be empowered people are required to use their power to participate, negotiate and thus transform the existing power relations. It is claimed that only by participating in development programmes can the powerless and marginalised groups be empowered [18]. Power

is a complex concept especially in the realm of politics, because the common argument is that power can ensure the compliance of the people based on the decision that has been made. That means, power is associated with domination and the capacity to influence others [21]. Even so, power to dominate became less dominant with the existence of power as ‘a capacity for action’ which has been popularised by Hannah Arendt who defined power as the capability of a person not just to act but ‘to act in concert’ ([2], p.44). This concept has shifted the understanding of power from power to dominate to the ability of people to act together in which they share similar forms of life, opinions, and social structures that bind them together contributing to their empowerment [33]. Arendt [2] believed that the power to act in concert exists when there are a number of people who are working together to achieve transformation. Not only that power is gained through effective communication in which people are not suppressed from deliberating and discussing their plans and development [12]. Power exists when there is communication and agreement on certain issues thus, this process and action empowered them. Arendt believed that the individual must be able to work collectively, and that the empowerment of people is achieved through collective action and unconstrained communication [3, 11]. As such, participation and empowerment require the active participation of people, notwithstanding the social structural factors that may enable or disable participation and empowerment. It is because the ability of people to participate and act collectively, have dialogue, and deliberate ideas depends on social relational components within society [26, 30] because the existence of power relations and complex social structural conditions may contribute to the failure of participation and empowerment [1, 32].

#### **4 The Sustainable Village Programme or Program Desa Lestari in Malaysia**

Participation The Sustainable Village Programme, or Program Desa Lestari, is one of the rural development empowerment programmes that was introduced by the then Ministry of Rural and Regional Development in 2013. The strategy of this programme is to empower local people to participate in the planning and implementation of development projects at the village level. Each village that is interested in participating in the programme must fulfil several criteria. For instance, the interested village must actively participate in the village competitions developed by the government, and they must at least win in the competitions. To ensure the sustainability of the programme, the interested village must also have active youth and a community that is willing to ensure its success. The village must also have an iconic product that is viable and worked on by the villagers. Not only that, the village also must have proper infrastructure, such as a good road, electric and water supplies, and phone access. The location of the village will also be an advantage in participating in the programme; for instance, the village is near historical sites, tourist attractions, nature, and recreational activities. The village should also have a pleasant environment, beautiful



scenery, and excellent village culture [24]. The implementation of this programme required local villagers to be active and able to make plans and decide what was best for their village. In 2019, RM138 million (USD 334) has been allocated, and another RM10 million (USD 223) has been added in 2022 to develop the economic activities for this programme. With the huge allocation of money and the support given by the government, it is important to examine if and how this programme empowers local people and improves their wellbeing. This can be examined by employing the theory of power to examine whether the Desa Lestari Programme enables or disempowers local people.

## 5 Methods

This study examines if and how local people participate in the Desa Lestari Programme, thus empowering them and improving their wellbeing. In an attempt to examine the nature and process of empowerment in decision-making in the Desa Lestari Programme in Malaysia, qualitative research was considered a credible method in order to answer this study. A case study was used to examine public participation and empowerment in one actively engaged village in the Desa Lestari Programme. The village has a paved road in each alley, proper electrical and water supplies, kindergarten and primary schools, a rural health clinic, and a mosque. There were approximately 350 households in this village, and the majority of the villagers are Malays. There were two phases of data collection. The first phase was document analysis. Several policy documents, the government's policies and plans, and Malaysia's plan documents were analysed to get information on the Desa Lestari Programme. The second phase was in-depth interviews. The in-depth semi-structured interviews were conducted with 18 respondents from the case study village. The respondents were approached based on purposive sampling techniques. Following that, the total number of 18 respondents in this research was sufficient to answer the research questions because the semi-structured interviews had reached saturation at 18 interviews [4, 6, 31]. Before the interview started, the researchers briefed the respondents about the intention of the interview, and if the respondents were stopped in the middle of the interview, their recorded voices would be discarded. The interview was conducted in Bahasa because of the respondents' limited understanding of the English language. The respondents were informed that the interview was recorded, and all 18 respondents were permitted to record their interviews. From the 18 respondents, 11 were male and seven were female (Table 1). Their ages ranged from 30 to 60 years old, and each of them had participated in and experienced the Desa Lestari Programme. Each of the interviews lasted around 40 to 60 minutes. For data analysis, the researchers used NVivo 12 software to organise the collected data. No complicated analysis was used; only descriptive analysis and analysis of the interview transcripts were generated. Thematic analysis was used to analyse the data from the interview [4]. This generated useful information on public participation and empowerment in decision-making in the Desa Lestari Programme.



**Table 1** Phases of data collection and number of the respondents

Phases of data collection	Data collection and number of the respondents
<i>First phase:</i> Document analysis	Data collection on policy documents, the government's policies and plans, and Malaysia's plan documents on the Desa Lestari Programme
<i>Second phase:</i> Semi structured in-depth interview	Total number of the respondents: 18 11 Males 7 Females

## 6 Findings and Discussion

This research aims to examine if and how the Desa Lestari programme empowers local villagers to decide their own economic and development affairs. 18 respondents were interviewed, and Arendt theory of power was used as a conceptual framework for examining the case. The names of the respondents were concealed, and pseudonyms were used to replace the real names of the respondents. Arendt emphasises that to be empowered means having the ability to act collectively, communicate without constraints, have dialogues and deliberations. This research found that the Desa Lestari programme did not empower local villagers in deciding their own economic and development affairs, but rather strengthened the power of public officials and local leaders.

### 6.1 *Limited Deliberation and Dialogue*

From the findings, the power to decide and inform the villagers was dominated by the local leader and his committees only. This resulted in the limitation of deliberation between local villagers and local leaders because most of the plans and decisions related to the Desa Lestari were decided by the local leaders, "the local leaders will plan and decide. He has his own committee members" (Adam). During the nomination of the case study village to be one of the Desa Lestari villages in 2013, the interviewees stated that they were informed by the local leaders about the suggestion by the public officials to nominate their village as a Desa Lestari village. But the deliberation and decision were made only among the local leaders. For instance, the local leader and his committee plan and decide on the economic and development activities that might be beneficial to the village. Once the decision is made, they will inform the villagers about their plan, "The local leader and their members decided everything. We only follow it" (Cathy). Another interviewee stated that "in this village we have a leader, so the leader will discuss with his members and decide anything. I only support the supporters, and if they need my help, I'll contribute my energy, even though my ideas are always rejected" (James). This indicates that local villagers were not involved in the decision-making process, and most of them only agreed to what had been decided by the local leaders, which indicated that the

deliberation and dialogue between local leaders and villagers only occurred after the decision had been made and when the leaders needed help from villagers.

The limited deliberations and dialogue can also be seen between the local leaders and public officials. From the findings, the public officials were not providing opportunities to the local people to propose the ideas that they thought were important for their village; instead, they imposed ideas and programmes on local villagers that were in line with the ministry and department's goals, not the villagers' ideas. For example, "we have thought of several economic activities that are suitable for each ally in our village, but the proposed ideas have been rejected by the public officials" (Cathy).

This showed the decision-making was not made by the villagers, but instead by the public officials and was dominated by local leaders at the local level. Instead of letting the local villagers decide what they thought they were capable of doing, they were instructed to follow whatever decision was made by the government.

## ***6.2 Disempowerment of Collective Decisions***

One of the aims of the Desa Lestari programme is to empower local villagers to decide on their own economic and development affairs. However, the aim of empowering local villagers was never realised, especially after the changes in village leadership. This was because the appointed local leaders, who were based on the political party of the governing central government, disempowered the collective decision between local leaders and villagers. Since the inception of the village as one of the Desa Lestari programmes in 2013, the village has been led by the Village Development and Security Committee (VDSC), which was from the then National Front political party. The VDSC was known for being active and has made the village one of the most recognisable villages, especially among public officials and agencies. Under the leadership of the VDSC, the village was able to win various village competitions. The villagers were also able to attract more tourists to their village. For example, "many tourists have come to our village. So they were able to experience the local lifestyle... There were also many public officials from various states who visited our village. I still remember the havoc during that time" (Molly).

However, after the fourteenth general election of Malaysia in 2018, the village leadership was changed following the central government ruling party and replaced by the new local leaders and committee that have similar political party ideologies to the central government. As a consequence of the loss of the National Front political party in 2018, the leadership of the VDSC in the village was also removed; "the then local leader was no longer active after the election. But the new local leader didn't do anything" (James). It was not surprising because the Desa Lestari programme was initiated by the former national government led by the National Front political party in 2013. As such, the transition of the government has disempowered the collective decisions of the villagers. It was replaced by the new leadership known as the Village Community Management Council (MPKK). The transition from the

former VDSC to the new MPKK has generated dissatisfaction and confusion among villagers. Some of the interviewees stated that after the MPKK took over the village's leadership, there were very few activities, and they were not similar to the previous VDSC programmes, "there were not many activities organised by the new leadership...the competitions between villages were no longer conducted...nothing much left" (Peter).

Not only that, but the villagers were also rarely being called for a village meeting, let alone making decisions for the village. The frustration with the new appointment of local leaders has made the Desa Lestari Programme slow and not progress well, "there were very few activities when the new leadership took place. This became worse also after the COVID-19 pandemic (John)" and "before this we had various activities like fishing competitions, but now there are no activities like that" (James). It was also important to note here that the leadership of the local village was once again changed after the fifteenth general election of the Malaysian government in 2022, right after this research was conducted.

### ***6.3 The Failure of the Establishment of the Co-Operative***

From the findings, the Desa Lestari programme through its Co-operative was considered a failure of capability expansion to empower local people to make decisions on their economic and development affairs. It was because the implementation of the Desa Lestari through the establishment of the Co-operative was not empowering local villagers but instead only a few groups of people. For example, "those who are holding the position in the Co-operative only benefited...there was no meeting conducted to inform the members about the financial status of the Co-operative." (Peter) and "all Co-operative assets were kept by a specific person assigned by the leaders of the Co-operative." (John).

In an extreme case, another interviewee who was one of the Co-operative members claimed that the top management of the Co-operative was not calling for any meetings, especially after the COVID-19 pandemic. The members were unaware of the financial status of the Co-operative. Yet, the rent of the assets such as tractors, vans, and chalets were running as usual, but the members did not know where the money went; "the Co-operative meeting was not frequently held as compared to the beginning of its establishment" (Adam). Another interviewee also stated that "there were two important local leaders who headed the Co-operative and most of the decisions were made by them" (Francesca). This showed that the Co-operative was not functioning as intended because it was not providing any credit or borrowing assistance to the members. It only functioned to manage the assets and nothing more than that, "we only focused on what the government had given us [assets such as vans and tractors], and we only maintained and used them in our day-to-day activities as most of the Co-operative members are paddy planters" (Mark) and "the Co-operative was actually supposed to develop more, for example if now we have one tractor and in five years we may have five tractors, but you know nothing changed" (Peter). This

showed that the establishment of the Co-operative and its management were not empowering local villagers but instead only certain groups of people.

## 7 Conclusion

Participation and empowerment are acknowledged by international governmental organisations, policy makers, developing countries as one of the approaches to improving the wellbeing and quality of life of people. Even so, looking at empirical findings from Malaysia's context, the participation and empowerment programme in economic and development activities did not empower local villagers in the case study village, let alone the wellbeing of the villagers. Drawing on Arendt, Freire, and Sen's concepts of power and empowerment, the participation in decision-making in the case study village was not visible, let alone empowered. The elements such as deliberation and dialogue between local villagers and local leaders were not visible; collective decisions were made only between local leaders and public officials; and the introduction of the Co-operative in the Desa Lestari programme as a means to empower local villagers was not successful. These factors have contributed to the disempowerment of local villagers in the Desa Lestari programme. Due to this, the intended programme did not only disempower local villagers but also did not increase their wellbeing.

From the discussion, several policy recommendations have been identified. This case study village showed that the Desa Lestari programme had a top-down implementation approach. This was seen in the instructions given by the public officials to the local leaders and the rejection of the local villagers' proposal. The case study village was instructed to follow suggestions made by the ministry and resubmitted their proposal, which followed the requirements set by the ministry. However, this approach has limited the deliberation and dialogue between local villagers, leaders, and public officials. From this study, the government and the ministry should allow and provide opportunities for the local villagers to plan and decide the best economic and development activities that suit their local conditions and resources. This can be done by allowing deliberation and dialogue in economic and development activities between local villagers and leaders, as well as limiting the control and power of public officials in making decisions on behalf of the villagers.

Second, the process of participation and empowerment is supposed to be initiated by the local villagers and must be apolitical. From this study, the collective decisions were absent because local villagers were frustrated with the changes in the local leadership. The appointment of the local leaders was made based on the political party and in line with the central government. This situation discouraged local villagers from participating in the Desa Lestari programme. Since the Desa Lestari Co-operative was headed by different leaders with different political ideologies, it was less active, and only members with similar political ideologies joined the Co-operative. This was not healthy since empowerment required the collective decisions of local villagers. Thus, the best way to empower local villagers is by providing them

with the opportunity to choose their own leaders. This can be done by not focusing on the leadership appointed by the central government, but instead on the leadership of the mosque, where all villagers are joined and bound together (mosque leadership is apolitical).

In future, the participation and empowerment programme should be designed with a bottom-up implementation approach. Thus, to be empowered means to be able to plan and make the best decisions for the village. The empowerment required local villagers to actively participate in the decision-making process and was not limited to local leaders and public officials only. This study shows that the Desa Lestari programme, which aims to empower local villagers in their own economic and development affairs, actually disempowers local villagers. Although this study focuses on a case study in Malaysia, the findings are transferable to other similar cases of economic and development programmes in rural areas. This paper contributes specifically to an empirical study from Malaysia's context on strategies for empowerment that can be adopted by the policy makers and development experts. Since this study only focuses on villages in peninsular Malaysia, future research should include the states of Sabah and Sarawak.

## 8 Disclosure Statement

No potential conflict of interest was reported by the authors.

## 9 Notes on Contributors

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## 11 Ethical Approval

This study has received ethics approval from the Universiti Teknologi MARA Research Ethics Committee.

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# Visualizing Progress: The Role of Instagram in Communicating Development Initiatives for Poverty Alleviation in Indonesian Provinces



Wahyu Widiastuti and Aries Munandar

**Abstract** This research aims to ascertain how Instagram is used by Governors in Indonesia to disseminate Development Policies implemented in an effort to reduce poverty in their regions. Data was collected from the Instagram accounts of four Governors in Java: Khofifah Indar Parawansa (Governor of East Java); Ganjar Pranowo (Governor of Central Java); Ridwan Kamil (Governor of West Java); and Anies Rasyid Baswedan (Governor of DKI Jakarta). The observations were conducted for three months from August to October 2022. The results revealed several important conclusions: (1) The four observed Instagram accounts were indeed utilized by the governors to publicize and communicate their activities, including initiatives related to poverty reduction, both directly and indirectly. (2) Each of the four accounts featured a mixture of content presented both personally and in their capacities as public officials. (3) A pattern of ‘blended mutualism’ goals was evident in each content, where each governor used information about poverty reduction development to increase popularity, and conversely, personal popularity was leveraged to reinforce information about poverty reduction programs. (4) The majority of content informed about development initiatives directly or indirectly relevant to poverty reduction efforts. (5) Public responses to development initiatives published on Instagram accounts correlated with the number of followers of each respective account.

**Keywords** Instagram posts · Poverty alleviation · Development

## 1 Introduction

The Sustainable Development Goals (SDGs) are a global development agenda that aims to promote peace and prosperity for both people and the planet Earth. This worldwide agenda, signed by 189 state leaders in 2015, comprises 17 goals: (1)

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no poverty, (2) zero hunger, (3) good health and well-being, (4) quality education, (5) gender equality, (6) clean water and sanitation, (7) affordable and clean energy, (8) decent work and economic growth, (9) industry, innovation, and infrastructure, (10) reduced inequality, (11) sustainable cities and communities, (12) responsible consumption and production, (13) climate change, (14) life below water, (15) life on land, (16) peace, justice, and strong institutions, and (17) partnership for the goals. You can find more information about these goals at [www.sdgs.un.org/goals](http://www.sdgs.un.org/goals).

Experiences and lessons learned from the implementation of the Millennium Development Goals (MDGs) underscore the significance of engaging all stakeholders, including the community. Conyers [2] outlines three reasons for the critical role of community participation in development. Firstly, community involvement serves as a crucial tool for acquiring information about the local conditions, needs, and attitudes, which are indispensable for the success of development programs and projects. Secondly, involving the community in the preparation and planning process fosters trust in the development endeavor, as the community possesses a deeper understanding of the project's intricacies and develops a sense of ownership. Lastly, community participation embodies the democratic right of the community to be actively engaged in the process of development.

Information about development programs needs to be disseminated so that it is understood and supported by all community groups. Therefore, the government, as a driving force for development, needs to provide information by communicating with them. Communication between the government and people refers to the exchange of information, ideas, opinions, and messages between government entities and the communities they serve. This communication process involves informing communities about government policies, programs, and activities, as well as receiving feedback from communities on issues that matter to them.

The form of government communication with the people is influenced by the government system adopted. During the era of the centralized New Order, the Indonesian government's communication was one-way downward communication, where heads of state and regional heads served as information centers. At that time, communication was facilitated by government-owned mass media or privately-owned media that were tightly controlled by the government. Meanwhile, after the New Order, the government system became relatively decentralized and democratic, allowing for two-way communication and the exchange of information. After 1998, government control over mass media loosened, resulting in more equal communication.

The presence of communication technology and the growing use of social media have transformed communication between the government and the people. Previously, news underwent a lengthy process before reaching the public. For instance, news about government and development in newspapers was the end result of professional routines involving news gathering, production, and distribution. The stories followed a daily pattern of production, with the final product sent to the printing presses in the early evening and delivered to the audience the following morning [6]. The same process applied to broadcast news.

The existence of social media is reshaping how messages are created and distributed. Social media, defined by Kaplan and Haenlein as a group of internet-based applications that build on the ideological and technological foundation of web 2.0, allows the creation and exchange of user-generated content (2010). O'Reilly [14] describes web 2.0 as an architecture of participation that enables people to interact beyond consumption, extending to the creation, dissemination, and sharing of digital content. This means social media enables news production without following the traditional mass media process. Social media platforms empower users not only to consume content shared on these platforms but also to produce and share their own content on these social networking sites.

The use of social media might increase collaboration among stakeholders. For citizens, social media can engage them in government programs and bridge the gap between the government and society. For the government, social media is capable of fostering public participation and collaboration. Social media platforms help create informed citizens and strengthen public relations.

Social media has significantly changed how people and governments connect with the general population. The following are examples of how social media has transformed and altered this relationship: First, social media platforms offer direct avenues of connection between the public and the government. Government representatives no longer need to use intermediaries like traditional media sources to engage directly with the public. Second, social media enables governments to share up-to-the-minute information on crucial events such as catastrophes, legislative changes, or public announcements. These updates are quickly accessible to citizens, allowing them to stay informed and take necessary actions. Third, social media platforms make it possible for governments to communicate with the general public about a variety of topics, including public services, projects, and policies. Citizens can now immediately access information, enhancing transparency and reducing dependency on conventional media. Fourth, social media provides governments with a platform to interact with the public and gather their comments and opinions. Governments can involve the public in decision-making processes, collect ideas, and address issues through tools like polls, surveys, and comment sections.

Fifth, social media enables individuals and organizations to spread their messages to a broader audience and amplify their voices. Engaging in public debates, sharing personal stories, and expressing ideas all provide citizens with opportunities to influence government decisions and policies. Sixth, social media has contributed to the growth of grassroots movements and civic activism. The ability to mobilize, plan demonstrations, and promote social and political concerns empowers citizens. The visibility and reach of social media have increased the likelihood that governments will respond to public pressure and heed citizen demands. Seventh, during times of disaster, social media is essential for disseminating information, organizing relief efforts, and supporting affected populations. Governments can use social media platforms to communicate emergency information, plan rescue efforts, and provide assistance to those in need.

The advantages of social media as a communication medium are being optimally utilized by world leaders. Data shows that several heads of government use platforms

such as Twitter, Facebook, Instagram, and YouTube to share official activities and events, disseminate information about regional and global events, present policies and development achievements in their regions, and engage in direct communication with the public, among other purposes. Among the most active heads of government with the highest number of followers on social media are Narendra Modi, Joe Biden, Erdogan, Justin P.J. Trudeau, and Emanuel Macron. President Joko Widodo is also recognized as one of the presidents with the largest following on Facebook, Instagram, YouTube, and Twitter platforms in 2022 [8].

In Indonesia, several regional leaders actively use social media to interact with their constituents. These include Ridwan Kamil, the Governor of West Java; Ganjar Pranowo, the Governor of Central Java; Sutarmidji, the Governor of West Kalimantan; Khofifah Indar Parawansa, the Governor of East Java; Emil Elestianto Dardak, the Vice Governor of East Java; Cellica Nurrachadiana, the Regent of Karawang; Iti Octavia, the Regent of Lebak; and Achmad Husein, the Regent of Banyumas.

Considering both the advantages and disadvantages of social media as a communication channel for government entities, there is a need for guidelines on how to optimize its use. Regulation number 83 of 2012 issued by the Ministry of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia outlines the guidelines for the utilization of social media by government agencies. According to these guidelines, the government is required to effectively communicate policies, work plans, and performance achievements to the broader community. Overall, effective communication between the government and the public is crucial for building trust, ensuring accountability, encouraging public participation, raising awareness, fostering collaboration, and managing expectations. This enables governments to ensure that their development plans and programs align with the needs and aspirations of the communities they serve. The structure of this article comprises an Introduction, Literature Review, Methodology, Findings and Discussion, and Conclusion and Future Work.

## 2 Literature Review

The research problem addressed in this study is how Regional Heads use the Instagram social media platform to communicate their efforts in poverty alleviation within their respective regions. Based on these inquiries, this paper proposes a framework to illustrate how the Four Governors communicate their performance to the public through the Instagram platform.

### a. Uses and Gratification theory

According to Blumler and Katz's Uses and Gratification theory, media consumers actively participate in selecting and utilizing media. Users utilize media with a purpose and participate actively in the communication process. According to the theory, media consumers look for a media source that best meets their demands. The

assumption behind uses and gratifications is that the user has other options for meeting their needs. Traditional U&G studies have identified three main categories of needs that can be gratified by various media: social needs, such as the need to deepen relationships with family, friends, and acquaintances; hedonistic needs, which involve the affective need for pleasurable and emotional experiences; and cognitive needs, including the need to seek knowledge, understanding, and information [5].

For individuals who produce information as account owners, the use of mass media is intended to satisfy social, hedonistic, and cognitive needs. Social needs refer to the desire to increase interaction with friends, acquaintances, and family. Hedonic needs pertain to emotional desires for enjoyable and pleasurable experiences, while cognitive needs encompass the desire to acquire knowledge, expertise, and insight. When considering figures like Governor Ganjar Pranowo, Ridwan Kamil, Anies Baswedan, and Khofifah I Parawansa, it becomes evident that the use of Instagram is valuable not only for getting closer to the community but also for showcasing the successes of development initiatives in their respective regions. Additionally, Instagram serves as a medium to address the latest issues, clarify confusion, and accommodate people's aspirations. The use of Instagram as a platform bridging the government with the community is reinforced by its popularity among Indonesian people today. According to a report released by We Are Social and Hootsuite, Instagram boasts 89.15 million users in Indonesia, ranking fourth in the world. Meanwhile, for the general public, the use of Instagram media is intended to access information about the latest issues and the figures they are interested in knowing about.

#### b. Development Communication Theory Wilbur Schramm

Schramm's model of communication and development centers around the notion that effective communication is vital for promoting social and economic development within society. Schramm emphasized the pivotal role of communication in instigating positive change and propelling development across various levels, particularly in developing countries. According to Schramm, communication functions as a tool to foster understanding, drive social transformation, and facilitate the development process. Communication is not a unidirectional process; rather, it constitutes a dynamic interaction between sender and receiver, influenced by cultural norms, values, and social structures.

In the context of development, Schramm underscores the significance of mass media in disseminating information, molding public opinion, and catalyzing social change. Schramm posits that media holds substantial potential as a force for development, empowering individuals and communities by granting access to information, education, and opportunities. Schramm's communication model underscores the necessity of feedback within the communication process. It asserts that effective communication demands not only the transmission of information but also the assurance that the intended message is received, comprehended, and accurately interpreted by the audience.

### 3 Methodology

This study examines the content of Instagram social media accounts published by four governors in Indonesia: Anies Baswedan (Governor of DKI Jakarta) with the account @aniesbaswedan, Ridwan Kamil (Governor of West Java) with the account @ridwankamil, Ganjar Pranowo (Governor of Central Java) with the account @ganjar\_pranowo, and Khofifah Indar Parawansya with the account @khofifah.ip. The observation was conducted over three consecutive months: August, September, and October 2022.

These four Instagram accounts were selected due to the consideration that these governors have gained significant popularity in Indonesia and have even been discussed as potential candidates for the upcoming 2024 presidential and vice-presidential elections. The selection of these four governors was also based on their positions as acting governors on Java Island, the most populous island in Indonesia with well-distributed internet infrastructure.

The observation involved identifying the number of posts over the three-month period and analyzing content related to the 17 Sustainable Development Goals (SDGs). The study distinguished between posts that appeared to be of a private nature and those that were related to their roles as public officials.

Furthermore, the research identified posts that garnered the most public responses or comments, as well as those that did not receive significant engagement. The study also examined how the account owners responded to these comments and public interactions.

### 4 Findings and Discussion

#### Observed Instagram Accounts

Based on the researcher's investigation, it is evident that the account statuses of each observed governor in this study are as follows (Fig. 1):

##### Quantity of Posts During the Observation Period

Based on the findings of our observation, it is apparent that the governor who posted the most on Instagram during the observation period was Ganjar Pranowo, amassing a total of 335 posts. Conversely, the lowest number of posts was attributed to Anies Baswedan, as illustrated below:

Figure 2, illustrates that Ganjar Pranowo is the most prolific Governor in terms of posting activities on his Instagram account, averaging 3.64 posts per day. Meanwhile, Anis Baswedan maintains a productivity level of 1.52 posts per day, Ridwan Kamil with 1.68 posts per day, and Khofifah Indar Parawansyah with as many as 2.82 posts per day. However, the examination results also reveal that despite having the fewest number of posts, Anies engages in discussions about SDGs issues more frequently than other governors. This is due to the fact that every piece of content posted by Anies is pertinent to various interconnected issues simultaneously.





Account Owner	Anies Baswedan	Ridwan Kamil	Ganjar Pranowo	Khofifah Indar Parawansyah
Public Office	Gubernur DKI Jakarta	Gubernur Jawa Barat	Gubernur Jawa Tengah	Gubernur Jawa Timur
Account Creation Date	September 2013	April 2012	Oktober 2015	Februari 2016
Account address	@aniesbaswedan	@ridwankamil	@ganjar_pranowo	@khofifah.ip.
Profile	 aniesbaswedan	 ganjar_pranowo	 ridwankamil	 khofifah.ip
Number of Followers	5.9 M	20.5 M	5.8 M	1 M
Number of posts	4,517	8,308	7,248	5,012

Fig. 1 Observed instagram account data. Source <http://www.instagram.com>, accessed 2023

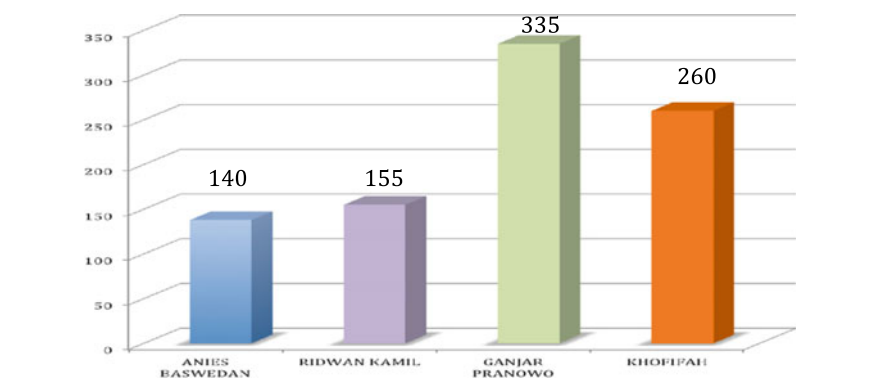
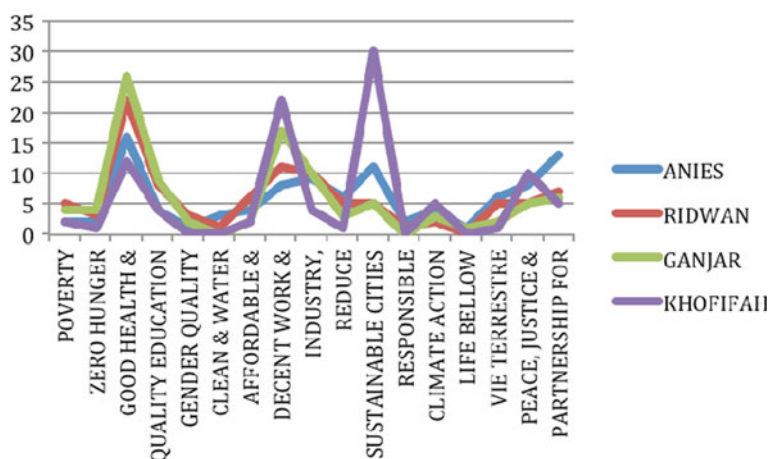


Fig. 2 Number of posts by each governor observed during August–October 2022. Source Research data, 2023

**Content Based on SDGs Goals**

Based on the study’s findings, it is evident that there are variations in the distribution of content on each governor’s Instagram account concerning the SDGs goals. Figure 3 illustrates that Anis Baswedan’s posts heavily emphasize the ‘Partnership’ and ‘Industry, Innovation, and Infrastructure’ aspects. This phenomenon indicates that Anies prioritizes addressing poverty issues in Jakarta through a focus on local government-driven cross-stakeholder collaborations, including those with other city governments abroad. There is an emphasis on facilitating innovative solutions for urban poverty and providing necessary infrastructure to foster collaboration and innovation. This approach aligns with Jakarta City’s motto as a ‘City of Collaboration,’ which Anies has championed throughout his tenure as the Governor of DKI Jakarta.



**Fig. 3** Comparison of posts percentages on 17 SDGs by four governors from August to October 2022. *Source* Research data, 2023

“While Khofifah Indar Parawansya is most prominent in the issues of ‘Sustainable Cities’ and ‘Decent Work and Economic Growth,’ this is relevant to her efforts in increasing employment opportunities for the community and improving the environmental situation of cities in East Java Province. These efforts are certainly relevant to addressing the root causes of poverty in the region.

Ganjar Pranowo is highly prominent in the issue of ‘Good Health and Well-Being,’ although other governors also seem to prioritize this issue. This policy indicates that both Ganjar Pranowo and the other three governors view health and well-being as a strategic entry point for tackling the main problem of poverty.

The graph also shows that, while the average attention level is generally low for all governors, Ridwan Kamil, the governor with the largest following on his Instagram account, allocates a slightly higher percentage of attention to issues directly related to ‘Poverty.’

Based on this observation, researchers note that the four governors, who exhibit strong performance in Java, Indonesia, are attempting to communicate their efforts in addressing poverty issues within their regions by focusing on aspects that target the underlying causes of poverty in their respective areas. This approach is taken instead of directly discussing activities that solely address the theme of poverty alleviation itself.”

### Self-Capacity in Posts

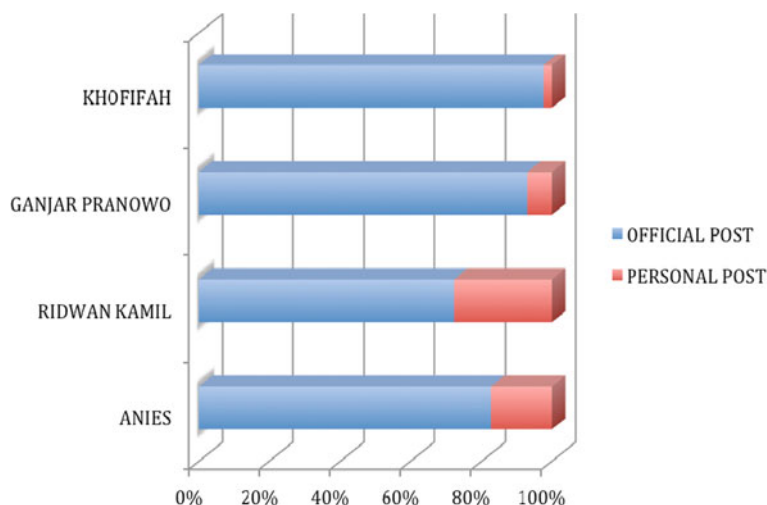
When examining the capacity of the content within posts, it becomes evident that Ridwan Kamil holds the record for sending the highest number of posts in a personal capacity, accounting for approximately 27% of his total posts. In comparison, Anis Baswedan comprises 17.39%, Ganjar Pranowo contributes 6.8%, and Khofifah Indar Parawansyah’s share is merely 2.31%, as depicted in Fig. 2.

Figure 4 illustrates that the observed Instagram account is predominantly utilized by each governor to communicate information pertaining to their roles as public officials. Nevertheless, there are instances when the account is also employed to share personal content. Upon closer examination, it was noted that these personal posts often encompass information related to community service, showcasing positive activities intended as examples for the community, or even discreetly endorsing and supporting products or small businesses operated within the community. Some of these posts directly encourage individuals to purchase or use specific products generated by local small businesses. Theoretically, this implies that the governor leverages their popularity to enhance the visibility of a product or business unit.

Conversely, the governor also gains advantages in the form of increased followers from the public who endorse the product. This phenomenon underscores a pattern of ‘blended mutualism’ objectives evident in each piece of content. On one hand, each governor appears inclined to utilize information on poverty reduction and development to enhance their own popularity. Conversely, their personal popularity is utilized to reinforce information about the poverty reduction and development initiatives that are being undertaken.

### Public Response

Instagram provides features that allow the public to engage with content shared by account holders through actions such as ‘Likes’ and ‘Comments’. The results of this study indicate that information related to development initiatives in the context of poverty eradication garnered significant attention from the public. However, it remains challenging to discern whether the ‘Like’ responses reflect public approval of the policies pursued by each governor or simply appreciation for the content itself. Nevertheless, the ‘Comment’ feature on Instagram enables the public to express



**Fig. 4** Comparison of observed posts by each governor as personal and public officials from August to October 2022. *Source* Research data, 2023



	FOLLOWERS	EVERAGE ‘LIKE’ PER POST	EVERAGE ‘COMMENT’ PER POST
ANIES BASWEDAN	5,900,000	73,220.83	1,860.39
RIDWAN KAMIL	20,500,000	179,147.50	3,616.55
GANJAR PRANOWO	5,800,000	48,243.81	870.04
KHOFIFAH INDAR PARAWANSYAH	1,000,000	36,637.18	171.48

**Fig. 5** Average ‘Likes’ and ‘Comments’ per post on each governor’s instagram account, as observed. *Source* Research data, 2023

support, provide feedback, voice concerns, or contribute additional information regarding the content.

Figure 5 illustrates that Ridwan Kamil’s Instagram account received the highest level of public engagement for the content posted, with an average of over 179,000 ‘Likes’ per post and an average of more than 3600 ‘Comments’ per post. In contrast, Khofifah’s Instagram account received an average of just over 36,000 ‘Likes’ per post and approximately 171 ‘Comments’ per post on average.

The data presented in Fig. 5 also demonstrates that a regional head’s Instagram account with a larger number of followers reaches a wider audience and garners increased public responses.

5 Conclusion and Future Work

Based on the analysis provided above, it can be concluded that the four observed Instagram social media accounts were indeed used by the respective governors: Anies Baswedan (Governor of DKI Jakarta), Ridwan Kamil (Governor of West Java), Ganjar Pranowo (Governor of Central Java), and Khofifah Indar Parawansyah (Governor of East Java) to publicize and communicate their activities, including initiatives related directly and indirectly to poverty reduction. The majority of the content conveys information about the implementation stages of development activities, which are reinforced by endorsements of the objectives and benefits of these activities, aiming to improve welfare and alleviate poverty.

The content on all four Instagram accounts comprises a blend of personal and official capacities. A pattern of ‘blended mutualism’ goals is evident in each content, wherein each governor employs information about poverty reduction initiatives to enhance their popularity. Conversely, their personal popularity is leveraged to bolster information about the poverty reduction development programs they are undertaking.

In conclusion, the content predominantly focuses on development initiatives directly or indirectly linked to poverty reduction efforts. Public responses to these development initiatives, as seen on the Instagram accounts, correlate with the number of followers of each respective account. However, it's important to note that this study solely explores Instagram social media accounts, limiting the scope of the conclusions drawn. Therefore, it is highly recommended to conduct similar research on other social media platforms to attain more comprehensive and robust results and conclusions.

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# Integrated Land and Marine Spatial Information Sharing for Sustainable Coastal Management Growth in Malaysia: A Review



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**Abstract** The development of coastal areas requires efficient and good management. However, there is mutually separated between land and marine agencies in managing and development of coastal area. Therefore, the management of information systems, especially spatial information between land and marine is very important to pay attention to solve this issue. Seamless spatial information management requires an integrated process of sharing spatial information between land and marine. This paper discusses the implementation of spatial information sharing between land and marine in Malaysia. This includes a discussion of the components found in the concept of spatial information sharing itself, namely data, standards, policies, organizations and technology. As conclusion, existing components of spatial information sharing concept that has been utilized before should be reviewed as parallel with the seamless spatial information sharing concept.

**Keywords** Seamless spatial information sharing · Coastal management · Information system management

## 1 Introduction

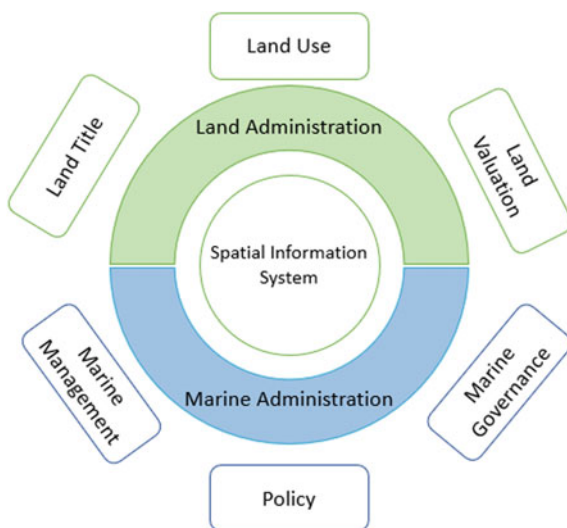
Malaysia is surrounded by sea level [1]. Thus, the administration of the country involves two parts, namely the land part and also the sea part [2]. Figure 1 shows the concept of integration in land administration with the marine which is the cornerstone of the management and administration of coastal areas. Existing land-related as well as marine information systems are ineffective and unsustainable because they

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**Fig. 1** Integration in land-marine management and administration (Adapted: [1, 7, 18–20])



exist in institutions that are mutually separate from each other [3–7]. Therefore, to solve such problems, geospatial information becomes of paramount importance as a problem-solving medium for such overlapping conflicts [1, 8, 9].

Therefore, geospatial data is an important aspect needed by government and private agencies to solve problems in land and marine management and administration [10, 11]. These data are very important to be used as the implementation of decision making (decision support system) [12]. In order to enable geospatial data to help in integrated land and marine development affairs, geospatial data sharing is absolutely necessary. This sharing concept has already started with the sharing of geospatial data from the land surface [13–15]. Then progress to the marine level [1, 16]. However, there are problems when involving the coastal area which is the boundary between the surface of the land and the marine [4]. This is due to the absence of a specialized agency in the administration of coastal areas [17].

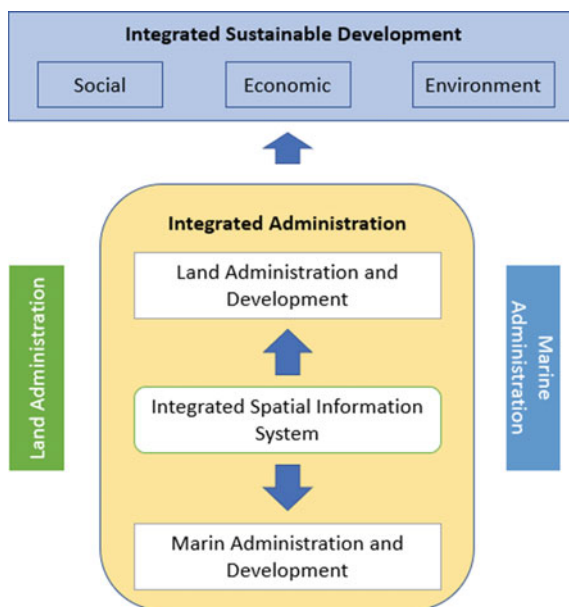
Therefore, there is a need to carry out a study on the method of implementing geospatial data sharing in the area. The structure of this paper discusses the concept of developments in integrated spatial information system between land and marine. Then, this paper discusses about spatial information sharing concept between land and marine along with the components. Finally, the components within spatial information sharing is further described in detail.

## 2 Integrated Land-Marine Spatial Information System

In the sustainability administration in coastal sector, it highly emphasis on the three basic components, namely social, environmental and economic [21, 22] as Fig. 2 shown. In coastal management and administration, it encompasses the integration between land and marine which involves three basic components namely legal (title), fiscal (property valuation), development (land use) and spatial information management, where it is published based on concepts in administration. own soil [19, 23]. Legal information states about the determination of title to an area from land surface to marine, while fiscal information states about the valuation of an area. Finally, information related to land use describes matters related to the planning and development of an area. To integrate these three basic components, the development of an integrated land-marine information system should be developed [24].

In coastal management, spatial information are very important because they are needed for planning, especially in coastal management and development. In addition, there is a need to establish a nationwide database system for coastal management, including standardized and well-coordinated methods in data collection and distribution [5, 9, 25, 26]. In addition, coastal spatial information requires meaningful data so that users can know, understand, view, access and query the spatial information of their choice from the local level to the global level with multiple uses, such as environmental policy development and impact assessment, land use planning, preparedness and preparedness in the face of natural disasters, monitoring and response [1, 5, 27–29].

**Fig. 2** Concept of integrated administration and development (Adapted: [1, 7, 18])



Aspects in the management of coastal area spatial data and information in Malaysia are related to geodetic reference, four-dimensional rights, integration and storage of large data, and spatial databases [27, 30]. To make a nationwide spatial information system successful, issues in integrating spatial data need to be identified and resolved, including issues on geodetic reference frameworks, coastline determination, baseline determination, baseline map scaling and records of importance [30].

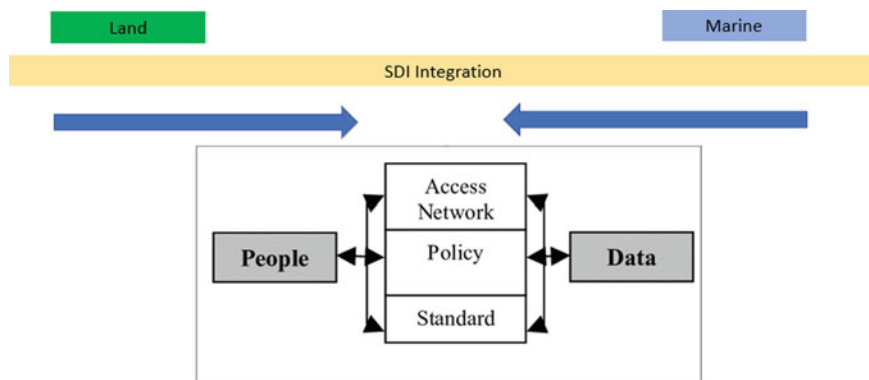
### **3 Integrated Land-Marine Spatial Information Sharing**

Integrated spatial data sharing between land and marine is essential so that integrated geospatial information systems can be enhanced. The development of integrated geospatial information systems can improve the development and administration of coastal areas [29, 31]. With integrated spatial data sharing, the development process of spatially enabled governance can grow. Spatial data sharing can enhance an integration between governance in a government [19] where environmental conservation can be further enhanced, economic development and risk management can be balanced especially in areas of overlap between the two surfaces namely coastal areas [32, 33]. Such processes can further enhance planning as well as decision-making processes [19] and locate and even develop new services as well as applications [3, 34, 35].

Fundamentally, SDI is a framework that involves a combination of five (5) elements, namely data, technology, standards, policies and technology [20]. The development of SDI begins with the land administration stage and is further extended to the marine level [34]. Integrated SDI is a merger between conventional SDI which only covers the land administration area until it is expanded to the marine level [16]. It is very important to pay attention to be in line with the concept of SDI itself, which is the coherence between all spatial information. The development of an integrated SDI is very important for the development of coastal areas because it involves governance between two levels, namely land and marine. Previous studies have shown that there is a need to look at the process of integration of spatial information system development between land and marine administration information.

### **4 Concepts of Land-Marine Integrated Spatial Information Sharing**

The key components in SDI are data, access networks, standards, policies and organizations [36]. Two of them are data and access networks which are static in nature. Data is the main pulse in SDI. To implement spatial data sharing, an access network is absolutely necessary just like the internet by every agency. In spatial data sharing, standards are very important so that there is uniformity and coherence in the process

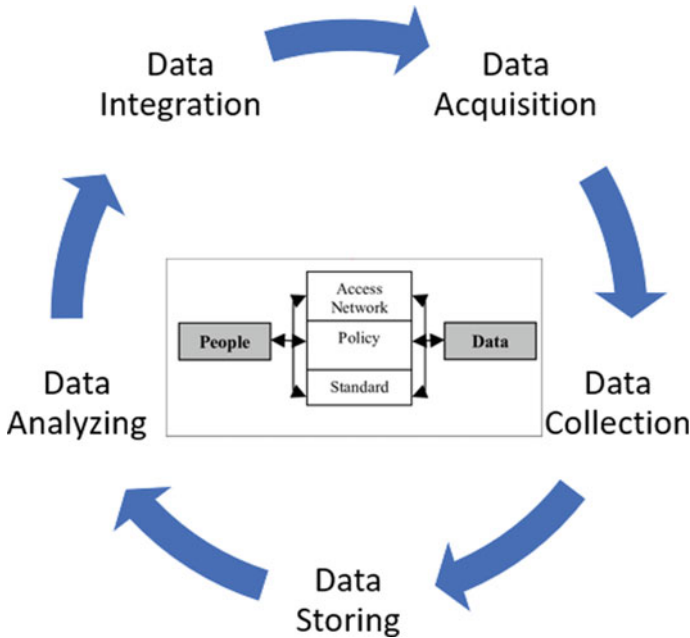


**Fig. 3** : Integrated SDI development (Adapted [1, 36, 39])

[37]. Meanwhile, the policy is very necessary to ensure that the data sharing process can run in accordance with the policy of an agency with each other. Apart from these two components, policies and standards are dynamic components. This is because it depends and according to the current situation and needs which depend on the development of technology.

The concept of integrated spatial data sharing is an extension of the SDI concept which started in the land administration area [14]. Subsequently, the concept of SDI is further developed to the marine level to be in line with sustainable management and administration [19]. However, in order to expand the SDI to the marine area, there is a discrepancy with the existing SDI which is the land surface area. Therefore, the concept of integrated SDI development between land and marine was introduced [35]. Therefore, there is a need to identify several benchmarks such as horizontal as well as vertical levels of partnership [38]. The following Fig. 3 shows the concept of integration in SDI.

Researchers and communities from geospatial discipline must collaborate with each other in various aspects whether it is aspects of acquisition, structuring, analysis, presentation and also the integration of spatial data. This is necessary so that the process of data sharing can be implemented more efficiently [1, 18, 40]. Therefore, cooperation between the agencies involved which involves two different surfaces is very necessary to be developed and established [7, 41]. This can be shown in Fig. 4 as follows. The technology component is a very important component in an integrated SDI. An example is the use of geo-portals where it is based on the concept of the World Wide Web (WWW) where it has helped users to access data and also create integration with any other institutions whether private or public organizations [42].



**Fig. 4** : Integration between GIS and SDI. (Adapted [1, 18, 39, 41])

## 5 Aspects of Land-Marine Integrated Spatial Information Sharing

There are five (5) aspects in developing and implementing of land-marine integrated spatial information sharing. The first aspect is data. In managing coastal administrative, data should be graphically visual so that it is easy to understand [3, 19, 43]. Aspects related to spatial data in coastal areas in Malaysia is the development of a dynamic database to be able to adapt three-dimensional (3D) and temporal (4D) data, data standards, metadata, cataloging, data quality and security issues [30, 32, 44–46]. To facilitate the sharing of spatial information between land and marine, it should be based on the same basic data set where according to the suitability of use in Malaysia. Therefore, the basic data set selected is topographic data for land area and bathymetric data set for marine area [1, 25]. Topographic data in Malaysia is collected by JUPEM. Meanwhile, bathymetry data was collected by the National Hydrographic Center (PHN). Topographic data has been managed under JUPEM with the National Topographic Database (NDTDB) system, while the Batymetry Database has been developed and managed under PHN, and is named as MyBDB (Malaysian Batymetric Database) [1].

One of the components to enable information sharing is standards to facilitate information sharing [19, 46]. Common standards for feature datasets have been developed by the International Hydrographic Organization (IHO), namely S100 (IHO



Geospatial Standard for Hydrographic Data) and S57 (IHO Transfer Standard for Digital Hydrographic Data) [46]. The issue with current practice is that there is a need for research to harmonize international standards, namely S-57 and S-100 with Malaysian Standards. This harmonization is crucial for the coordination of soil SDI with marine. This harmonization is crucial to understanding international standards, and how to incorporate spatial features from international standards into the Malaysian environment and vice versa.

One of the most important aspects in the development of integrated spatial information sharing is cooperation and collaboration between institutions [25, 35]. Integrated spatial data sharing initiatives will involve various parties coming from different backgrounds from each other [1, 7, 47]. The parties involved also come from various levels in government, namely the federal, state, local government, private, educational institutions and research [19]. In Malaysia, the PGN has been known as the main body in coordinating the spatial data sharing process, has several committees as central policy and decision-making bodies on matters related to the implementation, development and operation of MyGDI programs and initiatives [48]. To enable the sharing of Malaysian coastal spatial data, identify key stakeholders, as core committees, and other relevant organizations as support committees as examples of organizations responsible for coastal areas [3, 49–52]. Coastal areas in Malaysia involve varying administrative boundaries and jurisdictions, between neighboring countries, and different levels of organization in federal, state and local Malaysia [53]. This issue has been a challenge to create an integrated implementation of spatial information sharing [29].

The next aspect is the policy. It relates to circulars and regulations that have been issued by government agencies. In Malaysia, several circulars have been issued by MaCGDI and the Government of Malaysia, including circulars on pricing of spatial data (Geospatial Data Pricing and Dissemination Guidelines), development and implementation of MyGDI (Malaysian Geospatial Data Infrastructure and Implementation Guidelines), custodian (Geospatial Data Guidelines), Geospatial Data Center (Geospatial Data Center Guidelines Development and Implementation), data sharing and dissemination (Sharing and Dissemination of Geospatial Information Through MyGDI Guidelines) and Geospatial data standards (Geospatial Information Standards Compliance Guidelines) [54, 55]. The current circular can be used in implementing land spatial data sharing with marines in the Malaysian environment, where the basis of the spatial data circular has been covered by the current circular [56, 57].

Finally, the technological aspect is crucial to enable the sharing of spatial information especially related to coastal areas. Technology is especially important where it is necessary to enable spatial information to be accessed including geospatial elements, searching data, and downloading data [1, 7, 58, 59]. These technologies are usually online web portals, data warehouses, one stop centers, data portals or even online atlases [19, 60]. Technology is absolutely necessary for the provision of access to coastal-related information, and the need to adhere to standards and policies to better interoperate and streamline data transfer [7, 16, 34, 47]. In Malaysia, MaCGDI provides infrastructure in facilitating spatial data sharing, using several initiatives

including MyGDI Explorer, MyGOS, 1Malaysia Map, MyGeoname, MyGeotranslator, MyGDI Data Services and related services for agencies such as Basic Information Systems (SMANRE, Basic Information Systems), Geoinformation for Natural Resources and the Environment (G4NRE), and Geoinformation for Executives (G4E) [61, 62]. MyGDI Explorer is a metadata catalog service that allows users to explore, discover, view and evaluate data spaces from the MyGDI database.

## 6 Conclusion

In conclusion, coastal administration in Malaysia is facing with a problem in term of separately mutual administration between land and marine agencies. So, there is a necessity to give an attention in building a seamless spatial information sharing between land and marine area which covered coastal part. This study can develop knowledge especially in enabling the sharing of spatial data in an integrated manner. This is very important where there is a lack of coordination between land and marine agencies in the management of the coastal sector. Based on previous studies, initiatives to enhance SDI to achieve integration between land and marine have not yet been fully implemented in Malaysia. Therefore, the components in spatial information sharing should be revised carefully which include data, standard, policy, technology and organizational. These component also need to be revised in order to be parallel with the building seamless spatial information sharing based on existing MyGDI initiatives.

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# Impact of the Amethyst Module Implemented on the Micro-Enterprises Program: Disabilities Entrepreneur Group in Kelantan



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**Abstract** People with disabilities are part of society who have equal rights and opportunities to live a quality life like other members of normal society. Nevertheless, the issue of equality of rights and opportunities is rarely discussed by scholars in Malaysia, this is because there is still a lack of exposure to issues of that environment. The occurrence of COVID-19 and the declaration of the Movement Control Order (MCO) has clearly had a double impact on the disabled community from various aspects. Therefore, the study carried out evaluates the impact of the Amethyst Module implemented by micro-enterprises on the group of people with disabilities (OKU). To achieve these objectives, this study was carried out based on a mixed approach by using questionnaires and interviews during monitoring. This study involves 13 people with disabilities in Kelantan who are registered with the Social Welfare Department. The findings of this study illustrate the significant impact of knowledge transfer on a 100% increase in income, in addition to the impact of human and economic capital

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on disabled participants. The results of this study can help various stakeholders, especially the government to provide access to digital technology and knowledge transfer needs, increase income and overcome poverty through entrepreneurial empowerment of disabled people in Kelantan.

**Keywords** Amethyst module · Community · People with disabilities (OKU) · Micro-enterprises

## 1 Introduction

### 1.1 Background of Studies

People with disabilities (OKU) are integral to society and have the same rights and entitlements as other community members [5]. The principle of equal rights and opportunities for people with disabilities is widely recognized and promoted by various international organizations and legal frameworks. Issues related to people with special needs or also known as People with Disabilities (OKU) is always an issue that is often discussed [16].

The United Nations Sustainable Development Goals (SDGs) include a commitment to leave no one behind, including people with disabilities, by ensuring their full and equal participation in all aspects of society [6, 14]. Goal 10 aims to reduce inequalities, and Target 10.2 specifically addresses social, economic, and political inclusion for all, including people with disabilities. Figure 1 shows the Sustainable Development Goals (SDGs) as indicators of empowerment.

Meanwhile, The United Nations Convention on the Rights of Persons with Disabilities (CRPD) is a comprehensive international treaty that promotes and protects the rights and dignity of people with disabilities. It was adopted by the United Nations General Assembly in 2006 and has been ratified by numerous countries worldwide. Article of the CRPD emphasizes that “Persons with disabilities enjoy all human rights and fundamental freedoms on an equal basis with others.”

People with disabled are defined as individuals with long-term physical, mental, intellectual, or sensory disabilities who, when faced with various obstacles, may not be able to engage fully and effectively in society. However, the existence of the OKU policy guarantees equality of rights and opportunities for the disabled group for full participation in society. The policy also prioritizes human rights values such as dignity, honor, and freedom to enable them to live independently [11].

Based on statistics, the number of disabled people in Malaysia is estimated at 2.8 million people, which is 10% of the Malaysian population. According to KPWK, the number of registered disabled persons is still low, namely 540,986 disabled persons who have been registered with the Department of Social Welfare (JKM) as of April 30 this year (2019). To ensure that people with disabilities can be independent and live a prosperous life like other people, the government has provided





**Fig. 1** Sustainable development goals (SDGs)

opportunities for them to participate in the Vocational and Technical Skills Training Program for people with disabilities, as well as offering certification courses [17]. In addition, this job can increase income and provide employment opportunities to the community and the disabled.

The existence of employment opportunities for the disabled is one of the important and rather complicated issues in the labor market. Added to this, employment opportunities and a constant source of income are important elements in ensuring that the disabled can live an independent and independent life without relying too much on the help of others. If the disabled continue to depend on the government or the welfare of non-governmental organizations (NGOs) alone, it is feared that their socioeconomic level will also not develop.

The capacity building program that has been implemented by the research team emphasizes the transfer of knowledge and business skills and entrepreneurship of OKU participants so that they can develop businesses and be active in entrepreneurship. Institute for Poverty Research and Management (InsPeK) which is a center of excellence focusing on the empowerment of poor communities, has implemented many capacity-building programs for selected poor communities in Kelantan.



## 2 Literature Review

### 2.1 *People with Disabilities (OKU) on Micro-Enterprises in Kelantan*

People with Disabilities, also known as OKU (Orang Kurang Upaya), do indeed face numerous challenges and barriers that can lead to socioeconomic disadvantages and poverty [8]. These challenges often stem from societal attitudes, lack of accessibility, and limited opportunities for education and employment.

Opportunities for skills training and vocational education tailored to the needs of individuals with disabilities are often limited, further hindering their prospects for sustainable employment and entrepreneurship. Many individuals with disabilities have limited access to quality education, either due to the lack of accessible facilities or discriminatory practices. Without proper education and skills training, it becomes challenging for them to secure stable jobs and participate in economic activities.

Addressing these challenges requires a multi-faceted approach involving governments, businesses, civil society, and the general public to promote inclusivity, accessibility, and equal opportunities for people with disabilities. Many studies debate the socioeconomics of the disabled which involve some factors of relatively low access, health, the rights of the disabled, the asnaf group and others [2, 4, 11].

OKU is synonymous with individuals who are unable to take care of themselves as a result of deficiencies experienced, especially those involving physical disabilities as a whole [8]. This study related to the disabled is important to guarantee the disabled as entrepreneurs to increase income rights and the need for entrepreneurial knowledge using the Amethyst Module which is equal to the normal group is not ignored.

People with disabilities in Malaysia are generally referred to as special children, children of heaven, disabled, disabled, disabled, and with special needs [4]. These children differ in terms of neurological characteristics, sensory ability, communication ability, behavior and emotions as well as physical characteristics [18]. Therefore, the disabled group is given the right to registration and patronage according to the category of disabled.

### 2.2 *Previous Studies on the Aspect of People with Disabilities (OKU)*

Previous researchers have been drawn to the disabled in highlighting issues, rights and facilities for the disabled so that they can live their daily lives like normal people [12]. The results of the study found the importance of several aspects of facilities and amenities for the disabled. These findings revealed the main issues in many research fields related to facilities for the disabled, jurisprudence related to the disabled, education for the disabled, marriage for the disabled, employment, legal and social.

However, the study of entrepreneurial empowerment is still under-revealed. This study explores the review of previous studies covering the study of the rights of the disabled (Muhammad Shaberi et al., 2022), Application of the Resilience Model to Disabled Entrepreneurs [8], The Position of the Disabled as Zakat [4], Implementation of the principles of sustainable development goals [14] and Improving the Rights of Persons with Disabilities in Malaysia [6].

In addition, previous studies revealed the construction of modules and sustainable development of the disabled [2, 7, 13, 19].

### 3 Methodology

People with Disabilities, also known as OKU (Orang Kurang Upaya), Quantitative study are used to thoroughly questionnaire instruments and qualitative trigulation of interview instruments during monitoring the research topic. This research method was utilizing both secondary and primary data findings involving 14 participants of the Kelantan Disabled Group.

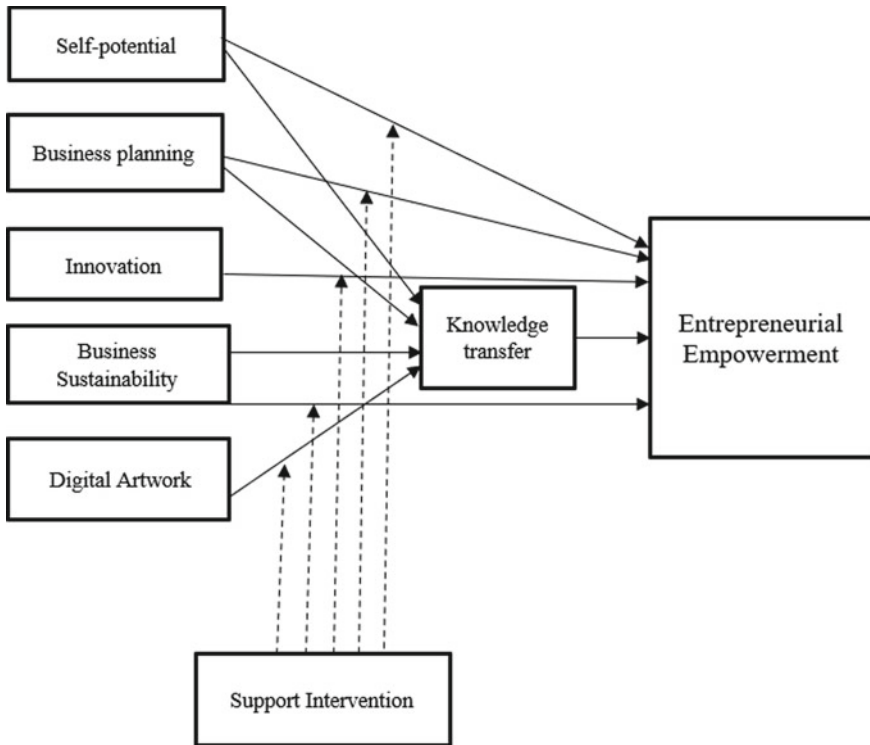
The information that has been obtained is quantitatively analyzed based on the first objective, which is to identify the extent to which the entrepreneurship knowledge transfer module uses the Amethyst Module and evaluate the impact of the Amethyst Module implemented on the entrepreneurship of disabled participants.

In conclusion, the data collection and analysis methodology is believed to be able to achieve the objectives that have been set. The main procedures in this study are related to methodology, research instruments, and methods of data collection and analysis. Finally, the quantitative approach answers the research questions. Meanwhile, the qualitative method uses interviews to answer questions involving the income impact and value of the modules that have been conducted during the study.

## 4 Findings and Discussion

### 4.1 Findings

During the session of modules, a total of 14 participants gave their commitment throughout the implementation of the entrepreneurship empowerment program. Participants consisting of food and service operators always attend the class sessions held even if they live outside the Bachok district. The results of the study show the enthusiasm of the participants in producing Community Coaches (i-COACH) among the participants to help other communities, that is from Community to Community. The finding of the conceptual framework is shown in Fig. 2.



**Fig. 2** Conceptual framework. *Source* Author

Support interventions are crucial to empower and enable people with disabilities to lead fulfilling lives and exercise their rights to autonomy and inclusion. These interventions can come from various sources, including governments, non-governmental organizations (NGOs), community-based organizations, and individuals. Islam interprets work as a necessity and importance to enable people to support the will and life of people including the disabled (Mohd Rizal Mohd Said and Rosmawati Sulaiman n.d.). These support interventions can play a vital role in breaking down barriers and promoting social inclusion, allowing individuals with disabilities to fully participate in their communities and realize their potential in various aspects of life World Health Organization (WHO) (2021).

Meanwhile, psychological support in business is important for the survival of people with disabilities [11]. Work is important and it is necessary to work to meet physical needs such as food security, shelter and clothing. Achieving food security requires addressing issues related to poverty, education, and more for a healthy life either physically, socially or economically [15]. While the spiritual needs are security, love, appreciation and self-perfection.

The findings of the research study show that disabled entrepreneurs who are self-employed full-time strongly expect to always empower entrepreneurship to increase

income in any situation. Knowledge transfer for the Entrepreneurial Empowerment of the Disabled Group increases the income value and productivity of the participants increases by 100% per month by combining online and offline business platforms according to the current suitability. Until now, they continue to improve their potential, demand knowledge and skills, and have an attitude of self-confidence and entrepreneurial innovation to achieve their dreams. Appreciating local knowledge, embracing technology, and controlling the products' quality can give an impact on commodification with the potential to increase domestic economic growth and human capital [1].

For them, business is very compatible with their abilities based on their respective shortcomings. This study is in line with the wishes and needs without complete dependence on other parties. The authorities should think of a special method or platform for the disabled to access and follow the skills process more flexibly.

Therefore, all modules can improve the soft skills of the participants that can be applied in their careers. In addition, helps participants to constantly improve the promotion of business products and services in line with sustainable business. The importance of empowering this module is expected to help participants improve quality and continuous success in business. The objective of this study meets the goal of sustainable development of the scope of the disabled group which includes the transfer of entrepreneurial knowledge and subsequently increasing income. Figure 3 displays the study phase for empowerment in parallel with the SDGs.

## 5 Conclusion

In conclusion, Module 1 (M1) can increase the ability of the participants in terms of awareness about the business world and can provide understanding to the participants related to the main concepts contained. In addition to that, this module also helps participants to prepare the correct business checklist, especially in the financial section, in addition to giving exposure to participants related to strategies that need to be implemented and intensified to ensure the smoothness of the participants' business in the future.

Module 2 (M2) can improve the ability of the participants in terms of knowledge about business planning and can provide understanding to the participants related to the main concepts contained in order to achieve success and blessings in business.

In addition to that, Module 3 (M3) also helps participants to prepare the correct business financial checklist in addition to giving exposure to participants regarding strategies that need to be implemented and intensified to ensure the smoothness of the participants' business in the future. Next, able to improve the ability of the participants in terms of innovation knowledge and creativity of the participants in entrepreneurship.

Meanwhile, module 4 (M4) is a core module that can improve the soft skills of the participants in branding, marketing and sustainability in business that can be applied in the career they pursue. For the sustainability of businesses, digitalization and



**Fig. 3** The phase for empowerment in parallel with the SDGs. *Source* Author

the potential of cutting-edge technology is adaptable and offer customized products [9]. In addition, this module also helps participants to constantly improve existing product branding and marketing techniques by exhibiting ethical product or service branding, business practices, social interaction with customers and finally carrying out sustainable business activities. The importance of this module is expected to help participants improve quality and sustainability in business, even in the period of post covid period [3].

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# Hyper-Personalization, Co-creation, Digital Clienteling, and Transformation in Malaysia



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**Abstract** This study aims to analyse and look into Malaysia's hyper-personalization, co-creation, digital clienteling, and change. Digital clienteling should be regarded as one of the most crucial components of internet firms in the modern business environment. Digital clienteling is a technique used by internet businesses to interact with their consumers in an effort to keep them committed to the brand. Interacting with customers both on and off-site is a component of digital clienteling. It entails being aware of what they have purchased, offering the clients fresh concepts, and encouraging them to shop according to their preferences. The study used quantitative study by distributing online survey forms Malaysian online consumers. Through convenience sampling technique, a total 400 respondents involved in this study and Pearson Correlation was used to analyse the data. The findings demonstrate that there are strong positive relationship between customer adoption and the independent variables such as customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norms.

**Keywords** Attitude · Customer adoption · Customer innovativeness · Customer involvement · Willingness to co-create

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# 1 Introduction

The purpose of this research is to study and investigate the hyper-personalization, co-creation, digital clienteling, and transformation in Malaysia. In today's current business world, digital clienteling is to be considered one of the most important elements in online businesses. Digital clienteling is known to be some sort of engagement of an online business to their respective customers in order to maintain their loyalty towards the company itself [9]. Digital clienteling entails interacting with clients online and off-site. Which means knowing what they have purchased, providing the customers with innovative ideas, and motivating them with their own preference-style shopping [44]. In other words, digital clienteling can be defined as the skillful use of data which is collected in order to create or craft a better personalized customer experience.

Furthermore, digital clienteling serves variety of purposes in online business such as being a retail tactic being used by a company to engage with customers in order to develop or create a long-lasting relationship [19]. By developing an application or software to engage with customers, this is also known as digital clienteling which helps the business to grow or sustain in the industry [27]. Therefore, the purpose of this research is to study Malaysian's online business which implements digital clienteling and customer adoption towards digital clienteling as there is a huge growth in online business sector ever since the pandemic occurs in 2020. Lockdowns became the new normal as more companies and customers went digital and offering and buying more goods and services online. In today's progressively increasing the popularity and consistency of purchasing items or services online, customer loyalty is no doubt to be one of the most important factors that online business companies have to focus on. Maintaining customer loyalty is considered one of the larger problems companies has to face. Digital clienteling is being promoted by everyone as something that consumers demand from the brands they have contact with. As we are looking towards the business trends nowadays, acquiring new consumers is generally more expensive, and they don't typically spend as much as devoted, recurring customers do. Airas [3] states that loyal customers typically generate much higher profits than other types of customers. Customers not only globally, but in Malaysia tends to prefer a personalized shopping experience as they demand to be courted, surprised, and delighted by the services and items provided by the online business platform [8]. Without digital clienteling, this could lead to the downfall of a certain online business platform as one of the main focuses of these companies are customer loyalty.

## 1.1 Research Questions

1. What is the relationship between customer innovativeness and customer involvement?

2. What is the relationship between Customer involvement and willingness to co-create?
3. What is the relationship between Customer innovativeness and willingness to co-create?
4. What is the relationship between Willingness to co-create and adoption?
5. What is the relationship between Attitude and adoption?
6. What is the relationship between Customer involvement and attitude?
7. What is the relationship between Subjective norms and adoption?
8. What is the relationship between Customer involvement and subjective norms?

## ***1.2 Research Objectives***

The objectives of the research are related to customer adoption as given:

1. To examine the relationship between customer innovativeness and customer involvement
2. To examine the relationship between Customer involvement and willingness to co-create
3. To examine the relationship between Customer innovativeness and willingness to co-create
4. To examine the relationship between Willingness to co-create and adoption
5. To examine the relationship between Attitude and adoption
6. To examine the relationship between Customer involvement and attitude
7. To examine the relationship between Subjective norms and adoption
8. To examine the relationship between Customer involvement and subjective norms

## **2 Literature Reviews**

### ***2.1 Customer Innovativeness and Customer Involvement***

Innovation readiness is the extent to which a person may adopt innovation sooner than other counterparts in the system which is meant by “earlier than others” denotes that the adoption period is relatively shorter than that of other counterparts in the system. According to the process by which a person adopts a system [39]. Depending on the antecedents and outcomes of customer involvement in services, there may be conditions that shape the effect of customer involvement on firm performance in different contexts. The research did not adequately address the potential mediating factors that could improve the relationship between customer involvement and performance. The goal of this research is to pursue this line of inquiry further by investigating the possibility that other higher-level strategic options may be preceded by consumer involvement capabilities [11]. When using digital clienteling for hyper-personalization, a customer’s involvement is positively correlated with their industry

innovation. Therefore, in this study, customer innovativeness is defined as the extent to which a person participates in various tasks such as creating, producing, and delivering services is referred to as consumer involvement.

*H<sub>1</sub><sup>a</sup>: there is a relationship between Customer Innovativeness and Customer Involvement.*

## **2.2 Customer Involvement and Willingness to Co-create**

Customer Involvement is the level to which a person engages in activities like designing, manufacturing, and providing services. By doing this, the business is attempting to broaden the scope and function of a person's participation at various phases of the service innovation process in order to suit personal requirements and demands [5, 7, 35]. Previous research had provided a wide variety of classifications for customer involvement). According to the first classification proposed by [16, 23, 34], there are three different types of involvement such as sating, situational, and reaction. Enduring involvement is the sustained identification of a person with a certain service category and is likely to be demonstrated by a thorough information search, brand understanding, and ultimately, brand commitment. Situational Involvement, on the other hand, is a transient phenomenon in which a person becomes interested in a situation, typically a buying decision. Customer adoption is driven by customer involvement, individual participation increases the tendency for adoption intention and, as a result, behavioural change. The process of customer acceptance is driven by fashion, and then when people become involved, they are more inclined to change their attitude and will be more likely to use the service in the future. Therefore, the involvement of a customer is favourably correlated with adoption intention for hyper-personalized digital clienteling.

*H<sub>1</sub><sup>b</sup>: there is a relationship between Customer Involvement and Adoption.*

## **2.3 Customer Innovativeness and Willingness to Co-create**

The degree to which an innovation is accepted independently is measured by customer innovativeness. Another definition of innovation is how quickly some people accept new ideas compared to other system participants [29]. All the other times, online purchasing practises, eco-innovative adoptions, eco-friendly consumer behaviour, and pro-environmental behaviour are all examples of customer innovativeness. Moving onto willingness to co-create, co-creation is a business strategy in which a company includes customers in the process of developing products and making decisions, giving them the opportunity to provide ideas and input, provide feedback, or select from a variety of potential options. When assessing consumers' propensity to participate in co-creation activities, it's critical to consider their underlying

motivations for doing so [10]. However, depending on the specific service setting, the significance of their motivations may change. This occurs during examining how service contexts affect consumers' co-creation motivations. There is a correlated positive relationship between customer innovativeness and willingness to co-create as consumers have a practice on purchasing items or services online, the process of co-create occurs at the same time. Besides, customer co-creation is a phenomenon, and both management theory and practise have recognized its importance for cutting-edge technology-based services [21]. Therefore, the willingness of a customer to co-create using digital clienteling for hyperpersonalization is favourably correlated with their innovativeness.

*H<sub>1<sup>c</sup></sub>*: there is a relationship between customer innovativeness and willingness to co-create.

## **2.4 Willingness to Co-create and Adoption**

Co-creation occurs when businesses involve outsiders in the ideation and development process. Most businesses work hard to keep new products and procedures under wraps, and some even keep them entirely internal. Co-creation, on the other hand, allows businesses to collaborate outside of the workplace to generate new ideas and challenge their own established practices. They openly admit that they are not the only ones who have the answers and make it easy for others to find them. There are various characteristics of a person that can be used to predict their behaviour toward innovation and their intention to adopt innovative or personalized services and products in the case of the online business industry [2, 37]. Co-creation is all about giving your customers a voice and involving them in the ideation process for your goods or services. Customers find this to be very engaging because it gives them a sense of involvement with a company they already adore. Moving onto adoption process through the willingness to co-create by customers, customer adoption describes the process through which a company brings a new product to market and attracts both new and returning customers. From product awareness through product integration into a customer's life, it is considered a whole process [38]. Customer adoption revolves around this. It involves assisting clients in utilizing new goods and services that your customer success company provides. This is frequently referred to as product adoption. So, when customers willingly to co-create a certain product or a service through digital clienteling in order to hyper-personalize purposes, they adopt to it. Hence, the motive to use digital clienteling for hyper-personalization is positively correlated with a customer's willingness to co-create in the industry.

*H<sub>1<sup>d</sup></sub>*: There is a Relationship Between Willingness to Co-create and Adoption.

## 2.5 Attitude and Adoption

Every consumer has their own personality, and it can influence their perception and perceive their online shopping behaviors [43]. According to Delafrooz et al. [15], it is important for retailers to understand their target customer to ensure the success of online business. Given that internet shopping is still in its early stages, little is known about consumer attitudes toward new shopping channels and the factors that influence their attitudes toward them [22]. There are many online businesses that attract their customer through website by offering them product and service. For example, they gain customers through games, social networking, e-commerce, news, videos, and messaging. Entrepreneurs add new features to keep viewers coming back and attract new customers in order to maintain customer attention. Zahid and Haji Din [45] state that the online purchase intention is a very critical and fascinating in today's e-environment and it has direct involvement in customer decision making term of purchase. According to Gefen and Straub [18] that the technological adoption can be affected by the perceive social presence of medium and suggested that the perception of website social presence can positively influence user trust and intention in an online context.

$H_1^e$ : there is a relationship between Attitude and Adoption.

## 2.6 Customer Involvement and Attitude

Customer involvement is a state of mind that can motivate a consumer to make a purchase and the value that a consumer places on a product or service. According to Zhang et al. [46], companies benefit from involving customers in innovation. Companies are embracing the concept of involving customers as co-creation partners in their innovation efforts, rather than viewing them as buyers at the end of value chains. Consumers were traditionally value exchangers or extractors [42], but they are now sources of co-created value, providing firms with new advantages. According to Ruiz-Molina and Gil Saura [40], customer perceived value is subjective because it involves an evaluative judgement and the value received by the consumer has component numbers that together determine their significance.

$H_1^f$ : There is a Relationship Between Customer Involvement and Attitude.

## 2.7 Subjective Norms and Adoption

Subjective norms have been seen as a crucial aspect for analyzing a person's behavioural purpose [4]. Social norms have a significant impact on an individual's behavioural intentions, which in turn affects conduct and modifies how an individual

perceives his or her close friends and family. According to Gong [20], subjective norm refers to how an individual believes he or she should behave and how others would judge their behaviour in a specific cultural and social environment. As the hypothesis stated above, the positive relationship between subjective norms and adoption can be happen if most customer give a good reaction about how useful digital clienteling to their life. Other person perspective can influence customer to trust and accept digital clienteling that able to hyper-personalization their online shopping experience. Adoption to digital clienteling in an online shopping and business able to develop a better experience for both customer and company to understand the demand in the market. Adopting digital clienteling have a positive relationship between subjective norms are due to the modern world where people choose to live with a minimalist concept. They tend to avoid waste for example, so a customizable products and services is going to be their choice. A hyper-personalization of digital clienteling can also help customer to prevent them from spending much time in finding and choosing variety of products in the market. A positive relationship between these two variables is showing the effect of subjective norms that can influence customer to adopting digital clienteling. We strongly believe customer would accept digital clienteling with a positive subjective norm is preferred to it.

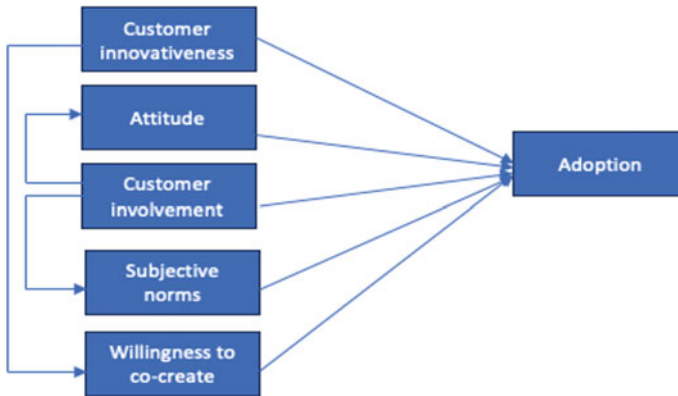
*H<sub>1<sup>g</sup></sub>*: there is a relationship between Subjective Norms and Adoption.

## 2.8 Customer Involvement and Subjective Norms

Subjective norms are basically related with customer believes and customer involvement is obviously the participation of the customer in digital clienteling. Both of these variables are related because it is about the client itself which customer. It is strongly believing that it going to be a positive relationship since the source of the variables are from the same core. If subjective norms of digital clienteling giving a positive outcome, automatically customer involvement will show a positive result due to the trust that already built. So, the intention to adopt is favourably correlated with a customer's subjective norms when using digital clienteling for hyper-personalization. Customer would interest to try and adopting digital clienteling if subjective norms resulting a positive outcome. Customer would voluntarily involve in hyper-personalizing their online shopping experience as the result from a positive subjective norm about digital clienteling.

*H<sub>1<sup>h</sup></sub>*: there is a relationship between Customer Involvement and Subjective Norms.

Therefore, the current study has proposed a conceptual framework based on the proposed hypothesis elements to explain the adoption intention towards hyper-personalization through digital clienteling in the online business which is shown in Fig. 1.



**Fig. 1** Conceptual framework based on hypothesis

### 3 Methodology

#### 3.1 Research Design and Sampling

In this study, quantitative research design was used to understand the relationship between dependent variables which is adoption and independent variables which are customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norms. Furthermore, a correlational design was chosen to examine the relationships between the study variables. The quantitative technique was used in this study because it is more objective in examining and interpreting the relationship between the independent variables and the dependent variables. This study aims to identify the customer adoption towards hyper- personalization, co-creation, digital clienteling and transformation in Malaysia. For example, Malaysia's eCommerce market is stronger than ever due to the COVID-19 pandemic, which has driven more customers than ever to shop online for goods and services, as well as technological improvements that have increased the country's overall internet penetration rate. A total of 400 Malaysian respondents were involved in this study. Sample size is determine using non-probability sampling method which is convenience sampling method because there are no specific number of online shoppers in Malaysia.

#### 3.2 Research Instrument Development

Our study considers five primary elements that are reflected in customer adoption in digital clienteling in Malaysia which are customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norms. Part A of the questionnaire is included with the demographics of the respondents, including age,

**Table 1** Pearson correlation coefficient

Correlation coefficient size	The strength of the relationship
1.00	Perfect positive correlation
0.50 to 1.00	Strong positive correlation
0.50	Moderate positive correlation
0 to 0.50	Weak positive correlation
0	No correlation
0 to $-0.50$	Weak negative correlation
$-0.50$	Moderate negative correlation
$-0.50$ to $-1.00$	Strong negative correlation

gender, race, marital status, occupation, and educational status. As for Part B, there will be questions which will be related to our independent variables which include customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norm. This goes to the same onwards to Part C which relates to our dependent variable, adoption is used in questionnaire form.

### 3.3 Data Analysis

Pearson correlation analysis was used to test the relationship of the variables. According to Gilchrist and Samuel [41], Pearson Correlation Coefficient is a statistical metric or method that measure the existence given by a (p-value) and strength given by correlation  $r$  between  $-1$  and  $+1$  of a linear relationship between dependent variables and independent variables. In this research, Pearson correlation is used to define and evaluate the relationship between intention to use dependent variable and perceived usefulness, perceived ease of use and service trust independent variable. This analysis is used to check or identify whether the hypothesis can be accepted or not (Table 1).

## 4 Findings and Result

### 4.1 Demographic Analysis

The highest number of respondents were female with 242 respondents and the majority of the respondents were at age 18–24 years old (210 respondents) followed by age 25–30 years (102 respondents). Malay races were recorded the highest number of respondent (268 respondents), followed by Chinese (76 respondents), Indian (53 respondents) and others (3 respondents). Majority of the respondents were the students (197 respondents) and only 22 respondents were recorded unemployed.



**Table 2** Summary of the mean and standard deviation for all variable with sample size class with 400 respondents

Descriptive statistics		
Variables	Mean	Std. Deviation
Customer innovativeness (IV_1)	4.2535	0.65491
Willing to co-create (IV_2)	4.1220	0.71118
Customer involvement (IV_3)	4.2500	0.64213
Attitude (IV_4)	4.2285	0.71901
Subjective norms (IV_5)	4.2195	0.69551
Adoption (DV)	4.2615	0.70139

Majority of the respondents stated that the often shop at Shopee, Tik Tok Shop and Lazada.

## 4.2 Descriptive Analysis

The summary of the mean and standard deviation for independent and dependent variables. For dependent variables, adoption show of mean 4.2615 and the standard deviation was 0.70139 respectively. For the independent variable, the first is the Customer Innovativeness of mean shows 4.2535 and the standard deviation is 0.65491. The second is Willing to Co-create show the mean shown at 4.1220 and the standard deviation was 0.71118. The third is Customer Involvement shown the mean shows 4.2500 and the standard deviation was 0.64213. For the fourth is Attitude show the mean shows at 4.2285 and the standard deviation was 0.7190. Therefore, the last mean is Subjective Norms was 4.2195 and the standard deviation is 0.69551 (Table 2).

## 4.3 Reliability Test

In this research, there are five questions that act as item in this test were used to measure the adoption is 0.894 which resulted as a good strength of internal consistency. The customer innovativeness is the independent variable were measured using five questions that worked as items in this test. The Cronbach's Alpha for this variable is 0.870 which is shown as good. Five questions that act as items in this test were applied to measure willing to co-create is 0.912, indicating that there is an excellent level of internal consistency. For the customer involvement, attitude and subjective norms is the independent variable were measured using five questions that worked as items in this test. The Cronbach's Alpha for this variable is 0.891 for customer involvement, for attitude is 0.899 and for subjective norms is 0.876 a which is shown as good (Table 3).

**Table 3** Reliability test for all variable

Study variable	Number of respondent	Cronbach's alpha	Remarks
Adoption	400	0.894	Good
Customer innovativeness	400	0.870	Good
Willing to co-create	400	0.912	Excellent
Customer involvement	400	0.891	Good
Attitude	400	0.899	Good
Subjective norms	400	0.876	Good

**Table 4** Test of normality of all variables

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Adoption (DV)	0.159	400	0.000	0.880	400	0.000
Customer innovativeness (IV_1)	0.127	400	0.000	0.890	400	0.000
Willing to co-create (IV_2)	0.119	400	0.000	0.925	400	0.000
Customer involvement (IV_3)	0.126	400	0.000	0.893	400	0.000
Attitude (IV_4)	0.142	400	0.000	0.878	400	0.000
Subjective norms (IV_5)	0.131	400	0.000	0.901	400	0.000

## 4.4 Normality Analysis

Table 4 shows the normality test for the dependent variable (adoption) and independent variable (customer innovativeness, willing to co-create, customer involvement, attitude, subjective norms). Kolmogorov-Smirnova was used in this study due to more than 50 respondents. It can see that significance was 0.000 which is less than 0.05. It assumes as a normal data and significance.

## 4.5 Hypotheses Testing

### 4.5.1 Customer Innovativeness and Customer Involvement

Table 5 shows the Relationship between customer innovativeness and customer involvement. Based on the result that was run in SPSS analysis of data, the significance of value for the customer innovativeness is below 0.05 and while the p is

**Table 5** Customer innovativeness and customer involvement

		Customer involvement
Customer innovativeness	Pearson correlation	0.817
	Sig. (2-Tailed)	0.000
	N	400

**Table 6** Customer involvement and adoption

		Adoption
Customer involvement	Pearson correlation	0.691
	Sig. (2-Tailed)	0.000
	N	400

less than 0.05 and that means we reject the null hypothesis and accept the alternative hypothesis. This proves that there is a significant relationship between customer innovativeness and customer involvement in Malaysia. After that, for Pearson correlation is 0.817 that indicates a strong positive correlation between customer innovativeness and customer involvement. Therefore, hypothesis 1 is accepted.

#### 4.5.2 Customer Involvement and Adoption

Table 6 shows the relationship between customer involvement and adoption. Based on the result that was run on SPSS data analysis, the significant value for the customer involvement is below 0.05 while p is less than 0.05 and that means we reject the null hypothesis and accept the alternative for the hypothesis. This proves that there is a significant relationship between customer involvement and adoption in Malaysia. After that, the Pearson Correlation is 0.691 that shows a strong positive correlation between customer involvement and adoption. Therefore, hypothesis 2 is accepted.

#### 4.5.3 Customer Innovativeness and Willingness to Co-create

Table 7 shows the relationship between customer innovativeness and willingness to co-create. Based on the result that was run on SPSS data analysis, the significant value for the customer's innovativeness is below 0.05 while p is less than 0.05. This proves that there is a significant relationship between customer innovativeness and willingness to co-create in Malaysia. After that, the Pearson correlation is 0.740 that shows a strong positive correlation between customer innovativeness and willingness to co-create. Thus, hypothesis 3 is accepted.

**Table 7** Customer innovativeness and willing to co create

		Willingness to co-create
Customer innovativeness	Pearson correlation	0.740
	Sig. (2-Tailed)	0.000
	N	400

**Table 8** Willingness to co-create and adoption

		Adoption
Willingness to co-create	Pearson correlation	0.697
	Sig. (2-Tailed)	0.000
	N	400

#### 4.5.4 Willingness to Co-create and Adoption

Table 8 shows the relationship between willingness to co-create and adoption. Based on the result that was run on SPSS data analysis, the significant value for the willingness to co-create is below 0.05 while p is less than 0.05. This proves that there is a significant relationship between customer willingness to co-create with customer adoption in Malaysia. After that, the Pearson correlation is 0.697 that indicates strong positive correlation between customer willingness to co-crease with customer adoption. Hence, hypothesis 4 is accepted.

#### 4.5.5 Attitude and Adoption

Table 9 shows the relationship between customer attitude with customer adoption. Based on the result that was run on SPSS data analysis, the significant value for the customer attitude is below 0.05 while p is less than 0.05. This proves that there is a significant relationship between customer attitudes with customer adoption in Malaysia. After that, the Pearson correlation is 0.689 that shows a strong positive correlation between customer attitude and customer adoption. Therefore, hypothesis 5a is accepted.

**Table 9** Attitude and adoption

		Adoption
Attitude	Pearson correlation	0.689
	Sig. (2-Tailed)	0.000
	N	400

**Table 10** Customer involvement and attitude

		Attitude
Customer involvement	Pearson correlation	0.765
	Sig. (2-Tailed)	0.000
	N	400

**Table 11** Subjective norms and adoption

		Adoption
Subjective norms	Pearson correlation	0.700
	Sig. (2-Tailed)	0.000
	N	400

**4.5.6 Customer Involvement and Attitude**

Table 10 shows the relationship between customer involvement and attitude. Based on the result that was run on SPSS data analysis, the significant value for the customer involvement is below 0.05 while p is less than 0.05. This proves that there is a significant relationship between customer involvement and attitude in Malaysia. After that, the Pearson correlation is 0.765 that shows a strong positive correlation between customer involvement and customer attitude. Therefore, hypothesis 5b is accepted.

**4.5.7 Subjective Norms and Adoption**

Table 11 shows the relationship between subjective norms with adoption. Based on the result that was run on SPSS data analysis, the significant value for the subjective norms is below 0.05 while p is less than 0.05. This proves that there is a significant relationship between subjective norms and adoption in Malaysia. After that, the Pearson correlation is 0.700 that shows strong positive correlation between subjective norms with adoption. Therefore, hypothesis 6a is accepted.

**4.6 Customer Involvement and Subjective Norms**

Table 12 shows the relationship between customer involvement with subjective norms. Based on the result that was run on SPSS data analysis, the significant value for the customer involvement is below 0.05 while p is less than 0.05. This proves that there is a significant relationship between customer involvement and subjective norms in Malaysia. After that, the Pearson correlation is 0.775 that indicates a strong positive correlation between customer involvement with subjective norms. Therefore, hypothesis 6b is accepted.

**Table 12** Customer involvement and subjective norms

		Subjective norms
Customer Involvement	Pearson Correlation	0.775
	Sig. (2-Tailed)	0.000
	N	400

## 5 Conclusion

Digital clienteling is used for more than just online commercial transactions. Additionally, digital clienteling acts as a tool to connect with online shoppers via SMS, video, live chat, or email to provide assistance, respond to inquiries, give tailored recommendations, or follow up on previous encounters. Hence, this study describes 5 variables which are customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norms that can influence the customer adoption towards digital clienteling in Malaysia. The variable that has the greatest impact on customer adoption in digital clienteling is customer involvement. Customer involvement is known to influence the most on customer adoption in digital clienteling is because digital clienteling requires spontaneous interaction and communication between online business and customers. This is because customers will remember your brand if you engage them and make their experience better. The longer you can keep them, and the more devoted they will be to you, the better involved they are. By including customers, the supplier should be able to provide better functional specifications, alter product designs to save production costs, or create designs that more closely address the unique demands and issues of customers. Secondly, customer innovativeness. The ability to foresee market shifts allows innovators to offer clients solutions before they even realise they are in need of them. Therefore, customers' innovativeness must be met on an ongoing basis unless innovation is valued and utilised. Thirdly, willingness to co-create. Co-creation of value is a business approach that supports and promotes active client participation in the production of on-demand and made-to-order goods. Consumers receive exactly what they desire through co-creation and participate in its creation. Next, attitude. Businesses need to understand customer attitude to make better judgements about the goods and services they offer. Businesses can modify their offers to better meet the requirements and preferences of their target market by comprehending why consumers buy products and how they use them. Lastly, subjective norms. According to subjective standards, consumers' behavioural intentions are driven by their perception of social pressure. Thus, people who adhere to subjective norms are more likely to act in accordance with what their peers believe they ought to do. The initial and main purpose of this research is to determine and identify the relationship between the customer adoption towards digital clienteling with 5 independent variables such as customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norms. In this study, the correlation between the variables is in range of 0.691–0.721 which indicates there is a strong positive relationship between the dependent variable and

the independent variables. This suggest that customer innovativeness, willingness to co-create, customer involvement, attitude, and subjective norms heavily influences on customer adoption in digital clienteling in Malaysia. Nevertheless, this study shows that all those 5 independent variables are accounted for customer adoption towards digital clienteling in Malaysia.

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# Do Economic Development, Credit, Globalization and Human Capital Reduce Poverty in India? Econometric Evidence from Quantile Regression Approach



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**Abstract** The key objective of the present study is to examine the role of macroeconomic variables on poverty in India for the period from 1980 to 2019. In the study, the total number of persons below the poverty line is the dependent variable on the other side, the economic development, credit, globalization and human capital are the regressors. The time-series data-set have been sourced from globally renowned websites such as *Knoema online* database, *World Economic Indicators* and *KOF Swiss Economic Institute*. The quantile regression technique has been employed, as the variables in our model have not met the conditions of linear regression such as linearity, homoscedasticity and normality. The estimated result illuminates some interesting insights that both economic growth and availability of credit have decreased the level of poverty with varying magnitudes. Shockingly, it is globalization, which increases the level of poverty in India over the study period. These results have very strong implications for policy modelling in developing countries like India.

**Keywords** Economic development · Credit · Globalization · Human capital · Poverty

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## 1 Introduction

The term poverty is a multifaceted socio-economic issue on the planet. Right from the eighteenth century, scholars and globally celebrated organizations such as the World Bank, Asian Development Bank, UNO and so on are trying to scientifically define the term and understand the various facets of poverty [24, 56, 58]. Among the available resources, the most influential definition on poverty is given by the World Bank as “*pronounced deprivation in well-being, where well-being can be measured by an individual’s possession of income, health, nutrition, education, assets, housing, and certain rights in a society such as freedom of speech*” [59]. This definition is more or less consistent with other prominent definitions given by Townsend [57], Sen [51], the United Nations [59], and Haughton and Khandker [23]. Because of the ill-effects and negative impacts on society, resources and economic growth, poverty related study reminds as a central topic in the domain of economics, sociology and other social sciences. Though governments in different parts of the world have been introducing different types of programmes and welfare packages to eradicate poverty, still this socio-economic problem exists and it is pervasive in the case of underdeveloped and developing countries like India. Hence, considering the relevance of the research issue, the present study is an attempt to examine the impact of the macroeconomic variables on the existing poverty in the Indian premises for the period from 1980–2019. The quantile regression model employed on the time-series variables yields some interesting outputs such as both economic growth and credit have reduced the poverty level substantially. More interestingly, it is credit, which reduced the level of poverty with higher level of magnitude than that of economic growth. Shockingly, globalization increased poverty in the Indian context, while human capital failed to influence the poverty at significant level.

## 2 Literature Review

Poverty related research is a well-flourished area in academic. Studies, by Imai and Azam [25], Berhane and Gardebroek [7], Dollar and Kraay [18], Ravallion and Datt [46], Besley and Burgess [8], Khandkar [30], Ravallion and Chen [45], Kraay [32], Kando et al. [29], and Collins et al. [12], found that both the increase in economic growth and expansion of consumption of the society have decreased the poverty level substantially. Finance plays a significant role in all walks of human life. Schumpeter [50] and Lewis [34] in their influential works identified the role of finance in overall economic development in an economy. It is generally believed that finance acts as a herculean weapon in eradicating poverty and enhancing the standard of living of the people. In this connection, Stiglitz [53] Jililan and Kirkpatrick [27], Jalilian and Kirk Patrick [28] and Jeanneney and Kpodar [29] observed symbiotic relationship between financial underdevelopment and poverty rate. This conclusion is more or

less tandem with the research findings of the World Bank [59], Ravallion and Datt [46], Dollar and Kraay [17].

The nexus between globalization and poverty is in apex place in the academic debate right from the inception of the open door system. In this regard, Santarelli and Figini [47] opined that globalization reduces poverty through the enhancement of trade and economic growth. In two prominent research works, famous scholars such as Krueger [33] and Bhagwati and Srinivasan [9] revealed that globalization reduced the poverty level by employing low-cost labours of developing countries. In the similar fashion, Davis and Mishra [16], Harrison [22], Easterly [20], Lundberg and Squire [35], Milinkovic and Squire [22] and Bergh and Nilsson [6] identified the significant role played by globalization on poverty alleviation through trade. The importance of human capital on economic development was properly documented by scholars viz., Becker et al. [2], Mincer [38] and Galor and Tsiddon [21]. In the seminal works Becker [59], Asaju [1], Chikelu [11], and Olopade et al. [42] examined the influence of human capital in eradicating poverty via obtaining suitable job and enhancing income. In the Indian context, authors such as Dandekar and Rath [13], Kohli [31], Patnaik [43], Datt and Ravallion [15], Mehta and Shah [36, 37], Sundaram [54], Roy and Weide [10], Bhalla et al. [10], very recently Das et al. [14] and Jain et al. [26] have studied about different dimensions of poverty including the impact of Covid pandemic on poverty. The data-set, models and conclusions of these research studies vary widely. Though a quite number of studies conducted, there is a paucity of research endeavor that how the macroeconomic variables affect the level of poverty in the recent decade, that too in the Indian context.

### 3 Data, Methods and Estimation Procedure

In this study an attempt is made to address a research question that *what are the roles of macroeconomic variables on the existing poverty in the Indian premises?* In order to empirically examine this research question, the time-series data on the total number of persons living below the poverty line (as per the World Bank's yardstick) has been collected from *Knoema online* database for the period from 1980 to 2019. The data-set is irregular even in the *Knoema online* database, hence we used *linear interpolation technique* to overcome this problem. When the poverty is the dependent variable, some pertinent macroeconomic variables such as economic growth, credit, globalization and human capital are the independent variables. Except the globalization index, all other variables have been sourced from the globally distinguished data-base published by the **World Bank** such as the *World Development Indicators*. The globalization index has been extracted from online database provided by the *KOF Swiss Economic Institute*. At first we examined the conditions of linear regression such as linearity, homoscedasticity and normality. But the results of these experiments revealed that the variables employed in our mode have not met the conditions of linear regression. Hence, we relied upon the quantile regression model. The functional form of quantile regression model as follows:

$$Q(B_k) = \sum_{i: y_i \geq X_i'\beta}^N q|Y_i - X_i'\beta_k| + \sum_{i: y_i < X_i'\beta}^N (1 - q)|Y_i - X_i'\beta_k|$$

4 Results and Discussion

Based on the previous literatures and streamed body of knowledge in the real world, the present study is an attempt to empirically investigate the role of macroeconomic variables on poverty in the Indian context. The time-series variables included in our model produced some insights that the condition of linear regression such as linearity, homoscedasticity and normality are not met. As it is evidenced from the result of the Histogram for normality check presented in appendix Chart-1 (probability value is < 0.5%), the result of the serial correlation LM test presented in appendix—Table 1a (the residuals are serially correlated as the p-value is less than 0.5) and the result of the Breusch Pagan Godfrey presented in appendix—Table: 1b (the residual suffer from Heteroscedasticity as the P value is less than 0.5). Since it has no strong distributional assumptions, we employed the quantile regression model to achieve our target in the research. Side-by-side, we constructed our broad hypothesis as follows: ***H<sub>0</sub>: there is no significant impact on LPBPL due to LGDPG and LCRE.***

The result of the quantile regression model presented in Table 1 revealed that the adjusted R<sup>2</sup> square value is 0.31, which indicates that all the independent variables explain the dependent variable at the rate of 31 per cent. The Quasi-LR statistics is 20.2 and the Quasi-LR probability value is 0.000, which testify that the model is

**Table 1** Result of quintile regression (Median)

Variables	Co-effic	Prob	Result on poverty
GDPG	−0.035	0.030	−tive
CRE	−0.560	0.045	−tive
GI	0.675	0.067	+ tive
HC	−0.768	0.188	No sig impact
C	22.166	0.000	
	Pseudo R-squared	0.389	
	Adjusted R-squared	0.318	
	Quasi-LR statistic	20.200	
	Prob (Quasi-LR stat)	0.000	

Source Computed from the World Bank and KOF Data

stable. Further, it can be understood that each independent variable influences the dependent variables at varying magnitudes.

The economic growth has meaningfully influenced the poverty at 5% level of significance and the co-efficient is  $-0.03$ . This value indicates that a one per cent increase in the economic growth of India just decreases the poverty at the rate of 0.03%. Though, it can be argued that the economic growth of this nation has contributed to poverty alleviation, it is not in an appreciable level. In other words, the poor people are able to taste the fruits of economic growth in the Indian context but, not at the fullest extent. Hence, government should take necessary steps to enact the inclusion policy intensively, so that the wealth cake to be disseminated to the low-income group. According to this study, credit decreased the level of poverty at 5% level of significance. At the same time, the size of co-efficient is 0.56, which demonstrates that one per cent increase in the credit disseminated to the society decreased the level of poverty at the rate of 0.56 per cent. Hence, more number of credit programmes should be introduced/channelized in the future to ensure self-employment and enhance the standard of living of the poor people in India. In the recent period, government of India has removed some welfare programmes and even reduced the allocation in the budget. Hence, both the central and the state governments should roll-back and protect the poor from the ill-effects of poverty as it fades the nation's image even in the global forum. Hence, the framed hypothesis that *there is no significant impact on LPBPL due to LGDPG and LCRE gained support from our analysis*.

Many developing countries have recently introduced the liberalization, privatization globalization by expecting some positive changes in their economy and society. The ground reality says that the movement of capital, commodities, human capital, and information across the globe created some positive marks on different parts of the world. But, shockingly, in the Indian context globalization increased the level of poverty. The estimated result revealed that 1% increase in globalization increased the level of poverty at 0.67%. Hence, it is visible that the globalization process benefits only a section of people such as global level business elites, high-skilled workers and industrial owners. Hence, government of India should ensure opportunities for poor people, at-least for their minimum survival, while opening its door for global players.

Adam Smith [52] is the first classical economist, who propounded that the human capital increases the wealth of the society. Following his pioneer work, researches such as Becker [3, 4], Schultz [48, 49] and Mincer [39–41] largely recognized the importance of human capital in augmenting economic growth and enhancing the welfare of the society. In this research, the empirical result illuminates that the existing human capital is not sufficient to get suitable employment opportunity, to increase earning and to eradicate poverty in India (as the p-value is not significant even at 10% level). In other words, it can be interpreted that there is a mismatch between the human capital and labour market. Hence, enhancing the educational infrastructure, vocational education, on the job training and special training for unemployed youths are the need of the hours by pumping money to educational sector.

The result of the quantile process has been prepared for 5 quantiles as we have included 4 regressors in our estimation. The result presented in Table 2 explicates that the p-value of economic growth is significant at all the quantiles. In the 20th quantile, the economic growth increased marginally at the rate of 0.03, but slightly increased the 40th quantile, thereafter decreased significantly. In the case of credit, the co-efficient value has been decreasing continuously from 20th quantile to 80th quantile with varying significant levels. But, there is a symbiotic relationship between globalization and the total number of people living below the poverty line. The co-efficient value of globalization revealed an opposite picture that it has been increasing up to the 60th quantile and thereafter decreased substantially. The co-efficient value of human capital has been decreasing substantially right from the 40th quantiles without significant level of p-values.

The results of the quantile slope equality test and symmetric quantile are presented in the first and second parts of Table 3. In these two estimations, the Chi-square values are 16 and 10 respectively, but the p-values are not significant. Hence, they can be articulated that the slope equality is not different across the quantiles and there is an evidence of symmetry (Fig. 1).

## 5 Conclusion and Policy Implications

The present study attempted to estimate the role of macroeconomic variables such as economic growth, credit, globalization and human capital on poverty alleviation in India for the period from 1980 to 2019. The quantile regression model employed on the time-series data-set produced some important results that economic growth has reduced the poverty at significant level. At the same time, the magnitude of the economic growth is lower than that of credit. Hence, Government of India should ensure the share in economic growth to the poor by enacting the social inclusion policy in a scientific manner. An interesting insight obtained by the model is that it is credit, which significantly reduced the poverty level during the study period. Hence, the unleashed credit policy coupled with welfare packages may uplift the poor even in future. Further, it is suggested that central and state governments, non-governmental organizations and philanthropists should come forward to address the financial/investment needs of the poor people. The insignificant impact of human capital on poverty alleviation, according to our estimation, pinpoints that the existing human capital is not up to the mark to find suitable job with attractive salary and alleviate poverty. Hence, special attention on the development of educational sector, on-the job, and off-the job trainings will help in alleviating poverty in the future. Shockingly, in our study, globalization increased the level of poverty. Hence, it is suggested that the Government of India should cautiously open the door to the global players. Further, it should ensure the foreign investment and technology in areas where employment creation for poor people/low skilled labour is very high. Finally, it is obvious that in the global forum, India is a two sided coin, on the one side it is

**Table 2** Result of quantile process

	Quantile	Coefficient	Std. Error	t-Statistic	Prob
GDPG	0.200	−0.035219	0.071989	−0.489222	0.0027
	0.400	−0.050624	0.069843	−0.724823	0.0014
	0.500	−0.035493	0.073092	−0.485598	0.0003
	0.600	−0.032385	0.084849	−0.381685	0.0050
	0.800	−0.001453	0.084847	−0.017130	0.0064
CRE	0.200	−0.886243	0.246604	−3.593795	0.0010
	0.400	−0.474852	0.279095	−1.701403	0.0977
	0.500	−0.560728	0.269854	−2.077891	0.0451
	0.600	−0.353121	0.259353	−1.361542	0.1820
	0.800	−0.215284	0.279497	−0.770255	0.4463
GI	0.200	0.277581	0.443710	0.625591	0.5356
	0.400	0.725920	0.369973	1.962088	0.0577
	0.500	0.675583	0.357616	1.889130	0.0672
	0.600	0.642257	0.423113	1.517931	0.1380
	0.800	0.294707	0.492200	0.598754	0.5532
HC	0.200	−0.079759	0.459423	−0.173607	0.8632
	0.400	−0.931101	0.602997	−1.544121	0.1316
	0.500	−0.768727	0.572562	−1.342609	0.1880
	0.600	−0.711147	0.627301	−1.133661	0.2646
	0.800	−0.180434	0.645258	−0.279631	0.7814
C	0.200	22.02506	0.525777	41.89047	0.0000
	0.400	22.32315	0.626038	35.65783	0.0000
	0.500	22.16630	0.648928	34.15833	0.0000
	0.600	21.41006	0.985140	21.73302	0.0000
	0.800	20.21059	1.181554	17.10508	0.0000

Source Computed from the World Bank and KOF Data

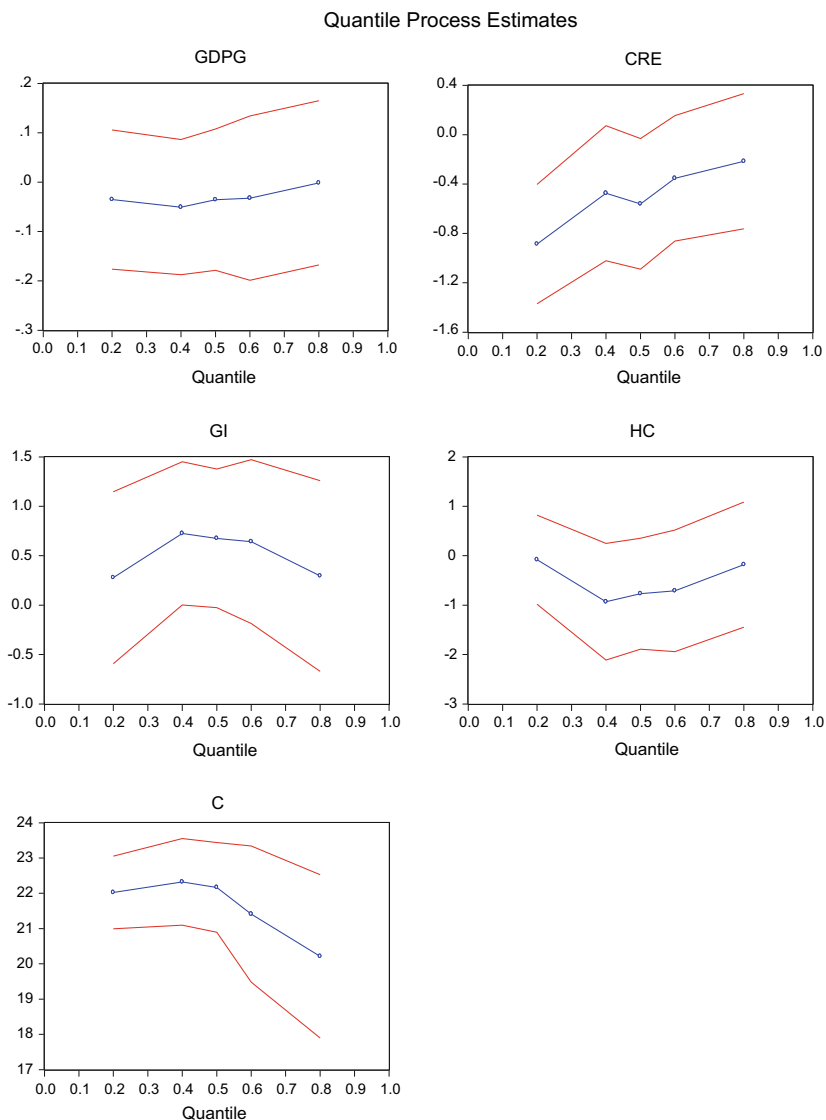
**Table 3** Result of quantile slope equality test and symmetric quantiles test

Test summary	Chi-Sq. statistic	Chi-Sq. d.f	Prob
Wald test	14.941	16	0.528*
Test summary			
Wald Test	9.698	10	0.467*

\*Estimated equation quantile  $\tau = 0.5$

Source Computed from the World Bank and KOF data





**Fig. 1** Result of the quantile process estimates. *Note* The confidence interval size is 0.95. *Source* Computed from the World Bank and KOF data

one of the fastest growing nations and on the other side poverty is pervasive. Hence, in order to position the image of India in the global arena, poverty should be totally eradicated through multiple channels.

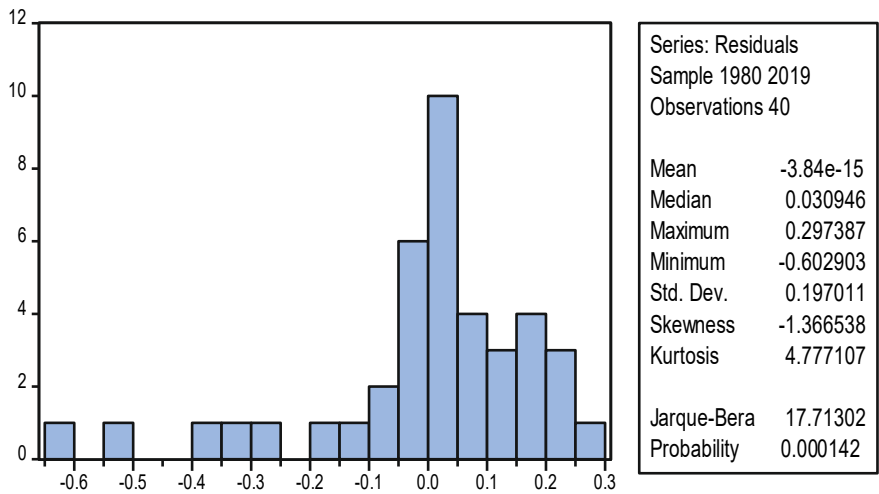


Fig. 2 Chart for normality check

Table 4 Results of LM and heteroscedasticity tests

(a) Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	24.15236	Prob. F(2,32)	0.0000
Obs*R-squared	24.06071	Prob. Chi-Square(2)	0.0000
(b) Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	7.761236	Prob. F(5,34)	0.0001
Obs*R-squared	21.32027	Prob. Chi-Square(5)	0.0007
Scaled explained SS	8.921798	Prob. Chi-Square(5)	0.1122

Source Computed from the World Bank and KOF Data

Appendix

See Fig. 2 and Table 4.

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# Retirement Financial Planning: Strategies and Challenges in Avoiding the Incidence of Poverty



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**Abstract** This study aims to explore the strategies and challenges of retirement financial planning in avoiding the incidence of poverty during retirees' later years. Financial retirement planning is essential for ensuring a stable and secure post-employment existence, especially as life expectancy rises, economic environments change, and retirement paradigms alter. Many retirees, who formerly relied on these institutions for a secure retirement, are now confronted with underfunding and sustainability difficulties. Results of informant interviews are compiled in this study. The Focus Group Discussion (FGD) approach was used to gather the data. The study's results were analysed using the Nominal Group Technique (NGT), which can highlight these issues' difficulties and possible approaches. There were three sessions with a total of 10 informants involved in this inquiry. The results of this study are intended to offer insightful guidance in creating practical plans for a secure and productive post-employment life. Individuals can negotiate the difficulties and uncertainties of

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retirement with proactive measures and well-informed decision-making, providing a secure and respectable financial future.

**Keywords** Retirement • Financial planning

## 1 Introduction

The significance of retirement financial planning has never been more vital at a time of rising life expectancy, transforming economic landscapes, and shifting retirement paradigms [20]. As the world's population ages, retirement as a concept is changing, bringing new opportunities and challenges for people to ensure their financial security throughout their post-employment years.

Jones [9] claims that retirement is a turning point that signals the end of one's active working life and the start of a new one. However, if proper retirement financial planning has not been done, the transition from the working years to retirement can be plagued with financial issues [18]. Individuals are now in charge of ensuring their financial future in retirement as life expectancy rises and traditional pension schemes become less prevalent [1, 2]. According to Selvadurai et al. [18], a lack of sound financial planning might put retirees in a risky scenario where they may struggle to make ends meet, risking their well-earned peace and happiness.

Nowadays, people have a greater responsibility for protecting their financial security in retirement in the quickly changing economic environment. According to Alcántara et al. [4], the possibility of being impoverished during retirement has become a serious problem due to the demise of traditional pension systems and the rising cost of living. So it's more important than ever to carefully arrange the finances for retirement if the retirees to be financially independent and secure.

As the responsibility for retirement planning passes from employers to their employees, the significance of personal financial readiness has grown significantly. In order to guarantee a good retirement, personal financial management and early preparation are crucial [18].

Despite the challenges, there are a number of strategies that can be used to prevent retirement poverty. Financial planning for retirement is therefore essential to ensuring a secure and successful life after employment. By addressing the issues, people can take control of their retirement destiny and reduce the likelihood that they will experience poverty in their later years.

### 1.1 Problems Statement

As life expectancies increase and traditional pension systems decline in their prevalence, individuals are increasingly burdened with the responsibility of securing a financially stable retirement [16]. However, this transition has not been without its

hurdles. Inadequate financial preparedness, a lack of financial literacy, investment risks, and the impact of changing demographics are among the key factors that can pose significant obstacles for retirees, potentially leading to a higher risk of falling into poverty during their retirement.

One of the primary problems is the inadequacy of traditional pension systems (Amaglobeli et al. 2021). Many retirees who once relied on these systems for a secure retirement now face underfunding and sustainability issues. As a result, pension benefits may not be sufficient to support retirees' needs, leaving them vulnerable to financial insecurity and potential poverty [10]. The transition to defined-contribution plans further compounds the problem, as it places the onus of investment decisions and risk management on individuals who may lack the necessary expertise to navigate the complexities of the financial markets effectively.

A significant issue lies in the lack of financial literacy among retirees and individuals approaching retirement Abdullah et al. [18]. Studies indicate that a substantial portion of the population lacks the required financial knowledge to make informed decisions about their retirement savings and investments. This lack of understanding can lead to poor financial choices, inadequate planning, and inefficient allocation of resources, placing retirees at risk of depleting their savings and facing financial hardships in their later years.

Investment risks and longevity risk also pose considerable problems in retirement financial planning. Based on Kupelian [12], the inherent uncertainty of financial markets and the potential for economic downturns can lead to fluctuations in retirement savings, which can directly impact retirees' overall financial security. Furthermore, with life expectancies increasing, there is a growing concern about outliving one's savings. Longevity risk presents retirees with the possibility of exhausting their funds prematurely, which could expose them to poverty during the later stages of retirement.

Furthermore, government policies and social programs can significantly influence retirement financial planning outcomes (Amaglobeli et al. 2021). Policy decisions related to tax incentives, retirement age, and social security benefits can have profound implications for retirees' financial security. Inadequate or ill-advised policies can hinder retirement preparedness, leaving retirees vulnerable to poverty and financial uncertainty.

Thus, retirement financial planning is fraught with various problems that must be addressed to secure a financially stable and fulfilling retirement for individuals. By acknowledging and resolving these challenges, individuals and policymakers can work together and implement effective strategies to avoid the incidence of poverty during retirement. Empowering retirees to make informed decisions and navigate the complexities of retirement financial planning will contribute to a more secure and prosperous post-employment life for all.

## 2 Literature Review

Retirement financial planning has been a subject of considerable research and analysis as societies grapple with the challenges of providing a secure and financially stable post-employment life for their aging populations. A review of the literature reveals a wealth of knowledge on various aspects of retirement planning, with a particular focus on strategies to avoid the incidence of poverty during retirees' later years.

One of the primary themes evident in the literature is the changing landscape of retirement systems [5]. Traditional pension schemes, once prevalent, have faced significant challenges, including underfunding and sustainability concerns. As a result, the responsibility for retirement financial planning has shifted increasingly to individuals, and defined-contribution plans have gained prominence. Researchers have explored the implications of this transition, emphasizing the need to empower individuals to navigate the complexities of managing their retirement savings effectively.

As indicated by Harahap et al. [8], financial literacy has emerged as a critical factor in retirement planning, and numerous studies have delved into the level of financial knowledge among individuals approaching retirement. Findings consistently highlight a lack of financial literacy, which can hinder retirees' ability to make informed decisions about their savings, investments, and risk management. Interventions such as financial education programs and personalized retirement planning assistance have been suggested to improve retirees' financial literacy and enhance their ability to secure a stable retirement.

Behavioural economics has offered valuable insights into the decision-making processes of retirees [19]. Studies have uncovered behavioural biases, such as procrastination and over-optimism, that can hinder individuals from making timely and rational financial decisions. Interventions that leverage behavioural insights, such as setting defaults for retirement contributions or nudging individuals to take proactive retirement planning steps, have been proposed to counteract these biases.

In addition, Amaglobeli et al. [6] said, government policies that related to retirement planning have also been a focus of investigation. Researchers have analysed the impact of policy decisions, such as changes in retirement age or adjustments to social security benefits, on individuals' retirement preparedness. Evidence-based policy-making that takes into account the long-term financial security of retirees has been recommended.

Therefore, by building on this knowledge, policymakers and individuals can work together to develop effective retirement strategies that minimize the risk of poverty during retirees' post-employment years.



### 3 Methodology

In accordance with Cresswell's [7], this study's methodology uses a qualitative approach, which places an emphasis on exploring individuals or groups in order to acquire a thorough insight of their lives. This strategy is consistent with Kothari's recommendation from 2009 to observe attitudes, opinions, and behaviours based on the situations of the informants. This survey is appropriate for obtaining comments and viewpoints from the retirees' of regarding the problems on the poverty.

Ten informants for each three groups participated in semi-structured interviews that were performed using a focus group discussion (FGD) methodology as the data gathering strategy for this study. Data analysis was done using the Nominal Group Technique (NGT). The NGT method may be useful for eliciting opinions on topics brought up in face-to-face dialogues, according to Van de Ven and Delbecq [21]. The NGT method, which enables informants to present their ideas in a prioritised order, is a fair and well-liked strategy in investigations that demand quick results [14].

Three focus groups consisting of 10 informants for every session were conducted in three different locations discussing on the informants' preferences. The invitation to contribute with discussion was notified directly through phone call to each potential participant. In this regard, NGT starts by introducing the purpose of the discussion to enlighten informants and avoid any unrelated topics. Then, NGT process conducted through three steps where informants supplied with blank paper to write down the cycle of challenges and strategies they practiced recently. Second steps, informants sharing their ideas in a group and discussing each of the attributes the similarity and the difference. Lastly, informants had an opportunity to reconsider their initial ranking of the attributes based on the group discussion. They were not pressured to alter their ranking nor to achieve consensus. The facilitator endeavored to ensure that all participants were given the opportunity to contribute.

### 4 Findings and Discussion

Retirement financial planning presents a multitude of challenges and strategies that individuals must navigate to avoid the incidence of poverty during their post-employment years. As life expectancies continue to rise and traditional pension systems face limitations, ensuring financial security in retirement has become a complex and daunting task for many. These challenges and strategies require careful consideration, proactive measures, and collective efforts to address effectively.

## 4.1 Challenges

One of the primary issues lies in the inadequacy of traditional pension systems. Many retirees, who once relied on these systems for financial support, now face underfunding and sustainability concerns. As a result, pension benefits may not be sufficient to meet retirees' needs, putting them at risk of financial insecurity and, in some cases, poverty. The shift towards defined-contribution plans further exacerbates this issue, as it places more investment risk on individuals who may lack the necessary knowledge and expertise to manage their retirement savings effectively.

Financial literacy, or the lack thereof, represents a significant issue in retirement financial planning. This factor was also mentioned by Abdullah et al. [1]. Studies indicate that a substantial portion of the population lacks the required financial knowledge to make informed decisions about their retirement savings and investments. This lack of understanding can lead to poor financial choices, inadequate planning, and inefficient allocation of resources, placing retirees at risk of depleting their savings and facing financial hardships in their later years. Improving financial literacy through education and awareness campaigns is essential to empower individuals with the tools and knowledge to make sound financial decisions.

Investment risks and longevity risk also pose considerable challenges in retirement financial planning. The inherent uncertainty of financial markets and the potential for economic downturns can lead to fluctuations in retirement savings, affecting the overall financial security of retirees. This factor was also highlighted by Tapia et al. [19]. Moreover, with life expectancies increasing, there is a growing concern about outliving one's savings. Longevity risk places retirees at the peril of exhausting their funds prematurely, which could expose them to poverty during the later stages of retirement. Addressing these risks requires a balanced and diversified investment approach, along with risk management strategies such as annuities and long-term care insurance.

Rising healthcare costs present another pressing issue in retirement financial planning. This finding was in line with Pokorski [15]. As retirees age, medical expenses tend to escalate, making healthcare a substantial financial burden. Failure to adequately plan for these costs can lead to retirees depleting their savings rapidly, leaving them vulnerable to financial hardships and increasing the risk of poverty. Properly accounting for healthcare expenses and exploring options for health insurance and long-term care coverage are critical steps in ensuring retirees' financial security.

Addressing these issues requires a multifaceted approach that involves collaboration between individuals, employers, financial institutions, and policymakers. By empowering retirees to make informed decisions and navigate the complexities of retirement financial planning will contribute to a more secure and prosperous post-employment life for all.

## 4.2 *Strategies*

Retirement financial planning entails a range of strategies that individuals can implement to avoid the incidence of poverty during their post-employment years. These strategies, based on insights from research and financial expertise, play a crucial role in securing a stable and financially secure retirement.

One of the fundamental strategies in retirement planning is to start saving early and maintain a consistent contribution to retirement accounts. By starting to save as soon as possible, individuals benefit from the power of compounding, which allows their savings to grow exponentially over time. Consistency in contributing to retirement accounts ensures a steady accumulation of wealth for the retirement years. This finding was in line with the one made by Salleh [17].

Diversifying investment portfolios is another key aspect of retirement planning. This strategy involves spreading investments across various asset classes, such as stocks, bonds, real estate, and commodities. Diversification helps mitigate the impact of market fluctuations on the overall portfolio, reducing the risk of significant losses and safeguarding retirees' financial security.

Longevity risk, the possibility of outliving one's savings, is a critical concern in retirement planning. To address this risk, individuals can explore options such as annuities or pension plans that provide guaranteed income streams for life. Annuities, for instance, offer a stable source of income during retirement, providing protection against the risk of exhausting savings prematurely. Additionally, long-term care insurance can shield retirees from the potentially high costs of healthcare and medical expenses in later years.

Seeking professional financial advice by consulting with financial advisors or retirement planners can be invaluable in retirement planning. The same issue was also highlighted by Liu [13]. These professionals can offer personalized advice tailored to an individual's unique financial situation and goals. A financial advisor can assist in creating a comprehensive retirement plan, addressing investment strategies, risk management, tax planning, and other critical aspects to ensure a financially stable retirement.

Improving financial literacy is a strategy that empowers individuals to make informed decisions about their retirement planning. This finding was similar with the one made by Selvadurai et al. [18]. Educating oneself about investment options, tax implications, and retirement income sources can help retirees make wise financial choices. Financial literacy programs and workshops can play a crucial role in enhancing retirees' understanding of personal finance and retirement planning.

For individuals concerned about financial insecurity in retirement, part-time employment or post-retirement work can be a viable strategy. Additional income streams from part-time work can supplement retirement savings and reduce the strain on financial resources. Besides financial benefits, part-time work can provide a sense of purpose and fulfillment during retirement years.

Managing and reducing debt is a crucial aspect of retirement financial planning. Paying off high-interest debts, such as credit card debt, can free up funds for retirement savings and reduce financial stress during retirement. Minimizing debt ensures a more secure and stable financial foundation for retirees.

In conclusion, retirement financial planning offers a comprehensive array of strategies to avoid the incidence of poverty during post-employment years. By implementing these strategies, individuals can enhance their financial security and achieve a dignified and worry-free retirement life.

## 5 Conclusion

In conclusion, retirement financial planning is a crucial aspect of ensuring a stable and financially secure post-employment life, free from the incidence of poverty. However, it is a complex endeavour that involves navigating numerous challenges and issues. To overcome these challenges, proactive measures are necessary at both individual and societal levels. Improving financial literacy through education and awareness campaigns can empower individuals to make informed decisions about their retirement savings and investments. By empowering retirees to make informed decisions and navigate the intricacies of retirement financial planning will ultimately contribute to a more dignified and financially stable retirement for individuals and families alike.

Thus, the retirement financial planning is not without its obstacles, but with careful planning, informed decision-making, and a collective effort, individuals can enhance their financial security and achieve a dignified and worry-free retirement life. By implementing these strategies, individuals can navigate the complexities of retirement financial planning and avoid the incidence of poverty during their post-employment years. To develop more on retirement financial planning, future study should incorporate longitudinal studies, delve into behavioural economics issues, and investigate the role of social and cultural factors on retirement decision-making. Examining the impact of technological improvements on retirement planning tools is also a viable field for additional research. With proactive measures, effective policy-making, and a commitment to financial literacy, people can work together to ensure a more secure and prosperous post-employment life for all individuals, enabling them to enjoy their retirement years with confidence and peace of mind.

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# The Impact of Religious Struggle on Muslim's Life Satisfaction Who Perform Hijrah: Religious Transformation as a Mediator



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**Abstract** Although research consistently shows that religion has a significant impact on life satisfaction, not all Muslims who perform hijrah can achieve life satisfaction. Even some of them returned to doing things that were against Islamic law before performing hijrah. This study aims to determine whether religious transformation is a mediating variable and the effect of religious struggle on life satisfaction in Muslims who perform hijrah. The research method used was a quantitative approach with 225 Muslims who perform hijrah obtained through snowball sampling. The research instruments are the Psychological Measure of Islamic Religiosity (PMIR) subscale of religious struggle and religious transformation and the Satisfaction with Life Scale (SWLS). The statistical analysis results using the Structural Equation Model (SEM) Partial Least Square show that religious struggle has a significant negative effect on life satisfaction, whereas religious transformation has a mediating effect on the relationship between the two variables. This implies that if Muslims who perform hijrah are still experiencing religious struggles, it will be difficult for them to achieve life satisfaction. However, by undergoing religious transformation, a person who is still struggling to perform hijrah will be able to achieve life satisfaction.

**Keywords** Life satisfaction · Religious struggle · Religious transformation

## 1 Introduction

Indonesia, the country with the world's largest Muslim population, is currently experiencing a phenomenon of strengthening the spirit of Islamic religiosity, as evidenced by the emergence of the hijrah movement [11]. The emergence of this movement was

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influenced by the increasingly massive proselytization carried out by transnational movements since the reform era [44]. Furthermore, popular culture and the use of information technology have a significant impact on the development of the hijrah movement in Indonesia [19].

From a historical standpoint, Royyani [33] asserts that hijrah has two meanings, the first of which is moving from an unsafe place to a safe one. Second, hijrah signifies moving from a place filled with unbelievers to a place full of believers. According to Al-Syuyuti' Abd al-Ghani Fakhr al-Hasan al-ahlawi [33], the second definition of hijrah can also mean leaving something that is not justified by Allah SWT, where this will not achieve perfection if it does not leave sin.

Furthermore, Hasan [19] stated that in Indonesia, the term hijrah is used to describe repentance. Repentance signifies that a Muslim abandons a bad lifestyle (*jahiliyyah*) for a better one, namely following what is commanded in Islamic teachings and abandoning what is forbidden along with spiritual development [36]. If a person performs Hijrah with a sense of repentance, it will have a beneficial effect on their mental health. Nugrahati et al. [28] show that repentance can alleviate anxiety and that consistent repentance prayer can increase tranquility.

According to Royyani [33], because hijrah is currently considered a trend, the meaning of hijrah has been reduced from its true meaning. Currently, the word hijrah is emphasized as an identity rather than the substantive meaning of hijrah. For example, hijrah is only demonstrated by changing appearance, so the main essence of hijrah, namely repentance by leaving the bad things in the past and turning towards the ultimate truth, cannot be obtained.

Based on the above description, it can be concluded that hijrah can have a positive impact on a person's psychological condition if the hijrah performed is repentance, where people who perform hijrah are no longer overwhelmed by anxiety and can feel inner peace. This condition denotes the attainment of emotional well-being, where life satisfaction is an aspect of emotional well-being [38]. It can be concluded that if hijrah is performed through the path of repentance, a person will experience life satisfaction.

Life satisfaction is derived from Latin, which means feeling enough, which is accompanied by acceptance of one's current situation and a sense of fulfilling one's wants and needs in general. Inherently, life satisfaction is the result of a cognitive evaluation or assessment of one's life [39].

Conceptually, in psychology, life satisfaction is an aspect of subjective well-being that is defined as a sense of satisfaction and tranquility resulting from a small gap between what is desired and what is successfully attained [38]. In addition, life satisfaction, according to cognitive theory, is "individuals' cognitive appraisal of comparisons based on the compatibility of their living conditions with standards" [7]. Affective theory, on the other hand, explains life satisfaction as an individual's awareness of experiencing positive emotions that are more dominant than negative emotions. Life satisfaction can also be assessed as a positive emotion [10]. Based on the description above, it can be concluded that a person's cognitive or affective

assessment of their life is dependent on the standards used. Religious people use religious values to evaluate their lives, so religion has a significant impact on a person's life satisfaction.

Many studies in psychology have been conducted on religion and life satisfaction. In general, the results show that religion, as manifested in the religiosity variable, has a positive and significant effect on life satisfaction [9, 14, 21, 42]. Furthermore, previous studies have shown that religiosity and religious well-being consistently have a significant relationship with life satisfaction [2, 15, 23, 42]. It can be concluded that if hijrah is performed correctly to produce peace of mind and humans return to their fitrah (the potential that Allah has given to them) [34, 36], then a Muslim will easily achieve subjective well-being and life satisfaction.

However, hijrah is not an easy thing to do. Those who perform hijrah must be able to resist the temptation to return to old habits that are forbidden in Islamic teachings and become accustomed to following all Islamic teachings. They must also deal with external challenges, such as negative reactions from the environment [25]. This difficulty in hijrah frequently leads to the emergence of religious struggle, which is characterized by tension, strain, and conflict over sacred things [48]. Religious struggle is linked to depression [26] and a low quality of life [6]. If religious struggle is mediated by spiritual growth, which is a dimension of religious/spiritual transformation, it will have a positive effect on life satisfaction [49]. This means that religious struggle on its own can have a negative impact on a person's psychology, such as depression. However, spiritual growth (transformation) has the potential to increase life satisfaction.

Zarzycka and Zietek [49] define spiritual growth as a mediator variable in the pursuit of life satisfaction. Although religious struggle, such as that experienced by Muslims performing hijrah, has a positive effect on life satisfaction, Zarzycka and Zietek [49] added that religious struggle will have a positive effect on life satisfaction if mediated by spiritual growth. This means that if a person overcomes religious struggle, they will experience religious growth (spiritual growth), which will lead to life satisfaction. The concept of spiritual growth used in this study is one dimension of spiritual transformation, while the other dimension is spiritual decline. According to this concept, people who successfully transform spiritually/religiously will experience spiritual growth, while those who fail will experience spiritual decline. Zarzycka and Zietek [49] also stated that spiritual struggle without being mediated by spiritual growth is significantly negatively correlated with life satisfaction. In this case, the researchers applied Zarzycka's concept of religious transformation (rather than spiritual growth). Therefore, this study aims to determine (1) whether there is a significant negative relationship between religious struggle and life satisfaction, and (2) whether religious transformation can significantly mediate this relationship.



## 2 Methods

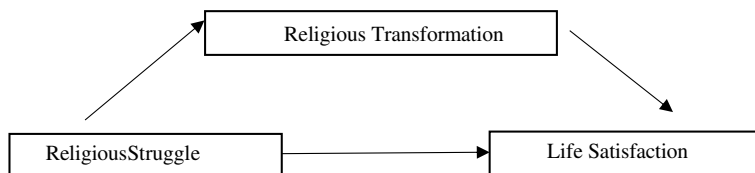
The method section describes the research approach, population, sampling techniques, research instruments, and data analysis. This study took a quantitative approach. According to Creswell [5], a quantitative approach is one in which research primarily relies on post-positive claims to develop knowledge. In the quantitative approach, the research design can be either experimental or survey, with data collected using predetermined instruments that generate statistical data. The survey research design was used by the researchers in this case. Survey research can be conducted using cross-sectional or longitudinal models that collect data using questionnaires or structured interviews to generalize conclusions from sample data to the population [5]. This study is a survey with a cross-sectional design. This study includes three variables: life satisfaction as the dependent variable, religious struggle as the independent variable, and religious transformation as the mediating variable.

The study's target population includes all Muslims in Riau who perform hijrah (repentance), both men and women. There were 225 people in the research samples. Non-probability sampling, or snowball sampling, was used in this study. This method was chosen because the research sample, namely Muslims who made hijrah, was difficult to identify and reach. This is consistent with O'Leary's [29] explanation, which states that snowball sampling is typically used in populations that are difficult to identify or difficult to access. The steps that can be taken include locating someone in the population based on predetermined criteria and then asking them to identify other people who meet the same criteria. The disadvantage of this technique is that it does not guarantee that the sample is representative of the population [29]. In this case, researchers have identified several recitation groups or communities where Muslims who have hijrah may reside. Sample information will be obtained from community leaders or members that has the predetermined characteristics of doing the "hijrah" process.

The data collection instrument consists of three scales:

1. The Satisfaction with Life Scale (SWLS) was developed by Diener et al. [7] and has been adapted by Afiatin et al. [1] into Indonesian to measure life satisfaction.
2. The religious struggle subscale of the Psychological Measure of Islamic Religiousness (PMIR) was developed by Raiya [32] and is used to measure Islamic religious struggle. Before being used, this scale was first adapted by researchers into Indonesian using the back translation method.
3. The religious transformation subscale of the Psychological Measure of Islamic Religiousness (PMIR) was developed by Raiya [32] and is used to measure Islamic religious transformation. Before being used, this scale was first adapted by researchers into Indonesian using the back translation method.

The data in this study were analyzed using the Partial Least Squares Structural Equation Model (PLS-SEM) with the assistance of SMART PLS 3 to test the model, the relationship of the independent variables to the dependent variable, and the mediating effect of the mediating variable. Model to be tested is depicted in Fig. 1.



**Fig. 1** Model to be tested

### 3 Results and Discussion

The research results and discussion section includes information on the demographics of the research sample, the model's reliability and validity, and the outcomes of hypothesis testing. It concludes with a discussion of research findings, research limitations, and recommendations for future research.

#### 3.1 Description of Research Data

The data obtained in this study were from 225 Muslims in Pekanbaru, Riau, who self-identified as having hijrah. Of the 225 samples, 26.27% were male and 73.33% were female. The sample ranges in age from 16 to 64 years old, with 72.89% of the sample being between the ages of 20 and 40. Most of the research sample, 58.82%, had completed their high school education. According to demographic data, most of the samples are students (44.44%), single (58.67%), and have undergone one to five years of hijrah (57.78%).

#### 3.2 Partial Least Square Analysis

PLS as a prediction model does not have the same requirements as parametric techniques for estimating parameters and predicting causal relationships. As a result, no parameter significance testing is required, implying that the evaluation model used for prediction is non-parametric. The PLS model is evaluated by comparing its outer and inner models [22].

##### Outer Model Testing

Outer model testing aims to determine a model's reliability and validity. Convergent validity, discriminant validity, composite reliability, and Cronbach's alpha are obtained through the PLS algorithm iteration process, as well as the R<sup>2</sup> value as a prediction model accuracy parameter [22]. Figure 2 shows the results of testing the outer model.



**Fig. 2** Model factor loading results

The first step in determining the validity of a model is to examine the factor loading for all indicators in the model. According to Hair et al. [16], indicators with factor loading values of 0.4–0.7 should be discarded only if doing so will increase the Average Variances Extracted (AVE) and Composite Reliability (CR), whereas indicators with factor loading 0.4 should be discarded immediately. After removing indicators that do not meet the requirements, the loading factor value  $> 0.7$  is obtained, moving from 0.711 to 0.837. This is in line with Henseler [20] recommendation that the loading factor value in research  $> 0.7$ .

The second step involves examining the AVE value to determine convergent validity. According to Wong [43], AVE is a standard metric for determining the convergent validity of a model construct, with  $AVE > 0.5$  indicating that the value of convergent validity is acceptable. According to Table 1, the model tested in this study exhibits an AVE of 0.563 for the construct of life satisfaction, 0.598 for the construct of religious struggle, and 0.628 for the construct of religious transformation. This indicates that the AVE values for each of the tested structures are acceptable.

In addition, researchers must understand the reliability value by examining Cronbach's Alpha and Composite Reliability values. Cronbach's alpha represents the lower bound of the measured construct's reliability value. The Composite Reliability value represents the true reliability value of the measured construct [22]. According to Werts et al. [22], the Composite Reliability value is more effective at displaying the reliability value of a construct estimated using an internal consistency approach. The rule of thumb for determining a good Alpha or Composite Reliability value is that it must be greater than 0.7, although a value of 0.6 is still acceptable [22]. The composite reliability value obtained for each latent variable is 0.837 for life satisfaction, 0.784 for religious struggle, and 0.87 for religious transformation. It can be concluded that all latent variables have good reliability values. The values of loading factors, AVE, and Composite Reliability are shown in Table 1.

The following step is a discriminant validity estimate, which aims to determine whether a construct is statistically unique and distinct from another construct [18].

**Table 1** Loading, AVE, and composite reliability values

Constructs	Items	Loading	Average variances extracted (AVE)	Composite reliability (CR)
Life satisfaction	LS1	0.711	0.563	0.837
	LS2	0.835		
	LS3	0.716		
	LS4	0.731		
Religious struggle	RST2	0.770	0.598	0.748
	RST6	0.776		
Religious transformation	RT1	0.832	0.628	0.870
	RT3	0.715		
	RT5	0.779		
	RT6	0.837		

There are a number of ways to determine the discriminant validity. However, Fornell-Larcker and the Hetrotrait-Monotrait ratio of the correlation (HTMT) are crucial for understanding that a reflective construct has a very strong relationship with its indicators. Discriminant validity estimates show that all dimensions measured by the Fornell-Larcker criterion method are acceptable, as long as the AVE root of each dimension given in the diagonal axis is greater than its correlation with the other dimensions. Life satisfaction has a higher AVE root (0.750) than its correlation with another dimension, as do religious struggle (0.773) and religious transformation (0.792) AVE roots, both of which have higher values when compared to other dimensions. Table 2 shows a detailed description of discriminant validity values calculated using the Fornell-Lacker criterion method.

The next discriminant validity estimate is conducted using HTMT. In accordance with the rule of thumb, the HTMT value is less than 0.9, indicating that the variable is theoretically distinct from other variables, as empirically demonstrated by statistical testing. The outcomes of the evaluation of discriminant validity using the HTMT are shown in Table 3.

### Inner Model Testing

After testing the outer model, the next step is to analyze the inner model which includes a description of the path coefficient, indirect effect,  $R^2$ ,  $f^2$ , and  $Q^2$ . The analysis shows that religious struggle directly has a significant negative effect on life

**Table 2** Fornell-Larcker criterion

	Life satisfaction	Religious struggle	Religious transformation
Life satisfaction	0.750		
Religious struggle	– 0.229	0.773	
Religious transformation	0.294	– 0.326	0.792

**Table 3** HTMT ratio

	Life satisfaction	Religious struggle	Religious transformation
Life satisfaction			
Religious struggle	0.454946145		
Religious transformation	0.348384885	0.608602838	

satisfaction ( $\beta = -0.150$ ,  $T = 2.341$ ,  $p < 0.05$ ) and religious transformation ( $\beta = -0.327$ ,  $T = 3.140$ ,  $p < 0.05$ ). Furthermore, religious transformation directly has a significant positive effect on life satisfaction ( $\beta = 0.245$ ,  $T = 3.752$ ,  $p < 0.05$ ). Therefore, it can be concluded that H1 is accepted.

The mediation analysis results show that religious struggle has an indirect effect on life satisfaction through religious transformation ( $\beta = 0.08$ ,  $T = 2.693$ ,  $p < 0.05$ ), so H<sub>2</sub> is accepted. Because religious struggle has a significant effect on life satisfaction, it can be concluded that religious transformation is a partial mediator.

Since the PLS algorithm aims to maximize the explained variance in endogenous variables,  $R^2$  (coefficient of determination) should be examined to assess the model's predictive power. The  $R^2$  value refers to the amount of variance of the dependent variable explained by the independent variables. The larger the  $R^2$  value, the higher the ability of the independent variables to predict the dependent variable. The value is categorized as large based on the guidelines  $R^2 = 0.75$  (strong),  $0.50$  (medium), and  $0.25$  (weak) [17]. Based on the  $R^2$ , it is known that the variation of life satisfaction explained by religious struggle is 10.6% and the variation of religious transformation explained by religious struggle is 10.7%. This shows that the ability of religious struggle and religious transformation variables to predict life satisfaction is relatively weak, other variables can explain life satisfaction.

In addition to evaluating the  $R^2$  values of all endogenous constructs, to determine whether changes in  $R^2$  values when a particular exogenous construct is removed will have a substantive impact on endogenous constructs. This can be seen from the  $f^2$  value [17]. The rule of thumb for assessing  $f^2$  is that values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects [4] of exogenous latent variables, respectively. If the  $f^2$  value is less than 0.02, it indicates that there is no effect. Based on Table 4, it is known that if religious transformation and religious struggle are removed from the model, a small effect size value is obtained.

Furthermore, researchers should also check the Stone-Geisser  $Q^2$  value [12]. The  $Q^2$  value is an indicator to determine the predictive power of the out-of-sample model

**Table 4** Value of  $f^2$ 

		Religious struggle	Religious transformation
<i>Life satisfaction</i>			
Religious struggle	0.022		0.119
Religious transformation	0.060		

**Table 5** Q<sup>2</sup>

	SSO	SSE	Q <sup>2</sup> (= 1-SSE/SSO)
Life satisfaction	900,000	854,457	0.051
Religious struggle	450,000	450,000	
Religious transformation	900,000	852,775	0.052

or predictive relevance. When the PLS path model shows predictive relevance, it accurately predicts data that are not used in the model estimation. In the structural model, a  $Q^2$  value greater than zero for a specific reflective endogenous latent variable indicates the predictive relevance of the path model for a specific dependent construct. Table 5 shows that the predictive relevance value of the  $Q^2$  life satisfaction model is 0.051 and religious transformation is 0.052. Because the value of  $Q^2 > 0$ , the independent variables in this model are relevant in making predictions.

### 3.3 Discussion

The results of this study have confirmed that religious struggle has a significant negative effect on life satisfaction ( $\beta = -0.150$ ,  $T = 2.341$ ,  $p < 0.05$ ). These results are in line with previous studies which show that religious struggle has a significant negative effect on life satisfaction [45, 47]. Furthermore, Zarzycka and Zietek [49] found that religious struggle has a positive effect on anxiety, but a negative effect on life satisfaction. Szcześniak and Timoszyk-Tomczak [41] also found that negative emotions toward God (religious struggle) have a negative impact on life satisfaction, whereas religious comfort has a positive impact on life satisfaction. In other words, it can be demonstrated that a person's religious struggle has a negative effect on their life satisfaction. Therefore, religious comfort is necessary to achieve life fulfillment.

However, the findings of Zarzycka et al. [46] show that not all dimensions of religious struggle have a negative effect. Only the dimensions of divine struggle and ultimate meaning struggle have a significant negative effect on psychological well-being, whereas moral struggle has a positive effect. The results of this study raised the question of why moral discomfort can have a positive effect on psychological health.

Paulotzian [31] asserts that a person's discomfort or uncertainty is the primary reason they alter their worldview or belief system. Cognitive and/or emotional anxiety, stress, and tension associated with one's religiosity (religious struggle) can contribute to the process of change (transformation) because doubt propels a person toward the process of searching for truth. When one succeeds in obtaining the truth, tension will subside and one's beliefs will grow.

This indicates that religious struggle will have a positive effect if religious transformation is successful. This statement was successfully proven through this study where it was found that religious struggle through religious transformation has a

significant positive effect on life satisfaction ( $\beta = 0.08$ ,  $T = 2.693$ ,  $p < 0.05$ ). However, religious transformation is a partial mediator. This means that religious struggle even when it is not mediated has a significant impact on life satisfaction, but the effect is negative; religious struggle reduces life satisfaction. The only way to obtain the positive effect of religious struggle is to undergo a religious transformation.

This is relevant to the findings of Zarzycka and Zietek [49], who show that spiritual growth (which occurs during the process of religious transformation) is a mediator variable for achieving life satisfaction. Although a person in religion may face difficulties, such as those faced by Muslims who perform hijrah, Zarzycka and Zietek [49] added that religious struggle will have a positive effect on life satisfaction if it is mediated by spiritual growth. This implies that if someone overcomes a religious struggle successfully, they will experience religious growth (spiritual growth), which will ultimately lead to life satisfaction. Zarzycka and Zietek [49] added that spiritual struggle has a significant negative correlation with life satisfaction when it is not mediated by spiritual development.

Several similar studies have found that religious transformation is an effective mediator in reducing the effects of trauma. This was consistent with Krause et al. [24] finding that lifetime trauma was not significantly associated with happiness among study participants who experienced religious transformation ( $\beta = 0.016$ ,  $b = 0.033$ , ns). Based on these findings, it was concluded that having a religious transformation experience mitigates the effect of lifetime trauma on happiness, particularly among younger adults. Traumatic life events were associated with lower levels of happiness in the study participants who had not experienced religious transformation ( $\beta = -0.086$ ,  $b = -0.182$ ,  $p < 0.01$ ).

In the context of this research, it can be explained that the pressure experienced by Muslims who perform hijrah can be relieved through the process of repentance as the true meaning of religious transformation in Islam. According to Ardiles [3], repentance begins with instructions that lead a person to the truth. Moreover, Shohib [36] added guidance enables a person to recognize their past errors and to subsequently confess (al-I'traf) and repent (al-nadam) for their sins. The subsequent obligation is to continue performing good deeds as prescribed by Islam. Consistently performing good deeds produces the positive emotions necessary to remain steadfast in carrying out the teachings of Islam. Ardiles [3] added that the presence of a supportive environment and appropriate coping strategies for dealing with temptations during repentance also affected the actual repentance process.

The description has explained that hijrah must be preceded by knowledge of the truth (hidayah), followed by a process of psychological and behavioral changes in the form of good deeds through ritual worship and other good deeds, the influence of the environment as a support system, and appropriate coping. If this hijrah process takes place comprehensively/thoroughly and continuously (istiqomah), it is expected to have a psychological impact in the form of happiness, psychological well-being, and life satisfaction.

This study has a value of  $Q^2 > 0$  based on the predictive relevance value of the  $Q^2$  model. Therefore, it can be concluded that the independent variables in this model are important in making predictions. The findings of Ardiles [3] and Shohib [36]

can be used to explain the relatively modest predictive capacity of religious struggle ( $R^2 = 10.6\%$ ) and religious transformation ( $R^2 = 10.7\%$ ) variables in predicting life satisfaction. Furthermore, when they are removed from the model, their impact is minimal. This phenomenon is explained by the existence of additional variables such as religious support, religious practices, and religious coping, all of which play a role in explaining life satisfaction.

Finally, it is possible to conclude that the religious struggle endured by Muslims who perform hijrah has a negative impact on life satisfaction. However, if they are able to undergo religious transformation (true repentance), they will be able to achieve life satisfaction. This means that the greater a person's repentance, the greater their life satisfaction as a result of religious struggle while performing hijrah.

There are several limitations to this study, including the fact that the population is limited to the hijrah community in Pekanbaru, Riau. The findings of this study do not represent all Indonesian Muslims who perform hijrah. Therefore, future researchers should include a broader population, namely Muslims who perform hijrah in Indonesia. Based on the findings of the literature review, it is also discovered that other factors, such as environmental support, effective coping, and sustainable worship, influence the hijrah process. Therefore, future researchers are advised to include other variables, such as religious support, religious practices, and religious coping.

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# Effectiveness of Respiratory Relaxation to Lower Academic Communication Apprehension in Students



Nur Fitriyana and Yohan Kurniawan

**Abstract** Communication is essential in any activity, both formal and non-formal. In academic development, there are many obstacles for students to convey every idea and idea. An emergency disorder in communication. The research aims to look at the effects of breathing relaxation in reducing communicative anxiety. communication skills are an important capital in the dissemination of information, science and supporting learning processes on campus, especially in expressing ideas to others. The study used an experimental approach to 10 students. This study found that breathing relaxation effectively decreased communication apprehension in students. Students who get respiratory relaxation experience decreased communication apprehension. There was a decrease in communication apprehension score in students before training (pre-tests) and after training (post-tests).

**Keywords** Respiratory relaxation · Communication apprehension · Student

## 1 Background

Good communication skills are an important capital in the dissemination of information, science and supporting learning processes on campus, especially in expressing ideas to others. Unlike when I was sitting at my school desk, in college, a student was asked to play a more active role in teaching and learning as well as to be more independent in the search for information. Therefore, students who are new to the university must be able to adapt to the patterns that exist on campus. Rakhmat [37] added that by communicating humans can learn many things, build relationships with others and preserve civilization.

In fact, there are students who have difficulties in communicating with others, both in the learning process in class and in the informal atmosphere outside the classroom. New students feel scared, worried, hesitant, and appear to be shaking

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and sweating when communicating with others. It was revealed from an interview on Tuesday, March 7, 2016 with a new student at X, the Faculty of Psychology who initiated P. P says it's hard to start communicating with his new friends on campus. According to P, he feels ashamed and afraid to have to talk to someone he's new to first. Albert Bandura's theory of self-efficacy plays a significant role in understanding communication anxiety. Self-efficacy refers to an individual's belief in their ability to successfully execute behaviors necessary to produce specific performance attainments. According to Bandura, self-efficacy influences how people think, feel, motivate themselves, and act. In the context of communication anxiety, self-efficacy determines how confident individuals feel about their ability to communicate effectively in various situations [5]. High self-efficacy leads to greater confidence in communication abilities, which reduces anxiety. Conversely, low self-efficacy can result in increased communication apprehension and avoidance of communicative situations [4].

In general communication, there is a disturbance in communication known as communication apprehension, a negative reaction in the form of anxiety experienced by a person in his or her communication experience [37]. A study in America states that 10–20% of American students suffer from communication apprehension [24]. People who suffer from such an apprehension will feel uncomfortable and anxious when they have to communicate with others, so they are unable to reflect a sense of warmth, openness, and support. By recognizing the sources of self-efficacy and implementing strategies to enhance it, individuals can improve their communication skills and reduce anxiety. This approach underscores the importance of confidence and belief in one's capabilities as crucial factors in effective communication [8].

The handling of anxiety between an individual and another individual may vary depending on the individual's personal judgment of the ability they possess. Based on the various reviews above, the researchers can conclude that relaxation of the air can be given as an attempt to reduce the symptoms of communication apprehension in students.

## 2 Communication Apprehension

Communication Apprehension or communication anxiety is a term used to describe the feelings of anxieties or fears experienced by a person when communicating with others. It can lead to disruptions in the ability to communicate and have a negative impact on social interaction, both in formal and informal situations. This phenomenon has attracted the interest of many researchers in the fields of communication and social psychology to understand the causes, effects, and ways to deal with communication anxiety.

McCroskey [23] is a prominent communication professor who has contributed a lot to understanding and studying communication anxiety. In his work entitled "Communication Apprehension: Some Neglected Factors," McCroskey discusses

factors that are often overlooked in understanding communication anxiety. It highlights the role of various variables that can affect a person's level of anxiety when communicating with others. This research has been the main benchmark for many subsequent studies of communication anxiety. De Vito [9] explain Communication serves multiple purposes, including informing, persuading, entertaining, and establishing relationships. De Vito emphasizes the importance of identifying the specific goals of communication in different contexts and adjusting strategies accordingly.

Richmond and McCroskey (2016) collectively summarizes the results of research on communication anxiety over the last fifty years in the publication "Communication Apprehension and Avoidance: Fifty Years of Research." They analyzed developments in the understanding of communication anxiety from a historical perspective and presented a summary of important findings from various previous studies. This publication provides an in-depth insight into the complexity of this phenomenon as well as an up-to-date insight on the challenges in addressing communication anxiety. Communication anxiety is defined as the feelings of nervousness or fear experienced by an individual when communicating with others, whether directly or indirectly. This anxiety can arise in various contexts, such as interpersonal communication, group communication, or public speaking [2]. Language development is defined as the process by which individuals acquire the ability to understand and use language, progressing from simple sounds to complex sentences. This development encompasses various stages and is influenced by multiple factors, including biological, cognitive, and social elements [1]. Communication anxiety, also known as communication apprehension, is the fear or anxiety associated with real or anticipated communication with others. It can significantly affect an individual's ability to effectively engage in communication, both verbal and non-verbal [3].

Meiss and Allen (2012) investigated the impact of communication anxiety on college students in their publication entitled "The Impact of Communication Apprehension on College Students." The study explores how levels of communication anxiety can affect academic achievement, social participation, and student adaptation in campus environments. Their research results provide a deeper understanding of the consequences of communication anxiety on this particular population.

### 3 Respiratory Relaxation

Relaxation is one of the techniques in behavioral therapy. Relaxation is a method or technique used to help humans learn to reduce or control the physiological reactivity that causes problems for them (McNeil and Lawrence 2002). The purpose of relaxation is to reduce the level of individual physiological agitation and bring the individual to a more calm state both physically and psychologically (Rout et al. 2011).

Relaxation therapy has a wide range of exercises such as deep breathing, massage, progressive relaxation, imagination, biofeedback, yoga, meditation, therapeutic touch, music therapy, as well as humor and laughter (Kozier et al. 2010). Breathing is

relaxation by adjusting the pace and depth of breathing (Schaffer et al. 2011). Davis et al. stated that proper breathing is a stress reliever (Maimunah and Retnowati 2011). Relaxation can be an active coping skill if it is used to teach individuals when and how to apply relaxation under desired conditions, e.g. to reduce insomnia, reduce anxiety or to make the body rest for a moment (Purwanto 2006). When an individual relaxes when he or she is stressed or anxious, the physiological reactions experienced by the individual will be reduced, so that he/she will feel relaxed. When his physical condition is relaxed, then his mental condition is also relaxed (Purwanto 2006). The most popular relaxation technique to reduce anxiety in students with communication anxieties is deep breath relaxation. This is because in-depth relaxation therapy is easier to learn and apply by the students later on, and the advantage of using in-depth therapy in this is the time and funds spent not too much compared to other relaxation treatments. Durand [10] relaxation breathing provides valuable insights into the profound connection between controlled breathing and both physical and mental well-being. Understanding the principles and benefits of controlled breathing enables individuals to harness this technique as an effective tool for managing stress, enhancing overall wellness, and achieving peace of mind. By integrating relaxation breathing into daily routines, individuals can experience its positive effects across various contexts, whether at work, home, or during physical activities. Durand’s theory underscores the importance of breathing techniques in promoting relaxation, reducing stress, and fostering a sense of balance and tranquility in life.

According to Earnest (1989) in Setyoadi and Kushariyadi (2011), inner breath relaxation techniques are described as follows: 1. The client takes a deep breath and fills his lungs with air, in three counts. (hirup, dua, tiga). 2. The air is breathed out slowly while allowing the body to be relaxed and comfortable. Do the calculation with the client (hembuskan, dua, tiga). 3. The client breathed several times in a normal rhythm. 4. Repeat the activity to take a deep breath and inhale it. Just leave your legs and palms relaxed. The nurse asked the client to concentrate his mind on his legs that felt light and warm. 5. The client repeats the fourth step and focuses on the arms, stomach, back and other muscle groups. 6. Once the entire client’s body is relaxed, teach him to breathe slowly. When the pain intensifies, the client can breathe smoothly and quickly.

4 Method

The study involved 10 students from “X” and “Y” universities. The design of the experiment can be described in Table 1.

Tabel 1 Research plan

NR (EG)	O1 → X → O2
	<i>The one group pretest–posttest design</i>

Source Shadish et al. (2002)

Keterangan:

EG: Experimental Group

O1: Pre-Test

O2: Post-Test

X: Intervention

The data analysis used in this study is non-parametric analysis because the number of samples is small (dan Castellan 2002). Testing the differences of communication apprehension before and after respiratory relaxation is given with one sample T test analysis techniques. By comparing prates scores with post-test scores. This analysis can be done with the help of the Jamovi program.

## 5 Result

From the normality test results obtained pre-test data amounting to 0.012 ( $p > 0.05$ ), where the result is less than 0.05 on the assumption of abnormal emergency data (pre-test). This test employs the Kolmogorov-Smirnov statistic to measure how well the observed data distribution fits the expected normal distribution [6, 7]. While the normality test at the post-test amounted to 0.556 ( $p > 0.05$ ), the result was greater than 0.05 on the assumption of normal post-test data (Table 2).

From the analysis using the One Sample T test which aims to find out the effectiveness of the respiratory relaxation program against the reduction of communication apprehension in students, and the analytical test used in this study is the one sample T test. One Sample T test aims to determine whether there is any difference in scores between groups before and after treatment by comparing prates scores with post test score (Table 3).

Based on the results of the One Sample T-test above, it was found that: (a) there was a difference between the communication apprehension score of the pre-test result and the posttest value (prates value 0.001  $> 0.050$ ). The results explained that there was a decrease in communication apprehension in students after being given respiratory relaxation. In other words, breathing relaxation has been shown to decrease communication apprehension in students.

**Table 2** Normality test

Normality test (Shapiro-Wilk)		
	W	P
Kecemasan_Pre	0.701	0.012
Kecemasan_Post	0.923	0.556

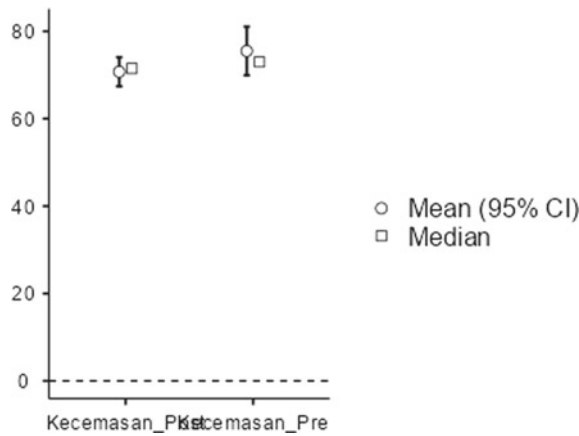
*Note* A low  $p$ -value suggests a violation of the assumption of normality

**Table 3** One sample T-test

One sample T-test		Statistic	df	P	Mean difference
Kecemasan_Pre	Student's t	26.6	3.00	< 0.001	75.5
	Wilcoxon W	10.0		0.098	73.0
Kecemasan_Post	Student's t	41.6	3.00	< 0.001	70.8
	Wilcoxon W	10.0		0.125	71.3

Note  $H_a \mu \neq 0$

**Picture 1** Plot



Based on Picture 1, we can see a decrease in communication apprehension in students after breathing relaxation. In other words, breathing relaxation has been shown to decrease communication apprehension in students.

## 6 Discussion

The results of the data analysis that has been carried out show that the hypothesis in this study is acceptable. The hypothesis that breathing relaxation can lower the level of communication apprehension in students. Students who obtained respiratory relaxation experienced a decrease in communication apprehension compared to before and after giving a breathing relaxation. This was supported by the results of quantitative analysis and training evaluation given to research respondents who were trained.

Admittedly, the research hypothesis put forward in this study is consistent with the theory put forward by Feist and Feist [11] that when a person experiences high fear, acute anxiety or high stress, then they usually have low self-control and confidence.



These findings are supported by previous research carried out by [12]. The results show a negative link between self-effectiveness and communication anxiety in new students. The higher the self-effectiveness of a student, the lower the communication anxiety, but if the less effective the student's self, the higher the communication anguish of the student. Additionally, Adeyemo (2007) supports the findings that individuals with high self-efficiency will strive to face the challenges that exist to reduce stress in themselves, are more resilient in dealing with challenges, and tend to be able to motivate themselves to face a challenge so that stress tends to decrease.

Breathing is relaxation by adjusting the pace and depth of breathing (Maimunah and Retnowati 2011). Davis et al. stated that proper breathing is a stress reliever (Maimunah and Retnowati 2011). Relaxation can be an active coping skill if it is used to teach individuals when and how to apply relaxation under desired conditions, e.g. to reduce insomnia, reduce anxiety or to make the body rest for a moment (Purwanto 2006).

## 7 Conclusion

Based on the results of the analysis obtained, it can be concluded that respiratory relaxation effectively reduces communication apprehension in students. Students who get respiratory relaxation experience a decrease in communication apprehension. There was a decrease in communication apprehension scores in students before training (pre-test) and after training (post-test).

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# Empowering Sustainable Livelihoods: The Ayady Social Kafalah Platform as a Solution to Socioeconomic Challenges



Aishath Muneeza and Sherin Kunhibava

**Abstract** This research paper proposes the “Ayady” Social kafalah Platform, a pioneering solution aimed at addressing the enduring socioeconomic challenges exacerbated by the COVID-19 pandemic and natural disasters. In a landscape where job losses and financial insecurity have left individuals grappling with the fear of hunger and dependence, Ayady presents a transformative approach grounded in a qualitative research methodology. Derived from the Arabic term for “helping hand,” Ayady reimagines assistance by emphasizing empowerment through opportunity, forging a self-sustaining cycle where individuals who have overcome adversity extend support to others. The concept formalizes the principle of ‘paying it forward’ with the use of the kafalah contract. Through qualitative analysis, this research explores the profound impact of Ayady in fostering self-sufficiency and breaking the cycle of dependency. Unlike conventional charity crowdfunding, Ayady’s unique essence lies in its ability to nurture lasting self-sufficiency, effectively revolutionizing poverty alleviation strategies. This paper delves into Ayady’s operational framework, assessing its feasibility, scalability, and the nuanced implications discovered through qualitative investigation. By providing insights into Ayady’s potential to revolutionize poverty alleviation strategies and foster sustainable livelihoods beyond the pandemic, this research underscores the transformative power of qualitative research in shaping innovative solutions.

**Keywords** Social Kafalah platform · Pay-it-forward · Empowerment through opportunity · Sustainable livelihood

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# 1 Introduction

The COVID-19 pandemic has disrupted lives and economies worldwide, leaving many individuals grappling with the fear of not being able to provide for their families due to sudden job losses. As reported by Rappler [13], the threat of hunger often outweighs the fear of the virus itself for many vulnerable populations. The dire situation is not confined to a specific region or nation, but resonates globally [11].

In response to this pressing issue, the need for comprehensive and sustainable solutions becomes paramount. While providing financial aid and in-kind support through Islamic social finance mechanisms like zakat, sadaqat, and waqf has proven beneficial, there arises a fundamental question: How long should individuals depend on external assistance? Can there be a way to empower them to regain financial independence and self-sufficiency? The responsibility of addressing this challenge extends beyond the government and includes active involvement from the private sector and the wider community.

This research paper proposes a groundbreaking solution to this predicament: the Social kafalah Platform, known as “Ayady.” Derived from the Arabic term for “helping hand,” Ayady envisions a social guarantee system that focuses on empowerment through opportunity rather than solely relying on monetary aid. This platform aims to create a cycle of sustainable support, where those who are currently capable of helping extend a hand to those in need, not merely by providing funds, but by offering opportunities for self-sufficiency and economic independence. This is similar to the concept of ‘paying it forward’ where the recipient of a good deed repays it to another in need rather than the benefactor (for e.g. [2, 6]).

The Ayady platform operates on a simple yet impactful principle: a person who has attained self-sufficiency through the platform’s support commits to assist another individual in need. By doing so, Ayady fosters an unending cycle of empowerment, ensuring that assistance continues perpetually, transforming recipients into contributors. It is similar to the well-known principle of paying it forward but from a Shariah perspective using contracts that are Shariah compliant. Ayady’s essence lies in its capacity to initiate a transformational journey, replacing reliance with self-sufficiency and dependency with empowerment. It also creates the culture of ‘giving back’ to society. It further facilitates the achievement of goals 1—no poverty, goal 2—zero hunger and goal 10—reduced inequalities of the United Nations Sustainable Development Goals [16].

The objective of this paper is to propose a formalized ‘pay it forward’ platform based on the Shariah compliant contract of kafalah to alleviate the hardships faced by society due to Covid-19 and other natural disasters. Through a detailed examination of this innovative solution, we aspire to shed light on the potential of the Ayady platform to address the socioeconomic challenges posed by the COVID-19 pandemic and other natural disasters. By exploring the platform’s inventiveness, assessing its impact, evaluating its feasibility, and envisioning its scalability, this paper seeks to provide a comprehensive understanding of how Ayady can revolutionize the way we combat poverty and foster sustainable livelihoods.

Next this paper, will present the relevant literature and thereafter explain in detail the proposed modus operandi of the Ayady platform, elucidating its uniqueness, impact, feasibility, and scalability, challenges will also be highlighted.

## 2 Literature Review

Humans are well known to reciprocate kindness and help [7]. In fact, this act has existed for centuries in Turkey in the form of buying bread at the bakery for the next person and thus ‘paying it forward’ [9].

Over the years many studies have researched on the concept of reciprocity and the social concept of ‘pay it forward’ in relation to social behaviour and organization citizenship from a theological, philosophical and social perspective (for e.g. [3–7]). However, there is little discussion from the Shariah perspective on ‘paying it forward’ apart from the need of people to give zakat (alms), sadaqah (charity), and doing good such as having teeb (goodness) birr (piety), and ihsan (excellence and [12, 14, 17]).

As for formalizing the social act of doing good, Baker and Bulkley [2, p. 15] found that ‘generalized reciprocity was sustained by the practice of paying it forward and by peer-monitored, peer-rewarded reputation, controlling for formal incentives, direct reciprocity, type of request, demographics, homophily, time, and other factors’. This indicates that formalizing reciprocity could be sustainable. There is little research in the area of formalizing ‘pay it forward’ through Shariah contract and principles [9]. It is therefore this gap in the literature that this paper intends to investigate.

The concept of kafalah has been delineated by various scholars within the realm of Islamic jurisprudence. Notably, the Hanafi school defines kafalah as the conversion of the guaranteed person’s liability into a joint responsibility of both the guaranteed and the guarantor at the point of seeking compensation. In contrast, the Maliki, Shafi’i, and Hanbali schools of thought regard kafalah as a conjoining of the guarantor’s liability with that of the guaranteed party [1]. Kafalah, deriving from its literal meaning of responsibility or suretyship, holds a technical implication as an additional obligation linked to an existing obligation, specifically concerning a claim or demand. This entails an agreement wherein one party undertakes the responsibility to fulfill the liability of a third party if that third party defaults in fulfilling their obligation [10].

Distinct perspectives on the foundation of a kafalah contract emerge from different scholars. Abu Hanifah and Muhammad assert that the basis of a kafalah contract is rooted in the guarantor’s offer and the debtor’s acceptance. Conversely, Abu Yusuf and the majority of scholars contend that a kafalah contract is established solely upon the offer. Additionally, the modes of kafalah can be characterized as either unrestricted or limited by description. kafalah can also be suspended pending a condition or deferred to a future time [1].

Within Islamic jurisprudence, kafalah encompasses a contractual arrangement where the guarantor, known as the Kafil, pledges to guarantee the performance, actions, and undertakings of a beneficiary. The Kafil undertakes the responsibility

to underwrite any claim or obligation that must be fulfilled by the guaranteed party. Kafalah, in the context of contracts of exchange, is permissible, finding application in scenarios such as sales contracts [15]. Furthermore, kafalah can serve as a secondary contract within the Islamic banking framework. For instance, in cases where the primary contract revolves around the deferred sale of an asset, the bank may request a customer to provide a guarantor to ensure future payments. It's worth noting that kafalah's applicability is not confined to secondary roles; it can also serve as a primary contract. This is exemplified when the product itself entails a guarantee, as seen in shipping guarantees or bank guarantees.

A consensus exists among Islamic jurists, supported by evidence from the Quran, Sunnah, and juristic consensus, that kafalah (guarantee) contracts are valid and permissible. A verse from the Quran, "They said: 'We miss the great beaker of the king; for him who produces it is (the reward of) a camel load; I will be his za'im.'" [12: 72], is interpreted to signify a reference to a guarantor or Kafil, according to Ibn Abbas. The fundamental purpose of kafalah is to aid in securing creditors' rights and preventing harm to debtors [8]. To establish a valid kafalah arrangement, certain tenets must be fulfilled, including the presence of a guarantor (Kafil), beneficiary (Makful lahu), subject of the guarantee contract (Makful), and the appropriate contractual language (Sighah, encompassing Ijab and Qabul).

Islamic jurisprudence imposes limitations on the application of kafalah as a secondary contract, particularly in the context of trust contracts like agency (Wakalah) contracts. Stipulating personal guarantees or security pledges in trust contracts is generally impermissible, except in cases involving negligence, misconduct, or breaches of contract. This prohibition extends to various contract types, such as wadiah, amanah, musharakah, mudarabah, wakalah, and leasing, where the leased asset is entrusted to the lessor [15].

Interestingly, a notable facet of kafalah pertains to the charging of fees. Islamic jurists, including Hanafi, Shafi'i, Maliki, and Hanbali scholars, uniformly deem it unlawful to charge a fee for a guarantee. Kafalah, considered a *tabarru'* (charitable) contract, does not align with the principles of commercial exchange. However, the guarantor is entitled to claim actual expenses incurred during the period of the personal guarantee. It is essential to differentiate between recourse and non-recourse guarantees. The former allows the guarantor to seek recourse from the debtor and is established at the debtor's request or with their consent. Conversely, a non-recourse guarantee is offered voluntarily by a third party without the debtor's initiation.

kafalah can be classified into two primary types: kafalah bi al-Nafs (Physical Guarantee) and kafalah bi al-Mal (Financial Guarantee) (International Shari'ah Research Academy for Islamic Finance, 2012).

- **Kafalah bi al-Nafs (Physical Guarantee):** This category involves the guarantor ensuring the presence of the principal party before a specific authority. In instances of suretyship for a person, the guarantor assumes the responsibility to ensure the principal's presence during legal proceedings, particularly when the principal owes a debt to a creditor. The guarantor's obligation is limited to ensuring the principal's presence and does not extend to settling the principal's debt. Should

the principal pass away, the guarantor is not compelled to settle the debt on their behalf. This form of kafalah centers on ensuring the principal's presence, rather than assuming responsibility for their debt settlement.

- **Kafalah bi al-Mal (Financial Guarantee):** This type of kafalah pertains to guarantees related to property or financial matters and encompasses various scenarios. It encompasses guarantees for the settlement of a debt (dain) or the return of a specific item (ain). Guarantees under kafalah bi al-Mal continue even if the creditor or owner of the property passes away. In such instances, the heirs of the creditor or property owner retain the right to demand that the guarantor settles the debt or returns the property. Kafalah bi al-Mal can be further categorized into three types:
  - **Kafalah bi al-dain:** This pertains to the guarantee of repaying another party's loan obligation.
  - **Kafalah bi al-ain/kafalah bi al-taslim:** This encompasses the guarantee of payment for an item or the guarantee of delivery in a transaction.
  - **Kafalah bi al-darak:** This guarantee ensures that a specific asset is free from encumbrances in cases where a transaction involves the transfer of title rights.

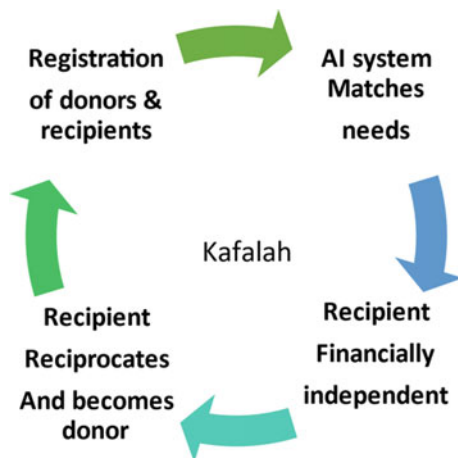
### **3 Empowering Through Opportunity: The Step-By-Step Operation of the Ayady Social Kafalah Platform**

The Ayady platform embodies the concept of kafalah by empowering individuals to become sponsors (Kafil) who provide opportunities for others, fostering a cycle of reciprocal support and sustainable transformation. The “Ayady” Social kafalah Platform operates through a carefully orchestrated step-by-step process aimed at empowering individuals facing economic challenges, particularly those who have lost their jobs due to the COVID-19 pandemic. Based on Diagram 1 below this is the proposed social kafalah platform.

- As a starting point, individuals and companies who are donors and recipients (those in need) register on the platform.
- The platform administrators curate a range of opportunities provided by willing donors who are in a position to help, the ‘help’ could be job openings, skill development programs, apprenticeships, and entrepreneurial ventures.
- Through a sophisticated matching algorithm and AI (artificial intelligence), registered individuals are then paired with opportunities that align with their skills and aspirations.
- Once a suitable opportunity is identified, beneficiaries accept the offer, initiating a commitment to their journey of empowerment.
- Upon acceptance, beneficiaries and participants offering opportunities enter into a kafalah agreement that outlines the terms, expectations, and duration of the opportunity. Throughout this engagement period, donors provide mentorship,



**Diagram 1** Kafalah platform empowered by technology. *Source* Authors' own



guidance, and support to the beneficiaries, ensuring their success in achieving self-sufficiency. As recipients actively participate in their chosen opportunities, they acquire new skills, gain valuable experience, and generate sustainable income, thereby progressing towards financial independence.

- At the point of achieving self-sufficiency, recipients commit to reciprocating the support they received by becoming sponsors themselves. This commitment perpetuates a cycle of empowerment, ensuring that the movement of Ayady continues in perpetuity.

The platform's impact expands as more recipients transition to donors, creating a community of individuals who actively contribute to uplifting others and alleviating poverty. Through a combination of technology, transparent platform, governance, knowledge sharing, collaboration, and the principle of reciprocity, Ayady fosters an environment of sustainable change. Ultimately, the "Ayady" Social kafalah Platform redefines the pay-it-forward assistance by formalizing and emphasizing empowerment through opportunity, creating a self-sustaining cycle of transformation that uplifts individuals, families, and communities alike.

## 4 Key Implementation Considerations and Challenges

The successful implementation of the "Ayady" Social kafalah Platform requires careful attention to various critical considerations and potential challenges. Addressing these aspects ensures the platform's effectiveness, sustainability, and its ability to bring about meaningful and lasting change for individuals in need. This section highlights key factors that should be taken into account during the implementation process to maximize the platform's impact and ensure its seamless operation.

### ***4.1 Targeted Outreach and Inclusivity***

Efforts to identify and reach individuals who are genuinely in need of assistance are paramount. A comprehensive outreach strategy must be developed to connect with those facing economic hardships, especially those who have lost their jobs due to the pandemic. It is essential to ensure that the platform's reach extends to marginalized and vulnerable communities, guaranteeing inclusivity and equal opportunities for all.

### ***4.2 Opportunity Matching and Skill Alignment***

A fundamental aspect of the platform's success lies in effectively matching beneficiaries with suitable opportunities. An advanced algorithm and AI system must be developed to match the skills, aspirations, and preferences of individuals in need with available opportunities. This requires continuous refinement and fine-tuning to ensure optimal matches that enhance the chances of beneficiaries' success and self-sufficiency.

### ***4.3 Mentorship and Support***

As beneficiaries embark on their chosen opportunities, consistent mentorship and support from sponsors play a vital role in guiding their journey. Establishing a structured support framework ensures that beneficiaries receive guidance, advice, and encouragement, enhancing their ability to make the most of the opportunities provided and achieve sustainable economic independence.

### ***4.4 Transparency and Accountability***

Maintaining transparency and accountability throughout the platform's operations is crucial. Clear documentation of engagements between sponsors and beneficiaries, as well as the outcomes achieved, fosters trust among participants and stakeholders. Robust monitoring and reporting mechanisms should be in place to track progress, assess impact, and ensure the platform's integrity.

### ***4.5 Reciprocity and Sustainability***

The concept of reciprocity lies at the heart of the Ayady platform's model. It is essential to emphasize the reciprocal nature of the support provided and received, encouraging beneficiaries to become sponsors themselves once they achieve self-sufficiency. This approach not only perpetuates the cycle of empowerment but also strengthens the platform's sustainability by expanding its reach and impact.

### ***4.6 Ethical and Cultural Sensitivity***

Cultural and ethical considerations must be carefully navigated throughout the implementation process. Respecting the values, beliefs, and norms of the diverse communities involved is essential to ensure the platform's acceptance and success. Cultural sensitivity should also extend to the types of opportunities offered, taking into account local contexts and preferences.

### ***4.7 Scalability and Technological Infrastructure***

As the platform gains traction and attracts more participants, scalability becomes a critical factor. Adequate technological infrastructure, including a robust online platform and secure data management systems, is necessary to accommodate growing user numbers while maintaining a seamless user experience.

### ***4.8 Monitoring and Evaluation***

Implementing a comprehensive monitoring and evaluation framework allows continuous assessment of the platform's effectiveness and impact. Regular data collection and analysis provide insights into the outcomes achieved, enabling informed decision-making, refinement of processes, and the identification of areas for improvement.

By proactively addressing these considerations and navigating potential challenges, the implementation of the "Ayady" Social kafalah Platform can be optimized to create a transformative and sustainable solution for individuals facing economic hardships.

## 5 Conclusion

The “Ayady” Social kafalah Platform stands as a beacon of hope and empowerment in the face of the socio-economic challenges intensified by the COVID-19 pandemic. As individuals grapple with the fear of hunger and dependence stemming from sudden job losses, Ayady presents a paradigm shift in addressing these concerns. Through a qualitative research methodology, this paper has illuminated the transformative power of Ayady in fostering sustainable livelihoods and breaking the cycle of dependency.

Ayady’s innovative approach redefines assistance by focusing on empowerment through opportunity. By connecting those who are able to extend a helping hand with individuals in need, Ayady facilitates a cycle of perpetual support and self-sufficiency. The platform’s unique *modus operandi* ensures that beneficiaries become sponsors, thereby perpetuating a movement of empowerment that transcends monetary aid.

The Ayady platform is not merely a one-time solution; rather, it forges a path toward lasting change. By actively engaging beneficiaries in meaningful opportunities, offering mentorship and support, and emphasizing transparency, Ayady paves the way for a brighter future. The principles of reciprocity, cultural sensitivity, scalability, and rigorous monitoring underscore its potential to revolutionize poverty alleviation strategies.

In a world grappling with the far-reaching effects of a pandemic, Ayady offers a ray of hope, demonstrating that sustainable livelihoods are not only possible but attainable. The success of Ayady lies not only in its operational framework but in its ability to instill a sense of agency, dignity, and resilience within individuals who have faced adversity. As this research has shown, qualitative investigation plays a pivotal role in shaping innovative solutions, ultimately contributing to a more equitable and empowered society.

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# Customer Relationship Management Effect on Loyalty: A Study of Switching Cost Role as Mediator



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**Abstract** The research aims to examine the effect of customer relationship management on customer loyalty with its mediator switching cost in sharia banks. Despite Indonesia's predominance of Muslims, Sharia banks nevertheless have a little market share. The study also demonstrates that consumers of Sharia banks behave differently from customers of conventional banks since Sharia bank customers are driven not just by their necessities but also by their desire to uphold Islamic beliefs. Sharia banks have been emphasizing enhancing their customer relationship management (CRM) approaches to overcome these issues and boost client loyalty. 100 Sharia bank customers in Pekanbaru participated in the research using a quantitative methodology. Questionnaires that were manually given to respondents and then subjected to PLS-SEM analysis were used as the data gathering method. The findings show that customer relationship management affects loyalty and switching costs, whereas the third hypothesis is disproved since switching costs do not serve as a mediator of customer loyalty ( $P = 0.341$ ). Overall, the results point to the possibility that Sharia banks can expand their market share and effectively compete in the services they offer clients by enhancing customer relationship management. The long-term success and expansion of Sharia banks in the banking sector can be attributed to their ability to comprehend customer needs and preferences through CRM and big data research.

**Keywords** Customer relationship management · Loyalty

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## 1 Introduction

Sharia banks in Indonesia do not yet have the dominant power in the banking industry. This can be seen from a low market share compared to conventional banks [1]. The following is explained by the Sharia banking market share in the last 3 years.

Table 1 explained that the Sharia banking market share is still far behind conventional banks. While Indonesia is a predominantly Muslim population. Another study suggests that the behaviour of Sharia bank customers differs from conventional banks, where Sharia bank customers use banks not only for needs but also because they want to comply with Islamic teachings [2]. Sharia banks must increase socialization and understanding of the use of Sharia banks as one of the implementations of Iman and Taqwa to Allah SWT. All products and services in Sharia banks have been secured and supervised by the Sharia Supervisory Board and the National Sharia Council [3, 4].

Loyalty is an important thing for companies to achieve. A company that generates loyalty is one of the advantages of competing and surviving among other companies [5]. In several studies, it is stated that the failure of these service companies is due to managers who do not know the factors that affect loyalty [6]. Some companies do not care about community attitudes, desires, and trends [7]. The Sharia banking industry is also the same, loyalty is one of evidence that Sharia banking can compete in providing services for customers. Loyalty starts from the assessment of the quality received based on the expectations that customers expect. Based on this, Sharia banks in North Sumatra designed the improvement and development of CRM strategies to not only maintain but also attract new customers [8].

Customer relationship management is used by companies to improve customer retention. This customer retention is useful for binding customers without switching to other products/services/companies [9]. The current development of big data will optimize the process, growth, and marketing strategy for customers. Big data as an effort to improve CRM strategy can understand customer habits and behavior so that companies can provide the best services and products according to customer needs [10]. Al Rajhi Islamic Bank is one of the banks that have successfully implemented Customer relationship management. The implementation of CRM in Islamic banks is the use of technology to get criticism and advice from customers. This technology is designed to increase customer loyalty [11].

**Table 1** Market share of Sharia Bank

No.	Years	Sharia bank market share (%)	Conventional bank market share (%)
1	2020	6.51	93.49
2	2021	6.59	94.41
3	2022	7.03	92.97

Source Data processed (2022)

Customer loyalty is effective marketing for the company. The high loyalty will automatically reduce the likelihood of customers switching to another bank. The switching cost perceived by customers can be positive and negative. Positive switching costs such as bonuses or other benefits obtained by customers while negative switching can be fines or penalties, poor service, and the like [12]. Based on research [13] The banking industry is more vulnerable to behavioral switching. To avoid this switching behavior, it is necessary to increase loyalty, loyal customers will not switch to other banks. Another study stated that the strategy established by Sharia banks to prevent switching behavior was to set switching costs. Customers will be disadvantaged if they have to move to another bank and pay a penalty for switching to another bank and will continue to use the bank's services [14].

## **2 Literature Review and Hypothesis**

### **2.1 Loyalty**

Loyalty is the customer's commitment to rebuild and require the products or services consistently in the future despite the influence of situations and conditions that could potentially lead to a transition to another bank. In other studies, loyalty is interpreted as the behavior of customers who buy back products and services and do not want to move to another company [15]. Loyalty is also interpreted as repurchasing and giving recommendations to other customers [16].

### **2.2 Customer Relationship Management**

Customer relationship management is the process of identifying, anticipating, understanding customer needs, and gathering information to become loyal customers or customers [17]. Customer relationship management is one way to maintain relationships with customers. The implementation of CRM in companies is a way of maintaining, improving, and obtaining good relationships with customers and providing a positive image [18]. Kotler [19] further explained that CRM is the overall process of building and maintaining relationships with customers by providing superior value and satisfaction.

### **2.3 Switching Cost**

Switching cost is defined as service provider change cost. In this case, there are two types of switching costs: positive cost and negative cost. Positive costs are felt by



customers who survive with the services already provided, while negative costs are aimed at customers who want to leave the service [20]. Furthermore, switching costs are also interpreted as the cost that consumers spend on moving from one product and service to another [21].

### **3 Methodology**

#### ***3.1 Population, Sample and Analysis Unit***

A population is a group of people, events, or other things that you want to study [22]. In this study, the population was Sharia bank customers in Pekanbaru. Based on data from the statistical center, the population of Pekanbaru is 1,107,327. But not all residents use Sharia banks. For that the researcher established a sample. Samples are a number of selected members of the population [22]. In this study, as many as 100 respondents used Sharia banks in Pekanbaru.

#### ***3.2 Method of Collecting Data***

This study used a quantitative method. Questionnaire is a list of written questions that have been formulated by researchers [22]. 100 Sharia bank customers in Pekanbaru participated in the research using a quantitative methodology. Questionnaires that were manually given to respondents and then subjected to PLS-SEM analysis were used as the data gathering method.

#### ***3.3 Variable Measurement***

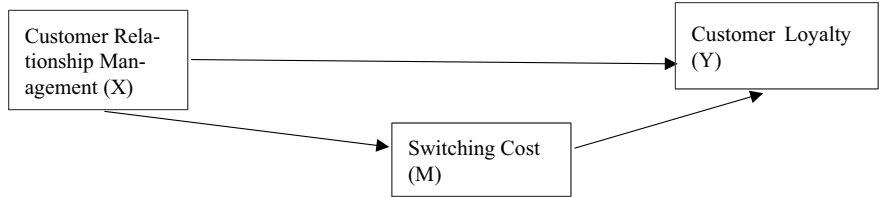
Variable measurements in this study used a Likert scale consisting of a total of five different types of measurements as suggested by [23] as follows:

1. Strongly agree = 5
2. Agree = 4
3. Neutral = 3
4. Disagree = 2
5. Strongly disagree = 1.

Based on earlier theories and research, the frame of thought can be described as follows (Fig. 1).

Based on this framework, the following hypothesis was formulated:

H1: Customer Relationship Management Directly Influences Customer Loyalty.



**Fig. 1** Framework

**Table 2** Validity test

Variable	AVE	Result
Loyalty	0.727	Valid
Customer relationship Management	<b>0.531</b>	Valid
Switching cost	0.509	Valid

Validity test is a tool used to assess how well a measuring device can capture the desired data is called validity (Sugiyono, 2011)

H2: Customer Relationship Management affects Switching costs.

H3: Customer Relationship Management has an indirect impact on customer loyalty through switching costs.

**3.4** *Validity and Reliability Test of the Instrument*

Test validity using Pearson correlation. Pearson correlation has a sig. 00.05, so all indicators are valid. The validity test results are as in Table 2.

Based on Table 2, the Average Variance Extracted (AVE) value of each variable more than 0.5. These results indicate that, all the variables are valid variable.

For instrument reliability tests using Cronbach alpha (α). Reliability test results show that all instruments are compatible. Table 3 has shown the reliability test results.

**Table 3** Reliability tests

Variable	Cronbach’s Alpha	Result
Loyalty	0.925	Reliable
Customer relationship Management	<b>0.935</b>	Reliable
Switching cost	0.901	Reliable

A test of reliability is a tool used in research to ascertain the degree to which measurement results can be considered reasonably constant despite being repeated (Singarimbun, 1995)

**Table 4** Hypothesis test

Variable	Original sample (o)	Sample mean	Standard deviation (Stdev)	T statistic	P value
CRM → LY	0.570	0.566	0.111	5.126	0.000
CRM → SC	0.571	0.597	0.066	8.713	0.000

## 4 Results and Discussion

Based on the data obtained and analyzed by using SEM-PLS, the following results were obtained (Table 4).

According to the study's findings, consumer loyalty is directly and significantly impacted by customer relationship management (CRM). The statistical study backs up the hypothesis' acceptance with a *p*-value of 0.000 (less than 0.05). This research suggests that companies, including Indonesian Sharia banks, should emphasize developing and putting into practice efficient CRM methods in order to cultivate solid and enduring connections with their clients. Effective administration management, safe information handling, and the creation of cutting-edge technology to improve customer experiences are some examples of appropriate CRM practices [24, 25].

The research also shows that customer relationship management directly affects switching costs. This hypothesis is also supported by the statistical analysis, which has a *p*-value of 0.000 (less than 0.05). This research implies that Sharia banks can reduce client switching costs when they adopt CRM tactics successfully. To put it another way, happy and devoted consumers are less inclined to think about transferring banks or financial organizations. While switching costs in industries like telecoms have been thoroughly studied in the past, research on switching costs in the banking sector, particularly for Sharia banks, has been rather limited [26, 27].

Overall, the study emphasizes the significance of CRM in Indonesian Sharia banking. An rise in customer loyalty, a decrease in customer switching behavior, and ultimately the expansion and success of Sharia banks in the cutthroat banking sector are all results of effective CRM strategies. Sharia banks may offer their clients a distinctive and individualized banking experience that can develop long-term loyalty and give them a competitive edge by putting a priority on consumer interactions, comprehending client demands, and using technological advancements.

## 5 Conclusion

In conclusion, this study illuminates the critical part that customer relationship management (CRM) played in the development and expansion of Indonesia's Sharia banks. Sharia banks have not yet dominated the banking sector, despite the nation's predominately Muslim population. The results of this study, however, point to the possibility that good CRM tactics may play a significant role in boosting client loyalty

and Sharia banks' ability to compete. According to the study, customers of Sharia banks behave differently from those of conventional banks. Sharia bank consumers are driven by a desire to uphold Islamic principles, as opposed to regular bank customers, who may primarily use banking services out of necessity. The importance of fostering solid awareness of Sharia banking services as an embodiment of religion and devotion to Allah SWT is highlighted by this, along with the importance of socialization.

Overall, the study highlights how crucial customer-centric strategies are for Sharia banks to succeed in the competitive banking environment. Their strategy initiatives should place improving client connections, offering top-notch services, and encouraging customer loyalty at the forefront. By doing this, Sharia banks can boost both their market share and their customers' financial well-being, as well as the expansion of the Sharia banking sector as a whole.

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# From Scarcity to Prosperity: Nurturing Financial Well-Being in Community Affected by Poverty



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**Abstract** Due to vulnerability faced by households, many households have shifted into lower category due to pandemic covid-19. Thus, this study aimed to investigate financial behaviour practices based on experience that are related to financial knowledge towards households' financial well-being. By forming a depth understanding of financial management experience, this study would identify the fragility and shortcomings to be intensified over time. Hence, this study intends in to uplift households in Malaysia and create a more inclusive and prosperous society. Using the Nominal Group Technique (NGT), three study groups with ten participants each were used. This began with a calmed generation of thoughts about the beneficial aspects and disadvantages of financial practices. After that, round-robin voting, and a group debate continued until no more ideas were offered. Then, informants would vote on their grievances about the behaviour of financial management until a consensus was reached. Therefore, this study found that low-income households have low financial knowledge and are influenced by impulsive financial attitudes and behaviors. Thus, this article highlights the need for tailored financial education programs that cover budgeting, saving, debt management, and investment. It emphasizes the importance of financial literacy, access to financial services, entrepreneurship, and community engagement in fostering financial well-being.

**Keywords** Scarcity · Financial well-being · Financial management · Financial literacy

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## 1 Introduction

Communities all throughout the world are affected by poverty, which limits access to resources, opportunities, and financial security. This is because poverty-stricken areas struggle with a variety of issues, such as restricted access to social support networks, financial services, and employment prospects [29]. In this regard, the lack of income has prevented community access to basic human rights such as shelter, illness preventable measures, wholesome education, nutritious food, clean water and much more [2]. The communities that lived under such circumstances tend to experience housing mobility and being homeless that are more likely to be at risk of becoming victims of potential crimes [14]. Besides, the poor of living condition has deprived individuals of medical attention and lower quality food that eventually affects their health. Furthermore, the effects of poverty have also affected how children learn and develop where some children being unable to attend school because of their parents' financial situation [7]. Thus, these difficulties prevent people from reaching their full potential and feed the cycle of scarcity. To escape the shackles of poverty, one must adopt a thorough and multidimensional strategy that priorities fostering financial security. Communities can improve their situation and pave the way for success by implementing initiatives that put a priority on financial well-being [1].

The term “financial well-being” describes the general satisfaction and health of the financial situation that an individual or household experiences [31]. Financial well-being is a subjective concept that varies from person to person depending on circumstances, values, and financial aspirations where it includes various aspects of monetary stability and security that goes beyond just having a particular amount of wealth or income. Hence, it would be beneficial to provide communities with the resources they need to break the cycle of poverty by starting financial education at a young age and extending it to adult education and practical training. To alter lives and pave the route for prosperity, it is crucial to foster financial well-being in areas plagued by poverty. Thus, this paper studies households' beliefs, perceptions and attitude in making financial decisions to identify whether positively foster the nature of financial well-being or otherwise.

## 2 Literature Review

### 2.1 *Scarcity into Prosperity*

The term “scarcity” describes the constrained supply of necessities like food, water, education, and healthcare. People who are imprisoned in poverty struggle to achieve their fundamental needs because they lack the resources to acquire enough food, clean water, education, or healthcare. As a result, poverty frequently creates scarcity. In turn, this shortage worsens poverty by restricting social mobility and making it

harder for people to break free from the cycle of poverty [6]. While prosperity encompasses a holistic and multidimensional understanding of well-being, where financial stability and fulfillment in various aspects of life intertwine which was the opposite of scarcity [20]. To be prosperous, one must achieve a degree of economic success and security that allows them to meet their requirements, pursue their objectives, and live comfortably. A sense of security, freedom, and empowerment brought about by financial prosperity enables people to make decisions that are consistent with their values and objectives [23].

The cycle of poverty and scarcity must be broken through multiple strategies. These include tackling systemic problems through social and economic policies, enabling inclusive and sustainable development, and advocating for equitable access to opportunities and resources [41]. To effectively address poverty and scarcity, cooperation between governments, civil society organisations, the commercial sector, and communities is essential.

## ***2.2 Nature of Financial Well-Being***

Financial prosperity and financial well-being are closely related concepts that encompass the achievement of financial success, security, and sustainability. The term “financial well-being” refers to a variety of factors and traits that affect someone’s overall financial satisfaction and health. Recognising the essential elements of financial well-being and how they interact to produce a feeling of stability, freedom, and fulfilment is necessary to comprehend its nature [9, 15, 32]. Having a sense of security of one’s financial condition is strongly correlated with one’s financial well-being. To handle unforeseen costs and guard against financial shocks, this includes maintaining a steady income, savings, and insurance coverage [38]. A stable income gives one a sense of security because it guarantees a consistent cash flow to pay for necessities like housing, utilities, food, and transportation [12]. It enables people to properly allocate resources, save money for goals, and prepare for the future. While savings act as a safety net for money, acting as a cushion for unanticipated costs, emergencies, and future financial objectives. People who routinely lay money aside can build up their savings, which serve as a safety net in difficult financial times. Savings can also present chances for wealth-building and investment, resulting in long-term financial security [3, 5]. Besides, in the event of unanticipated events like accidents, diseases, natural catastrophes, or the loss of property insurances serves as a safety net by offering monetary compensation. While individuals that have enough insurance coverage can reduce the financial effect of unforeseen disasters and safeguard their possessions and well-being. In this regard, financial stability offers a basis for stability and peace of mind, lowering worry and tension caused by financial instability. Hence, individuals that are financially free are better able to govern their life and make decisions that will improve their general well-being.



### ***2.3 Cultivating Financial Well-Being Among Community***

Offering accessible financial education programmes to low-income people is one of the primary tactics for fostering their financial well-being, which indirectly eradicates poverty. Such programmes must be created according to the specific needs and difficulties that this demographic confronts. There are various types of financial education programs that can be implemented which is workshop and seminars, one on one financial counseling, online and mobile platform, integrate financial education into school syllabus, establishing mentorship programs or support groups and much more. In essence, community centres, non-profit groups, and governmental organisations can work together to provide courses, seminars, and online resources that address issues like budgeting, saving, managing debt, establishing credit, and consumer rights to satisfy the requirements of society. Hence, ensuring accessibility and relevance, financial education can empower low-income individuals to make sound financial decisions and navigate complex financial systems [37].

Conduct interactive workshops and seminars to provide participants with useful advice and resources to aid in the development of crucial money management skills. Meanwhile, one on one financial counseling is giving individualised financial counselling sessions that can address their specific needs and give them the tools they need to take charge of their finances [39]. Create accessible mobile and internet resources to learn about money management by making videos, lessons, and interactive modules that cover a range of financial topics to assist customers in tracking their financial success, include goal-setting tools, calculators, and budgeting tools. As is known, financial technology nowadays has rapidly emerged where it provides mobile apps related to finance, financial online learning platform, financial gamification and simulation, access to banking services and much more [40]. However, due to awareness and illiterate they didn't they don't know how to apply and utilize it in life. Thus, work with educational organisations to incorporate financial literacy into the curriculum at the schools would engage students in compelling training, simulations, and case studies from real life to improve their financial literacy abilities from early age [24].

## **3 Methodology**

This study simply adopts qualitative research design in exploring and elaborating case studies which indirectly implement inductive research paradigm. Moreover, this study adopts Nominal Group Technique (NGT) in collecting data. NGT is a qualitative exploratory research technique that is frequently employed in circumstances requiring difficult decision-making, consensus-building, and complex problem-solving. The technique for determining pertinent features and a relative ordering of relevance was chosen using NGT [8, 30]. In addition, informants hold the power in weighted to responses while the procedure is open, inclusive, and repeatable. This

technique was initially developed by Delbecq et al. (1976) and has been used since then for business and academic purposes [35]. In this regard, this study uses NGT to determine pertinent features and a relative ordering of relevance regarding financial management among low-income households. While data from the nominal group technique can be studied both qualitatively and statistically, data analysis is often thought to be simple [21]. However, this study surely analysing the data qualitatively aligned with research design.

Therefore, qualitative research is used to adopt non-probability sampling. This is due to limited data and participants nature that difficult to reach through traditional random sampling [4]. There are various types of non-probability sampling such as convenience sampling, however this study combines purposive and snowball sampling method in selecting informants for this study. Snowball was utilising early participants as introduction points or sources for new study participants. This is because the target population of this study is hard to reach and lacks a comprehensive sampling frame. While purposive sampling method intends to select unique characteristics related to this study that are more likely to be rich with information. Thus, this study has outlined the “included” and “excluded” criteria to be followed. This criterion can be referred in Table 1.

Based on criteria outlined, there are three focus groups consisting of 9–14 informants for every session were conducted in three different locations discussing informants preferences in managing and planning personal finance. The invitation to contribute with discussion was notified directly through phone call to each potential participants that consist of low-income households. In this regard, NGT starts by introducing the purpose of the discussion to enlighten informants and avoid any unrelated topics. Then, NGT process conducted through three steps where informants supplied with blank paper to write down the cycle of financial management they practiced recently. Second steps, informants sharing their ideas in a group and discussing each of the attributes the similarity and the difference. Lastly, informants had an opportunity to reconsider their initial ranking of the attributes based on the group discussion. They were not pressured to alter their ranking nor to achieve consensus.

**Table 1** Included and excluded criteria of informants

Included	Excluded
Malaysian that live in Kelantan	Malaysians that live other than Kelantan
Categorized as low-income households	Categorized as middle- or high-income
Contributor to households income	Not contributing to households income
Directly involve in managing household finances	Not directly involved in managing household finances
Households consist of 3 individuals and above	Households consist below than 3 individuals
Comes from the Malay race	Comes from other than Malay race
Able to attend the discussion	Unable to attend the discussion

The researcher endeavored to ensure that all participants were given the opportunity to contribute.

## 4 Result and Discussion

A total of 33 informants participated across the three sessions. Table 2 shows informants demographic background from three session of discussion:

Table 2 shows 30 informants with diverse demographic backgrounds that contributed in three different session. Even though past study shows the difference of financial knowledge, capability and behavior between gender, education background and age, this study refuse to emphasize on the difference but building a depth understanding on current financial management issues faced by low-income households. Thus, the outcome would then be explained in further detail.

### 4.1 Administered Financial Management Practices

Figure 1 illustrates the thematic map of financial management in Kelantan, Malaysia that figures out themes and sub-themes that indicate the structure and progression of the following discussion. In this regard, data extracted through thematic analysis

**Table 2** Informants' demographic backgrounds

Total informants	30	(n = 30)
Gender	Women	(n = 6, 20%)
	Men	(n = 24, 80%)
Age	32–38 years	(n = 4, 13%)
	39–45 years	(n = 6, 20%)
	46–52 years	(n = 7, 23%)
	53 years and above	(n = 13, 44%)
Education	Not going to school	(n = 3, 10%)
	Primary school	(n = 2, 7%)
	Secondary school	(n = 22, 73%)
	STPM	(n = 3, 10%)
Employment sector	Unemployed	(n = 4, 13%)
	Manufacturing	(n = 3, 10%)
	Agriculture	(n = 9, 30%)
	Construction	(n = 4, 13%)
	Services	(n = 10, 34%)

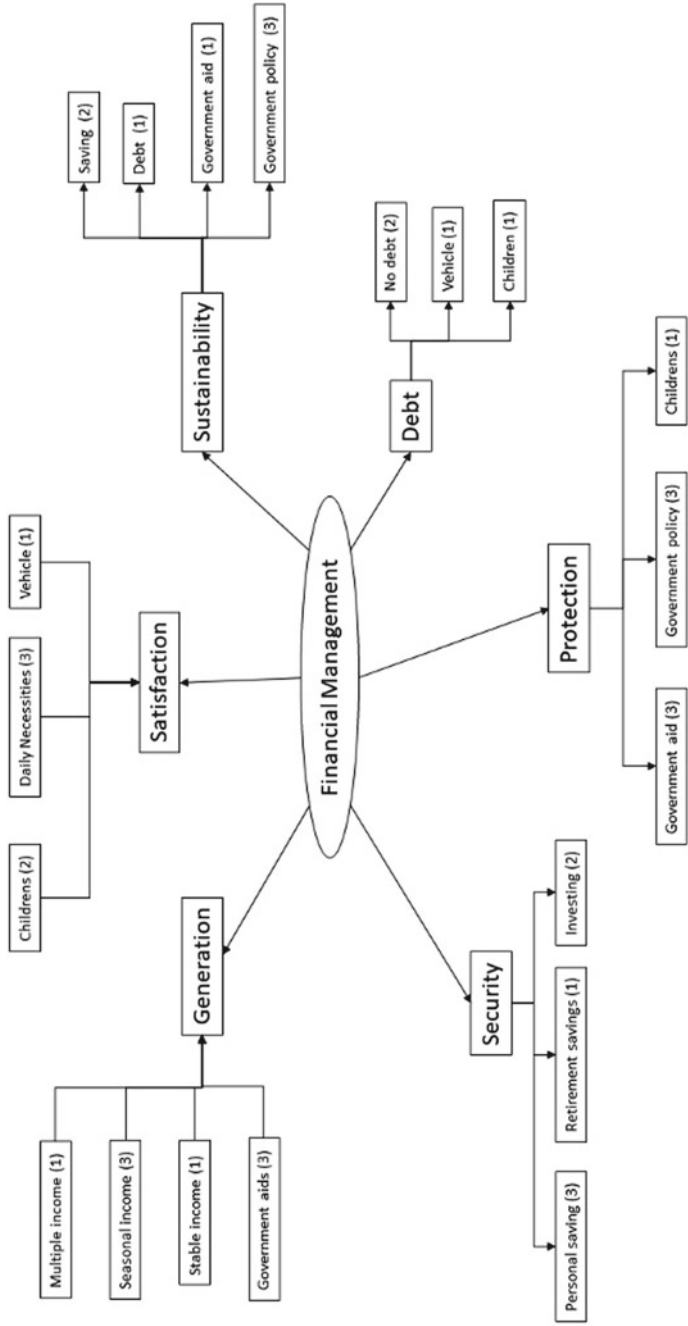
has revealed six main topics which are generation, satisfaction, security, protection, debt, and sustainability. Based on the analysis, the theme of generation was articulated into four sub-themes namely multiple income, seasonal income, stable income, and government aids. While satisfaction theme contained three sub-themes namely children's, daily necessities, and vehicle. Similarly, security reflected three sub-themes which are personal savings, retirement savings and investing. The protection theme consisted of three sub-themes namely government aid, government policy and children. Also, debt theme brought three sub-themes namely no debt, vehicle, and children. Finally, the sustainability theme is articulated into four sub-themes which is saving, debt, government aid and government policy.

### **Generation**

The theme of generation encompasses the studies concerning income gained by households in Kelantan. Thus, multiple income sub-themes present the dynamic of diverse resources gained by household to support daily needs. This is because the current needs of households cannot be met by one source of income. This is consistent with [25] claim that a single-income lifestyle is a sign of a culture of poverty because individuals tend to live under constraints. While seasonal income has been voted as a major type of income generation among low-income households in Kelantan. This was due to employment background which is manufacturing, agriculture, construction, and entrepreneurship where they tend to work based on their timeline. This seasonal income shown that households are financially unstable and could get in danger if there is no improvement after a specific amount of time. However, stable income sub-themes indicated that part of informants tend to generate stable monthly income by living on a fixed salary. Lastly, whole of informants determined the pertinent features of generation themes was rely on government aid. As known, every government updates its programmes designed to help those in need in reducing the country's overall poverty rate and Malaysia is not an exception. Thus, part of the informants seeks government financial aid by preferring it into cash that allows them to purchase daily goods and needs.

### **Satisfaction**

The themes of satisfaction contained of three sub-themes which are children, daily necessity, and vehicle. Three group discussions insist on fulfilling daily needs such as food, drinks, and shelter before other things. Even though, some of the consumed food sources are produced for free from the informants' own crops. Secondly, households with children tend to spend the required money on their ancestry specifically in education and the related matters. While one of the group discussions focused on buying a new car even though they're in debt to have the comfort they anticipate. After a while, individuals often feel under pressure to make large repayments to the point where they require assistance. This shows an impulsive behaviour that overlooked the personal financial capability in long-terms pictures [33].



**Fig. 1** Thematic map of financial management practice in Kelantan, Malaysia

## Security

Financial security is the state of illustrating as having no financial strain and having enough resources as well as stability to meet one's future and present needs. In this regard, personal savings sub-themes have indicated the desire to save to secure future financial stability regardless of the amount. However, even though informants often save little sums, they frequently reuse their savings particularly those who are self-employed like farmers to turnover the capital. While the sub-theme of retirement savings occurred to participants with stable income. This due to salary automatically deduction into retirement saving to Employees Provident Fund (EPF) that severely regulate Malaysians' retirement savings for the betterment of individuals and the entire country. Nonetheless, the other two group discussions have clarified that they are combining their personal use and retirement savings. This was aligned with Gomes et al. [18] finding that combining both retirement and personal savings has become trends that have their own advantages and disadvantages. Lastly, two group discussions emphasized investing in liquidity assets which is gold and *Amanah Saham Bumiputera* (ASB) that was low risk.

## Protection

Protection illustrates a safety net to shield people or organisations from potential financial risks such as unforeseen costs, income loss or unfavorable economic occurrences. Thus, protection is often associated with having insurance coverage, emergency money, and good financial planning. In this regard, unable to provide for own protection towards financial threats and risks due to limited resources. Hence, low-income households tend to rely on government policy in protecting their self-such as low cost for getting treatment at government health clinics. Besides, low-income households held a proneness to depend on financial aids such as specific coverage to be claim by low-income gained in Malaysia even though some of households may overlook into it. While some households expect to rely on their children due to ageing and poor health. Particularly, low-income households in Malaysia were lack in financial awareness towards importance of having financial protection for long-term stability and well-being [13].

## Debt

The theme of debt encompasses the studies concerned the behaviour of debt management among low-income households in Kelantan. In these aspects, no debt sub-themes emerge due to financial practices of debt-free living. Two from three group discussion stated that they did not have debt since they did not fit the criteria for loaning money. In addition, they are more inclined to save their own money rather than incur debt to make purchases. However, a different group discussion reveals a willingness to make loans to buy items with high value such as an automobile. Regardless of potential risks might face, they insist on purchasing depreciating assets to achieve the expected comfort which indirectly has become their personal satisfaction. Meanwhile, sub-theme children show that parents are willing to provide

educational loans for their kids if they ask to pursue higher education. Thus, a demographic of parents indirectly influences children's desire to pursue study in terms of financial support [17].

### **Sustainability**

Sustainability themes illustrate stability over the long-term, balance income and spending, diversify sources of income and making a well-informed financial decision. The savings as sub-themes show the desires of low-income households in ensuring personal finance stability and sustaining their lifestyle even though they keep stray from the track. In this case, past studies have elaborated on financial literacy has become the factor of individuals not being consistent in saving behaviour [16]. Next sub-theme was debt shows that amount of debt incurred directly affected households' sustainability. Thus, households that have debt burdens and are bound to installment find it difficult to maintain their lifestyle due to imbalance income and spending. Meanwhile, another sub-theme of government aid and government policies has become primary backup to low-income households in Kelantan to sustain due to insufficient income.

## **5 Conclusion**

In conclusion, supporting low-income households' financial well-being is an important initiative that has the potential to strengthen local economies, promote economic resilience, and enhance people's quality of life in general. The studies and programmes examined in this study provide light on the complex difficulties low-income households experience in obtaining financial stability and prosperity. Thus, targeted strategies can be created to provide these households with the knowledge, skills, and assistance they need to achieve improved financial well-being by having a thorough grasp of the intricacies and particular conditions that these households face. It is suggested that certain parties create and design a template that makes it simpler for people to create a rough financial budget to prevent them from becoming twisted and out of control. The root problem of inefficient financial management among low-income households is they fail to plan and budget from the beginning.

Furthermore, effective financial literacy programmes are essential for providing low-income people with the knowledge and skills they need to manage their finances, save money wisely, and accumulate long-term wealth. We can close the knowledge gap and promote a sense of financial empowerment in these communities by providing easily accessible and culturally appropriate financial education resources. In this regard, programmes for peer assistance and mentoring promise to foster financial well-being. Giving low-income individuals the chance to interact with financial mentors and support networks can provide them with direction, inspiration, and a feeling of community. Platforms for peer-to-peer learning make it easier for people to share their experiences and best practices, promoting a culture of group empowerment.

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# Students' Perceptions of Smartphone Use in Palestinian Higher Education: The Case of Al-Quds Open University



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**Abstract** Much international research has been conducted on mobile learning, Mobile-Assisted Language Learning (MALL), and smartphone learning to explore students' perceptions of these modes of learning. Nevertheless, a few research studies have been carried out on smartphone learning of EFL students in higher education in Palestine. The current study addressed this lack by exploring EFL students' perceptions at Al-Quds Open University (QOU) in Palestine during the COVID-19 pandemic to identify the impact of gender, university level, place of residence and age. Exploring these perceptions is hoped to encourage decision makers to adopt smartphone technologies in higher education setting in Palestine. Hence, this study aims to answer the question "What are EFL students' perceptions of smartphone use in the classroom setting at QOU during the COVID-19 pandemic?". To achieve this objective, a mixed-method approach was used utilizing a 32-item electronic questionnaire sent through the Academic Portal of Al-Quds Open University to seven sections ( $n = 285$ ) majoring in English language and literature in two academic branches. As a result, 148 students filled out the questionnaire while 12 students (five males and seven females) participated in semi-structured interviews. Findings revealed that EFL students generally valued the advantages of smartphone technology as a tool for learning English with no statistically significant differences at ( $\alpha \leq 0.05$ ) were found due to gender, university level or place of residence. However, statistically significant differences at ( $\alpha \leq 0.05$ ) were found due to students' age. The qualitative data highlighted a striking contrast between these views and students' actual usage. Findings also revealed that the majority of students used their smartphones in the classroom setting with the courses that involve practical sides such as Language Use, and English Language Teaching Methods. Based on the study findings, specific implications were offered.

**Keywords** Palestinian EFL students • Mobile-Assisted Language Learning (MALL) • Smartphone uses • Palestinian higher education

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## 1 Introduction

Over the past 10 years, mobile phone technology has developed from basic cell phones to current high-tech devices with the connectivity to upload and exchange multimedia files in a wide range of formats. Increasingly, the proliferation of wireless and mobile technologies has made it possible for MALL to be accessed via Smart phones, iPods, tablets, laptops, PDAs, and MP3 players [1]. Thus, MALL designers have begun putting strategies into practice that will optimize the advantages of these new devices. MALL has a number of advantages over traditional learning formats especially when the new generations of technology allows for active student participation in anytime, everywhere access to interactive information [32] and many students now refuse to carry heavy laptops or books, preferring to save everything on their phones [74]. Thus, with the advent of smartphones, students around the globe now have access to a device that is ever-present and impacts every aspect of their lives [36]. In this context, smartphone technology has had a tremendous impact on society and education in particular due to its ubiquity, flexibility, and utility [36]. Accordingly, there is a potential to increase the involvement of young adults in learning, anywhere, anytime as a means to supplement the traditional methods of teaching English. This potential is supported by the findings of a study conducted by [38] who found that EFL teachers in Bangladesh scored a high level of readiness to use smartphones for teaching oral skills due to the fact that smartphones help with the problems like a large class size, lack of authentic materials, learners' inactiveness, as well as lack of oral practice inside and outside the classroom.

Some current pedagogies, for instance, MALL, online learning, e-learning claim to facilitate the personalization of the learners' environment, provide less formal learning experiences outside the classroom and make learning more enjoyable, thus increasing students' motivation while giving them more access to different types of resources and knowledge [12, 26, 30, 37, 72, 74].

However, critics also challenge this usage, arguing for example that the transformational pedagogical potential of such technologies remains unrealized by the "increased datafication" of education [15, 68]. This paper therefore examines these claims in a specified context of learning English as Foreign Language (EFL) in a Higher Education (HE) institution. The paper also considers the pedagogical impact of mobile phone use among students at Al-Quds Open University in Palestine (QOU). This setting reflects a very specific background which enables us to draw significant conclusions about the actual potential of MALL to contribute positively to EFL pedagogies in HE.

### 1.1 Institutional and Contextual Framework

This study is based on Al Quds Open University (QOU) in Palestine. According to the academic portal of QOU, the university which adopts open education, holds

around 40,000 students who study in 19 educational branches in the West Bank and Gaza Strip. Specifically, QOU is an innovator in the Arab World by adopting open and distance learning, and thus has an interest in technological developments in education at every level. Like other universities, QOU has developed its use of m-learning as part of its continuous efforts to meet the needs of students. Mobile technology use in QOU must face the distinct challenges of meeting the needs of students in 19 branches scattered throughout Palestine. In addition, a large percentage of QOU students live in marginalized areas, including the Gaza Strip, Jordan Valley, the so-called C zone which have suffered, amongst other disruptions, from unstable electricity, Israeli restrictions and lack of internet services (<https://www.qou.edu/en/aboutQOU/about.jsp>).

QOU's philosophy of open and distance learning thus aims for developing a series of sustainable solutions that take into account numerous technical breakthroughs as well as the students' diverse and ever-increasing needs. In such contexts, smartphones have become ubiquitous to undertaking a wide range of educational activities, including communicating with instructors and classmates, accomplishing educational activities, sitting for online exams, and creating social media groups to get technical and educational support. During the COVID-19 pandemic, when most QOU students had to do the assigned work using their smartphones, these activities were heavily implemented. These include investment in self-study courses and exams in remote areas and access enhanced by mobile phone applications, for instance by attending web-based class meetings organized through the web video conferencing system Big Blue Button used by QOU nowadays [62].

However, these developments and changes incline to involve the delivery of content rather than pedagogy while MALL in its current form indicates a significant transformation from traditional methods to more communicative approaches to language learning where instructors are present to help students learn and do things using mobile-learning rather playing the role of traditional facilitators in the classroom setting [77].

## 2 Statement of the Problem

The COVID-19 pandemic, which has affected approximately 1.6 billion students in more than 190 countries, has caused the biggest disruption of educational systems in history, according to the [75]. The crisis, however, has also sparked innovation within the education sector, resulting in cutting-edge strategies for promoting education in many nations, such as the shift from traditional face-to-face schooling to online learning [14, 23, 42, 52].), live streaming instruction with more student-teacher interaction [81]. Microsoft Teams and Moodle with distance education system [24], distance learning supported by several platforms including Google Classroom, Google Hangout, Google Meet, Zoom, and Jitsi Meet [71], to name a few. Under these conditions, smartphone learning appears to have a promising future to minimize the digital divide and enhance teachers' confidence as well as their

knowledge of pedagogical practices required for distance education [75]. However, the use of smartphone devices is still restricted to out of class learning and students are prohibited from using their smartphones in the lectures. Some instructors still believe that using smartphones lead to distraction, chaos and lack of classroom discipline. Hence, the current study aimed to explore the perceptions of EFL students at Al-Quds Open University during the COVID-19 pandemic to identify the impact of the variables of gender, university level, place of residence and age on EFL Students' Perceptions of Smartphone Use in Palestinian Higher Education.

### 3 Significance of the Study

When the whole world was witnessing the receding waves of the COVID-19 pandemic, leaving negative effects on education in particular, educational systems were working hard to introduce modern technologies in the learning and teaching process, especially those that serve open education, virtual education and distance education. Accordingly, there is a need to investigate the importance of employing smartphone devices in learning the English language. What makes this employment easier and more applicable than the past years is that these devices have become available and affordable with different brands and styles. Based on this objective, the importance of exploring students' perceptions of using these devices in learning English emerges as a good rationale in the Palestinian context. Accordingly, it is hoped that the results of this study can benefit instructors and decision-makers in higher education institutions in adopting supportive policies to employ mobile devices more widely and allow their use in classrooms. Furthermore, the results are hoped to help the EFL students in doing their best to manage their usage and also finding out useful applications that help them to improve the four skills of English.

### 4 Questions of the Study

In light of the aforementioned institutional and contextual background, the present study sought to explore the perceptions of EFL students of smartphone use in Higher Education institutions in Palestine. To achieve this objective, five interconnected questions were raised as follows:

1. What are EFL students' perceptions of smartphone use in the classroom setting at QOU during the COVID-19 pandemic?
2. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone use in the classroom due to gender?
3. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone use in the classroom due to university level?

4. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone use in the classroom due to age?
5. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone use in the classroom due to student's place of residence?

## 5 Literature Review

According to PCBS [58], smartphones are increasingly used by the teenagers and youth in Palestine whereby about 2.5 million smartphones are in the hands of the Palestinians and nearly 97% of Palestinian families currently have one or more mobile phone lines. Furthermore, around 86% own one smartphone or more. Such popularity might be due to fact that the smartphone is rapidly overtaking other learning and teaching tools as the most popular and widely-used device on our planet. Al-Furaih and Al-Awidi [4] especially when a large number of online games and social media were responsible for the overuse of smartphones all around the world [57].

Many researchers have argued that such widespread use of mobile phone technology has tremendously affected the way young people in particular use and search for information, communicate and learn [41]. Mobile devices are expected to play an even greater role in the shaping the future of the whole educational processes [54] especially when smartphones can act as small classrooms, enabling students to access interactive content anytime, anywhere [32, 67]. It is therefore unsurprising that several studies recommend that educators need to use a tool which improves student motivation, interaction, communication and participation to extend language learning opportunities [10, 74, 79]. Instructors who consider smartphones indispensable tools for teaching and learning are increasingly using them in their classrooms [36]. This view tends to agree with Aggor et al. [2] who found that smartphone use in the classroom was more common among students than computers and tablets. On the other hand, most communities forbid students from using smartphones in class and even at school [50].

In this case, smartphones can be a promising option due to their availability and affordability [79]. As such devices are widely available, students can use them to learn new languages from anywhere and at any time either individually, in pairs or even in small groups [9, 64]. Additionally, the Internet makes it possible for students to access a variety of materials independently which increases their autonomy [80].

### 5.1 Mobile Phone Use in Educational Settings

Given this focus on distribution and the pedagogical change to Do It Yourself "DIY" language learning, the present study aimed at exploring QOU students' perceptions of the uses of smartphones in the classroom setting. Exploring these perceptions might

encourage decision makers to adopt the idea of using smartphones technologies in higher education setting in Palestine.

There is of course a huge body of literature in the field of mobile phone learning. This body of work can be divided into three major sections: (1) technical studies, which discuss the features, uses and applications of smartphones; (2) attitude and perception studies which discuss the attitudes and perceptions of users themselves and (3) obstacles to positive development of MALL in education settings. Given the interconnected nature of these aspects of MALL and EFL, a brief review on each area will be presented to help in answering the questions raised by this study.

## ***5.2 Features, Uses and Widespread Use of MALL in the EFL Context***

Several studies emphasize the features and applications of smartphones in the EFL context. Examples of mobile applications were given by [45] and included Mobile Podcasting and Mobile Social Software such as Facebook, Twitter, YouTube, or Flickr. These companies offer automatic speech recognition (ASR) software such as Bing, Google Voice, Vlingo, or Siri Assistant.

Such emphasis might be attributed to the fact that the English language as the first international language was one of the most affected learning fields during the COVID-19 pandemic [23]. From the student's perspectives, they were able to listen to the English native speakers, access free courses and download audio-visual resources [21]. Other uses involved note-taking [47], sending and receiving emails and accessing the internet [8]. Looking up words, definitions, phrases and idiomatic expressions, translating words/phrases, listening to pronunciation, and revising and practicing vocabulary were also practiced [27, 56].

Additionally, students were able to use the features of texting and talking with others, and checking social media and Internet searches [11]. Similarly, taking photos, creating albums, using Gmail, Viber, Instagram, Tooktook, WhatsApp, and Facebook for communication, arranging daily schedules, saving large documents, watching videos, listening to music, browsing the internet and video conferencing are highlighted [74]. Recording conversations and language from various sources, text messaging to reinforce vocabulary learning, practising writing skills, tandem learning (reciprocated autonomous learning by e-mail, phone or other media) and social networking by blogging, playing games are all seen as benefits [63]. From the teacher's perspective, some identify an enhanced ability to teach listening, speaking, reading, vocabulary and culture as main aspects by integrating mobile technologies [31, 64]. MALL can help in checking students' comprehension, data collection and sharing information, just as it supports creating and distributing video input and communicating with the teachers on WhatsApp, Viber or Messenger [74].

Such uses are very widespread, notably in higher education. [73] described four main features of mobile learning: enhancing access to education and information,

improving the quality of education, promoting individuals' decision-making skills, and developing the administration, management, and governance of local, national and regional education systems. [19] identified an overall positive tendency to use mobile phones (e.g. as an online or offline dictionary or aid to active collaborate learning). By the same token, Niño [56] found that mobile phones were used to teach writing, speaking, pronunciation, vocabulary, grammar, and also for evaluation tasks. Similar usage has been reported by [5, 8]. According to [23] using smartphones was a common medium for online education during the spread of Covid-19 pandemic.

### ***5.3 Attitudes and Perceptions of MALL in the EFL Context***

For some educators, attitudes are closely related to perceptions as the former refers to a complex mixture of components involving personality, beliefs, values, behaviors, and motivations that help us define how different people with different backgrounds perceive situations. On the other hand, the process through which creatures organize and interpret sensation to create a meaningful experience of the world is referred to as perception [60]. Therefore, measuring the attitudes and perceptions of students in a classroom climate hold a critical position in students' learning [53].

Given the widespread usage of smartphone technology, many studies have examined differences in attitudes towards MALL. Pombo and Marques [61] and Walsh [77] found generally positive attitudes to mobile learning as a potentially exciting and motivating resource. Alghamdi's [3] study of Saudi EFL students' attitudes revealed WhatsApp as a popular communication platform, despite having minimum preset language learning goals. Many other studies have highlighted positive attitudes to the enhanced portability and autonomy of MALL [13, 18, 20, 29, 31, 40, 44, 51, 55, 64, 77, 79].

However, in Slovakia, [54] revealed moderately positive attitudes among the 77 students towards using smartphones for EFL learning as well as students' failure to properly and efficiently arrange their language learning, general underuse of smartphone apps, and other issues with practicing speaking skills. By the same token, Dolgunsöz and Yıldırım [23] found despite the fact that the 47 EFL preparation class participants chose to use smartphones or notebooks over desktop PCs and tablets, their satisfaction with using the smartphones for online courses was low.

Other recent studies have highlighted differences in attitudes. One of these is linked to gender; for example, Kundu and Bej [47] in their study of 300 university students and 20 professors, found no significant difference due to students' gender, while [6] study of EFL students in Saudi Arabia reported more positive attitudes among female students [25, 74]. Gromik and Litz [33] revealed that the 189 female Emirati undergraduate students had fewer positive perceptions of smart use in their first year than participants in subsequent study years. As for age variable, it was found that users over 60 years tend to suffer from smaller screen size than users aged 20–39 [7] while a correlation between accessing a smartphone at a young age and poor eyesight later in life was also found by [66].



Other studies reported concrete obstacles to adoption of MALL. These included the inherent limitations such as the small size of the screen/ keyboard, microphone problems, and internet connection [23]. The obvious difficulty of using a small screen for tasks such as extended writing has been noted [77]. Other problems were concerned with limited bandwidth and amounts and types of information that can be displayed, limited storage capacities, limited battery life and the possibility of data loss and issues such as slow internet connections [37, 61, 70].

These problems are amplified when students lack the skills of using smartphones and their updated applications [74] in addition to unfamiliarity and incompatibility issues [17]. They also support the view among some teachers that such devices are an unhelpful distraction and therefore to be prohibited [8, 61, 69]. Meanwhile, there are many digital distractions, such as receiving text messages on a smartphone, that result in lower-quality lecture notes [28]. Besides, some students lack the ability to plan language learning appropriately and effectively or to practice the speaking skills [54].

In a recent mixed- method study conducted at a public university in Turkey, Kocak and Goktas [46] sought to uncover the smartphone usage patterns of 89 male and female students. Results indicated that most students revealed negative attitudes towards using smartphones during classes, although some of them showed had positive perceptions. Furthermore, it was found that social media and messaging applications were the most frequently used smartphone applications. The study also revealed that more than utilizing smartphones for instructional objectives like research or taking pictures of the whiteboard or slides, most students were using their cellphones in the classroom for non-educational activities like checking the time, making calls, and messaging.

Karabataki and Alanolui [43] investigated how 577 Turkish university students utilize smartphones in their classrooms. The data showed that most students occasionally connect to social networks, use their smartphones for studying, and send messages. The majority of students reported that using cellphones in class did not interfere with their ability to concentrate. Some students also indicated that they did not use their phones because they were preoccupied and it was against the rules to use them in class. In addition, the vast majority of students who reported using their smartphones for research, news reading, and conversing also said they did that for educational objectives.

In summary, while perceptions and attitudes to MALL are generally positive, the claim that these devices offer better access, motivation, and an enhanced pedagogical experience demands further study. This is especially true in Palestine, where such studies are rare. In particular, as the adoption of learning technology generally is being accelerated by the COVID crisis, we need to be sure that the claims made above are justified.

## 6 Method

### 6.1 Study Design

The mixed-method approach was used to collect the required data through utilizing both quantitative and qualitative techniques. The quantitative method was manifested in a questionnaire while the qualitative method was manifested in interviews and dialogue with a sample of students. This mixed- method approach aimed to help the researcher to delve into diverse points of views and discover relationships between the multifaceted aspects of the study questions.

### 6.2 Participants

A convenience sample consisting of 148 EFL students (129 females and 19 males) at QOU/ Nablus Branch was targeted in the academic year 2021/2022. This number represents 45% of the total number of EFL students in this branch. The age of these students ranged from 19 to 33 years old. The respondents were varied in terms of gender, level, place of residence, and age as shown in Table 1. Regarding the obvious difference between the number of females and males in the sample, It was because most English language and literature majors are female students.

**Table 1** Sample distribution based on the study independent variables

Variable	Class	Frequency	Percentage
Gender	Female	129	87.2
	Male	19	12.8
University level	2nd year	64	43.2
	3rd year	40	27.0
	4th year	44	29.7
Place of residence	City	31	20.9
	Village	108	73.0
	Camp	9	6.1
Age	19–24 years	124	83.8
	25–30 years	18	12.2
	More than 30 years	6	4.1
Total		148	100%

### **6.3 Data Collection and Instruments**

To gather the required data, two instruments were used as follows:

#### *The Questionnaire*

For collecting the quantitative data, a questionnaire comprising 31 items was constructed by the researcher with the help of the aforementioned literature review. The first section focused on the demographic features of age, gender, university level and place of residence, whereas the second section included 31 items that covered students' perceptions of smartphone use in the classroom setting. A five-point Likert scale was used to determine the responses' scores for each item in which Strongly Agree is given five points, Agree is given four points, Undecided is given three points, Disagree is given two points, and Strongly Disagree is given one point.

For content and face validity issues, a jury of TEFL and education specialists from the Faculty of Educational Sciences at QOU and a partner university were consulted. The questionnaire, was then piloted on 10 students randomly chosen from the sample so as to ensure that the items of the questionnaire clearly address the research questions and the content of all items is comprehensible and appropriate. Based on the students' comments and the jury's modifications, the questionnaire was adapted and then finally subjected to a reliability check through Cronbach's Alpha (score 0.95).

#### **Interviews and Dialogue**

To obtain some qualitative data about the students' perceptions, oral interviews in Arabic were conducted with 12 students (7 females and 5 males) using WhatsApp and Messenger because meeting the students face to face was difficult due to the closure of the university during COVID-19 pandemic. Additionally, students were asked to send any other comments or discuss possible practices through text messaging. All interviews were recorded and reexamined by the researcher and a part-time instructor at QOU who volunteered to help. This instructor has rich experience in teaching the course Technology in Education. These interviews centered around four main questions:

1. Have you ever used your smartphone in the classroom for educational purposes? If so, how and why?
2. What are the possible advantages/applications of using smartphones in the classroom?
3. Are there any disadvantages/obstacles to using smartphones in the classroom?
4. What is your overall /attitude toward using smartphones in the classroom at QOU?

The final draft of the electronic questionnaire was sent to students' accounts on the academic portal of QOU to fill with three reminders to encourage them.

## 7 Procedures

The quantitative data collected through the questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS). To determine descriptive statistical analysis, means, frequencies, standard deviations, t-tests for Independent Samples, one-way analysis of variance (ANOVA), and post hoc measures were also utilized. As for analyzing the quantitative results, the following scale was used to represent the estimation level of students' responses.

On the other hand, the qualitative data collected through the interviews were thematically analyzed. Themes were derived by reading the transcripts of interviews as a means to look for patterns. It is important to note that students' answers in the interviews were somewhat short and clear which helped in analyzing them and categorizing the results into relevant themes.

## 8 Results and Discussion

The data were analyzed in accordance with the study questions and the results were as follows:

### 1. *What are EFL students' perceptions of smartphone use in the classroom setting at QOU during the COVID-19 pandemic?*

To answer the first question, means and standard deviations were used as shown in Table 3.

Table 3 shows that the total degree of EFL students' perceptions of smartphone use in the classroom at QOU was (4.01) indicating a high positive level of perception. These results certainly, reflect the latest statistics in Palestine that pointed, as we have seen, to high levels of phone ownership and usage both inside and outside the university [8, 11, 21, 31, 47, 64]. These results are also supported by the results obtained from the phone interviews when students talked about a variety of functions and applications used inside the university and outside such as using social media for communicating with their friends, classmates, relatives, and professors, using the electronic dictionary on their smartphones and so forth. These functions and uses contributed to the high level of students' perceptions of using smartphones in the classroom setting in their higher education. Again, the results are consistent with previous studies discussed above including [61, 77, 79], to name a few. Nevertheless, these results seem to disagree with other researchers who either found moderately positive attitudes among the students towards using smartphones for EFL learning [54] or low satisfaction with using the smartphones for online courses [23]. Besides, the results seem to disagree with [46] who found negative views among the Turkish students in their study which was about using smartphones during classes.

Table 3 also shows that item number 4 "*Smartphones help me access the academic portal*" scored the highest mean (4.39). A probable reason is that all

**Table 2** Estimation level of students' responses

Estimation level	Means
Very high	4.5—and more
High	4–4.49
Medium	3–50–3.99
Low	3–3.49
Very low	Less than 3

students at QOU are required to communicate with their professors through the academic portal of QOU where students receive essential emails and messages, and check their schedules, submit online activities and currently, due to the COVID-19 pandemic, sit for online exams.

More surprising is that the lowest mean (3.59) was scored by item 24 “*Learning through smartphones is more appealing than traditional ways*” indicating that the participants find learning through smartphones less attractive than learning through traditional ways when they can meet their professors face to face. As we have seen, technical difficulties such as small screen size poor internet connection which may be slow (and limitations such as the difficulty of using moving graphics [37] and the lower speed of mobile devices compared to the speed of using a computer may help explain this.

**2. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone use in the classroom due to gender?**

The findings of the t-Test for Independent Samples that was employed to address this question are displayed in Table 2.

Table 4 displays that there was no statistically significant evidence at  $\alpha \leq 0.05$  that students' perceptions of smartphone use correlate to gender. The significant value is (0.427), which is more than 0.05, This means that both male and female students find smartphones educationally useful and enjoyable as previous research suggests [8, 11, 21, 47, 56, 63]. On the other hand, these results are not consistent with some studies including [6] who indicated positive attitudes among female students, and [33] who had fewer positive perceptions of smart among first year female students.

**3. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone use in the classroom due to university level?**

To find out if there are statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone uses in the classroom setting, One Way ANOVA was used, and Tables 5 and 6 show the results.

Table 6 shows no statistically significant differences at  $\alpha \leq 0.05$  in students' perceptions of using smartphones in the classroom due to university level because the significant value is (0.451), more than 0.05. Again, as said previously, we can hypothesize that this result reflects the fact that all students at QOU have to access the academic portal and the easiest way for them is their own smartphones due to their availability and affordability [79] and because the widespread of such devices

**Table 3** Means and standard deviations of EFL students' perceptions of smartphone use in the classroom setting at QOU during COVID-19

No	Item	Means	Standard deviations	Estimation level
1	Smartphones help me become an active learner	4.11	0.76	High
2	Using smartphones has the potential to enhance student-centered approaches	3.89	0.74	Medium
3	Smartphones enable me to use learning resources such as search engines and digital libraries	4.03	0.79	High
4	Smartphones help me access the academic portal	4.39	0.64	High
5	Smartphones help in taking pictures and videos for educational purposes	4.30	0.79	High
6	Smartphones support text-messaging with classmates for educational purposes	4.24	0.70	High
7	Smartphones help me browse books and off-line dictionaries	3.93	0.83	Medium
8	Smartphones help in downloading educational materials easily	4.14	0.81	High
9	Smartphones help me learn in a way that suits my ability	4.03	0.81	High
10	Smartphones can record audio and video lessons	4.18	0.78	High
11	Smartphones can help in accomplishing tasks	3.89	0.82	Medium
12	Smartphones provide a means of emailing my instructors and receiving emails as well	4.04	0.78	High
13	Smartphones decreases the degree of classroom boredom	3.62	0.97	Medium
14	Using smartphones creates an enjoyable learning environment	3.81	0.98	Medium
15	Smartphones provide a variety of learning experience	4.04	0.77	High
16	Smartphones help me communicate with my teacher and classmates	4.17	0.79	High
17	Using smartphones enables me to receive immediate feedback about my performance	3.91	0.81	Medium

(continued)

**Table 3** (continued)

No	Item	Means	Standard deviations	Estimation level
18	Smartphones provide a room for sharing information and ideas through social network environment such as Facebook, WhatsApp	4.30	0.76	High
19	Smartphones allows the user to access information anytime	4.18	0.81	High
20	Smartphones help in managing learning according to one's personal needs	4.07	0.85	High
21	Using smartphones fosters the motivation to learn English in different ways	4.09	0.81	High
22	Smartphones promote interaction between me and my teachers	3.82	0.91	Medium
23	Smartphones promote students' interaction inside the class	3.71	0.93	Medium
24	Learning through smartphones is more appealing than traditional ways	3.59	1.05	Medium
25	Smartphones foster collaboration with my teacher and peers	3.76	0.88	Medium
26	Using smartphones enhances my pronunciation and speaking skills	4.02	0.80	High
27	I can listen to English native speakers talking about various topics through smartphones	4.22	0.77	High
28	Smartphones enable a feasible access to YouTube for language learning	4.26	0.77	High
29	Using smartphones may cause communication failure due to poor connectivity	3.98	0.84	Medium
30	Using smartphones leads to some kind of distraction in the classroom	3.89	0.87	Medium
31	Using smartphones leads to disciplinary problems	3.76	0.90	Medium
Total degree		4.01	0.51	High

**Table 4** T-test for independent samples of EFL students' perceptions of smartphone use due to gender

Domain	Gender	N	Mean	S. D	t	Sig.*
Total	Female	129	4.0000	0.52130	- 0.746	0.427
	Male	19	4.0951	0.49979		

\*The mean difference is significant at the 0.05 level

**Table 5** Frequencies, means and standards deviations of EFL students' perceptions of smartphone use due to university level

Domain	University level	N	Mean	S.D.
Total	2nd year	64	4.0282	0.56923
	3rd year	40	3.9274	0.40136
	4th year	44	4.0660	0.53491
	Total	148	4.0122	0.51791

**Table 6** Results of one-way ANOVA for EFL students' perceptions of smartphone use due to university level

Domain	Source of variance	Sum of squares	df	Mean square	F	Sig
Total	Between groups	0.431	2	0.216	0.802	0.451
	Within groups	38.999	145	0.269		
	Total	39.431	147			

\*The mean difference is significant at the 0.05 level

permits students to study foreign languages whenever they want and wherever they are, whether alone or in contact with others [9, 64]. These results seem to disagree with [33] who found fewer positive perceptions of smart use among the students in their first year than participants in subsequent study years.

#### 4. *Are there any statistically significant differences at $\alpha \leq 0.05$ in the perceptions of EFL students of smartphone uses due to age?*

One-Way ANOVA was used to provide an answer, and the findings are displayed in Tables 7 and 8.

Table 8 reveals statistically significant differences at  $\alpha \leq 0.05$  regarding the EFL students' perceptions of smartphone use due to age. The significant value is (0.031) which is less than 0.05. Since the analysis of variance (ANOVA) test is significant, there was a need to uncover the differences between the age groups. This was done through the Post hoc test. Table 9 shows the results.

Table 9 demonstrates that there are differences between students' perceptions at age 19–24 and their counterparts at the age 25–30. The differences were in favor of (25–30) years old. These results tend to agree with Van Deursen et al. who found that smartphone use is better managed by older participants in some ways than by



**Table 7** Frequencies, means and standards deviations of EFL students' perceptions of smartphone use in the classroom setting due to age

Domain	Age	N	Mean	S.D.
Total	19–24 years	124	4.0598	0.51024
	25–30 years	18	3.7276	0.46710
	More than 30 years	6	3.8817	0.60956
	Total	148	4.0122	0.51791

**Table 8** Results of one-way ANOVA for EFL students' perceptions of smartphone use in the classroom setting due to age

Domain	Source of variance	Sum of squares	df	Mean square	F	Sig
Total	Between groups	1.841	2	0.921	3.552	0.031*
	Within groups	37.589	145	0.259		
	Total	39.431	147			

\*The mean difference is significant at the 0.05 level

**Table 9** Results of post hoc test due to the variable of age

Level	19–24 years	25–30 years	More than 30 years
19–24 years	–	0.33223*	0.17811
25–30 years	–	–	– 0.15412
More than 30 years	–	–	–

younger participants although users over 60 years are expected to suffer from smaller screen size than users aged 20–39 [7].

**5. Are there any statistically significant differences at  $\alpha \leq 0.05$  in the perceptions of EFL students of smartphone uses in the classroom setting due to the place of residence?**

To answer this question, One-Way ANOVA was used, and Tables 10 and 11 show the results.

**Table 10** Frequencies, means and standards deviations of EFL students' perceptions of smartphone use in the classroom setting during due to the place of residence

Domain	Place	N	Mean	S.D.
Total	City	31	3.9157	0.66181
	Village	108	4.0573	0.46814
	Camp	9	3.8029	0.49225
	Total	148	4.0122	0.51791

**Table 11** Results of one-way ANOVA for EFL students' perceptions of smartphone use in the classroom setting due to the place of residence

Domain	Source of variance	Sum of squares	df	Mean square	F	Sig.
Total	Between groups	0.903	2	0.452	1.699	0.186
	Within groups	38.527	145	0.266		
	Total	39.431	147			

## 9 Analysis of the Qualitative Data

For analysis and interpretation, the data gathered through semi-structured interviews with the 12 participating students were categorized and divided into categories. Three recurring motifs were discovered using the thematic analysis.

**First**, the majority of students (10 out of 12) indicated that they used their smartphones in the classroom setting at QOU mainly in the Language Use course because it involved a practical side centered around oral skills and tasks. Only five students revealed they used their smartphones in other courses, ELT 1 and ELT2 in particular, as the two courses required using microteaching. Three female students mentioned that they used their smartphones secretly without teachers' knowledge or permission for non-educational purposes.

**Second**, with respect to the advantages and applications of using smartphones in the classroom, all students agreed that the smartphone, especially the latest versions, allowed them to use their smartphones in multiple ways, on and off campus for a variety of educational functions. This result echoes existing findings mentioned above, and connects to the fact that these advantages were sometimes undermined by examples of poor access because of geographic, technical or economic reasons related to the Palestinian context.

**Thirdly**, nearly all students reported that some instructors feel that the use of smartphones in lectures makes it difficult to maintain discipline. One female student stated that her instructor got angry when he saw her checking a message on her smartphone during a lecture in a drama course. However, two students maintained that students should not be allowed to use their smartphones in the classroom because they are not mature enough to use it for educational purposes and such use might lead to some kind of distraction in the classroom or even some kind of dispute between the instructor and the students.

## 10 Conclusion

In this study that aimed to explore the perceptions of EFL students of smartphone use in the classroom setting at QOU during the COVID-19 Pandemic, the results suggested a striking contrast between the quantitative and the qualitative data. The former revealed that the participating students, regardless of their gender, place of residence, and university level, generally welcomed using the smartphones in the classroom setting. That said, the age variable showed that significant differences existed in the case of younger students, who, perhaps surprisingly, had fewer positive attitudes. On the other hand, the qualitative results of the semi-structured interviews demonstrated three recurrent and contrasting themes. First, although most interviewees welcome the various educational functions of smartphones, they used them only in three courses, specifically those involving practical work. Second, instructor attitude was shown to be important: students highlighted instructors' rejection of mobile use as a barrier, fearing classroom management issues (distraction and disruption) and technical problems.

These results encourage EFL instructors to utilize smartphone technology in higher education settings. They suggest that clear policies that allow for more smartphone use are needed, notably during the continuing coronavirus pandemic to address the possibility that some instructors still struggle to see these devices as learning tools rather than causes of disruption and distraction. Curriculum designers can also consider smartphone technology and adapt materials and resources such as EFL course books in line with smartphone applications and features in addition to the usual classroom and behaviour management strategies with which teachers are familiar. These developments are especially relevant in a developing country with very limited resources and an extraordinary political situation. The results also suggest that further studies are needed to shed light on the potentials of smartphone technology and applications among university students through conducting experimental or quasi-experimental studies that invest in appropriate smartphone applications and features to gauge their impact on specific language skills, e.g. listening, speaking, reading and writing. This will pave new ways for mobile technology in EFL classrooms at QOU and maybe in the school setting.

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# Birth Trauma Among Working Women: An Exploratory Study



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**Abstract** Problem: Precipitating aspects of birth related trauma has been evidently playing a role in the Postpartum PTSD. Background: Nearly 4% women go through Postpartum PTSD after birth. Women respond to incidents related to birth with extreme distress, helplessness or awfulness. Questions: Is birth trauma or fear of death perceived among working mothers during maternity or child birth? Aim: This study aims to understand the experience of birth trauma or birth associated Post Traumatic Stress Disorder in working woman in Indian population. Methods: In a non-experimental quantitative research design, women who had their baby within 2, 3, 4 and 5 years were recruited using purposive sampling to identify trauma experienced during maternity and child birth through City birth trauma scale. Findings: There is no significant difference in fear of death during child birth among working mothers. There was significant difference in Birth trauma among working mothers. Discussion: High levels vigilance to precautionary measures to not to contract the COVID-19 virus in the hospital setting lead to higher distress among mothers (Liu et al. in Arch Gynecol Obstet 306(3), 687–697, 2021). Though PTSD symptoms were slightly higher in the participants, Birth related PTSD symptoms were not highly significant in the participant (Basu et al. in PLoS ONE 16, 2021). Conclusion: Fear of death or the reminiscence of the child birth experience was not differing among working women even with varied duration after child birth.

**Keywords** Woman · Trauma · Postpartum · PTSD · Birth

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## 1 Introduction

Birth trauma refers to physical and psychological injuries that occur during childbirth and can have long-lasting effects on the mother's well-being. Among working women, the challenges and stressors associated with managing both their professional and personal lives can potentially contribute to an increased risk of birth trauma. This research aims to explore the issue of birth trauma specifically in the context of working women.

Causes of Birth trauma can be classified into three types namely, work related stress in which, The demanding nature of work, long working hours, high workloads, and the pressure to balance career and family responsibilities can contribute to heightened stress levels during pregnancy and childbirth.

Another reason is Lack of Support where insufficient support systems within the workplace and a lack of understanding and accommodation for the physical and emotional needs of pregnant women can exacerbate birth trauma.

Finally Limited Maternity Leave and Return-to-work Pressures can cause psychological disturbances among working women. In countries with short maternity leave policies, working women may experience additional stress and pressure to return to work quickly after giving birth, increasing the risk of birth trauma.

Emotional Consequences of Birth trauma can lead to postpartum depression, anxiety, and post-traumatic stress disorder (PTSD) among working women, affecting their overall mental well-being and ability to perform their professional duties effectively. Further, it will impact on mother and child bonding process. Birth trauma can potentially hinder the establishment of a strong bond between the mother and the newborn, affecting the early mother-child relationship. The stress and emotional turmoil associated with birth trauma may negatively impact a woman's ability to establish and maintain successful breastfeeding, which has numerous health benefits for both mother and child.

Physiological changes during pregnancy can mask trauma posing challenge to detect trauma associated symptoms in pregnant women as care must be accessible for mother and fetus [10]. Trauma is the foremost cause of maternal death [12, 19]. Trauma are fatal and at times it could be of lesser intensity could be managed effectively with confidence and expertise by evoking maternal and fetal pathophysiologic responses to trauma [13, 18]. Though there are multiple amenities provided in the work environment for the lactating mothers, the amount of trauma they experience during the early motherhood phase is unavoidable. Maternal mortality evidences the amenities of health care system in the community [15]. In an Australian study of 890 women [3] 14.3–29.4% experienced stress. Reviews show postpartum PTSD affects 3–4% of all women after birth and 15–19% of women in high risk situations such as those who have pregnancy complications or preterm birth and up to 39% of women due to child mortality [5].

This is an area which needs extensive learning to improvise the wellbeing and psychological state of mothers which may directly influence the productivity and

group dynamics in the work place. This study focuses on exploring the birth trauma experience and memories of it among working mothers over a period of time.

Problem	What is Already Known?	Significance of this research
Does experiencing PTSD associated to Child birth change or decrease over a period of time in working mothers?	<ul style="list-style-type: none"><li>• Physiological changes act as a challenge to detect trauma associated symptoms in pregnant women</li><li>• Trauma causes maternal death</li><li>• Maternal mortality evidences the lack of amenities in health care system</li></ul>	<ul style="list-style-type: none"><li>• This study focuses on exploring the birth trauma experience and memories of fear of death among working mothers over a period of time</li><li>• This is an area which needs extensive learning to improvise the wellbeing and psychological state of mothers, if unplanned maternal service alterations could be avoided</li><li>• Birth Trauma experienced by mothers may directly influence the productivity and group dynamics in the work place even after 5yrs of child birth</li></ul>

2 Method

2.1 Research Question

Is birth trauma perceived among working mothers during maternity?  
Is fear of death true among working mothers during child birth?

2.2 Objective

To identify the difference in trauma experienced during maternity across years through screening City birth trauma scale among working women.

2.3 Hypothesis

H01: There is no significant difference in Birth trauma among working mothers across years.

H02: There is no significant difference in fear of death during child birth among working mothers.

## ***2.4 Research Design***

The selection of an appropriate method is one of the key tasks in research. The research design selected for this study is a Non-Experimental Quantitative Design. The design lacks the manipulation of independent variable, measuring the variables as they occur naturally without any influences. Working mothers who had their baby within the last 12 months, women who had their baby within 2, 3, 4 and 5 years were recruited for the study through purposive sampling to identify the trauma experienced during maternity and child birth through City birth trauma scale.

The sample for the current study includes 48 mothers (working) who experienced child birth pre, during and post the covid-19 in various parts of India.

## ***2.5 Sampling Technique***

The sampling technique selected for this study is a non-probability sampling technique with Purposive sampling method. Non-probability sampling method is marked by the criteria that all members of the population have an equal chance of being a part of the sample. Judgmental or purposive sampling method is a sub-category of non-probability sampling technique which indicates that the sample is selected with the help of researcher's knowledge and credibility. Only those individuals who are deemed fit for the study are selectively chosen by the researcher unlike random selection.

## ***2.6 Research Variables***

Birth Trauma.

Fear of death during child birth.

## ***2.7 Inclusion Criteria***

1. Female Participants who had given birth since 2018 till 2022.
2. Participants who can speak, read and write English Language.
3. Participants working in both public and private sectors.

## **2.8 Exclusion Criteria**

1. Participants with Physical disabilities are excluded from the study.
2. Daily wage workers are excluded.
3. Women with a history of mental health issues are excluded.

## **2.9 Ethical Considerations**

1. The Participation in this study is voluntary. The participants had the right to withdraw from the study at any time if they wish to do so.
2. The participants in the research are not subjected to harm in any way.
3. Respect for the dignity of each participant in this research is prioritized.
4. Informed consent from the participants obtained prior to the study.
5. Protection of privacy of each research participant is ensured.
6. Confidentiality of the Participant's data is ensured.

### **2.9.1 Tools for the Study**

**City Birth Trauma Scale** Ayers et al. [1] has 29 items assessing various subscales of re-experiencing symptoms, avoidance symptoms, negative cognitions and mood, and hyper arousal. The total score of PTSD symptoms and certain Dissociative symptoms are considered. It also looks into domains of Birth-related PTSD symptoms and General PTSD symptoms.

### **2.9.2 Data Collection**

Data collected through google form. The data was subjected to statistical analysis assuming normality.

### **2.9.3 Statistical Analysis**

Descriptive statistics like mean, median and standard deviation were used. Independent sample T test was used to identify difference in death fear among the sample population. One way Anova is employed to understand the difference in the birth trauma among working women who has experienced child birth in various duration.

### 3 Results and Discussions

The data in Table 1 shows mean score for the fear of death among sample population during childbirth. For the response 'no' Mean and Standard deviation are 15 and 14.09. For the response 'yes' Mean and Standard Deviation are 43.33 and 15.01. The result does not show any significant difference in the fear of death among working women during child birth. High levels vigilance to precautionary measures to not to contract the COVID-19 virus in the hospital setting lead to higher distress among mothers [9]. Hence the hypothesis stating that there is no significant difference in fear of death during child birth among working mothers is accepted.

Table 2 shows Mean and standard deviation for the birth trauma experienced is 20.31 and 17.99 ( $n = 48$ ). The domains of City Birth Trauma Scale showing mean and standard deviation for Re-experiencing symptoms are 2.60 and 2.64 ( $n = 48$ ). Mean and standard deviation for Avoidance symptoms are 0.77 and 1.73 ( $n = 48$ ). Mean and standard deviation for Negative cognitions and mood is 4.94 and 5.27 ( $n = 48$ ). Mean and standard deviation for Hyper arousal are 6.13 and 5.11 ( $n = 48$ ). Large number of pregnant women informed negative psychological reaction to Covid-19 pandemic [4, 16]. Mean and standard deviation for PTSD symptoms are 15.29 and 13.74 ( $n = 48$ ). Mean and standard deviation for Dissociative symptoms are 1.31 and 1.80 ( $n = 48$ ). Mean and standard deviation for Birth-related PTSD symptoms are 5.75 and 6.42 ( $n = 48$ ). Mean and standard deviation General PTSD symptoms are 9.54 and 9.01 ( $n = 48$ ). Though PTSD symptoms were slightly higher in the participants, Birth related PTSD symptoms were not highly significant in the participant. This may indicate the access to inevitable self-monitoring devices to the participants [6].

Table 3 shows the distribution of the sample according to the year in which child birth occurred and the mean score and standard deviation for birth trauma each year. In the year 2018 ( $n = 9$ ) mean and standard deviation for birth trauma screening is 15.78 and 12.74. Women described optimistic birth practices during prepandemic period [11]. In the year 2019 ( $n = 6$ ) mean and standard deviation for birth trauma screening is 20.83 and 23.81 showing an increased birth trauma score which could be due to the lack of protective factors like resilience. In the year 2020 ( $n = 16$ ) mean and standard deviation for birth trauma screening is 22.38 and 19.13. In the year 2021 ( $n = 10$ ) mean and standard deviation for birth trauma screening is 12.30 and 14.42. In the year 2022 ( $n = 7$ ) mean and standard deviation for birth trauma screening is 32.43 and 18.05. Looking for information from various media sources lead to elevated posttraumatic stress [2].

**Table 1** t test value for Fear of death among women during child birth

Variable		N	Mean	SD	t value	p value
Fear of death during childbirth	No	39	15	14.09	0.01	0.93 NS
	Yes	9	43.33	15.01		

NS: Not significant

**Table 2** Descriptive statistics of the symptom subscales, PTSD symptoms, dissociative symptoms, birth-related PTSD symptoms and general PTSD symptoms

	N	Mean	Std. deviation
Birth trauma	48	20.31	17.99
Re-experiencing symptoms	48	2.60	2.64
Avoidance symptoms	48	0.77	1.73
Negative cognitions and mood	48	4.94	5.27
Hyper arousal	48	6.13	5.51
PTSD symptoms	48	15.29	13.74
Dissociative symptoms	48	1.31	1.80
Birth-related PTSD symptoms	48	5.75	6.42
General PTSD symptoms	48	9.54	9.01

**Table 3** Mean and standard deviation of the birth trauma among working women who has experienced child birth in the last 5 years

Year of child birth	N	Mean	Std. deviation
2018	9	15.78	12.74
2019	6	20.83	23.18
2020	16	22.38	19.13
2021	10	12.30	14.42
2022	7	32.43	18.05
Total	48	20.31	17.99

Table 4 shows the results for one way Anova. Mean square between groups is 481.09 and mean square within groups is 309.35. F value is 1.55 and indicates that there is no difference among the working women in terms of the experiencing birth trauma during the child birth and the presence of PTSD symptoms even still births were reported during pandemic [8]. Access to telehealth was noticeable during these period for self-interventions [7]. Hence the hypothesis stating that there is no significant difference in Birth trauma among working mothers is rejected.

The results of Table 5 shows the presence of significant mean difference between the year 2021 and 2022 at 0.05 level. This could be the influence of Covid-19 pandemic and the stringent health system and precautionary measures to be followed with a lack to express their concerns associated with birth prospects [14]. Sudden alterations to the birth practice due to the COVID-19 pandemic may have trivial

**Table 4** ANOVA comparing sample given birth during the past 5 years and their birth trauma

	df	Mean square	F	Sig.
Between groups	4	481.09	1.55	0.20
Within groups	44	309.35		
Total	48			

**Table 5** Showing differences in mean comparison in each year

Multiple comparisons			
Dependent variable: Total_Truama			
LSD			
(I) Year_of_birth	(J) Year_of_birth	Mean difference (I-J)	Sig.
2018	2019	– 5.056	0.588
	2020	– 6.597	0.373
	2021	3.478	0.669
	2022	– 16.651	0.067
2019	2018	5.056	0.588
	2020	– 1.542	0.856
	2021	8.533	0.353
	2022	– 11.595	0.243
2020	2018	6.597	0.373
	2019	1.542	0.856
	2021	10.075	0.163
	2022	– 10.054	0.214
2021	2018	– 3.478	0.669
	2019	– 8.533	0.353
	2020	– 10.075	0.163
	2022	– 20.129*	0.025
2022	2018	16.651	0.067
	2019	11.595	0.243
	2020	10.054	0.214
	2021	20.129*	0.025

\*Significant at 0.05 level

but determined effects on depressive and PTSD symptoms [9]. Women centred care could have been adopted during these period [17].

## 4 Summary and Conclusion and Implication

It can be concluded that the fear of death or the reminiscence of it was not differing among working women even with increased duration after child birth. Birth trauma experienced by working women during varied years of birth is significant. This indicates the influence of various extraneous variable including Covid-19 and other protective factors. Future studies can also focus on improvising experience of child birth in the overall Indian health system.

## 5 Suggestions for Future Studies

In addition to the current research findings, future studies can be conducted to investigate the prevention and supporting strategies for birth-related trauma among working women. Working policies can be examined to see what measures employers have taken to combat birth trauma, such as flexible work hours, accommodations for physical limitations during pregnancy, and longer maternity leave, to reduce stress and reduce the risk of birth trauma among working women.

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# The Roles of ESG Disclosure, Innovation in Improving Firm Financial Performance: Evidence from China



Ting Fu and Ooi Kok Loang

**Abstract** This study examines the relationship between ESG disclosure, innovation, and the financial performance of Chinese A-share firms. Utilising stakeholder, resource-based, and legitimacy theories, the research sample consists of 960 Bloomberg-rated listed corporations from 2012 to 2020. The results indicate that ESG disclosure substantially improves firm performance. Tests of robustness validate the conclusion's validity. In addition, the study identifies innovation as a mediator in the relationship between ESG and firm performance. Tests for heterogeneity reveal variations based on company ownership and sensitivity to the environment. There is a substantial correlation between ESG disclosure and firm performance among non-state-owned businesses with minimal environmental sensitivity. State-owned enterprises and environmentally conscious businesses, on the other hand, demonstrate the significant mediating role of innovation. This research contributes to the comprehension of the effectiveness of ESG disclosure and innovation and provides insights into fostering sustainable development through proactive ESG practices.

**Keywords** ESG disclosure · Innovation · Firm performance · Sustainable development

## 1 Introduction

China as the largest developing nation, this commitment signifies China's contribution to global sustainable development. Sustainable development has become a recognised global trend, and investigating specific approaches and pathways to promote sustainable development has become an essential area of in-depth study and research. ESG is committed to stakeholders' interests, responding to investors'

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demands, establishing a positive reputation, and being popular in addressing crises and competition across industries [5, 62]. It encourages businesses to transfer their focus from profit to social benefit maximisation [16].

However, the economic utility of ESG disclosure by corporations remains debatable. One school of thought, taking into account stakeholder, resource-based, and legitimacy theories, contends that strong ESG performance can enhance a company's image and reputation by conveying trustworthy and ethical signals of business practices to consumers, governments, and the general public [78]. According to most empirical studies [15, 57], this can preserve customer loyalty, attract new customers, and enhance firm performance. In contrast, agency theory scholars argue that information asymmetry may lead companies to mask ESG weaknesses or mitigate ESG risks [75], which may be detrimental to shareholder interests. In addition, a small body of research indicates a negative or nonexistent relationship between ESG disclosure and economic performance (see, for example, [6]). Notably, the majority of research has focused on countries like Germany [74], Greece [83], the United Kingdom [44], and Italy [56]. However, the existing literature on ESG in emerging economies, including but not limited to China [50], Malaysia [60], and India [10], is limited and in its infancy [2]. Therefore, there is an urgent need for additional scholastic research to expand our understanding of the ESG environment in these emerging markets.

Innovation is a crucial factor in determining long-term success in an intensely competitive market. It enables businesses to acquire unique resources and achieve lasting competitive advantages [39]. In recent years, scholars have delved deeper into the transmission effect of innovation on firm development. Various aspects, such as the relationship between CSR and competitiveness, the interaction between ESG practices and responsible leadership [38], and the relationship between ESG performance and high-quality development, have been the subject of research. However, a significant research vacuum exists regarding investigating the relationship between a company's ESG performance and its performance, taking into account the role of corporate innovation as a mediator.

This study examines the impact of ESG disclosure on firm performance and investigating the mediating role of innovation in this relationship. The research utilises a sample of Chinese-listed companies from 2012 to 2020. The study aims to contribute to the existing literature in two key aspects: Firstly, it seeks to apply stakeholder theory, legitimacy theory, and resource-based theory to better comprehend the implications of ESG activities and innovation. The findings enrich the knowledge base of resource-based theory by shedding light on the importance of stakeholders and expanding the understanding of legitimacy theory in developing economies. Secondly, the study seeks to enhance the empirical understanding of the relationship between ESG disclosure and firm value. By exploring the driving mechanisms of ESG practices in Chinese firms, the research provides valuable insights for sustainable development in developing countries. Furthermore, examining the intricate relationship between ESG disclosure and firm performance, incorporating the mediating effect of innovation and the moderating role of factors such as corporate ownership nature and industry pollution, enables the study to offer targeted recommendations to enhance the value creation effect of ESG disclosure [72].

## 2 Literature Review and Research Hypothesis

### 2.1 Stakeholder Theory

Stakeholder theory often serves as a pivotal theoretical foundation, either independently or in conjunction with legitimacy theory and resource-based theory [11, 56, 67, 70]. Within this scholarly context, the present study aligns itself with the established theoretical framework of stakeholder theory to formulate its hypotheses.

Stakeholder theory, in conjunction with legitimacy theory and resource-based theory, plays a crucial role in empirical research investigating the relationship between ESG disclosure and firm performance [11, 56, 67, 70]. Stakeholder theory emphasises value creation for all stakeholders, recognising the importance of considering stakeholder interests alongside those of shareholders [27]. In line with this, companies must develop business strategies aligning with stakeholder expectations [67]. Meanwhile, legitimacy theory introduces the notion of a social contract between companies and society, stressing the need for companies to meet stakeholder expectations and maintain legitimacy [54]. By doing so, companies can enhance their reputation and positively contribute to society [34]. Failure to meet these expectations may lead to legitimacy gaps, which can be addressed by increasing public information disclosure and aligning with societal norms [25]. Furthermore, resource-based theory emphasises the significance of resources that enhance firm efficiency and effectiveness [22]. Effective management of stakeholder relationships transforms them into strategic resources, further enhancing firms' competitive positioning [32]. This includes recognising employees as valuable resources and prioritising their well-being and satisfaction [24, 42].

However, the studies on the relationship between ESG disclosure and firm financial performance has yielded inconclusive results [31]. While a significant portion of the literature supports a positive correlation between ESG factors and firm financial performance or value (e.g., [4, 15, 57, 81]), a smaller body of research suggests a notable negative relationship between them [75]. Furthermore, certain scholars argue that ESG performance has no significant impact on firm value (e.g., [6, 45]) or posit that the relationship between the two is intricate [30].

One plausible explanation for these discrepant research findings is that ESG factors may exert differential effects on companies. It is crucial to acknowledge that variations can significantly influence the economic implications of ESG practices for firms in national institutional frameworks, social contexts, industry dynamics, and geographical locations [13]. Therefore, a comprehensive examination of additional mechanisms shaping the relationship between ESG disclosure and firm financial performance is warranted.

## 2.2 *Research Hypothesis*

### 2.2.1 ESG Disclosure and Firm Performance

Drawing on stakeholder, legitimacy, and resource-based theories, the relationship between ESG disclosure and firm performance can be analysed regarding its impact on firm costs and revenues.

From the cost perspective, ESG disclosure reduces internal agency costs, human capital investment costs, and external financing costs for firms. Firstly, robust ESG disclosure signifies strong corporate governance mechanisms, mitigating agency problems [28, 46]. ESG investments reduce free cash flow, curbing managerial myopia and lowering agency costs [68]. Secondly, excellent ESG performance enhances management systems, lowering human capital investment costs through increased employee engagement and loyalty. Sound ESG disclosure reduces information asymmetry, improving investment efficiency and lowering financing costs [49].

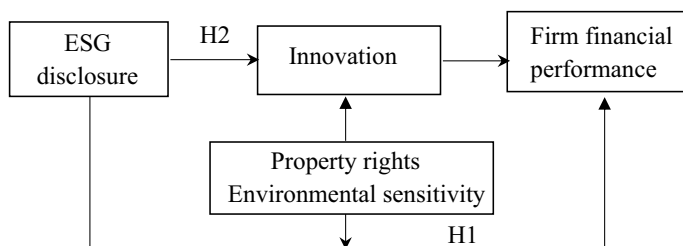
From the revenue perspective, ESG disclosure enhances a firm's reputation, creates new market opportunities, and generates increased revenue. Firstly, improved ESG disclosure fosters trust and ethical perception, attracting and retaining customers [78]. Secondly, sustainability reporting positively influences brand value and consumer perception of brand quality [52]. Lastly, robust ESG disclosure enhances legitimacy, leading to governmental financial support and new market opportunities [53]. Based on these findings, thus proposing the first research assumption:

*H1. ESG disclosure is positively and significantly correlated to firm's financial performance in China listed-companies.*

## 2.3 *ESG Disclosure, Corporate Innovation and Firm Performance*

The inconclusive empirical findings concerning the relationship between ESG disclosure and firm financial performance have prompted scholars to explore the underlying mechanisms. Innovation, a prominent theoretical and practical corporate management theme, is widely acknowledged as a critical source for organisational survival, competitiveness, and performance. It drives profitability and competitive advantage [3] and is presumed to be an important mediating pathway through which firms achieve improved financial performance via implementing ESG disclosure (Fig. 1).

The impact of ESG disclosure on corporate innovation can be examined through three key aspects. Firstly, CSR signals shareholder-driven innovation, effectively alleviating investor concerns [33]. Secondly, higher levels of ESG disclosure incentivise companies to develop environmentally friendly products, creating more opportunities to obtain green patents. Thirdly, CSR is a significant driver in attracting investors



**Fig. 1** Research concept

and reducing external financing costs [29]. Sufficient funding facilitates the commercialisation of innovative products and services, which is crucial for research and development efforts [59]. A robust corporate innovation capability enables firms to differentiate their offerings through cost efficiency or superior quality, ultimately leading to a competitive edge and enhanced corporate value. Additionally, firms with high levels of innovation can adapt swiftly to dynamic market conditions, ensuring sustained market competitiveness and improved performance. Rajapathirana and Hui [66] argue that corporate innovation is a critical determinant of success in today's fiercely competitive global economy, offering a clear roadmap to future opportunities. Building upon this analysis, thus proposing the second research assumption:

*H2. Corporate innovation mediates the relationship between ESG compliance disclosure and firm financial performance in China listed-companies.*

### 3 Research Design

#### 3.1 Sample Selection

This study's initial sample comprises corporations listed on the Chinese A-share market on the Shanghai and Shenzhen Stock Exchanges and rated by Bloomberg between 2011 and 2020. The original data are filtered based on the following standards: (1) exclusion of financial firms; (2) exclusion of firms with substantial lacking financial data; and (3) exclusion of firms classified as ST or \*ST during the sample period. It yields a final dataset containing 960 businesses with 5876 valid observations. In addition, to reduce the influence of anomalies, the Winsorize method minimises the extreme values at the 1st and 99th percentiles for all continuous variables.

The Bloomberg database provides the ESG disclosure data used in this study, while the China National Research Data Service Platform (CNRDS) provides the data on the number of patent applications. Other financial information was obtained from the Guotai An database (CSMAR) to ensure completeness and accuracy.

### 3.2 Variables

The independent variable is ESG disclosure. [47] conducted a statistical analysis of 43 studies published in top international journals since 2015 that examined the relationship between ESG and firm performance. Among these studies, 34.7% sourced ESG data from Thomson Reuters, 30.6% obtained data from the Bloomberg database, and 34.7% used other databases. In the Chinese capital market context, ESG is a relatively new concept and has not received significant attention from international ESG rating agencies. Bloomberg is one of the earliest international institutions to provide ESG ratings for Chinese companies. Unlike domestic ESG ratings, Bloomberg's ESG data has broader coverage, aligns more closely with international standards, and carries more credibility. It is widely used globally (e.g., [18, 20, 57]). Bloomberg assigns composite ESG scores as well as individual scores for Environmental (E), Social (S), and Governance (G) based on the quality of information disclosed in companies' CSR reports. The scores range from 0 to 100, with higher scores indicating greater disclosure of information by the company.

The mediating variable is innovation. Firm innovation is commonly measured from two perspectives: innovation inputs and innovation outputs [48, 82]. Research and development (R&D) activities have become a spontaneous investment behaviour in intense global market competition. Actual technological innovation, characterised by high risk, faces challenges in effectively transforming R&D inputs into innovation outputs, thus potentially overestimating the technological innovation capability when using these indicators. Therefore, this study employs innovation outputs to assess innovation capability. Table 1 outlines the definitions of variables and relevant literature.

**Table 1** Definitions of variables and relevant literature

Variable types	Variables	Symbol	Relevant literature
Dependent	Return on assets	ROA	
	Return on equity	ROE	[1]
Independent	ESG disclosure	ESG	
Mediating	Corporate innovation	Patent	[35]
Control	Financial leverage	Lev	[77]
	Firm age	Age	[71]
	Sales growth rate	Growth	
	Ownership concentration	Top1	[84]
	Industry fixed effects	Industry	
	Year fixed effects	Year	

### 3.3 Model Building

#### 3.3.1 Baseline Model

First, the model of the impact of ESG disclosure on the firm financial performance is constructed:

$$FP_{i,t} = \alpha_1 + cESG_{i,t-1} + \partial_1 Controls_{i,t-1} + \sum Industry + \sum Year + \mu_{i,t} \quad (1)$$

Considering that the impact of ESG disclosure on firm financial performance may have a time lag, while avoiding potential endogeneity issues, this study applies a one-period lag treatment to all explanatory and control variables. In model (1), the subscript  $t$  represents the year and  $i$  represents the enterprise.  $FP_{i,t}$  represents the enterprise value of enterprise  $i$  in year  $t$ , measured using two indicators: ROA and ROE.  $ESG_{i,t-1}$  is the ESG information disclosure score of sample enterprise  $i$  in year  $t - 1$ .  $Controls_{i,t-1}$  is a set of control variables that includes financial leverage (Lev), company age (Age), growth opportunity (Growth), and equity concentration (Top1). The coefficient  $c$  represents the degree to which ESG disclosure affects firm financial performance. Industry and Year represent industry and annual dummy variables, respectively. When  $c$  is significantly greater than 0, ESG performance positively correlates with enterprise value, and the H1 is verified.

#### 3.3.2 The Mediating Role of Corporate Innovation

Second, the model of the impact of ESG disclosure on innovation is constructed:

$$Patent_{i,t} = \alpha_2 + aESG_{i,t-1} + \partial_2 Controls_{i,t-1} + \sum Industry + \sum Year + \mu_{i,t} \quad (2)$$

where  $Patent_{i,t}$  is the mediating variable, representing the innovation capability of company  $i$  in year  $t$ , measured by the number of patent applications. The coefficient  $a$  represents the impact of ESG disclosure on corporate innovation. When  $a$  is significantly greater than 0, it indicates that ESG disclosure can enhance the innovation ability of enterprises. The significance of other variables is the same as in model (1).

Finally, a test model of the mediating effect of innovation is constructed:

$$FP_{i,t} = \alpha_3 + c'ESG_{i,t-1} + bPatent_{i,t-1} + \partial_3 Controls_{i,t-1} + \sum Industry + \sum Year + \mu_{i,t} \quad (3)$$



where  $c'$  is the direct effect of the ESG on firm financial performance (FP) after controlling for the influence of the mediating variable (Patent). The coefficient  $b$  is the influence of the mediating variable on the dependent variable after controlling for the influence of the ESG; The meaning of variables is consistent with models (1) and (2). In this model, it is necessary to simultaneously focus on the direction and significance of coefficients  $b$  and  $c'$ .

When the coefficient  $c$  in model (1) exhibits a significant positive effect, while the coefficient  $a$  in model (2) similarly demonstrates a significant positive effect. Furthermore, it is worth noting that the coefficient  $b$  in Eq. (3) exhibits a significant positive deviation from zero. If the coefficient  $c'$  demonstrates statistical significance, it indicates the presence of a partial mediating influence. The Mesomeric effect, also known as the indirect effect, is seen as the product of coefficients  $a$  and  $b$ . The mediating influence in the overall effect may be quantified as the fraction  $ab/c$ . If the coefficient  $c'$  is found to be negligible, it indicates a full mediating effect. In each of the aforementioned scenarios, the verification of H2 is seen.

## 4 Results Analysis

### 4.1 Descriptive Statistics

The ESG rating data from Bloomberg for Chinese-listed companies covers 2011–2020. This study applied a lagged approach to the explanatory variable of ESG disclosure. As a result, the empirical analysis focuses on the period from 2012 to 2020. Descriptive statistics show in Table 2, including measures such as mean, standard deviation (sd), minimum value (min) and maximum value (max).

The dependent variables, ROA and ROE, exhibit a significant range of  $-17.707$  to  $24.169\%$  and  $-52.679$  to  $39.875\%$ , respectively, indicating notable variation in financial performance among the sample firms. Higher values of ROA and ROE indicate greater efficiency in profit generation. Generally, ROA and ROE levels of

**Table 2** Descriptive statistics

Variable	N	Mean	sd	min.	Median	max.
ROA	5876	4.755	6.173	$-17.707$	3.877	24.169
ROE	5876	8.104	12.205	$-52.679$	8.142	39.875
ESG	5876	22.361	6.61	11.983	21.074	46.694
Patent	5876	3.548	1.819	0	3.611	7.951
Lev	5876	47.061	19.402	7.21	48.15	87.189
Age	5876	2.971	0.28	2.079	2.996	3.555
Growth	5876	10.742	24.399	$-46.938$	8.586	109.723
Top1	5876	36.959	15.892	7.948	35.702	76.969

**Table 3** Pearson correlation analysis

	ROA	ROE	ESG	Patent	Lev	Age	Growth	Top1
ROA	1							
ROE	0.885***	1						
ESG	0.006***	0.065***	1					
Patent	0.057***	0.125***	0.260***	1				
Lev	— 0.432***	— 0.227***	0.159***	0.204***	1			
Age	0.002	0.004	0.029**	− 0.004	0.004	1		
Growth	0.319***	0.335***	0.0100	0.066***	— 0.028**	— 0.029**	1	
Top1	0.051***	0.071***	0.158***	0.007	0.125***	— 0.223***	— 0.075***	1

Note \*\*\*, \*\* and \* represent 1, 5 and 10% significance levels, respectively

5% and 15% or above are acceptable [7]. The mean values of ROA and ROE for the sample firms are 4.755 and 8.104%, respectively, suggesting relatively lower financial performance.

## 4.2 Correlation Analysis

The Pearson correlation test was conducted to examine all variables in the model, and the test results are presented in Table 3.

Table 3 indicates a significant positive correlation between the independent variable ESG and the dependent variables ROA and ROE, with correlation coefficients of 0.006 and 0.065, respectively, supporting H1. ESG also shows a significant correlation with the mediating variable firm innovation (Patent) with a correlation coefficient of 0.260. The mediating variable has significant correlations of 0.057 and 0.0125 with the dependent variables ROA and ROE, respectively, at the 1% level. Although further empirical testing is necessary to support H2, multicollinearity is not a significant issue, as the maximum Pearson correlation coefficient among variables is 0.432, well below the commonly used threshold of 0.8.

## 4.3 Estimate Model of Baseline Regression

Table 4 presents the results of the baseline regression. Columns (1) and (2) display the results of the univariate regressions, while columns (3) and (4) further control for other firm-level characteristics. With the inclusion of control variables, the adjusted R<sup>2</sup> significantly increases, indicating an improved model fit. Year and industry fixed

effects are controlled for in all columns. The coefficients of ESG are significant and positive at the 1% confidence level across all columns, suggesting that higher ESG disclosure scores enhance firms' financial performance. This regression result confirms H1, indicating that the greater ESG disclosure exhibit, the better financial performance.

This finding aligns with previous studies such as [4, 15, 57, 81], which emphasise the value-enhancing effect of corporate ESG performance rather than shareholder costs.

**Table 4** Baseline regression

	(1)	(3)	(2)	(4)
	ROA	ROE	ROA	ROE
LESGC	0.033*** (2.763)	0.156*** (6.345)	0.062*** (6.220)	0.177*** (7.694)
Lev			− 0.141*** (− 32.339)	− 0.174*** (− 15.297)
Age			1.212*** (4.165)	2.421*** (4.016)
Growth			0.082*** (21.382)	0.173*** (20.945)
Top1			0.055*** (11.681)	0.099*** (9.745)
Constant	4.177*** (4.429)	3.852** (1.971)	3.084*** (2.616)	− 1.639 (− 0.673)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
R-square	0.056	0.034	0.323	0.208
N	5876	5876	5876	5876

*Note* This table presents the OLS regression results of ESG disclosure on firm performance. Columns (1) and (2) are regression results without control variables, and columns (3) and (4) are regression results with control variables. The t-statistics in parentheses are derived based on robust standard errors. Industry and year fixed effects are controlled for in each regression. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1% levels, respectively

## 4.4 Robustness Tests

### 4.4.1 Quantile Regression

Quantile regression offers a complete analysis of the correlation between independent variables and different quantiles of the conditional distribution. The methodology offers a robust framework that exhibits reduced sensitivity to outliers, mitigating biases and enabling a more precise assessment of the influence of independent variables on the dependent variable across different quantiles.

For this analysis, three quantile points are considered: the 25th percentile (lower quantile), the 50th percentile (median quantile), and the 75th percentile (upper quantile). The results of the quantile regression analysis are presented in Table 5. Across all three quantiles, the coefficient for ESG is significant and positive, indicating that ESG disclosure positively influences the financial performance of companies across different performance levels. These findings robustly support Hypothesis 1. Notably, the coefficient for ESG is largest at the 25th percentile, suggesting that ESG disclosure has a particularly strong effect on improving the financial performance of companies with lower performance levels.

**Table 5** Quantile regression model

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	ROA	ROA	ROA	ROE	ROE	ROE
	25th	50th	75th	25th	50th	75th
ESGC	0.057*** (6.92)	0.043*** (5.96)	0.018** (2.22)	0.117*** (6.17)	0.089*** (3.84)	0.094*** (3.04)
Lev	− 0.082*** (− 14.96)	− 0.112*** (− 32.48)	− 0.160*** (− 37.79)	− 0.087*** (− 10.06)	− 0.087*** (− 9.99)	− 0.089*** (− 8.84)
Age	0.753*** (2.87)	1.049*** (5.65)	1.039*** (3.82)	1.220*** (2.71)	1.301*** (2.71)	1.916*** (3.67)
Growth	0.049*** (15.36)	0.060*** (20.78)	0.075*** (18.45)	0.096*** (15.78)	0.125*** (26.73)	0.167*** (22.71)
Top1	0.030*** (6.37)	0.036*** (12.25)	0.036*** (10.71)	0.062*** (7.50)	0.081*** (11.73)	0.079*** (12.19)
Constant	− 1.453 (− 1.19)	2.527*** (2.66)	10.242*** (10.05)	− 5.103*** (− 2.65)	− 0.088 (− 0.04)	8.489*** (2.99)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
N	5876	5876	5876	5876	5876	5876

*Note* The parenthetical t-statistics are derived from resilient standard errors. \*, \*\*, and \*\*\* represent significance levels of 10, 5, and 1%, correspondingly

#### 4.4.2 Omitted Variables

The study employed two strategies to address potential omitted variable issues: controlling for firm-specific fixed effects and adding additional control variables. Columns (1) and (2) in Table 6 present the regression results after controlling for industry, year, and firm fixed effects. The coefficients of ESG remain significantly positive at the 5% and 1% levels.

Regarding the additional control variables, prior research suggests that board size impacts firm value. Most studies indicate that larger board size is beneficial for improving financial performance [21, 41], while others argue that smaller boards are more conducive to enhancing firm performance. Furthermore, cash holdings can

**Table 6** Omitted variables test

Variables	(1)	(2)	(3)	(4)
	Firm-fixed		Confounding factors	
	ROA	ROE	ROA	ROE
ESG	0.031** (2.18)	0.125*** (3.92)	0.028*** (3.19)	0.115*** (5.42)
Age	0.794 (1.38)	2.093** (1.99)	0.849*** (3.27)	1.729*** (3.08)
Lev	− 0.163*** (− 19.37)	− 0.230*** (− 12.69)	− 0.119*** (− 30.16)	− 0.139*** (− 12.59)
Growth	0.067*** (15.78)	0.150*** (16.61)	0.068*** (20.40)	0.149*** (19.56)
Top1	0.046*** (5.43)	0.096*** (5.57)	0.037*** (8.79)	0.069*** (7.18)
Board			0.847*** (2.81)	2.905*** (4.09)
Cash			0.379*** (28.71)	0.644*** (22.89)
Constant	6.611*** (3.07)	3.324 (0.86)	0.265 (0.22)	− 9.271*** (− 3.41)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Firm	Yes	Yes	NO	NO
N	5876	5876	5875	5875
R-squared	0.3815	0.2639	0.461	0.308

*Note* Column (1) and (2) reports the regression results after controlling to the firm, and column (3) and (4) reports the results of the regression with the addition of the variables board size (Board), cash hold (Cash). \*\*\*, \*\* and \* represent 1, 5 and 10% significance levels, respectively. The robust t-statistics are in parenthesis

also affect firm value. On the contrary, holding cash provides flexibility, reduces transaction costs, and lowers financing costs, benefiting shareholders. Research by [37] supports a significant positive correlation between cash holdings and financial performance in non-financial firms. On the other hand, managers may exploit excess cash for personal gain, and the fragility and susceptibility to expropriation associated with cash holdings exacerbate agency issues within cash-rich firms (Tran, 2019). Thus, cash holdings can have an impact on firm performance.

Two additional control variables, board size (natural logarithm of board size) and cash holdings (net cash flow from operating activities/total assets), were added to Model (1) and the regression was repeated. According to Table 6 (3) and (4) columns, the outcomes are consistent with previous findings.

#### 4.4.3 Instrumental Variable Regression

The instrumental variable approach (IV-2SLS) was utilised to attempt to address endogeneity issues. Ideal instrumental variables must meet two fundamental conditions: first, they must be correlated with the endogenous variable, and second, they must not directly influence the dependent variable.

The city-level intensity of Confucian culture was chosen as an instrumental variable. Confucianism is China's most influential and enduring cultural framework, with a history extending over two thousand years. It is considered a moral compass for individuals and organisations [35]. Consistent with the ESG principles emphasising corporate responsibility towards consumers, communities, and the environment, Confucian culture promotes altruism and honesty. Second, China's enormous geographical expanse has resulted in varying degrees of Confucian cultural influence in various regions. Consequently, the intensity of Confucian culture at the firm's location may affect its ESG performance, meeting the first requirement for instrumental variables. The cultural context at the regional level is less likely to impact the financial performance and value of firms directly, thus satisfying the second criterion for instrumental variables.

Table 7 displays the outcomes of the two-stage regression using the cultural intensity of Confucianism as the instrumental variable. At the 1% significance level, the instrumental variable ( $\text{confu} \times \text{ESG\_mean}$ ) exhibits a significant positive relationship with ESG in the first-stage regression (column 1). The weak instrumental variable test confirms the efficacy and validity of the instrumental variable, as both the F-statistic and Kleibergen-Paap LM statistic indicate a valid instrument. The Cragg-Donald Wald F-statistic also eliminates concerns regarding weak instrumental variable.

The coefficients of ESG on firm performance indicators, ROA and ROE, remain significant at the 1% level in the second-stage regression (columns 2 and 3). This indicates that even after controlling for endogeneity using instrumental variables, ESG performance continues to have a positive effect on firm financial performance. Consistent with previous research [4, 13, 57, 84], these results provide strong support for Hypothesis 1.

**Table 7** Robustness test

Variables	(1)	(2)	(3)
	First	Second	
	LESGC	ROA	ROE
ESGC		0.520*** (2.599)	1.517*** (3.317)
ESGCIV	0.002*** (5.266)		
Lev	0.044*** (10.046)	− 0.161*** (− 16.494)	− 0.232*** (− 9.798)
Age	0.052 (0.149)	1.198*** (3.552)	2.381*** (3.128)
Growth	0.007** (2.188)	0.079*** (18.264)	0.163*** (16.630)
Top1	0.056*** (9.561)	0.029** (2.326)	0.024 (0.835)
Constant	14.921*** (12.548)	− 4.012 (− 1.247)	− 22.390*** (− 2.977)
Industry	Yes	Yes	Yes
Year	Yes	Yes	Yes
R-squared	0.112	0.123	0.189
N	5876	5876	5876
F	23.237		
Kleibergen-Paap rk LM statistic	27.838		
Cragg-Donald Wald F statistic	25.547		
Kleibergen-Paap rk Wald F statistic	27.734		

## 4.5 Mediating Effect

Additional regression analyses were conducted according to the three-step mediation test established by [9] in order to investigate the potential mediating effect of innovation in the above relationship. Table 8 presents the outcomes of these analyses. At a significance level of 1%, the results in column 3 of Table 8 indicate a significant positive correlation between ESG factors and innovation. Specifically, the coefficient estimate for the variable “Patent” is 0.054. This observation suggests that the disclosure of ESG factors influences positively a company’s capacity for innovation.

This study investigates how ESG disclosure and innovation affect the performance of enterprises. The performance is evaluated for analytical purposes using ROA and ROE metrics, which are respectively assigned to columns (4) and (5). At the 1% confidence level, the estimated coefficient of patents in the ROA model is

**Table 8** Mediating effect model

Variables	(1)	(2)	(3)	(4)	(5)
	ROA	ROE	Patent	ROA	ROE
LESGC	0.062*** (6.220)	0.177*** (7.694)	0.054*** (17.009)	0.027*** (2.662)	0.099*** (4.378)
Patent				0.655*** (13.985)	1.456*** (13.257)
Lev	− 0.141*** (− 32.339)	− 0.174*** (− 15.297)	0.013*** (11.137)	− 0.149*** (− 34.461)	− 0.192*** (− 16.612)
Age	1.212*** (4.165)	2.421*** (4.016)	− 0.412*** (− 4.830)	1.482*** (5.173)	3.021*** (5.092)
Growth	0.082*** (21.382)	0.173*** (20.945)	0.005*** (5.309)	0.079*** (20.956)	0.167*** (20.754)
Top1	0.055*** (11.681)	0.099*** (9.745)	0.002 (1.210)	0.054*** (11.693)	0.097*** (9.722)
Constant	3.084*** (2.616)	− 1.639 (− 0.673)	0.697** (2.200)	2.627** (2.278)	− 2.654 (− 1.116)
Industry	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
r <sup>2</sup>	0.323	0.208	0.325	0.348	0.239
N	5876	5876	5876	5876	5876
Bootstrap 95% bias-corrected confidence interval				[0.0289, 0.0413]	[0.0076, 0.0435]

*Note* This table reports the mediating effect of innovation on the relationship between ESG disclosure and firm performance. Columns (1) and (2) show the baseline regression of model (1) results. Column (3) shows the relationship between ESG discourse and innovation. Columns (4) and (5) show the regression results of model (6) with both the mediating variable and the explanatory variable. The last row reports the p-value of the Bootstrap test for the mediation effect. \*\*\*, \*\* and \* represent 1, 5 and 10% significance levels, respectively. The robust t-statistics are in parentheses

0.655, which is significant. Moreover, the estimated coefficient for the ESG variable is 0.054. Even though this coefficient is significant at the 1% level, it is substantially lower than the initial ESG coefficient of 0.062, as reported in the first column of the analysis. The finding above suggests that innovation partially mediates the relationship between ESG disclosure and ROA. In the ROE model, the coefficient for the mediating variable “Patent” is 1456, indicating statistical significance at a confidence level of 1%. Regarding the coefficient of ESG factors, this study reveals an important result. The estimated coefficient of ESG, denoted by 0.099, demonstrates a significant relationship at the 1% significance level. This coefficient is significantly smaller than the coefficient of ESG, which is 0.177 and listed in the second column of the



analysed data set. This study's findings indicate that innovation partially mediates the association between ESG disclosure and ROE performance within an organisation.

We implemented [79] Bootstrap mediation test. The final column of Table 8 provides empirical support for a significant mediating effect. This conclusion is corroborated by the analysis of 1000 repeated samples, in which the 95% confidence intervals for the indirect effects do not contain zero.

## 4.6 Robustness Tests

### 4.6.1 Analysis of Property Rights

In China, state-owned enterprises (SOEs) typically have expansive operations, stable management, and access to additional policy information channels [36]. They enjoy inherent advantages in acquiring government fiscal funds, policy preferences, and financial institution loans. Additionally, state-owned enterprises have various political responsibilities, such as stabilising the national economy, creating employment opportunities, and adhering to macroeconomic policies [17]. In most cases, superiors determine the appointment of senior executives in SOEs, and their performance evaluation is not solely based on financial performance. However, the lack of ownership and multilayered agency relationships within SOEs result in significant agency problems.

Table 9 presents the empirical findings regarding this correlation. Columns (1) to (4) separately report the relationship between ESG disclosure and firm performance for SOEs and non-SOEs. In both instances, the ESG regression coefficients are substantially positive at the 1% level, confirming the substantial positive influence of ESG disclosure on firm performance, consistent with findings from previous research. Intriguingly, the sample of non-SOEs has larger regression coefficients for ESG, indicating that ESG disclosure has a greater positive effect on non-SOEs' financial performance than SOEs'.

Following this, columns (5) and (6) illustrate the relationship between ESG disclosure and innovation for both enterprise categories. Patent regression coefficients are substantially positive at 1%, but SOE regression coefficients are larger than non-SOE regression coefficients. This suggests that ESG disclosure has a greater impact on SOEs' innovation capabilities than non-SOEs. Lastly, columns (7) through (10) provide the regression results for the mediation effect, demonstrating the mediation effects of innovation between ESG disclosure and firm performance for both SOEs and non-SOEs, thereby providing additional support for Hypothesis 2.

### 4.6.2 Analysis of Environmental Sensitivity

Previous studies have found that the environmental sensitivity of firms' industry context has significant implications for their environmental performance [61], social

Table 9 Additional test based on property rights

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	SOE	N-SOE	SOE	N-SOE	SOE	N-SOE	SOE	N-SOE	SOE	N-SOE
	ROA	ROA	ROE	ROE	Patent	Patent	ROA	ROA	ROE	ROE
ESGC	0.055*** (4.816)	0.105*** (5.884)	0.167*** (6.075)	0.233*** (5.735)	0.061*** (14.622)	0.040*** (8.116)	0.018 (1.480)	0.076 (4.386)	0.084*** (3.046)	0.169*** (4.355)
Patent							0.616*** (11.257)	0.744*** (9.489)	1.372*** (9.671)	1.618*** (9.414)
Lev	-0.121*** (-21.285)	-0.154*** (-21.616)	-0.171*** (-10.973)	-0.156*** (-9.160)	0.010*** (6.582)	0.015*** (8.522)	-0.127*** (-22.847)	-0.165*** (-23.164)	-0.185*** (-11.709)	-0.180*** (-10.431)
Age	1.673*** (5.304)	0.951* (1.867)	3.472*** (4.395)	1.597* (1.710)	-0.583*** (-4.798)	-0.250** (-2.015)	2.032*** (6.538)	1.137** (2.285)	4.272*** (5.478)	2.001** (2.200)
Growth	0.073*** (13.594)	0.084*** (15.473)	0.169*** (13.463)	0.164*** (14.903)	0.004*** (3.217)	0.005*** (4.191)	0.070*** (13.581)	0.080*** (14.847)	0.163*** (13.512)	0.156*** (14.462)
Top1	0.047*** (8.329)	0.079*** (9.833)	0.094*** (6.558)	0.136*** (8.823)	0.001 (0.418)	-0.001 (-0.581)	0.047*** (8.350)	0.080*** (10.348)	0.093*** (6.545)	0.138*** (9.360)
Constant	1.137 (0.745)	2.376 (1.284)	-4.148 (-1.351)	-3.007 (-0.842)	0.518 (1.096)	0.668 (1.476)	0.819 (0.539)	1.879 (1.045)	-4.858 (-1.604)	-4.089 (-1.179)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.320	0.312	0.213	0.206	0.370	0.288	0.350	0.338	0.242	0.240
N	3093	2783	3093	2783	3093	2783	3093	2783	3093	2783
Mediation proportion							100%	28.4%	50.11%	27.78%

Note: \*\*\*, \*\*, and \* represent 1, 5 and 10% significance levels, respectively. The robust t-statistics are in parentheses; SOE represents State-owned enterprises, N-SOE represents Non State-owned enterprises

responsibility [58], and corporate governance [12]. Due to the varying expectations of stakeholders regarding the ESG performance of firms with different industry sensitivities, the effects of ESG performance on firm value and innovation capabilities may differ across industries [81]. Therefore, this study hypothesises that the impact of ESG performance on firm financial performance and innovation capabilities may vary across firms in different industry contexts with different levels of environmental sensitivity, thereby resulting in different mediation effects of innovation between the two types of enterprises.

Table 10 presents the results of the comparison of groups. The positive and significant coefficients of ESG in columns (1) through (4) indicate that ESG disclosure positively influences the financial performance of both categories of firms, thereby providing additional support for Hypothesis 1. However, the coefficient of ESG for firms with low environmental sensitivity is greater than that for firms with high environmental sensitivity, indicating that ESG disclosure has a greater value-creating effect on firms with low environmental sensitivity. From columns (5) to (6), it is evident that the effect of ESG disclosure on the development of innovation capabilities does not differ substantially between the two types of companies. Columns (7) through (10) confirm the mediating role of innovation in the relationship between ESG disclosure and firm performance for both categories of firms, validating Hypothesis 2 once more. Notably, innovation has a comprehensive mediating effect on firms with high environmental sensitivity.

## 5 Conclusion

In comparison to industrialised nations, China's political, economic, legal, and cultural characteristics are distinct. The ESG practices employed by Chinese businesses serve as a model and guide for other emergent nations. This study utilised Bloomberg's ESG disclosure ratings for Chinese A-share listed companies from 2012 to 2020 in order to investigate the effect of ESG disclosure on enhancing company performance, as well as the potential mediating effect of innovation. Following is a summary of the primary findings of this study: First, the disclosure of ESG information has a significant positive impact on the value of a company. Second, ESG disclosure facilitates the enhancement of a company's innovative capabilities. Thirdly, innovation acts as a mediator between ESG disclosure and firm performance. Lastly, heterogeneity analyses reveal that the positive influence of ESG disclosure on financial performance is greater for non-state-owned firms and firms with minimal environmental sensitivity. In contrast, the mediating role of innovation is more significant for state-owned and environmentally sensitive businesses.

The results of this study have substantial ramifications for other emerging nations and other parties involved in China. First and foremost, it is imperative for developing

Table 10 Additional test based on environmental sensitivity

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	High ES	Low ES	High ES	Low ES	High ES	Low ES	High ES	Low ES	High ES	Low ES
	ROA	ROA	ROE	ROE	Patent	Patent	ROA	ROA	ROE	ROE
LESGC	0.040*** (2.609)	0.082*** (6.225)	0.101*** (2.952)	0.241*** (7.820)	0.054*** (12.046)	0.058*** (13.189)	0.012*** (0.792)	0.040*** (3.054)	0.040*** (1.159)	0.150*** (5.030)
Patent							0.504*** (6.203)	0.723*** (12.306)	1.127*** (5.802)	1.572*** (11.602)
Lev	-0.139*** (-21.241)	-0.140*** (-23.164)	-0.173*** (-10.318)	-0.166*** (-10.690)	0.012*** (7.279)	0.015*** (9.870)	-0.145*** (-22.061)	-0.151*** (-25.073)	-0.186*** (-10.757)	-0.190*** (-12.001)
Age	1.268*** (2.392)	1.188*** (3.423)	1.992* (1.941)	2.527*** (3.435)	-0.110 (-0.712)	-0.540*** (-5.417)	1.324*** (2.497)	1.579*** (4.621)	2.116** (2.065)	3.376*** (4.672)
Growth	0.094*** (14.648)	0.075*** (15.538)	0.191*** (13.940)	0.160*** (15.331)	0.002 (1.495)	0.006*** (5.115)	0.093*** (14.603)	0.070*** (15.047)	0.189*** (14.005)	0.151*** (14.994)
Top1	0.054*** (7.399)	0.059*** (9.612)	0.092*** (6.065)	0.115*** (8.430)	0.006*** (2.994)	0.002 (1.189)	0.051*** (7.024)	0.057*** (9.689)	0.085*** (5.714)	0.112*** (8.444)
Constant	2.436 (1.522)	2.501* (1.828)	0.345 (0.105)	-3.866 (-1.384)	0.841* (1.805)	0.768** (2.064)	2.012 (1.258)	1.945 (1.456)	-0.603 (-0.182)	-5.074* (-1.864)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.392	0.279	0.265	0.189	0.204	0.373	0.404	0.313	0.280	0.227
N	2352	3524	2352	3524	2352	3524	2352	3524	2352	3524
Mediation proportion							100%	51.14%	100%	46.64%

Note \*\*\*, \*\* and \* represent 1, 5 and 10% significance levels, respectively. The robust t-statistics are in parentheses; High ES represents High environmental sensitivity, Low ES represents Low environmental sensitivity

nations to strengthen their ESG assessment frameworks and facilitate the dissemination of ESG-related information. The task at hand necessitates developing comprehensive disclosure standards tailored to accommodate the distinct ESG practices prevalent in each nation.

Furthermore, the Chinese government, market, and firms must recognise the multifaceted impacts of ESG disclosure and the moderating influence of innovation. It is recommended that the government institute standardised and robust ESG disclosure criteria, with a progressive shift from voluntary to obligatory disclosure. Financial incentives may be offered to corporations that proactively publish ESG information, focusing on privately held organisations committed to environmental sustainability.

Promoting long-term institutional investors inside the market would enhance market dynamism and facilitate the integration of investment ideas in line with ESG principles. Financial institutions have to endorse comprehensive ESG disclosure and provide financial support to outstanding initiatives that aim to solve societal and environmental concerns. This assistance is crucial in assisting enterprises committed to social responsibility in overcoming financial obstacles. Integrating ESG concepts with traditional Confucian culture is crucial for listed enterprises. By properly disclosing ESG information, firms can improve their reputation, establish investor confidence, and promote a culture of innovation. Moreover, it is essential to prioritise examining the substance and calibre of ESG disclosure to address unequal access to information and minimise expenses related to obtaining funding. This, in turn, will lead to a substantial enhancement in the worth of corporations.

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# Industrial Agglomeration, Technological Innovation, and Poverty Alleviation: Evidence from China



Meng Xu and Ooi Kok Loang

**Abstract** The rapid development of a new generation of information technology has led to a blurring of industry boundaries, which has brought about profound changes in the connotation and extension of industrial integration and agglomeration. This transformation has been closely linked to technological innovation within industries and regions, emerging as a significant force driving technological advancement. Over the period from 2011 to 2020, China's advanced manufacturing and modern service industry experienced a noticeable upward trend in their integration levels, resulting in a convergence of uneven regional development. This convergence has substantial implications for poverty alleviation, as industrial integration and agglomeration have significantly promoted technological innovation, regional growth, and economic progress. To harness the potential benefits of this development for poverty reduction, it becomes imperative to continually optimise the external environment of agglomeration with a specific focus on empowering leading enterprises. Additionally, identifying critical areas for industrial integration and fostering the growth of key integration entities will play a pivotal role in fostering inclusive and equitable development. Moreover, by providing advanced manufacturing technology application scenarios and emphasising the synergy between industries and urban centres, efforts can be directed towards creating employment opportunities, enhancing income levels, and ultimately contributing to poverty reduction in various regions.

**Keywords** Industrial integration · Industrial agglomeration · Advanced manufacturing · Innovative development

**JEL Classifications** O14 · O30 · L60

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## 1 Introduction

With the rapid evolution of the new technological revolution, industrial The rapid evolution of the new technological revolution has ushered in a period of accelerated industrial transformation, characterised by the emergence of novel technologies, models, and formats. This dynamism has led to industries interpenetrating, integrating, and innovating, thereby enhancing the efficiency of industrial value chains. In this context, the innovative development of advanced manufacturing assumes great importance as it facilitates high-quality economic development through industrial transformation and upgrading and holds the potential to elevate China's position in the global industrial chain. In the face of a complex and ever-changing international environment, advancing complex technology-centred advanced manufacturing becomes crucial for breaking the technological barriers imposed by a few countries and fostering high-quality development across the manufacturing industry. It represents a pivotal opportunity to expand the growth space of the industrial sector and forms a critical component of China's modern industrial system in the new era. In line with the "innovation-driven development" national strategy, various regions have embraced the development of advanced manufacturing as a strategic pathway to propel economic high-quality development, resulting in promising development momentum.

Moreover, the convergence of the advanced manufacturing industry with the modern service industry has presented favourable external conditions for overcoming development challenges. This integration enhances the knowledge content and value-added of manufactured products while reducing related costs in the manufacturing value chain [1]. Blending advanced manufacturing and modern service industries is a vital approach to foster the innovative development of advanced manufacturing and augment its core competitiveness. The new technological landscape has blurred the boundaries between these industries, leading to a notable manufacturing trend becoming more service-oriented. This industrial fusion, penetration, and reconstruction offer opportunities for companies to cultivate new competitive advantages and drive overall industrial innovation, laying a robust foundation for the innovative development of advanced manufacturing. As a result, it becomes imperative to explore the interplay between industrial agglomeration, industrial integration, and the innovative development of advanced manufacturing.

Moreover, the industrial agglomeration has been a subject of extensive research in the field of new economic geography, highlighting its potential to generate increasing returns to scale through the sharing of infrastructure, labour pools, and knowledge spillovers, thereby enhancing the overall competitive capability of a region [2–4]. Specifically, the impact of industrial agglomeration on technological innovation has been a focus of theoretical inquiry, leading to the formation of two distinct viewpoints. The concept of Marshallian externalities, proposed by [5–7], emphasises the importance of industry specialisation and concentration in improving innovation performance within specific regions. Conversely, Jacobs externalities [8] emphasise the benefits of diverse industry agglomerations in facilitating innovation performance

in a given area. Both specialised and diversified agglomerations offer opportunities for inter-firm interactions, accelerating knowledge spillover [9], and exert varying degrees of promoting effects on industrial innovation activities, with the level of industrial agglomeration influencing its impact on enhancing innovation [10]. Moreover, industrial fusion has been identified as a two-way promoting relationship with technological innovation [11]. On the other hand, technical fusion acts as a precursor to industrial fusion, with the diffusion of innovative technologies across industries forming a common technological foundation crucial for fusion. On the other hand, industrial fusion enhances industrial innovation capabilities by generating multiple innovation effects, including technological innovation effects that elevate industrial innovation capabilities. Knowledge spillover effects, competitive incentives, and economies of scale arising from industrial fusion drive continuous technological innovation between manufacturing and productive service industries through interactive integration and symbiosis [11]. Empirical research has also supported industrial fusion's significant positive effects on innovation performance and efficiency within the overall Chinese manufacturing industry [12] and specific industries [13].

Despite the extensive research on industrial agglomeration and industrial fusion, there is a limited focus on exploring the innovation development of advanced manufacturing from the perspective of advanced manufacturing agglomeration and its fusion with modern service industries. This study aims to bridge this gap by examining the relationship between industrial agglomeration, industrial integration (fusion), and the innovative development of advanced manufacturing. The research will shed light on the driving forces behind technological innovation in this sector by investigating how the rapid evolution of new technological revolution has led to inter-penetration, integration, and innovative transformations within industries. Furthermore, by quantifying and analysing the levels of advanced manufacturing agglomeration and its fusion with modern service industries across various regions, this study will provide valuable insights into the overall development level of advanced manufacturing. The outcomes of this research hold significant practical significance for guiding policies and strategies to foster inclusive growth, reduce poverty, and promote technological innovation within advanced manufacturing sectors.

The paper comprises five sections: Introduction provides an overview of the technological revolution's impact on industrial transformation and the significance of advanced manufacturing's innovative development. Literature Review explores research on industrial agglomeration and fusion's implications for technological innovation. Methodology outlines the evaluation method and fixed-effects model. Findings present outcomes on integration levels and their influence on regional development and technological innovation. Policy Implications offer insights for optimising the environment, guiding industrial convergence, and alleviating poverty through urban integration.

2 Measurement of the Integration Level Between Advanced Manufacturing and Modern Services

Commonly used methods for measuring the level of industrial integration include input–output analysis [11, 14], a technical coefficient method [15], and a coupling degree evaluation method [16, 17]. Among them, the technical coefficient method usually uses a limited number of indicators to measure industrial integration, which may not be comprehensive enough. In the literal sense of integration, the results obtained from the input–output analysis should be the most accurate. However, in our country, input–output tables are not published annually but every five years, leading to a lack of continuity in data. This poses challenges when using this method for years with unpublished data, and researchers typically resort to the assumption of equalisation to calculate, which may introduce discrepancies in the measurement results across different years. Table 1 presents the measurement indicators of the integration of advanced manufacturing and modern services.

In the specific selection of industries, we follow the definitions of advanced manufacturing and modern service industries and the industry classification standards provided by the National Bureau of Statistics. First, the advanced manufacturing industry is relative to the traditional manufacturing industry and refers to incorporating high-tech achievements such as information technology, advanced materials, and processes. It involves the integration of high-tech manufacturing patterns and management concepts throughout the process, including research and development, design, production, marketing, and after-sales services [18]. Based on the “National Economic Industry Classification” (2019 Revised Edition) provided by the National Bureau of Statistics, this study selects seven industries for measurement,

**Table 1** Measurement indicators of integration of advanced manufacturing and modern services

	Dimensions	Measurement indicators
Advanced manufacturing industry	Scale	Fixed assets investment number of employees
	Structure	The proportion of operating income in the industrial sector
	Speed	Growth rate of fixed assets investment
	efficiency	The proportion of net profit to operating income
Modern service industry	Scale	Fixed assets investment number of employees
	The proportion	The proportion of value added in the service industry
	Speed	Growth rate of fixed assets investment Growth rate of employment
	Efficiency	Value added per fixed asset

namely pharmaceutical manufacturing, special equipment manufacturing, automobile manufacturing, railway, shipbuilding, aerospace, and other transportation equipment manufacturing, electrical machinery and equipment manufacturing, computer, communication, and other electronic equipment manufacturing, and instruments and meters manufacturing. Furthermore, the modern service industry can be distinguished from the traditional service industry qualitatively, with a critical difference in productivity, which, in turn, is determined by production [19]. From this perspective, referring to the “Statistical Classification of Productive Service Industries (2019)” issued by the National Bureau of Statistics, five industries are selected for measurement, namely transportation, warehousing, and postal services, information transmission, software, and information technology services, finance, leasing, and business services, and scientific research and technical services. The specific steps for measurement are as follows.

The indicators will be standardised using the Min–Max normalisation method. Then, the contribution values of advanced manufacturing and modern service industries will be calculated separately, following the formulas below:

$$AMC = \sum a_{ij}m_{ij}$$

$$MSC = \sum b_{ij}s_{ij}$$

where  $i$  represents the sub-industries, and  $j$  represents various measurement indicators. AMC and MSC denote the contribution values of advanced manufacturing and modern service industries, respectively.  $m_{ij}$  and  $s_{ij}$  represent the standardised values of indicators for advanced manufacturing and modern service industries.  $a_{ij}$  and  $b_{ij}$  represent the weights of each indicator in the manufacturing industry subsystem and modern service industry subsystem, respectively. These weights are calculated using the entropy weight method.

Next, we calculate the coupling degree between advanced manufacturing and modern service industries using the following formula:

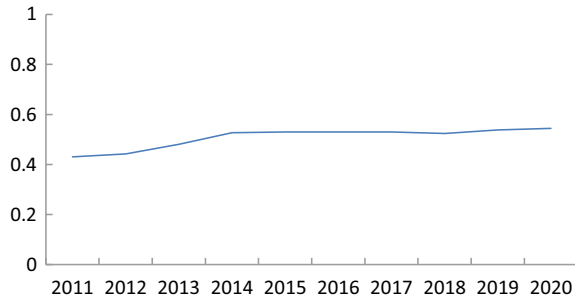
$$C = \sqrt{\frac{AMC \times MSC}{(AMC + MSC)^2}}$$

Considering the differences in the development foundation and environment among different industries, we further introduce the coupling coordination degree as a measure of the integration level between advanced manufacturing and modern service industries:

$$ICon = \sqrt{C \times T}$$

In the equation, ICon represents the coupling coordination degree between advanced manufacturing and modern service industries, indicating their level of integration. A higher value of ICon indicates a higher degree of integration.  $T = \alpha$

**Fig. 1** Illustrates the integration level of advanced manufacturing and modern services industries in China



$\times \text{AMC} + \beta \times \text{MSC}$  represents the comprehensive coordination coefficient of the two industries' integration development, where  $\alpha$  and  $\beta$  are the respective industry contributions, with values of 0.4 and 0.6 [16, 20].

The required data for the calculation mainly comes from the “China Industrial Statistical Yearbook,” “China Third Industry Statistical Yearbook,” “China Science and Technology Statistical Yearbook,” and “China Statistical Yearbook,” as well as various provincial (municipal, autonomous region) statistical yearbooks. Specifically, the data for the advanced manufacturing industry in 2017 is extracted from the statistical yearbooks of multiple provinces (municipalities, autonomous regions). For provinces that did not provide this data, linear interpolation is used for imputation. However, due to the lack of indicators and data in the Tibet region, it is not included in the sample range.

The calculation results indicate that from 2011 to 2020, the level of integration between advanced manufacturing and modern services has shown an overall increasing trend (Fig. 1). The number of provinces (municipalities, autonomous regions) with integration levels below 0.5 decreased from 23 in 2011 to 11 in 2020, but regional disparities remain evident. In 2020, the calculated integration level was higher than 0.6 in provinces such as Guangdong, Shanghai, Jiangsu, Zhejiang, Shandong, Henan, and Sichuan, with the majority in eastern regions. Among the 11 provinces with integration levels below 0.5, 9 are located in central and western regions.

### 3 Research Design

#### 3.1 Model Specification

Based on the theoretical analysis of the problem, an econometric model is constructed to examine the impact of industrial agglomeration and industrial integration on the innovation and development of advanced manufacturing.

$$IN_{it} = \alpha + \beta_1 IClu_{it} + \beta_2 ICon_{it} + \beta_j X_{it} + \mu_i + \varepsilon_{it}$$



In the model, the dependent variable  $IN_{it}$  represents the level of innovation and development of advanced manufacturing in region  $i$  at time  $t$ . The independent variables are  $IClu_{it}$ , which measures the level of agglomeration in advanced manufacturing, and  $ICon_{it}$ , which represents the level of integration between advanced manufacturing and modern service industries.  $X_{it}$  refers to a set of control variables,  $\mu_i$  captures the region-specific fixed effects, and  $\varepsilon_{it}$  represents the random disturbance term assumed to follow a normal distribution.

## 3.2 Variables Declaration

### 3.2.1 Dependent Variable

The level of innovation and development in advanced manufacturing (IN) is measured using the number of patent applications, and its value is logged. Technological innovation is a highly complex process involving multiple stages, such as idea generation, innovation input, innovation output, and commercialisation [21].

Moreover, in a fiercely competitive market environment, micro-enterprises engage in continuous innovation activities, which may simultaneously exist at different stages of innovation. Therefore, comprehensively assessing the innovation level of a company, industry, or region poses challenges. Studies typically use various indicators to measure technological innovation, including the number of patents [22, 23], sales revenue from new products [24], etc. These two indicators effectively capture different aspects of innovation output: technological advantage and market advantage. As a result, some studies combine these indicators to provide a more comprehensive assessment. However, due to the unavailability of data on sales revenue from new products, this study employs the number of patent applications as an indicator to measure the level of innovation and development in advanced manufacturing. Regarding the number of patents granted, it is worth noting that obtaining patent authorisation typically takes a considerable amount of time, usually ranging from 2 to 4 years, and some patent applications may face temporary authorisation delays due to non-technical issues such as formatting problems [23]. Hence, using the number of patents granted is a robustness test indicator for assessing the level of innovation and development in advanced manufacturing.

As detailed provincial-level data on the number of patent applications and granted patents within specific sub-industries are not publicly available, this study employs the number of patents in high-tech industries as a proxy variable to measure the level of innovation and development in advanced manufacturing. Although the scope of high-tech industries is slightly narrower than that of advanced manufacturing, they are considered the core components of advanced manufacturing. Therefore, using the number of patent applications in high-tech industries as a proxy variable is deemed feasible for this analysis.

### 3.2.2 Core Explanatory Variable

The level of industrial agglomeration in advanced manufacturing (IClu) is measured using the Location Quotient (LQ) method. The calculation formula is as follows:

$$IClu_i = \frac{L_{ij} / \sum_j L_{ij}}{\sum_i L_{ij} / \sum_i \sum_j L_{ij}}$$

where  $i$  and  $j$  represent the region  $i$  and the sub-industry  $j$  of the manufacturing sector, the calculation considers advanced manufacturing as a whole. In the formula, the numerator represents the proportion of employees in advanced manufacturing in a certain region to the total industrial workforce in that region. At the same time, the denominator represents the proportion of employees in advanced manufacturing nationwide to the total industrial workforce in the country.

The level of integration between advanced manufacturing and modern services (Icon) is measured using the fusion index values calculated earlier in the text.

### 3.2.3 Control Variables

Research and development expenditure (RD) is measured using research and development intensity. Research and development intensity refers to the proportion of research and development (R&D) expenditure to GDP. Typically, research and development expenditure includes both personnel input and R&D funding. Considering that R&D expenditure already encompasses related expenses such as research personnel's salaries and benefits, using R&D expenditure provides a comprehensive measure of research and development input.

Regional economic development level (PerGDP) is measured using per capita regional gross domestic product (GDP). The data is adjusted using the base year 2000 and transformed by taking the logarithm. Technology innovation is a high-cost economic activity with significant uncertainty, involving risks of innovation failure and imitation after successful innovation. As a result, micro-enterprises motivation to engage in innovative activities may weaken. However, direct government subsidies to innovation activities can help enterprises overcome the problem of insufficient investment funds. To some extent, the regional economic development level determines the extent of government support for innovation by micro-enterprises within the region.

Foreign direct investment (FDI) is measured by the proportion of total foreign direct investment in the region to GDP. Foreign direct investment has made significant contributions to China's economic growth. As China enters the stage of high-quality development, parts have shifted their focus from pursuing scale-oriented "investment attraction" to quality-oriented "selective investment" when utilising foreign capital. More advanced technologies and management experience enter a region through capital inflow, thereby influencing the region's technological innovation [25].

**Table 2** Descriptive statistics of variables

Variable	Sample size	Mean	Std. Dev.	Min.	Max.
IN (patent application quantity)	300	10.71	1.40	6.60	13.78
IN (the number of granted patents)	300	10.11	1.44	6.22	13.47
ICon	300	0.51	0.14	0.24	0.91
IClu	300	0.81	0.43	0.11	1.66
RD	300	1.73	1.13	0.41	6.44
PerGDP	300	9.22	0.38	8.46	10.27
FDI	300	2.12	2.38	0.00	27.66
NII	300	0.07	0.06	0.02	0.29

Information infrastructure (NII) is measured by the proportion of total postal and telecommunication services to GDP. Information technology investment has become essential for micro-enterprises to improve productivity [26]. Sound information infrastructure is a crucial foundation for knowledge exchange, transformation, and transfer among various research entities, facilitating technological innovation among different entities within a region. Table 2 presents descriptive statistics of the variables in the study, including sample size, mean, standard deviation, minimum, and maximum values.

## 4 Empirical Analysis

### 4.1 Baseline Regression Analysis

Based on the econometric model constructed in the previous section and according to the results of the Hausman test, we employ the fixed effects model for analysis. Model (1) and Model (2) regress the two core explanatory variables of industry integration and agglomeration. Model (3) incorporates core explanatory and control variables for regression analysis (Table 3). Table 3 presents the baseline regression results with three models (1)–(3).

The results indicate that after controlling for the variables. However, the coefficients of the industry integration level and advanced manufacturing agglomeration level have decreased, the industry integration level still passes the significance test at the 10% level, and the advanced manufacturing agglomeration level passes the significance test at the 1% level. Moreover, both coefficients remain positive, suggesting that their influence on the innovation development of advanced manufacturing is still significant.

In the control variables, R&D investment and information infrastructure have significant positive effects on the technological innovation of advanced manufacturing, with correlation coefficients passing the 1% significance level test. Similarly,

**Table 3** Baseline regression results

	(1)	(2)	(3)
	IN	IN	IN
<i>ICon</i>	5.626*** (0.818)		2.095* (1.189)
<i>IClu</i>		2.743*** (0.256)	1.945*** (0.398)
RD			0.463*** (0.145)
<i>PerGDP</i>			1.194* (0.606)
FDI			− 0.009*** (0.003)
<i>NII</i>			3.383*** (0.732)
Constant term	4.573*** (0.395)	5.209*** (0.275)	− 7.217 (5.624)
Fixed effect	Control	Control	Control
<i>N</i>	299	299	299
<i>R</i> <sup>2</sup>	0.237	0.075	0.424

Note \* indicates  $p < 0.1$ , \*\* indicates  $p < 0.05$ , \*\*\* indicates  $p < 0.01$

the regional economic development level also positively impacts the technological innovation of advanced manufacturing. On the other hand, foreign direct investment (FDI) shows a significant negative impact, passing the 1% significance level test. This may be related to the historical choices of China's foreign investment policies. On the one hand, in prioritising the quantity of foreign investment, some of the attracted foreign capital belongs to non-advanced manufacturing enterprises or even outdated capacity transfers from developed countries, which may lack the motivation for innovation. On the other hand, some technologically advanced companies that enter China mainly focus on assembly and processing, while their core technology remains dependent on their parent companies. This situation also contributes to the difficulty in achieving breakthroughs in innovation despite the inflow of foreign capital.

## 4.2 Test of the Robustness

To test the robustness of the regression results, we used the number of patent applications and the number of granted patents in each province as alternative, dependent

variables to examine whether the regression results of the core explanatory variables remain significant. Advanced manufacturing, combining new technologies, materials, and management practices with traditional industries, represents one of the most innovative local economic sectors [27]. Its innovation activities drive technological advancements in two ways: directly generating patents within its industry and indirectly influencing patents in other industries, thereby promoting the development of local technological innovation. Consequently, the quality and quantity of technological innovation in advanced manufacturing are closely related to the quality and quantity of technological innovation in each province [28]. They are using the number of patent applications and the number of granted patents in each area as alternatives. Dependent variables are thus reasonably justified.

Table 4 displays the results of the robustness test regression with four different models (1)–(4). In Table 4, Model (3) has the number of patent applications in each province as the dependent variable, and Model (4) has the number of granted patents in each area as the dependent variable. The results from the robustness tests show that the integration level of advanced manufacturing and modern services (ICon) passed the significance test at the 1% level, indicating its significant impact on technological innovation. Similarly, the agglomeration level of advanced manufacturing (IClu) passed the significance test at the 10% level, confirming its important role in promoting technological innovation.

## 5 Conclusion and Implications

In conclusion, the rapid advancement of new-generation information technology has instigated transformative changes in industry integration and clustering, exerting profound implications on the overall technological innovation within industries and regions. This study has elucidated the pronounced upward trend in the integration level between advanced manufacturing and modern services from 2011 to 2020, accompanied by some convergence in the imbalanced development across regions. Furthermore, the empirical findings have unequivocally established that industry integration and clustering significantly impact technological innovation in advanced manufacturing. These research outcomes carry paramount policy implications for promoting the high-quality development of advanced manufacturing in diverse regions, and they bear a direct linkage to poverty reduction efforts.

Several critical strategies warrant consideration to harness the potential of industry integration and clustering for poverty alleviation. Firstly, optimising the external environment for advanced manufacturing clusters assumes paramount importance, with a specific emphasis on empowering key enterprises. Establishing a conducive business climate that fosters technological research and development, incentivises competition, and attracts innovative talent will enable leading enterprises to emerge as crucial drivers of growth and innovation within the clusters [29].

**Table 4** Results of the robustness test regression

	(1)	(2)	(3)	(4)
	IN	IN	IN	IN
<i>ICon</i>	6.863*** (0.923)		3.841*** (0.897)	3.178*** (0.706)
<i>IClu</i>		1.627** (0.686)	0.481* (0.249)	0.463** (0.213)
RD			0.278*** (0.047)	0.265*** (0.028)
PerGDP			0.441 (0.593)	0.040 (0.718)
FDI			-0.016** (0.006)	-0.016*** (0.005)
<i>NII</i>			4.350*** (0.847)	6.002*** (0.701)
Constant term	7.228*** (0.446)	9.397*** (0.709)	6.869*** (0.460)	6.708*** (0.451)
Fixed effect	Control	Control	Control	Fixed effect
<i>N</i>	300	300	300	300
<i>R</i> <sup>2</sup>	0.434	0.032	0.666	0.751

Note \* indicates  $p < 0.1$ , \*\* indicates  $p < 0.05$ , \*\*\* indicates  $p < 0.01$

Secondly, the prudent selection of pivotal domains for industrial convergence demands attention, with an accompanying focus on nurturing the principal entities involved in the convergence process. Local authorities are urged to judiciously assess the developmental underpinnings of advanced manufacturing and modern services industries within their respective regions while also considering the development status of neighbouring regions. This will guide the implementation of targeted measures in identifying key domains for convergence and nurturing a diverse array of convergence entities [30]. Supporting their growth and resource optimisation will deepen and expand industrial convergence, fostering inclusive development and mitigating poverty.

Thirdly, promoting industry-urban integration is a vital pillar, as cities serve as pivotal arenas for the practical application of advanced manufacturing technologies. Emphasising the synergistic relationship between industries and urban centres will facilitate the creation of advanced manufacturing technology application scenarios, precipitating innovation-driven growth, job creation, and improved living standards, all of which bear significant implications for poverty reduction.

This research underscores the salient role of industry integration and clustering in catalysing technological innovation while accentuating their potential to drive poverty reduction and inclusive development. By adroitly implementing targeted

policies and strategies, encompassing the optimisation of the external environment for advanced manufacturing clusters, the cultivation of industrial convergence, and the facilitation of industry-urban integration, policymakers can harness the power of technological innovation to propel high-quality development and uplift the livelihoods of diverse populations across regions, thereby contributing substantively to poverty alleviation and the fostering of sustainable economic growth [31].

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# Assessing Malaysia's Social Security Measures: Government Responses to Income Security and Unemployment During the COVID-19 in Alignment with ILO Standards



Noor Shuhadawati Mohamad Amin and Ashgar Ali Ali Mohamed

**Abstract** The coronavirus or COVID-19 which was said to begin from Wuhan City in southern China had, within a short period, spread at a quantifiable speed across the globe. To limit the spreading of the highly contagious disease, restrictions were imposed to curb the movement of people within a country. Due to the restriction, many employees suffer from the cut-off of salary and some even faced termination. Malaysia, like many other countries, has been dealing with the consequences of the pandemic, including an increase in unemployment and the subsequent financial challenges suffered by impacted individuals and households. The purpose of this research is to critically examine the Malaysian government's social security protections specifically on two instrumental contingencies namely income security and unemployment, analysing their efficacy and compliance with ILO requirements. The extent to which Malaysia's social security measures comply with ILO policies and recommendations are assessed. The outcomes of this study are likely to provide important insights into the effectiveness of the Malaysian government's responses to the issues faced by employees during the COVID-19 pandemic. From the research, Malaysia has accorded social security protection systems but these protections can be improved by aligning national policies and practises with ILO standards. Finally, it attempts to shed light on the present social security framework's strengths and areas for improvement if faced with similar situations in the future.

**Keywords** COVID-19 pandemic · Employees · Government · ILO · Social security

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## 1 Introduction

The COVID-19 pandemic has had far-reaching effects on politics, economics and civilizations worldwide [18]. In response to the pandemic's unprecedented issues, governments around the world have undertaken a variety of steps to limit its impact, particularly in terms of protecting vulnerable populations such as unemployed individuals [27]. The impact of the pandemic has also contributed to a number of issues for employed individuals. Major challenges faced by employees during the pandemic are job loss and income reduction which would lead to financial problems [10]. It is worth highlighting that unemployment is one of the contingencies listed in the first ILO Convention on social security. However, income security was only highlighted in the ILO Social Protection Floors Recommendation 2012 which serves as a modern policy recommendation on social security as it is more inclusive. This study focuses on the Malaysian government's social security protections in reaction to the COVID-19 pandemic, with a particular emphasis on analysing the policies in light of International Labour Organisation (ILO) standards on income security and unemployment. As a United Nations specialised agency, the ILO establishes worldwide labour standards aimed at promoting social justice and preserving workers' rights. These standards include a wide range of topics including social security. Recognising the importance of social security measures during this crisis, the Malaysian government has adopted a number of measures to provide relief and assistance to the unemployed population during the COVID-19 pandemic, using ILO standards as a benchmark. This study examines COVID-19 pandemic challenges for Malaysian employees, followed by an overview of government's income security and unemployment measures. Analysis of ILO's Social Security Convention, Recommendations, and policies will follow as benchmarks. Lastly, alignment between Malaysian provisions and ILO standards will be assessed.

## 2 Methodology

The method used in this research is doctrinal in nature with a detailed analysis of legal primary sources such as ILO Conventions and Recommendations, national legislations and regulations. This research also refers to other secondary sources such as books, article in journals, and website publications as a method to gain an in-depth understanding of social security protections in Malaysia during the COVID-19 pandemic. It analyses various government policies and programs to assist citizens during the crisis. The study is limited to the immediate impact of policies implemented during the COVID-19 crisis. It may fail to account for the long-term repercussions or unexpected implications of these actions. It should be noted that the observed economic growth could have been influenced by a variety of external factors outside of the focus of this study, such as global economic trends, geopolitical shifts, or other domestic policies.

### 3 Results

#### 3.1 *Navigating Turbulent Times: Challenges Faced by Employees in Malaysia During the COVID-19 Pandemic*

There are a number of challenges faced by employees working in Malaysia mainly because of the freedom of movement restrictions imposed. Firstly, employees in Malaysia faced job loss and unemployment. As a result of the pandemic, many employees lost their jobs or were laid off as firms closed, downsized, or faced financial limitations [26]. Individuals and their families experienced financial pain and anxiety as a result of the unexpected loss of jobs. Mobility limitations have hurt many workers and businesses which is evident in the first year of the pandemic. In 2020, Malaysia's economy has been badly hit by many months of movement restrictions and business closures, resulting in a 17.1% year-on-year reduction in Gross Domestic Product (GDP). The economic slump, which began even before mobility restrictions were imposed as a result of a decline in tourism-related activity and interruptions in international supply chains, resulted in a substantial increase in unemployment [3]. It is understood that the employees particularly in the aviation, hotel, and tourism industries are the most affected by COVID-19 [1]. Table 1 indicates the statistic on the employment rate from the year 2020 until 2022 [4]. It is apparent that second Quarter of 2020 has shown a decline in the employment rate owing to the COVID-19 crisis. However, the employment rate started to pick up when the lockdown have been lifted up beginning in January 2022 starting with the state of Sarawak and Kelantan. Malaysia entered the endemic phase on April 1, 2022, with the exception of crowded areas and indoor spaces, all international crossings will be reopened, and the mask mandate for outdoor spaces will be lifted. At this stage too, people other than those who tested positive for COVID-19 or unvaccinated tourists undergoing quarantine, are free to access public buildings regardless of their vaccination status on May 1, 2022 (see Fig. 1). Malaysia also waived pre-flight and on-arrival testing for fully vaccinated tourists as well as those who have recently recovered. Masks will continue to be required for indoor events and on public transportation [28].

Secondly is regarding income reduction and financial strain on employees. Even for those who were able to keep their positions, many faced income losses as a result of wage cutbacks, reduced working hours, or unpaid leaves [31]. In order to offset financial losses, some firms adopted salary cuts for their staff. These cuts

**Table 1** Household income classifications

Income classification	Description
B40 (bottom 40%)	Household income is below RM4850 per month
M40 (middle 40%)	Household income is between RM4850 to RM10,970 per month
T20 (top 20%)	Household income is above RM10,970 per month



**Fig. 1** Statistic on the employment rate from the year 2020 until 2022

varied from a percentage drop in monthly earnings to temporary pay reductions. As a result, employees' take-home pay decreased, making it difficult to satisfy financial responsibilities and maintain their level of living. Further, the employees in sectors highly impacted by the pandemic, such as hospitality, tourism, and retail, had reduced working hours [1]. This reduction in working hours had a direct influence on their income, as they earned less due to the reduced number of hours worked. As a result, employees had to make do with a smaller salary, making it harder to cover their expenses. It is also worth noting that as a cost-cutting measure, some companies instituted unpaid leaves [24]. Employees were compelled to take unpaid leave from work, resulting in a total lack of income during certain periods. Employees bore a tremendous financial strain as a result of having to manage their expenses without a source of income for the period of unpaid absence. The financial burden was exacerbated by the dread of probable job losses and the inability to forecast future income stability. This unpredictability made it difficult for employees to successfully plan and manage their budgets, leading to increased stress and worry. Thirdly, many employees also suffer from workforce restructuring and job insecurity [7]. In order to react to the changing business landscape, organisations had to restructure their workforce. Employees faced employment instability as a result, fearing layoffs or additional reductions. Many businesses, particularly those in directly affected industries such as tourism, hospitality and retail encountered financial difficulties and operational limits as a result of the epidemic [7, 29]. As a consequence, some businesses were compelled to shut down permanently, while others implemented downsizing measures. Organisations implemented staff reorganisation and redeployment methods to adjust to the shifting economic situation. Employees were reassigned to alternative responsibilities, departments, or locations, or even re-deployed to other business areas. Employees were frequently obliged to learn new skills or adapt to new work conditions as a result of such reorganisation.

### **3.2 Overview of Social Security Measures by Malaysian Government on Income Security and Unemployment**

The measures cover a wide range of efforts aimed at protecting employees' livelihoods and addressing the crisis's immediate and long-term consequences. Wage subsidies, loan repayment moratoriums, job retention plans, employee stimulus packages, contract negotiations, and a reduction in the foreign workers' fees are among the key initiatives.

#### **Moratorium**

The first phase of the moratorium went into effect in March 2020 and lasted six months, until September 2020 [16]. Moratorium refers to a temporary suspension of an activity or legal action until further consideration such as when the circumstances that led to the moratorium are resolved. Its goal was to provide urgent assistance to individuals and businesses affected by pandemic-induced economic disruptions. It is automatically applicable to all individuals with housing loans, personal loans, hire purchase loans, and SME loans except for credit card loans. Table 1 the types of household income classifications namely B40 (bottom 40%) representing the bottom-tier households that have an income of below RM 4850 while M40 (middle 40%) representing the middle-tier households whose income falls between RM 4850 to RM 10,959. The last classification is T20 (top 20%) representing the top-tier households whose income is higher than RM 10,959 [4].

Following the completion of Phase 1, the Phase 2 moratorium was implemented to provide more assistance to individuals and enterprises. It went into effect in October 2020 and lasted three months, until December 2020. The Phase 2 moratorium expanded on the measures put in place during Phase 1 but with a few changes [5]. For example, Phase 2 used a tailored approach, borrowers had to apply for the moratorium through their financial institutions. The application process was designed to guarantee that the moratorium was only granted to people who were truly affected by the pandemic.

#### **Employees' Provident Fund Withdrawal**

In response to the financial difficulties that individuals faced during the COVID-19 pandemic, the Malaysian government implemented a programme that allows eligible donors to withdraw monies from the Employees Provident Fund (EPF). The first phase is known as i-Lestari programme. It was introduced in March 2020 and was designed to provide financial flexibility to EPF members throughout the epidemic [21]. Under the i-Lestari programme, eligible members could withdraw up to RM500 each month from their EPF Account 2 for a period of 12 months. Members were offered the option of continuing or discontinuing their participation. The second phase is i-Sinar which increased the eligibility criteria to include more EPF members. It was offered to members who had seen a 30% or greater decrease in monthly income as a result of the COVID-19 outbreak, including those who had lost their jobs or been placed on unpaid leave. The withdrawal amount under the i-Sinar

programme was determined by the member's total savings in Account 1 of the EPF. The last phase is known as i-Citra programme which allows them to withdraw up to RM5,000 based on their total combined balance in Accounts 1 and 2 starting July 2021 [6].

### **Wage Subsidies**

The government has introduced the wage subsidy programme in 2020. This programme was established by the government to assist employers who are economically impacted as a result of COVID-19 and to ensure that they may continue operating their businesses while preventing workers from losing their employment [25]. Malaysians earning less than RM4000 per month are eligible for the subsidies, the extent of which is determined by the company's personnel size. Companies with more than 200 employees would get RM600 per retained employee, while those with 75–200 employees will earn RM800. Employees with fewer than 75 will be entitled for RM1200.

### **Employment Retention Programme**

The Job Retention Scheme was an important initiative launched by the Malaysian government to assist businesses and maintain employment during the difficult economic conditions created by the pandemic [9]. The initiative by the Social Security Organisation (SOCSO) intended to prevent or reduce layoffs while also providing financial help to affected firms in order for them to keep their personnel. This programme would benefit all private sector employees who contributed to the Employment Insurance System (EIS). These employees must have taken at least one month of no-pay leave since March 1, 2020, and whose monthly salary do not exceed RM 4000. This ensures that the lowest-income people will receive financial help, as they would be disproportionately affected by the pandemic. It should be noted that retired employees, civil servants, overseas workers, self-employed people, and freelancers are not covered by the programme.

### **Negotiations of Employment Terms**

To reduce the impact of the pandemic, the government urged employers to implement flexible employment arrangements. Remote work, shortened working hours, rotational work schedules, and temporary layoffs were all choices. Employers were able to react to the changing business environment by using these strategies, which reduced the need for permanent employment terminations [22]. Existing labour rules, such as the Employment Act of 1955, laid the groundwork for fair and equitable bargaining.

### **Foreign Workers' Levy Reduction**

Social security protection is also extended to foreign workers in Malaysia. Acknowledging the dilemma faced by employers to retain foreign workers, the government has agreed to provide assistance to employers through the reduction of payment of levy. Levy payments for foreign workers will be reduced by 25% for all companies

where their work permits end on April 1 to December 2020 [5]. The reduction in levy payments, however, is not extended to housemaids.

### ***3.3 ILO Social Security Convention, Recommendations and Policies on Income Security and Unemployment***

The Conventions and Recommendations on social protection are unique in nature as it sets out the minimum standards of protection. This way, ratifying states will not be financially overburdened as ILO allows flexibility in adopting the standards provided therein. The flexibility clauses can be found in the Social Security (Minimum Standards) Convention, 1952. The relevance of the 1952 Convention in times of COVID-19 crisis is undeniable. This is evident from various social security programmes that have shown to be effective instruments for mitigating harmful consequences of crises and beyond. The Convention offers ratifying states to accept at least three of its nine branches and the rest can be attained later. In relation to unemployment, there are a number of relevant provisions that focus on the benefits. Article 20 compels member states to provide unemployment benefits to insured persons due to their inability to obtain suitable employment in the case of a person who is capable of and available for employment. In Article 24, the duration of the benefit which is available to prescribed classes of employees will be provided up to 13 weeks within a period of one year. Another instrumental standard is the ILO Income Security Recommendation, 1944. To ensure the protection of basic income security, the recommendation advocates for a two-pronged approach to income security, encompassing both social insurance and social assistance. Social insurance schemes that are based on contributions should be implemented, while social assistance programmes should be accessible to individuals who are not covered by social insurance or have insufficient coverage. In 2012, Social Protection Floors Recommendation was introduced aiming at providing guidance on maintaining and implementing social protection floors for ratifying states. One of the Recommendation's goals is to construct national social protection floors for the purpose of ensuring income security at a nationally set minimum level. The Recommendation was originally introduced in the aftermath of the 2008 financial and economic crisis [14]. This Recommendation helps to enhance protection for the unprotected, poor and vulnerable by establishing national social protection floors. One of the Recommendation's goals is to construct national social protection floors to ensure income security at a nationally set minimum level. The Recommendation encourages member states to develop comprehensive social protection programmes that encompass all individuals throughout their lifetimes.

### **3.4 ILO and COVID-19**

ILO's contributions in times of pandemic are evident in three main areas; social dialogue, monitoring and providing a support system to ratifying states to reduce loss of income and to lessen the number of cases involving workers at the workplace. Firstly, social dialogue is of great importance, especially in coordinating proposals brought by government, employers' and employees' organisations to mitigate challenges faced by employers and employees. National priorities are redefined and policies that could close the gaps in the legislation by integrating the voice of workers and employers organisations [15]. Further, ILO is also responsible in monitoring the implications of COVID-19 in ratifying states. In the evaluation process of the latest market labour developments, there are three main concerns that are monitored by the ILO namely workplace closures, working-hour losses and labour income losses. This is also essential to test the effectiveness of financial stimulus packages introduced by countries to mitigate labour market disruptions. Lastly, it is worth noting that ILO also has been providing support continuously to ratifying state workers' organisations to adapt to the current global crisis. ILO COVID-19 information hub by sharing the responses and actions taken by workers' organizations at the national level to mitigate the impact of COVID-19. Bureau for Workers' Activities (ACTRAV) is a wing of ILO that primary link between the ILO and the world of work, as one of its constituents, workers' organisations. It guarantees that the ILO's policy development and actions take into account the concerns and interests of workers' organisations [11]. It has also produced policy guidance documents and knowledge materials to raise awareness of workers' organisations role on various topics such as occupational safety and health, harassment issues and protection of vulnerable groups. Supports are also provided in the form of training and technical assistance [12].

## **4 Discussion**

### **4.1 Alignment of Malaysian Social Security Protections with the ILO Standards**

Despite the fact that Malaysia has not signed all ILO standards, including specific conventions on social security protections, the country can nonetheless align its social security measures with the ILO's principles and guidelines. Here is an explanation of how Malaysia's social security safeguards can be aligned with ILO criteria even if formal ratification is not obtained:

#### **Comprehensive Existing Social Security Systems**

Malaysia has developed and implemented a comprehensive social security systems that address a wide range of social protection issues, such as income security, health-care, unemployment benefits, and access to necessary goods and services. These



systems should strive for universal coverage and provide adequate protection to all individuals, including workers and their families. According to the Ministry of Finance, the gross domestic product (GDP) increased by 14.2% in the third quarter (Q3) of 2022. This significant growth demonstrates the efficacy and success of the policies implemented in the aftermath of the COVID-19 disaster. The nation's economy expanded by 9.3% in the first nine months of 2022, the most significant nine-month rise since 2000, covering more than two decades [30].

### **Providing Income Security Through Government Measures**

Malaysia ensures that income security measures, such as wage subsidies, social transfers, or unemployment benefits, are in place to provide individuals and their families with a minimal level of regular income during times of economic hardship or unemployment. These policies are aimed at preventing poverty and allowing people to retain a decent standard of living. As discussed above, government initiatives to help protect income security such as the introduction of moratorium, wage subsidies, employment retention programme and allowing negotiations of employment terms between employers and employees are some of the key measures.

### **Extending Protection and Coverage**

Malaysia has expanded social security coverage to include all employees, including migrant workers. In this regard, Malaysia has accorded with the ILO's principle of social justice and fairness by promoting inclusion and non-discrimination in the social security system. By reducing the payment of levy to the employers, this has indirectly helped the migrant workers to keep their jobs.

## **5 Conclusion**

From the above, it indicates that the social security measures taken by the Malaysian government demonstrate alignment with certain ILO standards, such as providing income support to employees especially those affected by COVID-19 in Malaysia. It is undeniable that social protection is recognised as an instrumental policy tool to help attain the Malaysia Development Goals [20]. Despite the fact that Malaysia's compliance with ILO standards on social security protections is not based on ratification of specific conventions and recommendations, the government has nonetheless shown various efforts in providing social security protection in the form of income security based on the ILO's standards and recommendations. Malaysia may improve the employees' well-being and social protection by adopting the minimum standards of social security protection into its social security policies and practises, in accordance with internationally recognised ILO standards such as protecting the contingency of employment as embedded in the Social Security (Minimum Standards) Convention, 1952 and providing income security as recommended in the Social Protection Floors Recommendation 2012. Lastly, ILO policy in protecting the employees during such calamity should be followed especially in promoting social dialogue between

the government and other stakeholders such as the employers' federation and trade unions representing the employees to ensure Malaysia is well-prepared in the future. Future research endeavors could delve into a thorough examination of the specific policies undertaken during the crisis, analysing their individual contributions to the observed economic growth. This could aid in determining which policies had the most impact and the reason behind it.

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# A Review Factors Contributing to Energy Poverty



Ummu Khalilah Mohamad, Norzalina Zainudin, and Syuhaily Osman

**Abstract** Energy poverty is a widespread issue in developing and developed countries, with serious health, education, and economic development consequences. Energy poverty arises from income inequality, high costs, inadequate housing, and poor infrastructure. A comprehensive approach involving government policies, private sector investments, community engagement, and technological innovation is required to address these factors. We can improve the lives of millions of people and contribute to a more sustainable and equitable future by addressing energy poverty. This paper reviews the literature within 10 years, from 2012 to 2023. And its current issue is based on factors that contribute to energy poverty. Two major databases, Web of Science (WOS) and Scopus, set standards for inclusion and disqualification were created to search and screen the articles. This review examines factors contributing to energy poverty. The results of this review may benefit researchers, society, and policymakers to impede energy poverty.

**Keywords** Energy poverty · Factors · Review · Affordability · Accessibility · Household

## 1 Introduction

Two of the targets in the seventh Sustainable Development Goal (SDG) aimed at eradicating energy poverty include ensuring access to electricity and clean cooking technologies and fuels for all people by 2030. However, progress in these two targets

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has not happened at the same pace [1]. The World Bank, in 2018, reported that 3 billion people were in energy poverty, primarily in developing nations. In the Association of Southeast Asian Nations (ASEAN), particularly in Indonesia, Malaysia, Cambodia, and Thailand, over 880 million people face energy scarcity. Nearly 2.5 billion people use biomass, 120 million use kerosene, and 170 million use coal [2].

Energy poverty is a complex issue affecting economic development in both developed and developing countries. Energy is a crucial factor in the seventh Sustainable Development Goal (SDG) and hinders economic and social development globally [2]. The seventh Sustainable Development Goal (SDG) promotes investment in clean energy infrastructure, technology, and international cooperation. Governments, corporations, and civil society must collaborate strategically to improve clean energy investments, efficiency, and access to services.

Energy consumption drives economic growth, empowering millions and promoting sustainable, affordable, and reliable energy for job empowerment, education, health, and climate resilience. Energy is a core human necessity; hence not having access to affordable contemporary energy services can contribute to energy poverty and social injustice. Numerous elements, such as the financial state of the household, the efficiency of the home's energy use, and the cost of fuel, influence energy poverty. Issues impact people's ability to access basic energy services and maintain comfort in their homes [3].

Energy equips humans with the necessary capabilities to meet their basic needs and live satisfactorily or have a quality life. The quality of life (QOL) is closed to everyone. Everyone desires and strives for a high standard of living. When it comes to life quality, people often consider how happy or satisfied they are [4]. The concepts of quality of life and energy poverty are inextricably linked. The lack of modern energy services can negatively impact people's quality of life.

Connection to modern energy services can significantly improve people's quality of life. Energy deprivation affects individuals' well-being by limiting access to essential energy services, reducing the time and effort needed for household tasks, increasing access to education and income-generating activities, and reducing overall health and well-being [5].

This review is aimed at the factors contributing to energy poverty in the household. Energy poverty is when a household cannot afford the energy services necessary to meet its most basic requirements, such as cooking, heating, lighting, and transportation. Low-income households, distant or rural places, and developing nations are frequently associated with energy poverty.

The absence of access to contemporary utility services, high energy costs, poor housing conditions, and climate change are some of the factors that contribute to energy poverty. Households that use traditional fuels such as firewood or coal for cooking and heating are subjected to high levels of indoor air pollution, which causes respiratory diseases in women and children. Access to modern communication technologies, such as the Internet, is also limited due to a lack of electricity, which can impede economic development and education. This paper picture a review of the literature before 2023 and its current issue based on factors contributing to energy poverty.

Six sections make up this paper, and section one is an introduction to the study. The next part, Sect. 2, discusses the previous literature. The methodology is described in Sect. 3 of the paper. The fourth chapter focuses on the factors that contribute to energy poverty. Next is followed by the conclusion, a declaration of competing interests, and the final chapter is references.

## 2 Literature Review

Energy poverty refers to the absence of affordable, dependable energy services, negatively impacting the quality of life, health, and economic opportunities. Several arguments support this definition. Another argument in favour of this definition is that energy poverty disproportionately affects the most vulnerable populations, such as those living in rural areas or informal settlements, women and children, and the poorest of the poor.

Energy poverty in developed countries now encompasses affordability of services, not just access to electricity and energy, transforming the issue. Energy poverty in developed countries arises from low household income, high energy costs, and low home efficiency [6]. However, finding the definition of energy poverty is challenging due to disagreement on interpreting basic energy services, sparking debate and receiving limited literature support [7]. Among the identified factors of energy poverty are economics, housing quality, geography, household behaviour, and climate factors. The prior literature suggests that energy poverty stems from low incomes, poor housing, and high fuel costs.

Next, unemployment may increase home energy use due to increased home presence. In France, due to the low energy efficiency of rental homes, renters are more likely to experience energy poverty [8]. This is presumably caused by a principal agent issue that prevents landlords from making energy-efficiency modifications. The financial strain brought on by energy costs is increasing for both renters and homeowners. Policy initiatives should focus on helping low-income renters by resolving landlord-tenant concerns and principal-agent problems [9]. Literature shows that renting leads to lower income, while owning leads to better income. Nonetheless, there is no clear evidence regarding this in countries with high property ownership rates [10].

Geographical factors may impact energy poverty differently than overall poverty. The following empirical research connects energy poverty to subpar dwelling conditions, including size, location, and quality. Many rural areas lack the infrastructure for modern energy services. Research explores urban and rural locations' role in energy poverty. Using a geographical spatial approach, the study of energy poverty identifies distribution patterns in areas with greater vulnerability.

Next, climate change and energy poverty intertwine, causing mutually reinforcing effects. In contrast to energy poverty, which results from insufficient access to dependable services, climate change is predominantly caused by greenhouse gas emissions (GHG). The need for heating and cooling is directly impacted by the climate [11].

3 Methodology

In this chapter, the methodology will be explained in detail, including the literature screening and procedures for researching the literature. The materials for this paper are sourced from the Web of Science (WOS) and Scopus database. The authors had established precise standards for examining papers. The research papers must first contain the keyword(s) “factors” AND “energy poverty” in the title. The authors analysed peer-reviewed journal articles for reputable studies, excluding conference proceedings and book chapters. The researchers also considered articles published from 2012 to the present (28th February 2023). Last but not least, the research papers must focus on factors contributing to energy poverty.

The literature screening process included papers focusing on energy poverty factors, presented empirical findings, and written in English. There are several studies that met the specific criteria (Fig. 1).

In order to guarantee the accuracy of the data, the authors independently searched and analysed literature from both databases, ensuring data accuracy. Results showed similarity, proving data collection method validity and 35 papers were reviewed. The authors also searched the literature using two widely used databases, Scopus and Web of Science, while implementing inclusion and exclusion criteria. To confirm the accuracy of the data, the researchers independently examined and evaluated the literature using identical methods to confirm data accuracy and validate the data acquisition approach.

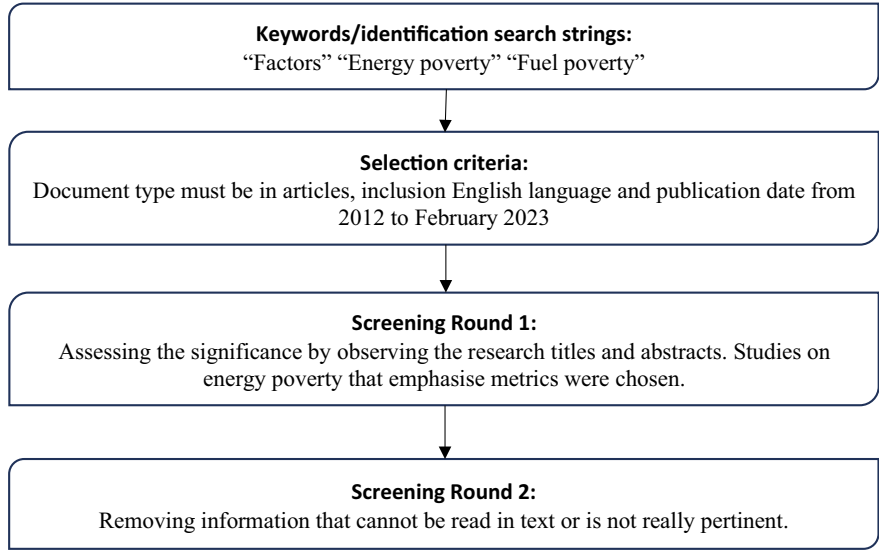


Fig. 1 Literature searching strategy in Scopus and WOS



## 4 Factors That Contribute to Energy Poverty

High energy prices (HEP) can disproportionately affect low-income households and those living in poverty, as they may already struggle to pay for basic necessities like food and housing. In some cases, people may have to choose between paying for energy bills and buying food or paying for medical expenses. Interviewees criticise cold-weather energy habits on high electricity bills, which keep homes from being comfortable [12].

Low-income (LI) households struggle with energy bills, often choosing between energy and other necessities, such as food or healthcare. Low-income households may eventually rely on dangerous heating and lighting sources like candles or kerosene lamps, posing health and safety hazards. The COVID-19 pandemic is expected to have the greatest impact by 2020, posing economic challenges for vulnerable households, particularly low-income groups.

Inadequate housing can contribute to energy poverty in several ways. For example, winter presents issues for home heating if a home has poor insulation or drafty windows and doors. As a result, the occupants may have to use more energy to heat the home, which can lead to higher energy bills that they may be unable to afford.

Next, in developing countries, outskirts residents rely on traditional fuels like wood, charcoal, or kerosene for cooking and heating. These fuels can be expensive, inefficient, and harmful to health and the environment, contributing to energy poverty. Living in the outskirts faces challenges due to limited electricity access, high energy costs, and traditional fuel reliance, contributing to energy poverty.

Table 1 shows that the most common factor in this review is poor housing quality. Poor housing quality and energy poverty are closely linked, as home conditions impact consumption. For instance, homes' inadequate insulation, leaks, and ineffective heating systems increase energy costs and require more warmth.

Moreover, poor housing quality can also affect the health and well-being of the occupants, particularly those vulnerable to the cold, such as the elderly and young children [6]. Cold, damp, mouldy homes can exacerbate respiratory conditions and other health problems [13]. Addressing poor housing quality is crucial for tackling energy poverty. Improving energy efficiency through insulation, heating systems, and other measures can reduce bills and enhance residents' quality of life.

Low-income households face energy poverty, characterised by the inability to afford adequate energy services in their homes due to poor housing quality and energy poverty [2]. High energy prices can cause households to struggle to afford necessary upgrades or repairs, resulting in energy poverty and increased costs. This can cause households to struggle to balance necessities like food, rent, and healthcare with energy bills.

Some articles emphasise household energy considerations, low income, poor home quality, location, and demographic factors in addition to energy prices. According to research, social capital has a minimal impact on reducing energy poverty but is linked to household energy poverty [14]. This review primarily employs

**Table 1** Shows of the result from this review

No.	Author/year	Country/region	Findings	Factors
1	Mohr [28]	United States of America	Estimates show that enough insulation reduces fuel poverty in South Atlantic and Northeast models	High energy price, housing quality and demographic characteristic
2	Ucal and Günay [34]	Turkey	Happiness is severely impacted by family fuel poverty, as are favourable connections with home ownership, career development, and male presence in the home	–
3	Aziz et al. [1]	Bangladesh	Study shows socioeconomic factors impact healthier cooking methods, with better ventilation and affluence influencing usage	Household appliances
4	Chen and Feng [24]	China	Households face energy poverty in rental properties, older homes, and inadequate equipment	Housing quality and house location
5	Zang et al. [2]	Tibet, China	Energy poverty does not correlate with age, gender, education, or other variables. The altitude of a family home has an impact both positively and negatively	Housing quality and house location
6	Best and Sinha [19]	United States of America	Positive associations with unaffordability include renting, energy assistance, education, insulation, and solar panels, while negative ones include education and insulation	Housing quality and house location
7	Chai et al. [23]	Queensland, Australia	Energy poverty predominantly affects low income individuals, influenced by factors like income instability	Income and demographic characteristics
8	Belaïd [3]	Egypt and Jordan	Energy-poor households have high bills and are below the poverty line; economic conditions, inequality, and education are crucial for reducing fuel poverty	Income and demographic characteristics
9	Horta et al. [12]	Portugal	Energy poverty vulnerability varies across the country; households may tolerate cold/hot home temperatures	Energy prices and housing quality

(continued)

**Table 1** (continued)

No.	Author/year	Country/region	Findings	Factors
10	Encinas et al. [36]	Chile	Addressing urban energy poverty from a spatial perspective	Housing quality
11	Kalfountzou et al. [6]	Greece	Single-parent families in Macedonia face energy poverty	Demographic characteristic
12	Sharma and Dash [32]	India	Eight revenue types positively correlate with fuel usage; age and education negatively impact	Income, poor housing quality and demographic characteristic
13	Taltavull de La Paz et al. [10]	Spain	Results contradict the generalisation of poverty related energy poverty due to subpar housing	Income, housing quality and house location
14	Best and Burke [9]	Australia	Low net worth, lack of solar panels, and factors like rent, mortgage, high occupants, and energy intensive residents impact dwelling energy inefficiency	Income and demographic characteristics
15	Qin et al. [4]	China	Energy poverty negatively impacts the quality of life through affordability and accessibility	–
16	Phoumin and Kimura [37]	Cambodia	Study reveals that energy poverty correlates with fuel type and clean energy source, impacting quality of life and health	Income and house location
17	Sadath and Acharya (2017)	India	India faces energy poverty due to income inequality and health risks	Income and house location
18	Pacudan and Hamdan [30]	Brunei	IBT scheme raises electricity costs, causing welfare losses for non-poor households	High energy price, low income and house location
19	Dong et al. [25]	China	Improved energy efficiency addresses income inequality and poverty, revealing heterogeneity	Income and house location
20	Bouzarovski and Tirado Herrero [20]	Poland, Czech Republic and Hungary	Home energy costs rise unaddressed, causing persistent energy poverty in rural areas	–
21	Castaño-Rosa and Okushima [22]	Japan	Location, infrastructure, and household characteristics impact energy poverty risk	Income, house location and demographic characteristics

(continued)

**Table 1** (continued)

No.	Author/year	Country/region	Findings	Factors
22	Papada and Kaliampakos [13]	Greece	Low-income families, isolated homes, colder regions, and higher elevations are more vulnerable	Energy prices and housing quality
23	Adeyonu et al. [16]	Nigeria	Energy poverty positively correlates with household head age, size, and factors like education	Household appliance and demographic
24	Belaïd and Flambard [18]	Egypt	This analysis focuses on a nation that used probit regression and saw rapid development	Income
25	Li et al. [15]	China	The paper explores household energy poverty's causes from a relative's cultural perspective	Demographic characteristic
26	Luan et al. [27]	China	Research shows digital divide negatively impacts low-income, elderly, and rural households' energy poverty reduction	House location and demographic characteristic
27	Shen et al. [33]	United States of America	The study investigates energy burden and community vulnerability factors, focusing on epidemiological factors	Housing quality and household characteristics
28	Wang et al. [35]	China	The study identifies factors contributing to energy poverty, suggests effective approaches, and empirical data	House location
29	Ren et al. [14]	China	Social capital positively impacts energy poverty alleviation	Social capital
30	Aguilar et al. [17]	Canary Island and Spain	Research shows Canary Islands are more affected by income-based energy poverty indicators	Income and house location
31	Sanchez-Guevara et al. [31]	Madrid	The study characterises the housing stock of fuel-poor households in Madrid	Energy price, low income and housing characteristics
32	Legendre and Ricci [8]	France	Economists find higher fuel vulnerability in retired, single, single households	Housing quality and household characteristics
33	Brunner et al. [21]	Vienna, Austria	The research aims to address fuel poverty through personal experience, evaluating various approaches	Energy price, income and housing quality

(continued)

**Table 1** (continued)

No.	Author/year	Country/region	Findings	Factors
34	Ismail Zakiraah [26]	South Africa	Logit regression identifies household expenditure, race, location, and energy access as factors affecting energy poverty in South Africa	House location and household characteristics
35	Okushima [29]	Japan	Japanese households face energy poverty due to high prices and low income	Energy price, income and household characteristics

quantitative methods, commonly used in research and data analysis due to their objective, measurable, and statistical nature.

**5 Conclusion and Limitation**

To conclude, as evidenced by recent publications, energy poverty is widespread worldwide. Since the early 2000s, people have begun to recognise the significance of energy poverty. Energy poverty is an important factor in the development of a country, the environment, and the quality of life. Energy poverty is defined as a scenario in which people cannot afford appropriate and dependable access to energy services such as electricity or heating. Millions of people worldwide, particularly in underdeveloped nations, are affected by this issue. Governments can reduce energy poverty by implementing policies that reduce costs, enhance efficiency, and promote sustainable energy sources.

Next, in this review, the authors implemented a word cloud to summarise and infer which factors contribute to energy poverty more precisely. Word cloud, commonly called a tag cloud, may automatically extract data into a visualisation from vast documentation. By emphasizing the most frequently used terms without having to read them all, it also makes it simple for users to summarise in one image [15]. The benefits of this graphic include the most effective computation of terms, but the drawback is that some terms may have many meanings, or several terms may share the same meaning. The word cloud represents the most frequently used keyword in an essay, highlighting more frequently mentioned words. This graphic representation of word frequency highlights words that are more crucial and important in a text source.

According to Fig. 2, the word "household," which is larger and bolder, does not indicate any factor contributing to energy poverty; rather, it is thus because it is frequently used in the text source. The following two terms, housing and age, are related to the causes of energy poverty. Based on Table 1, housing conditions are



countries, suggesting that it does not focus on each developed and developing country and hence cannot portray the genuine state of each. Finally, the nonsystematic review approach cannot be utilised to assess the robustness of previous studies. On the other hand, review studies are a useful tool for synthesising existing data and providing suggestions.

## 6 Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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# Does ESG Performance Improve the Financial Performance of Enterprises in China? The Mediating Role of Financial Constraints



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**Abstract** The purpose of this research is to investigate the relationship between ESG performance and financial performance of Chinese firms listed on the A-share market. It spans the years 2015 through 2022. This research also looks at the role of finance restrictions in mediating this connection. The findings indicate that a company's environmental, social, and governance performance is strongly and favourably connected to its financial performance. Notably, governance performance appears as a critical driver of improved financial results. The mediation mechanism test findings show that finance restrictions moderate the relationship between ESG performance (and its aspects) and business financial performance. Furthermore, robustness tests indicate that the impact of ESG performance and its dimensions to company financial performance is particularly obvious in highly polluting businesses and firms functioning in very market-oriented contexts. The study's results assist businesses, investors, and others in making more scientific judgements.

**Keywords** ESG · Financial constraints · Financial performance · Sustainable development

**JEL Classification** G30 · Q56 · G32 · M14 · O16

## 1 Introduction

In recent years, ecological damage, extreme weather, natural disasters and other issues have attracted widespread attention from all walks of life, and green sustainable development has been the focus of academic research. Enterprises, as an important part of economic development and at the same time a major source of pollution emissions, need to balance environmental concerns and social responsibility while generating profits [1]. Environmental pollution and other problems caused by China's past

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extensive development model are particularly prominent, and it is urgent to reshape the development concept and achieve sustainable development. In September 2020, the Chinese government set the development goal of “striving to peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060”. To achieve this development goal, introducing ESG factors into company operation and development is an important means of solving problems such as environmental pollution from the source and a necessary way to realise China’s economic transformation.

ESG is an investment concept and enterprise evaluation standard focusing on environmental, social and governance performance. ESG has been rapidly developing globally over the past few years. ESG, as a corporate investment strategy, has gradually become one of the three key indicators used globally to measure corporate sustainability [2].

China’s attention to ESG issues is relatively late, and so far, it is still in the exploratory stage. Enterprises in the country may undertake ESG responsibilities to meet stakeholder expectations, adhere to legal requirements, and enhance business performance [3, 4]. Given the competitive market environment, financing constraints persist for listed companies, posing challenges to their high-quality development. Understanding the mechanism linking ESG responsibility fulfilment and financial performance among Chinese enterprises, as well as the varying impacts of environmental, social, and corporate governance dimensions on financial performance, is crucial. Additionally, examining the mediating role of financing constraints in the CFP-ESG relationship and exploring potential differences in the relationship based on industries and regional marketisation are pressing concerns.

Academics have conducted extensive research on ESG, concentrating predominantly on its correlations with ownership structure, corporate risk, management characteristics, and performance [5, 6]. Nonetheless, the findings regarding the economic effects of firms’ ESG responsibilities have produced divergent opinions. While some studies reveal a positive correlation between ESG and CFP, suggesting that ESG enhances financial performance [7–9], others find a negative or inconclusive relationship [10, 11]. These discrepancies highlight the need for additional research into the intricate relationship between ESG practises and financial outcomes.

Regarding the effect of ESG dimensions on corporate financial performance, [12] discovered that, of the three dimensions, social scores had the most pronounced positive influence on Tobin’s Q. Comparatively to environmental (E) and social (S) indicators, corporate governance (G) indicators have the greatest effect on financial performance [13]. Environmental (E), social (S), and corporate governance (G) all have a negative impact on corporate financial performance, according to [11].

Existing literature on the relationship between ESG and CFP primarily has the following limitations. Due to the limited coverage of Chinese enterprises in mainstream international ESG databases and the immaturity of Chinese ESG rating agencies, there has been less research on the correlation between ESG and financial performance. Second, the mechanism through which financial constraints influence the CFP-ESG relationship was not considered. Financing constraints will restrict the sources of funds available to businesses and increase their cost of funds, thereby influencing their production and investment efficiency and inhibiting the expansion of

enterprise performance. Thirdly, the relationship between the numerous dimensions of ESG indicators and financial performance is understudied. Environment, Society, and Governance contribute differentially to a company's financial performance, and this distinction is the foundation for the company's ESG strategy adaptation. The relationship between the comprehensive ESG performance of an enterprise and its three dimensions, financing constraints and financial performance, warrants in-depth study.

Therefore, the purpose of this research is to investigate the relationship between ESG performance and financial performance of Chinese firms listed on the A-share market. This research also looks at the role of finance restrictions in mediating the relationship between ESG rating and financial performance.

## 2 Literature Review and Hypothesis Development

### 2.1 *ESG Performance and Financial Performance*

The relationship between ESG performance and firm financial performance remains contentious [14]. Excellent environmental, social, and corporate governance performance can promote the enhancement of corporate financial performance [15]. Investigated the relationship between ESG rating and financial performance in the European food industry and discovered that ESG rating had a positive and statistically significant impact on the financial performance of businesses [16]. Kim and Li [17] concluded that ESG factors have a significant and positive impact on corporate profitability, and corporate governance has the greatest facilitative effect. Liu et al. [18] investigated the relationship between ESG activities and financial performance using data from small and medium-sized manufacturing enterprises in China. They discovered that ESG activities positively correlated significantly with financial performance. Some academics hold divergent opinions. Liu et al. [19] discovered that the impact of ESG comprehensive performance on financial performance is insignificant. There is a significant negative correlation between environment and financial performance, no significant relationship between social and financial performance, and a significant positive correlation between governance and financial performance across the three dimensions. Other studies indicate a significant negative correlation between ESG and financial performance [20].

Stakeholder theory posits that prioritising a company's responsibility to stakeholders, including shareholders, employees, customers, communities, and governments, is crucial for achieving sustainable development and enhancing business performance [21]. ESG, which encompasses corporate environmental responsibility, social responsibility, and governance efficiency, serves as a means to address stakeholders' needs and garner their response, thereby contributing to the financial performance of the business [22]. ESG performance of enterprises yields several advantages. Firstly, it facilitates access to financial support from banks, financial markets,

and government subsidies, easing financing constraints and reducing capital costs, ultimately enhancing enterprise value [23–25]. Secondly, strong ESG performance enhances brand image, fosters consumer loyalty, and positively impacts financial performance through improved product information dissemination [26]. ESG ratings are pivotal in promoting green innovation in enterprises, as consumers increasingly prefer products with green labels [27–29]. Moreover, ESG initiatives contribute to better relations between enterprises and employees, thereby promoting enhanced corporate efficiency. Companies prioritising corporate diversity, equal opportunities, and on-the-job training attract high-quality employees, improving operational efficiency [30]. Lastly, good ESG performance fosters the accumulation of moral and reputational capital, improves public perception of enterprises, and mitigates losses arising from negative events [31].

Based on a comprehensive analysis of various dimensions of ESG practices, it is posited that a company's adherence to sustainable environmental responsibility, including resource management, pollution reduction, and the production of eco-friendly products, can augment its competitive advantages and financial performance [32, 33]. Similarly, in the social realm, implementing training policies and equal opportunities is believed to enhance enterprises' efficiency and financial performance [30]. Additionally, some literature suggests that the social aspect of ESG holds the most significant influence on the positive impact of ESG practices on corporate financial performance [17]. Furthermore, in terms of corporate governance, it has been observed that effective governance practices can contribute to the operational efficiency of enterprises, thereby improving their financial performance [34]. Prior research has demonstrated a positive correlation between ESG comprehensive performance, its individual dimensions, and financial performance [16, 35]. Based on these findings, the following hypothesis is proposed for study.

H1: ESG Performance is Positive and Significant with Financial Performance.

H1(a): Environmental Performance is Positive and Significant with Financial Performance.

H1(B): Social Performance is Positive and Significant with Financial Performance.

H1(C): Governance Performance is Positive and Significant with Financial Performance.

## ***2.2 Mediating Effect of Financial Constraints***

Existing research suggests that corporate ESG performance can positively impact financial performance by alleviating financing constraints faced by enterprises. Studies by [36, 37], and others support the notion that good ESG performance signals positive information to the market, leading to reduced financing constraints. Found that ESG disclosure significantly negatively impacts enterprise debt financing costs, increasing transparency and facilitating access to third-party financial resources [38]. Proposed that ESG information disclosure reduces information asymmetry,

allowing for a more comprehensive understanding of enterprises and easing financing constraints [39].

Theoretical support for the relationship between ESG performance and financing constraints comes from information asymmetry theory and signal transmission theory. ESG performance provides non-financial information, such as environmental responsibility and corporate governance, reducing information asymmetry and enhancing stakeholders' understanding of companies [40]. Positive ESG performance also conveys stability, financial health, and sustainable development, building confidence in stakeholders and investors. Moreover, in the Chinese context, good ESG performance enhances government support through compliance with corporate responsibility expectations, leading to subsidies, tax relief, and lower interest rates on loans [41].

Regarding the three dimensions of ESG, fulfilling environmental responsibility increases legitimacy, reduces debt costs, and eases financing constraints. Strong corporate social responsibility improves enterprise image and investor confidence, reduces information asymmetry, and broadens financing channels. Corporate governance, including green governance structure and CEO management ability, also contributes to alleviating financing constraints.

Financing constraints will affect enterprises' investment policies and investment efficiency [42], and the easing of financing constraints will help improve the financial performance of enterprises [43]. Specifically, enterprises with low financing constraints can obtain the funds needed for enterprise development at a lower capital cost, invest resources in enterprise development projects, enhance the core competitiveness of enterprises, maintain market position, and promote improving enterprise financial performance. Based on the above analysis, we propose the following hypothesis:

H2: Financial Constraints Plays a Mediating Role in the Relationship Between ESG Performance and Financial Performance.

H2(a): Financial Constraints Mediate the Relationship Between Environmental Performance and Financial Performance.

H2(B): Financial Constraints Mediate in the Relationship Between Social Performance and Financial Performance.

H2(C): Financial Constraints Mediate the Relationship Between Governance Performance and Financial Performance.

### 3 Methodology

#### 3.1 Sample Selection

This study takes A-share listed companies from 2015 to 2022 as research samples. The ESG performance data is from the Huazheng ESG rating, and the other is from the CSMAR database. The Huazheng ESG rating is a comprehensive assessment

system that evaluates companies' ESG performance. It provides insights into how well a company incorporates sustainable practices and responsible management in its business operations. On the other hand, the CSMAR database is a reputable financial and economic research database in China, widely utilised by researchers, analysts, and investors to access financial data, corporate information, and macroeconomic indicators. On this basis, financial companies, especially processed companies, and companies with missing significant data are excluded. The final sample contained 4297 firms with a total of 24,587 firm-year observations. In addition, in order to eliminate the influence of extreme values on the empirical results, all the involved continuous variables were Winsorize at 1 and 99%.

### 3.2 Main Variables

Corporate financial performance is the dependent variable of this study. Referring to the practice of [11], the return on total assets (ROA) is taken as the main proxy variable of corporate financial performance, and the return on equity (ROE) is assisted in the robustness test.

Environmental, social, governance performance, and ESG comprehensive performance (ESG overall score) are independent variables of this study. This study refers to the practice of [44] and selects the ESG score of Huazheng to measure the ESG performance of enterprises. The HuazhengESG evaluation system is an ESG index system constructed by referring to the international mainstream ESG evaluation system and adjusting to the characteristics of China's market. It has the characteristics of high update frequency, wide coverage and high data availability.

Financing constraint is the mediating variable of this study. Referring to the practice of [45], this study chooses KZ index to measure financing constraints. The calculation model is as follows:

$$\begin{aligned} KZ = & -1.002 \times Cf_{i,t}/Asset_{i,t-1} + 3.139 \times Leverage_{i,t} \\ & - 39.368 \times Div_{i,t}/Asset_{i,t-1} - 1.315 \times Cash_{i,t}/Asset_{i,t-1} \\ & + 0.283 \times Tq_{i,t} \end{aligned} \quad (1)$$

Among them,  $Cf_{i,t}$ ,  $Leverage_{i,t}$ ,  $Div_{i,t}$ ,  $Cash_{i,t}$ ,  $Tq_{i,t}$  are the operating net cash flow, enterprise asset liability ratio, enterprise cash dividends, cash holdings, and Tobin Q of enterprise  $i$  at time  $t$ .  $Asset_{i,t-1}$  represents the total assets of enterprise  $i$  at time  $t-1$ . The larger the KZ index, the higher the degree of financing constraints faced by enterprises.

Since firms' financial performance is influenced by a number of different financial indicators, drawing on [46], this study introduces the following control variables: ratio of fixed assets, ratio of intangible assets, independence of the board of directors, concentration of ownership, growth of enterprises, and financial leverage, while

**Table 1** Definitions of variables

Type	Variable	Symbol	Definition
Dependent variable	Financial performance	ROA	Net income/total assets
		ROE	Net income/shareholders' equity
		EPS	Net income/total share capital
Independent variables	ESG comprehensive performance	ESG	Huazheng database ESG comprehensive score
	Environmental performance	E	Huazheng database environmental performance score
	Social performance	S	Huazheng database social performance score
	Corporate governance	G	Huazheng database corporate governance performance score
Mediator variable	Financial constraints	KZ	KZ index
Control variables	Fixed assets ratio	PPE	Fixed assets/total assets
	Intangible assets ratio	Intan	Intangible assets/total assets
	Board independence	Indep	Independent directors/total number of directors
	Ownership concentration	Top1	The proportion of the largest shareholder
	Firm growth	Growth	Operating income growth rate
	Financial leverage	Leverage	Total liabilities/total assets
	Industry fixed effects	Ind FE	Industry dummy
	Year fixed effects	Year FE	Year dummy

industry and year factors are controlled. The variable definitions and measurement methods are shown in Table 1.

### 3.3 Methodology

#### 3.3.1 Baseline Model

In order to verify the relationship between ESG performance and corporate financial performance, we proposed the following model:

$$ROA_{i,t} = a_0 + a_1 ESG_{i,t} + a_i \Sigma Controls_{i,t} + \mu_1 Ind\ FE + \mu_2 Year\ FE + \varepsilon_{i,t} \quad (2)$$

In the above model, the dependent variable is financial performance, measured as  $ROA_{i,t}$ , which denotes the return on total assets of firm  $i$  in year  $t$ .  $ESG_{i,t}$  is the independent variable of this study, which denotes the ESG performance of firm  $i$  in



year  $t$ . Controls represent the control variables. Ind FE and Year FE denoting industry and time fixed effects, respectively.  $\varepsilon_{i,t}$  denotes the error term.

### 3.3.2 Mediating Models

In order to test the mediating role of financing constraints in the relationship between ESG and its three dimensions on financial performance, research models (3) and (4) are established to test hypothesis 2 and its sub-hypotheses.

$$KZ_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_i \Sigma Controls_{i,t} + \mu_1 \text{Ind FE} + \mu_2 \text{Year FE} + \varepsilon_{i,t} \quad (3)$$

$$\begin{aligned} ROA_{i,t} = & \gamma_0 + \gamma_1 ESG_{i,t} + \gamma_2 KZ_{i,t} + \gamma_i \Sigma Controls_{i,t} \\ & + \mu_1 \text{Ind FE} + \mu_2 \text{Year FE} + \varepsilon_{i,t} \end{aligned} \quad (4)$$

$KZ_{i,t}$  is the mediating variable, which represents the financing constraints of enterprise  $i$  in year  $t$ . The main observed coefficient in model (3) is  $\beta_1$ . Model (4) is based on model (2) by adding financing constraint variables, the main observation coefficients  $\gamma_1$  and  $\gamma_2$ .

## 4 Empirical Results and Analysis

### 4.1 Descriptive Statistics

Table 2 displays descriptive statistics for the variables. The sample enterprises have a mean ROA of 0.038, a standard deviation of 0.067, a maximum value of 0.226, and a minimum value of  $-0.243$ , indicating substantial differences in their financial performance. In Huazheng's ESG scoring system, ESG scores range from 0 to 100, and the mean (73.130) and median (73.410) indicate that the level of ESG responsibility fulfilment among Chinese enterprises is generally normal, indicating that the implementation of ESG among Chinese enterprises should be strengthened. The ESG index has a standard deviation of 5340, indicating a significant disparity in ESG performance among Chinese businesses. The environmental responsibility performance of Chinese businesses is subpar, with a mean value of 60.750 and a standard deviation of 7.740 across multiple dimensions. There are also substantial differences in environmental responsibility performance between businesses. The standard deviation of financing constraints KZ is high, indicating that the financing constraints of various businesses vary considerably. Taking control variables into account, the standard deviation of fixed asset ratio (PPE), the proportion of the largest shareholder (Top1), corporate growth (Growth), and financial leverage (Leverage) is

**Table 2** Descriptive statistics

Variables	N	Mean	Sd	Min.	P50	Max.
ROA	24,587	0.038	0.067	−0.243	0.038	0.226
ESG	24,587	73.130	5.340	57.190	73.410	84.600
E	24,587	60.750	7.729	45.200	60.540	81.68
S	24,587	75.410	9.452	46.990	75.980	100
G	24,587	78.320	7.118	52.290	79.800	90.78
KZ	24,587	0.852	2.315	−6.026	1.124	5.934
PPE	24,587	0.202	0.153	0.002	0.170	0.672
Intan	24,587	0.046	0.0510	0.00004	0.033	0.335
Indep	24,587	0.379	0.0540	0.333	0.364	0.571
Top1	24,587	33.150	14.540	8.259	30.790	72.800
Growth	24,587	0.159	0.387	−0.561	0.100	2.287
Leverage	24,587	0.420	0.198	0.0620	0.413	0.888

large, indicating that enterprises have substantial differences in fixed asset holdings, equity concentration, growth, and leverage.

## 4.2 Baseline Regression Results

Table 3 shows the benchmark regression results for the impact of ESG performance on business financial performance. Column (1) shows that the ESG coefficient is 0.00140, which is significant at the 1% level, demonstrating that ESG performance is strongly and positively connected to company financial performance, supporting H1. Columns (2), (3), and (4) are the regression coefficients for the environmental dimension, social dimension, governance dimension, and financial performance, respectively, and they are significantly positive, indicating that all three dimensions are significantly positively correlated with firm financial performance, which supports H1(a), H1(b), and H1(c). Furthermore, the regression test of all three characteristics concurrently with financial performance in column (5) demonstrates that all three factors substantially and favourably impact business financial performance, with the governance dimension being the most relevant.

## 4.3 Mediating Effect of Financial Constraints

Table 3 displays benchmark regression findings indicating ESG and its three components are positively connected with financial performance. Table 4 delves the impact of financial constraints as a moderator in the relationship between ESG performance

**Table 3** Impact of ESG performance on financial performance

Variables	(1)	(2)	(3)	(4)	(5)
	ROA	ROA	ROA	ROA	ROA
ESG	0.00140 <sup>***</sup> (14.18)				
E		0.00034 <sup>***</sup> (5.43)			0.00011 <sup>*</sup> (1.78)
S			0.00065 <sup>***</sup> (12.65)		0.00059 <sup>***</sup> (11.41)
G				0.00083 <sup>***</sup> (11.01)	0.00075 <sup>***</sup> (10.07)
PPE	-0.04872 <sup>***</sup> (-10.01)	-0.05297 <sup>***</sup> (-10.51)	-0.05020 <sup>***</sup> (-10.06)	-0.04866 <sup>***</sup> (-9.99)	-0.04707 <sup>***</sup> (-9.76)
Intan	-0.09768 <sup>***</sup> (-7.81)	-0.10200 <sup>***</sup> (-7.86)	-0.10170 <sup>***</sup> (-7.90)	-0.09655 <sup>***</sup> (-7.76)	-0.09707 <sup>***</sup> (-7.84)
Indep	-0.02690 <sup>***</sup> (-2.65)	-0.01939 <sup>*</sup> (-1.88)	-0.01922 <sup>*</sup> (-1.87)	-0.02997 <sup>***</sup> (-2.94)	-0.02837 <sup>***</sup> (-2.81)
Top1	0.00067 <sup>***</sup> (15.02)	0.00072 <sup>***</sup> (15.48)	0.00072 <sup>***</sup> (15.64)	0.00066 <sup>***</sup> (14.72)	0.00067 <sup>***</sup> (14.93)
Growth	0.04478 <sup>***</sup> (32.96)	0.04494 <sup>***</sup> (32.95)	0.04455 <sup>***</sup> (32.74)	0.04478 <sup>***</sup> (32.91)	0.04457 <sup>***</sup> (32.85)
Leverage	-0.14092 <sup>***</sup> (-38.61)	-0.14808 <sup>***</sup> (-39.31)	-0.14745 <sup>***</sup> (-39.71)	-0.13726 <sup>***</sup> (-36.54)	-0.13886 <sup>***</sup> (-37.30)
Constant	-0.01771 <sup>*</sup> (-1.66)	0.05929 <sup>***</sup> (6.49)	0.03757 <sup>***</sup> (4.19)	0.01270 (1.23)	-0.02624 <sup>***</sup> (-2.40)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	24,587	24,587	24,587	24,587	24,587
Within R <sup>2</sup>	0.221	0.224	0.225	0.221	0.222

Note \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1

and financial performance. Table 4, columns (1), (3), (5), and (7) demonstrate the regression findings of the influence of ESG and its three aspects on funding restrictions. At the 1% level, the coefficients of ESG and its three dimensions are all considerably negative, showing that ESG and its three dimensions are strongly adversely related to corporate financial limitations. Furthermore, the financing constraint coefficient in column (2) is  $-0.01266$ , which is significant at the 1% level, demonstrating that financing constraint is negatively connected with company financial performance, implying that severe financing restriction would impair corporate financial performance. When the KZ index is not included, the coefficient size decreases from 0.00140 to 0.00112, indicating that the direct effect of ESG performance on financial performance is smaller than its total effect on financial performance, indicating that the mediating effect of financing constraints is established and H2 is verified. The findings of columns (4), (6), and (8) demonstrate that financial constraints mediate the relationships between financial performance and social performance, financial performance and governance performance, and financial performance and environmental performance, thereby supporting hypotheses H2(a), H2(b), and H2(c).

## **4.4 Robustness Tests**

### **4.4.1 Replacing Financial Performance Measurement Methods**

In the robustness test, the firm's financial performance is measured by the ROE. The test results in Table 5 indicate that firms' ESG performance and its three dimensions are significantly and positively related to firms' financial performance variables, and research hypothesis 1 and its three sub-hypotheses are still supported. At the same time, financing constraints still mediate the relationship between ESG performance and its three dimensions and corporate financial performance. Hypothesis 2 and its three sub-hypotheses are still supported, indicating that the research conclusions of this study are relatively robust.

### **4.4.2 Endogeneity Mitigation**

To mitigate endogenous difficulties, lag regression and instrumental variable regression were utilised in this research. To begin, delayed regression was utilised in this analysis to mitigate the possibility of bidirectional causal endogeneity between the dependent and independent variables. Given that the lagging ESG is not vulnerable to the negative influence of current financial performance, ESG and its three lag-period dimensions (L.ESG, L.E, L.S, L.G) are considered explanatory factors. Table 6 shows the matching regression findings. The analysis demonstrates that the variables L.ESG, L.E, L.S, and L.G have coefficients that are not only significant but also positively correlated at the 1% significance level, demonstrating that the study's result is robust.

Table 4 Mediation model

Variables	(1)	(2)	(3)	(4)
	KZ	ROA	KZ	ROA
ESG	-0.02716 <sup>***</sup> (-10.84)	0.00112 <sup>***</sup> (12.83)		
E			-0.00545 <sup>***</sup> (-3.21)	0.00028 <sup>***</sup> (5.00)
S				
G				
KZ		-0.01266 <sup>***</sup> (-44.11)		-0.01292 <sup>***</sup> (-44.83)
PPE	2.16976 <sup>***</sup> (15.55)	-0.02185 <sup>***</sup> (-5.42)	2.26029 <sup>***</sup> (15.92)	-0.02347 <sup>***</sup> (-5.69)
Intan	3.52393 <sup>***</sup> (9.40)	-0.04922 <sup>***</sup> (-4.78)	3.58629 <sup>***</sup> (9.35)	-0.05060 <sup>***</sup> (-4.79)
Indep	0.87829 <sup>***</sup> (3.18)	-0.01744 <sup>**</sup> (-1.98)	0.74655 <sup>***</sup> (2.70)	-0.01097 (-1.23)
Top1	-0.02103 <sup>***</sup> (-14.63)	0.00039 <sup>***</sup> (10.56)	-0.02171 <sup>***</sup> (-14.85)	0.00042 <sup>***</sup> (11.21)
Growth	-0.65453 <sup>***</sup> (-18.25)	0.03724 <sup>***</sup> (29.95)	-0.65922 <sup>***</sup> (-18.31)	0.03727 <sup>***</sup> (29.88)
Leverage	7.24876 <sup>***</sup> (69.05)	-0.04138 <sup>***</sup> (-11.26)	7.34816 <sup>***</sup> (69.28)	-0.04481 <sup>***</sup> (-11.91)
Constant	-0.88039 <sup>***</sup> (-2.79)	-0.03497 <sup>***</sup> (-4.07)	-2.44186 <sup>***</sup> (-8.53)	0.02430 <sup>***</sup> (3.41)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	24,587	24,587	24,587	24,587
Within R <sup>2</sup>	0.296	0.272	0.297	0.272

(continued)

Table 4 (continued)

(5)	(6)	(7)	(8)
KZ	ROA	KZ	ROA
-0.00820*** (-5.94)	0.00057*** (12.27)		
	-0.01281*** (-44.56)	-0.01994*** (-11.32)	0.00064*** (9.37)
			-0.01277*** (-44.09)
2.22595*** (15.70)	-0.02161*** (-5.28)	2.16684*** (15.59)	-0.02166*** (-5.37)
3.58990*** (9.43)	-0.05086*** (-4.84)	3.49943*** (9.34)	-0.04798*** (-4.68)
0.74473*** (2.69)	-0.01090 (-1.23)	0.97831*** (3.54)	-0.01971*** (-2.22)
-0.02171*** (-14.90)	0.00042*** (11.36)	-0.02055*** (-14.25)	0.00038*** (10.30)
-0.65421*** (-18.20)	0.03694*** (29.70)	-0.65277*** (-18.22)	0.03720*** (29.84)
7.34577*** (69.67)	-0.04498*** (-12.08)	7.14615*** (66.91)	-0.03761*** (-10.10)
-2.24587*** (-7.90)	0.00482 (0.69)	-1.16754*** (-3.92)	-0.00944 (-1.14)
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
24,587	24,587	24,587	24,587
0.296	0.274	0.297	0.270

Note \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1. The t value calculated using firm-level clustering robust standard error is in parentheses below the regression coefficient

Table 5 Robustness tests

Variables	(1)	(2)	(3)	(4)	(5)
	ROE	KZ	ROE	ROE	KZ
ESG	0.00367 <sup>***</sup> (17.39)	-0.02716 <sup>***</sup> (-10.84)	0.00300 <sup>***</sup> (15.50)		
E				0.00102 <sup>***</sup> (7.86)	-0.00545 <sup>***</sup> (-3.21)
S					
G					
KZ			-0.02192 <sup>***</sup> (-40.94)		
PPE	-0.05822 <sup>***</sup> (-5.75)	2.16976 <sup>***</sup> (15.55)	-0.02373 <sup>***</sup> (-2.74)	-0.06750 <sup>***</sup> (-6.36)	2.26029 <sup>***</sup> (15.92)
Intan	-0.12461 <sup>***</sup> (-4.87)	3.52393 <sup>***</sup> (9.40)	-0.04977 <sup>***</sup> (-2.28)	-0.13674 <sup>***</sup> (-5.10)	3.58629 <sup>***</sup> (9.35)
Indep	-0.05723 <sup>***</sup> (-2.74)	0.87829 <sup>***</sup> (3.18)	-0.04091 <sup>**</sup> (-2.19)	-0.03583 <sup>*</sup> (-1.67)	0.74655 <sup>***</sup> (2.70)
Top1	0.00127 <sup>***</sup> (14.73)	-0.02103 <sup>***</sup> (-14.63)	0.00077 <sup>***</sup> (10.41)	0.00140 <sup>***</sup> (15.46)	-0.02171 <sup>***</sup> (-14.85)
Growth	0.09270 <sup>***</sup> (31.14)	-0.65453 <sup>***</sup> (-18.25)	0.07964 <sup>***</sup> (28.08)	0.09326 <sup>***</sup> (31.16)	-0.65922 <sup>***</sup> (-18.31)
Leverage	-0.20796 <sup>***</sup> (-22.75)	7.24876 <sup>***</sup> (69.05)	-0.02904 <sup>***</sup> (-3.31)	-0.23020 <sup>***</sup> (-23.74)	7.34816 <sup>***</sup> (69.28)
Constant	-0.15878 <sup>***</sup> (-7.75)	-0.88039 <sup>***</sup> (-2.79)	-0.17439 <sup>***</sup> (-10.04)	0.03362 <sup>*</sup> (1.95)	-2.44186 <sup>***</sup> (-8.53)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	24,587	24,587	24,587	24,587	24,587
Within R <sup>2</sup>	0.177	0.296	0.201	0.182	0.297

(continued)

Table 5 (continued)

(6)	(7)	(8)	(9)	(10)	(11)	(12)
ROE	ROE	KZ	ROE	ROE	KZ	ROE
0.00085 <sup>***</sup> (7.15)						
	0.00156 <sup>***</sup> (13.92)	-0.00820 <sup>***</sup> (-5.94)	0.00135 <sup>***</sup> (13.01)			
				0.00221 <sup>***</sup> (13.31)	-0.01994 <sup>***</sup> (-11.32)	0.00179 <sup>***</sup> (11.49)
-0.02273 <sup>***</sup> (-42.24)			-0.02247 <sup>***</sup> (-41.72)			-0.02227 <sup>***</sup> (-41.11)
-0.02746 <sup>***</sup> (-3.06)	-0.06099 <sup>***</sup> (-5.79)	2.22595 <sup>***</sup> (15.70)	-0.02283 <sup>**</sup> (-2.56)	-0.05799 <sup>***</sup> (-5.72)	2.16684 <sup>***</sup> (15.59)	-0.02320 <sup>***</sup> (-2.68)
-0.05411 <sup>**</sup> (-2.41)	-0.13521 <sup>***</sup> (-5.08)	3.58990 <sup>***</sup> (9.43)	-0.05401 <sup>**</sup> (-2.41)	-0.12131 <sup>***</sup> (-4.77)	3.49943 <sup>***</sup> (9.34)	-0.04602 <sup>**</sup> (-2.13)
-0.02207 (-1.16)	-0.03591 <sup>*</sup> (-1.69)	0.74473 <sup>***</sup> (2.69)	-0.02235 (-1.18)	-0.06646 <sup>***</sup> (-3.17)	0.97831 <sup>***</sup> (3.54)	-0.04853 <sup>***</sup> (-2.59)
0.00086 <sup>***</sup> (11.24)	0.00140 <sup>***</sup> (15.67)	-0.02171 <sup>***</sup> (-14.90)	0.00087 <sup>***</sup> (11.47)	0.00125 <sup>***</sup> (14.35)	-0.02055 <sup>***</sup> (-14.25)	0.00074 <sup>***</sup> (10.01)
0.07972 <sup>***</sup> (27.96)	0.09205 <sup>***</sup> (30.83)	-0.65421 <sup>***</sup> (-18.20)	0.07869 <sup>***</sup> (27.68)	0.09278 <sup>***</sup> (31.01)	-0.65277 <sup>***</sup> (-18.22)	0.07957 <sup>***</sup> (27.87)
-0.03954 <sup>***</sup> (-4.33)	-0.22653 <sup>***</sup> (-23.75)	7.34577 <sup>***</sup> (69.67)	-0.03830 <sup>***</sup> (-4.24)	-0.19702 <sup>***</sup> (-21.16)	7.14615 <sup>***</sup> (66.91)	-0.01700 <sup>*</sup> (-1.94)
-0.02204 (-1.56)	-0.00459 (-0.28)	-2.24587 <sup>***</sup> (-7.90)	-0.05604 <sup>***</sup> (-4.13)	-0.08251 <sup>***</sup> (-4.11)	-1.16754 <sup>***</sup> (-3.92)	-0.11190 <sup>***</sup> (-6.55)
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
24.587	24.587	24.587	24.587	24.587	24.587	24.587
0.202	0.184	0.296	0.204	0.175	0.297	0.198

Note <sup>\*\*\*</sup> p < 0.01, <sup>\*\*</sup> p < 0.05, <sup>\*</sup> p < 0.1. The t value calculated using firm level clustering robust standard error is in parentheses below the regression coefficient



**Table 6** Regression results for explanatory variables with a one-stage lag

Variables	(1)	(2)	(3)	(4)
	ROA	ROA	ROA	ROA
L.ESG	0.00089 <sup>***</sup> (8.56)			
L.E		0.00045 <sup>***</sup> (6.03)		
L.S			0.00045 <sup>***</sup> (7.74)	
L.G				0.00033 <sup>***</sup> (4.17)
PPE	-0.04758 <sup>***</sup> (-8.88)	-0.05075 <sup>***</sup> (-9.30)	-0.04879 <sup>***</sup> (-9.01)	-0.04791 <sup>***</sup> (-8.87)
Intan	-0.10480 <sup>***</sup> (-7.36)	-0.10826 <sup>***</sup> (-7.45)	-0.10769 <sup>***</sup> (-7.46)	-0.10368 <sup>***</sup> (-7.25)
Indep	-0.02548 <sup>**</sup> (-2.26)	-0.02185 <sup>*</sup> (-1.92)	-0.02194 <sup>*</sup> (-1.94)	-0.02551 <sup>**</sup> (-2.24)
Top1	0.00070 <sup>***</sup> (14.21)	0.00073 <sup>***</sup> (14.61)	0.00073 <sup>***</sup> (14.70)	0.00071 <sup>***</sup> (14.23)
Growth	0.04644 <sup>***</sup> (30.42)	0.04648 <sup>***</sup> (30.48)	0.04666 <sup>***</sup> (30.64)	0.04630 <sup>***</sup> (30.24)
Leverage	-0.14916 <sup>***</sup> (-35.25)	-0.15422 <sup>***</sup> (-35.71)	-0.15268 <sup>***</sup> (-35.75)	-0.14845 <sup>***</sup> (-34.26)
Constant	0.02087 <sup>*</sup> (1.80)	0.05502 <sup>***</sup> (5.31)	0.05495 <sup>***</sup> (5.63)	0.05525 <sup>***</sup> (4.83)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	19,900	19,900	19,900	19,900
Within $R^2$	0.210	0.215	0.214	0.212

Note \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . The t value calculated using firm level clustering robust standard error is in parentheses below the regression coefficient

This study employs the instrumental variable method to mitigate endogenous issues caused by absent variables over time. This study alludes to the work of [47] and employs the Huazheng ESG rating industry average (excluding the enterprise) as the ESG rating’s instrumental variable. The industry mean ESG rating has a strong correlation with explanatory variables, and the industry mean ESG rating has no direct effect on the financial performance of an enterprise, thus satisfying the correlation and externality hypotheses. Table 7 displays the results of the instrumental variable regression. The first-stage regression results indicate a significant correlation between the ESG industry average and the ESG performance of businesses. Kleibergen-Paap rk LM statistics and Kleibergen-Paap rk Wald F statistics are used to test the unidentifiable problem and weak instrumental variable problem. The results demonstrate the validity and reasonableness of the instrumental variable. The results of the second regression stage indicate that the ESG coefficient is still substantially positive, indicating that this study’s conclusion is also robust when endogeneity is considered.

**Table 7** Instrumental variable regression results

Variables	(1)	(2)
	First stage	Second stage
	ESG	ROA
ESG_Mean	0.87602*** (23.85)	
ESG		0.00214*** (3.99)
PPE	−0.09108 (−0.35)	−0.01904*** (−6.81)
Intan	0.64719 (0.84)	−0.05031*** (−6.64)
Indep	5.62297*** (9.07)	−0.03534*** (−4.53)
Top1	0.03993*** (16.77)	0.00065*** (18.94)
Growth	0.31756*** (3.37)	0.04928*** (34.41)
Leverage	−2.72288*** (−14.67)	−0.11726*** (−44.72)
Constant	5.66206** (2.18)	−0.08903** (−2.47)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	24,587	24,587
R-squared	0.087	0.275
Kleibergen-Paap rk LM statistic		461.817***
Kleibergen-Paap rk Wald F statistic		568.883 (16.83)

*Note* \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . The t value calculated using firm level clustering robust standard error is in parentheses below the regression coefficient

## 4.5 *Heterogeneity Tests*

### 4.5.1 *Heterogeneity of Pollution Property*

This study investigated the spectrum of pollutant properties. According to the Ministry of Environmental Protection of China's Guidelines for Environmental Information Disclosure of Listed Companies, the sample firms are divided into two groups: high-polluting enterprises and non-high-polluting enterprises.  $HPI = 1$  is allocated to businesses with high pollution levels, while  $HPI = 0$  is assigned to businesses with moderate pollution levels. Table 8 displays the evaluation results of two approaches for grouping regression and cross-term regression of dummy variables. In columns (1) and (2) of Table 8, the coefficients of the ESG variable are 0.00099 and 0.00163, respectively. These coefficients are statistically significant at the 1% level, indicating that environmental, social, and governance factors have a statistically significant and positive impact on the financial performance of both high-polluting and non-high-polluting firms. The coefficient of regression for the cross term is 0.00014, which is statistically significant at the 1% level. This finding indicates that the ESG composite performance has a greater impact on the financial success of polluting businesses. Environmental dimension, social dimension, and governance dimension positively impact the financial performance of enterprises, regardless of whether they are high-pollution or low-pollution enterprises. Moreover, these factors have a greater impact on the financial performance of businesses with high pollution levels. This phenomenon is attributable to the imposition of stricter environmental regulations and increased industry supervision on polluting businesses. Consequently, these businesses are required to prioritise their environmental conduct, fulfil their social responsibilities, and improve their corporate governance practises. Through technological innovation, investment in environmental protection facilities, and industrial reorganisation, they also intend to communicate to the market positive indicators of environmentally sustainable growth.

### 4.5.2 *Marketisation Degree Heterogeneity*

The level of marketisation reflects the extent to which the market influences resource allocation and propels economic activity. A high degree of marketisation is characterised by a favourable legal environment, rapid economic development and information transmission, and less government intervention in enterprise behaviour. In regions with a high level of marketisation, the incentive mechanism for enterprise ESG practice is generally more refined, and stakeholders pay greater attention to enterprise ESG practice. Therefore, it is anticipated that the ESG performance of businesses in regions with a high degree of marketisation will play a greater role in enhancing the financial performance of businesses. Table 9 displays the regression results for marketisation degree heterogeneity. There are 1 ( $HMD = 1$ ) enterprises

Table 8 Heterogeneity analysis based on pollution property

Variables	(1)	(2)	(3)	(4)	(5)
	HPI = 1	HPI = 0	Full sample	HPI = 1	HPI = 0
ESG	0.00099*** (5.71)	0.00163*** (13.71)	0.00137*** (17.40)		
HPI × ESG			0.00014*** (6.85)		
E				0.00037*** (2.97)	0.00032*** (4.49)
HPI × E					
S					
HPI × S					
G					
HPI × G					
PPE	-0.03959*** (-4.01)	-0.05844*** (-10.03)	-0.05369*** (-13.87)	-0.04291*** (-4.26)	-0.06297*** (-10.39)
Intan	-0.10414*** (-3.75)	-0.10703*** (-7.44)	-0.10026*** (-9.74)	-0.10551*** (-3.70)	-0.11175*** (-7.49)
Indep	-0.00602 (-0.30)	-0.03009* (-2.57)	-0.02503*** (-3.05)	-0.00005 (-0.00)	-0.02210* (-1.84)
Top1	0.00050*** (5.76)	0.00073*** (13.98)	0.00067*** (17.69)	0.00053*** (5.93)	0.00078*** (14.43)
Growth	0.04953*** (17.81)	0.04236*** (27.56)	0.04468*** (52.75)	0.04959*** (17.78)	0.04257*** (27.55)
Leverage	-0.16238*** (-22.16)	-0.12962*** (-30.71)	-0.14005*** (-53.17)	-0.16775*** (-22.38)	-0.13779*** (-31.43)
Constant		-0.03237*** (-2.70)	-0.01489* (-1.67)	0.08893*** (6.67)	0.06180*** (6.23)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	6817	17,770	24,587	6817	17,770
Within R <sup>2</sup>	0.257	0.213	0.222	0.258	0.216

(continued)

Table 8 (continued)

(6)	(7)	(8)	(9)	(10)	(11)	(12)
Full sample	HPI = 1	HPI = 0	Full sample	HPI = 1	HPI = 0	Full sample
0.00028*** (4.98)						
0.00017*** (6.77)						
	0.00045*** (4.61)	0.00074*** (12.19)	0.00062*** (13.56)			
			0.00013*** (6.61)			
				0.00059*** (4.56)	0.00097*** (10.65)	0.00080*** (13.97)
						0.00013*** (6.75)
-0.05805*** (-14.70)	-0.04002*** (-4.00)	-0.06099*** (-10.17)	-0.05490*** (-14.02)	-0.03989*** (-4.03)	-0.05819*** (-10.03)	-0.05350*** (-13.81)
-0.10455*** (-9.97)	-0.10528*** (-3.73)	-0.11145*** (-7.51)	-0.10420*** (-10.01)	-0.10287*** (-3.71)	-0.10518*** (-7.40)	-0.09903*** (-9.61)
-0.01762** (-2.12)	-0.00005 (-0.00)	-0.02164* (-1.83)	-0.01743* (-2.11)	-0.00736 (-0.36)	-0.03414*** (-2.89)	-0.02814*** (-3.41)
0.00072*** (18.42)	0.00053*** (6.03)	0.00078*** (14.56)	0.00072*** (18.57)	0.00049*** (5.66)	0.00071*** (13.67)	0.00066*** (17.39)
0.04481*** (52.88)	0.04957*** (17.79)	0.04201*** (27.29)	0.04445*** (52.55)	0.04939*** (17.73)	0.04246*** (27.56)	0.04469*** (52.62)
-0.14728*** (-54.99)	-0.16646*** (-22.38)	-0.13764*** (-31.95)	-0.14658*** (-55.24)	-0.16039*** (-21.45)	-0.12480*** (-28.58)	-0.13640*** (-50.81)
0.06341*** (7.80)		0.03396*** (3.52)	0.04046*** (5.16)	0.06043*** (3.79)	0.00242 (0.21)	0.01550* (1.84)
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
24,587	6817	17,770	24,587	6817	17,770	24,587
0.224	0.258	0.218	0.226	0.257	0.212	0.221

Note: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1. The t value calculated using firm level clustering robust standard error is in parentheses below the regression coefficient

with a high marketisation degree and 0 ( $HMD = 0$ ) enterprises with a low marketisation degree. The coefficients of ESG in columns (1) and (2) of Table 9 are 0.00141 and 0.00137, respectively, which are significant at the 1% level, indicating that ESG performance significantly enhances firms' financial performance in regions with high and low marketability. The cross-term regression coefficient is 0.00005, which is statistically significant at the 10% level, indicating that the combined ESG performance has a greater impact on the financial performance of firms in regions with high marketisation.

## 5 Conclusion

This study aims to investigate the relationship between ESG performance and the financial performance of firms, as well as the mechanisms that may influence this relationship. The purpose of the study is also to determine if certain variables, such as the level of pollution and the degree of marketisation, influence the correlation between ESG performance and financial performance.

The study's findings indicate that ESG performance and its three dimensions significantly and positively impact the financial performance of businesses, with the governance dimension having the greatest impact. The analysis of the mediating mechanism demonstrates that excellent ESG performance and all three dimensions alleviate corporate financing constraints, thereby improving corporate financial performance. In other words, financing constraints mediate ESG performance and its three dimensions and corporate financial performance. Robustness tests reveal that the positive influence of ESG performance on financial performance is more pronounced for highly polluting and highly marketised firms. This finding suggests that firms with higher levels of pollution or firms operating in regions with a greater emphasis on the market may prioritise larger ESG benefits.

### 5.1 Theoretical, Managerial and Policy Implications

#### *Theoretical Implications*

The theoretical implications of this study cast light on the significance of ESG performance and its dimensions in determining corporate financial performance. By demonstrating the significant positive impact of ESG on financial outcomes, the research bolsters the importance of incorporating ESG factors into corporate decision-making processes. The findings contribute to the existing literature on ESG by providing empirical evidence of its correlation with improved financial performance, validating stakeholder theory's premise that prioritises responsibilities to improve sustainability and business success.

**Table 9** Heterogeneity analysis based on marketisation degree

Variables	(1)	(2)	(3)	(4)
	HMD = 1	HMD = 0	Full sample	HMD = 1
ESG	0.00141 <sup>***</sup> (13.34)	0.00137 <sup>***</sup> (4.95)	0.00135 <sup>***</sup> (16.19)	
HMD × ESG			0.00005 <sup>*</sup> (1.74)	
E				0.00032 <sup>***</sup> (4.89)
HMD × E				
S				
HMD × S				
G				
HMD × G				
PPE	-0.04775 <sup>***</sup> (-9.31)	-0.05693 <sup>***</sup> (-3.81)	-0.04822 <sup>***</sup> (-12.64)	-0.05176 <sup>***</sup> (-9.71)
Intan	-0.10493 <sup>***</sup> (-7.87)	-0.05650 <sup>*</sup> (-1.57)	-0.09756 <sup>***</sup> (-9.46)	-0.10815 <sup>***</sup> (-7.81)
Indep	-0.02437 <sup>***</sup> (-2.24)	-0.04465 <sup>*</sup> (-1.61)	-0.02688 <sup>***</sup> (-3.27)	-0.01758 <sup>*</sup> (-1.58)
Top1	0.00068 <sup>***</sup> (14.20)	0.00065 <sup>***</sup> (4.94)	0.00067 <sup>***</sup> (17.68)	0.00072 <sup>***</sup> (14.65)
Growth	0.04634 <sup>***</sup> (31.12)	0.03516 <sup>***</sup> (11.32)	0.04477 <sup>***</sup> (52.84)	0.04648 <sup>***</sup> (31.09)
Leverage	-0.13935 <sup>***</sup> (-35.87)	-0.15171 <sup>***</sup> (-13.42)	-0.14073 <sup>***</sup> (-53.31)	-0.14628 <sup>***</sup> (-36.55)
Constant	-0.01221 <sup>*</sup> (-1.03)	-0.02188 <sup>*</sup> (-0.78)	-0.01672 <sup>*</sup> (-1.87)	0.06675 <sup>***</sup> (6.46)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	21,745	2842	24,587	21,745
Within R <sup>2</sup>	0.220	0.254	0.221	0.222

(continued)

Table 9 (continued)

(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
HMD = 0	Full sample	HMD = 1	HMD = 0	Full sample	HMD = 1	HMD = 0	Full sample
0.00054 <sup>***</sup> (2.88)	0.00027 <sup>***</sup> (4.13)						
	0.00007 <sup>***</sup> (2.01)						
		0.00067 <sup>***</sup> (12.12)	0.00051 <sup>***</sup> (3.50)	0.00060 <sup>***</sup> (11.58)			
				0.00006 <sup>***</sup> (2.07)			
					0.00083 <sup>***</sup> (10.30)	0.00077 <sup>***</sup> (3.94)	0.00077 <sup>***</sup> (12.53)
						0.00006 <sup>***</sup> (2.26)	0.00006 <sup>***</sup> (2.26)
-0.06189 <sup>***</sup> (-4.07)	-0.05235 <sup>***</sup> (-13.45)	-0.04898 <sup>***</sup> (-9.30)	-0.05880 <sup>***</sup> (-3.87)	-0.04959 <sup>***</sup> (-12.83)	-0.04769 <sup>***</sup> (-9.27)	-0.05571 <sup>***</sup> (-3.74)	-0.04801 <sup>***</sup> (-12.57)
-0.06639 <sup>*</sup> (-1.78)	-0.10176 <sup>***</sup> (-9.70)	-0.10889 <sup>***</sup> (-7.95)	-0.06120 <sup>*</sup> (-1.65)	-0.10153 <sup>***</sup> (-9.74)	-0.10323 <sup>***</sup> (-7.75)	-0.05858 <sup>*</sup> (-1.65)	-0.09637 <sup>***</sup> (-9.34)
-0.03312 (-1.17)	-0.01943 <sup>***</sup> (-2.34)	-0.01684 (-1.53)	-0.03553 (-1.26)	-0.01922 <sup>***</sup> (-2.32)	-0.02794 <sup>***</sup> (-2.55)	-0.04446 (-1.60)	-0.02994 <sup>***</sup> (-3.63)
0.00070 <sup>***</sup> (5.13)	0.00072 <sup>***</sup> (18.46)	0.00072 <sup>***</sup> (14.82)	0.00069 <sup>***</sup> (5.13)	0.00072 <sup>***</sup> (18.59)	0.00067 <sup>***</sup> (13.89)	0.00065 <sup>***</sup> (4.96)	0.00067 <sup>***</sup> (17.39)
0.03542 <sup>***</sup> (11.34)	0.04493 <sup>***</sup> (53.00)	0.04611 <sup>***</sup> (30.97)	0.03507 <sup>***</sup> (11.14)	0.04455 <sup>***</sup> (52.64)	0.04627 <sup>***</sup> (31.02)	0.03549 <sup>***</sup> (11.37)	0.04477 <sup>***</sup> (52.70)
-0.16040 <sup>***</sup> (-13.65)	-0.14780 <sup>***</sup> (-55.09)	-0.14593 <sup>***</sup> (-36.98)	-0.15775 <sup>***</sup> (-13.61)	-0.14719 <sup>***</sup> (-55.39)	-0.13556 <sup>***</sup> (-33.80)	-0.14834 <sup>***</sup> (-12.99)	-0.13699 <sup>***</sup> (-50.93)
0.03943 <sup>*</sup> (1.75)	0.06037 <sup>***</sup> (7.42)	0.04237 <sup>***</sup> (4.16)	0.04026 <sup>*</sup> (1.92)	0.03828 <sup>***</sup> (4.88)	0.01853 <sup>***</sup> (1.63)	0.00885 <sup>***</sup> (0.34)	0.01366 <sup>***</sup> (1.62)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2842	24,587	21,745	2842	24,587	21,745	2842	24,587
0.256	0.223	0.224	0.254	0.225	0.219	0.253	0.221

Note: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1. The t value calculated using firm level clustering robust standard error is in parentheses below the regression coefficient



### *Managerial Implications*

For enterprises, the study's managerial implications underscore the need for active engagement in ESG responsibilities and efforts to improve ESG performance. By integrating ESG factors into various operations, companies can enhance their sustainability and potentially boost financial performance. Strengthening ESG information disclosure practices can foster transparency, build a positive corporate image, and enhance investor trust. These findings encourage managers to consider ESG an integral part of their business strategies, leading to responsible and sustainable practices.

### *Policy Implications*

From a policy perspective, the study's findings suggest the importance of establishing a comprehensive ESG evaluation system in the Chinese market, utilising unified evaluation standards. This measure would facilitate an accurate assessment of ESG performance, aiding stakeholders in making informed decisions. Moreover, governments can play a pivotal role in guiding enterprises to improve their ESG performance and enhance ESG information disclosure. By implementing supportive policies and measures, policymakers can foster responsible corporate behaviour, promote sustainable business practices, and create an environment conducive to long-term economic and social development.

## **5.2 Limitations and Recommendations for Future Studies**

This study's exclusive concentration on China's A-share listed companies is a notable limitation that raises concerns about the generalizability of the findings to other contexts or regions. Future research could resolve this limitation by expanding the scope of the study to include businesses from various geographies and industries. Examining a more diverse sample would allow for a better comprehension of the broader implications of ESG performance on the financial outcomes of corporations in various contexts. The reliance on ESG scores from Chinese rating agencies as the primary data source is an additional potential limitation. Using data from a single rating agency may introduce inherent biases or limitations, compromising the validity and reliability of the results. To enhance the reliability of future studies, researchers may wish to investigate alternative sources of ESG data or utilise multiple rating agencies to conduct a comprehensive analysis. Utilising multiple data sources would improve the accuracy and comprehensiveness of ESG assessments, thereby providing a more holistic view of the correlation between ESG performance and financial performance.

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# True or Fake News: Why Bother?



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**Abstract** Misinformation and disinformation can easily infiltrate unsuspecting individuals' minds due to the proliferation of social media platforms and the abundance of online news sources. This fake news issue affects people at all levels from all over the world including Malaysia. It is critical to understand how Malaysians are affected by fake news and how concerned they are about it because the spread of false information continues to pose significant challenges to health and well-being globally. The study aims to determine how concerned and informed Malaysians are about fake news. The survey utilised purposive sampling to gather data from respondents. By using GPower, 122 responses were collected from a survey of Malaysian social media users for this study. 32 headlines from local and international sources made up the survey's questions. For the study, some of the headlines were altered on purpose. Finally, regarding Malaysian awareness of fake news, interesting findings and implications were discussed.

**Keywords** Fake news · News satire · News parody · Misinformation · Health and well-being · Social media

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# 1 Introduction

The proliferation of social media platforms, combined with the abundance of online news sources, has created an environment in which misinformation and disinformation can easily infiltrate unsuspecting individuals' minds [1]. Eventually, exploiting individuals vulnerable to falling into the trap of fake news has become an increasingly significant and complex issue in an era of rapid information dissemination and widespread connectivity [2]. Whilst fake news is not new, the speed and extent with which it spread during the COVID-19 pandemic entered an all-new high. Thereby, 2020 was a watershed year for online information warfare, with COVID-19-related fake news being the most prevalent problem worldwide. More than 25% of the most watched COVID-19 YouTube videos contained false or misleading information, reaching over 62 million views worldwide [3].

Since January 2020, there have been 270 fake news investigations, with 35 people charged in court. The local government has taken a few new initiatives to combat this issue because of the pandemic, including the formation of a Rapid Response Troop to combat fake news about the Movement Control Order, Welfare Department aid, and other COVID-19-related topics [4]. And now, in 2023, curbing fake news has come to no avail. Therefore, the study aims to find out how concerned and knowledgeable Malaysians are about fake news.

## 2 Literature Review

### 2.1 Fake News

Tandoc et al. [5] examined 34 academic articles using a “fake news” search between 2003 and 2017 resulted in six typologies of fake news, namely news satire, news parody, news fabrication, photo manipulation, advertising and public relation, and propaganda as shown in Table 1.

Fake news can be defined by looking at the levels of facticity and deception.

“The first dimension, facticity, refers to the degree to which fake news relies on facts. For example, satire relies on facts but presents it in a diverting format, while parodies and fabricated news take a broad social context upon which it fashions fictitious accounts. Native advertising uses one-sided facts, while fabrications are without factual basis.”—([5], p.11)

“The second dimension, which is the author's immediate intention, refers to the degree to which the creator of fake news intends to mislead.”—([5], p.11)

In short, the concept of fake news highlighted by this study is very clear, whereby misinformation and disinformation not only can easily pass through naive individuals' minds but due to the proliferation of social media platforms and the abundance of online news, anyone can fall into fake news. Fake news affects people at all works of life from all over the world including Malaysia. It is crucial to comprehend how

**Table 1** Type of fake news

Type of fake news	Definition	Examples	References
News satire	“Mock news programs, which typically use humour or exaggeration to present audiences with news updates”	“The Daily Show on Comedy Central in the United States”	Baym, 2005
News parody	“Use of non-factual information to inject humour. Instead of providing direct commentary on current affairs through humour, parody plays on the ludicrousness of issues and highlights them by making up entirely fictitious news stories”	“Tearful Biden carefully takes down the blacklight poster of a topless barbarian chick from office wall”	The Onion, 2017
News fabrication	“Articles which have no factual basis but are published in the style of news articles to create legitimacy”	“Right-wing news Breitbart’s report that retailer Target’s share prices had dropped because of its transgender policies is questionable as there were more likely reasons for the decrease”	Palma, 2017
Photo manipulation	“Manipulation of real images or videos to create a false narrative”	“Used manipulated photos that were circulated on Twitter during Hurricane Sandy in 2012”	Zubiaga and Ji, 2014
Advertising and public relations	“To describe advertising materials in the guise of genuine news reports as well as to refer to press releases published as news”	“A report referred to video news releases (VNRs) as “fake TV news”	Farsetta and Price, 2006
Propaganda	“News stories which are created by a political entity to influence public perceptions. The overt purpose is to benefit a public figure, organisation or government”	“The study investigated news stories on Channel One, an official Russian news channel that is broadcast both locally in Russia and internationally”	Khaldarova and Pantti 2016

Malaysians are wedged by fake news and how concerned they are about it because the spread of false information continues to present significant challenges to health and well-being, across the globe. The authors’ main goal is to discover whether social media users bother to investigate whether the news is fake or true.

## 2.2 *Diffusion Theory*

Diffusion theory explains the spread of information, including fake news on any platform [6–8]. This theory proposes that information spreads via social networks and interpersonal communication channels of communication. Fake news can spread through such channels as people pass on it with their network of social contacts, potentially leading to its widespread distribution and acceptance as truth.

## 2.3 *Impact of Fake News*

According to [9], the prevalence of social media and instant messaging platforms, which enable instant communication and the rapid spread of new ideas around the world, has made fake news a major problem on a global scale. Fake news threatens the integrity of information as well as the functioning of democratic societies. Such as election results, industry and the morals of the society. It could shape public views, political narratives, and even vital decision-making processes [1]. Hence, recognising the reasons that make people more susceptible to believing and spreading fake news is critical in combating this widespread problem.

Those frequently identify with specific social groups, and their self-esteem and sense of belonging can be linked to their affiliations with groups. Fake news can take advantage of such characteristics by enticing people's group identities, reinforcing existing biases, and instilling a "us vs. them" mentality [10]. Individuals may accept and spread false information that supports their group's narrative or ideology because of social identity reinforcement. This is a sign of personal and societal harm. Fake news can have real-world consequences and contribute to the spread of misinformation about health, science, and important social issues. This misinformation can misguide people's choices and behaviours, potentially leading to harm to themselves or others. By being discerning consumers of news, we can mitigate the negative effects of false information. For instance, fake news spreading on WhatsApp has been linked to cases of mob killings in India [11]. Consequently, in the long run, it is worried that fake news will damage public confidence in real news media when uncontrolled [12].

People will become sceptical or lose trust in media credibility due to uncontrolled false or misleading information repeatedly. In 2020, fake news about COVID-19 deaths triggered panic among Malaysian [4]. Fake news was spread on social media platforms such as WhatsApp groups of friends, family, community, and others. The Malaysian Communications and Multimedia Minister reported in April, during the peak period of enforcement of the Movement Control Order (MCO), that the government's Rapid Response Troop (PRP) had effectively shot down 205 fake news items [4]. The minister stated that their mission was to detect and combat false news that could cause public anxiety. A rational person should be able to determine their



legitimacy by visiting more accurate information, such as the Ministry of Health Malaysia's website or Facebook page. However, do Malaysians cares?

Henceforth, the issue at hand is to investigate the level of concern among Malaysians about fake news. As the spread of false information continues to pose significant challenges around the world, it is critical to understand how Malaysians are affected by and concerned about fake news. This study aims to examine whether Malaysian care about fake news and provide valuable insights into Malaysian awareness of fake news.

### **3 Methods**

The study employed a quantitative approach. A survey with a self-administered online questionnaire was used to gather information from the respondents.

#### **3.1 Participants**

The population of the study were social media users in Malaysia. Purposive sampling was used in recruiting the respondents. Respondents were among Malaysian social media users. By using G\*Power 3.1.9.4 [13] to calculate the minimal sample size necessary for data collection, four factors were specified: the medium effect size, significance level ( $\alpha$ ), statistical power, and overall number of predictors. Lenth [14] asserts that the statistical power of 0.95 is sufficient for social science research. In the current research, 119 samples are sufficient for the study, however, the researcher managed to get 122 social media users to voluntarily participate in the study.

The survey questions were blasted on six social media sites such as Facebook, Instagram, WhatsApp, Twitter, YouTube, and TikTok, for 4 months from March to June 2022. Participation was on a voluntary basis. Before participating, participants gave their informed consent and were given clear instructions as stated in the questionnaire. They can withdraw anytime they feel like terminating their participation. The online data collection method was convenient for participants, protected their privacy and confidentiality, and minimised any potential biases introduced by in-person interactions.

#### **3.2 Measures**

Demographic backgrounds are asked in the questionnaire, such as age, gender, marital status, and type of social media that most internet users frequently visit. There are six types of social media listed in the survey, i.e., Facebook, Instagram, WhatsApp, Twitter, YouTube, and TikTok.

Headlines in mainstream media from conventional and online newspapers to news from TV broadcasting ranging from politics, social welfare, and entertainment were selected and included in the questionnaires. Used a series of headlines to investigate the role of deliberation in susceptibility to political misinformation and “fake news [15]. The present study adopts the same method to know whether Malaysian care to check headlines before accepting the news or not. 32 Headlines were extracted from the said platforms. Some of the headlines were modified intentionally to mislead the respondents. Example of the headlines are Question 22- *Imbuhan untuk Pengerusi dan Pengarah FGV dinaikkan*, Question 21- *Kenderaan berat dilarang masuk ke Kuala Lumpur pada waktu puncak*, Question 19—*Malaysia sudah bersedia laksana dasar kerja 4 hari seminggu—Pakar Ekonomi*, Question 18—*Wanita paling banyak menjadi mangsa penipuan dalam talian*, and Question 26—*Kajian dijalankan oleh BBC menunjukkan bahawa orang muda berumur antara 11 hingga 16 tahun lebih percaya kepada youtubers daripada ahli politik*. The respondents must answer True or Fake.

### 3.3 Data Analysis

Descriptive analysis for demographic background, frequent social media use, and headlines were analysed using SPSS v29.

## 4 Results

### 4.1 Demographic Background of the Social Media Users

Out of 122 Malaysian social media users, 63.9% (78) are male and 36.1% (44) are females. Male social media users seem more responsive and attracted to the survey rather than female respondents. Most of the respondents are between the age of 19–24 years old (91.2%; 106), students (84.4%;103), and single (91%;111). These numbers accurately describe the largest age engagement with social media among Generation Z, with average daily Internet usage of 8 h. Malaysia’s Generation Z is a technologically savvy generation that is heavily reliant on social media and smart-phones. Table 2 includes the demographic data for the respondents’ participating in the study.

**Table 2** Demographic Background of the social media users (N = 122)

Demographic data	n	%
<i>Gender*</i>		
Male	78	63.9%
Female	44	36.1%
<i>Age*</i>		
19–24	106	91.2%
25–34	10	7%
35–44	1	0.8%
45–54	5	3%
<i>Ethnic*</i>		
Malay	52	51.6%
Chinese	63	5.7%
Indian	7	42.6%
<i>Marital status*</i>		
Single	111	91%
Married	10	8.2%
Divorced/Widowed	1	0.8%
<i>Work status*</i>		
Student	103	84.4%
Government sector	5	4.1%
Private sector	9	7.4%
Own company/business	1	0.8%
Not working/housewife	3	2.5%
Others	1	0.8%

## 4.2 Descriptive Analyses of Frequently Used Social Media

There are six types of social media listed in the survey, i.e., Facebook, Instagram, WhatsApp, Twitter, YouTube, and TikTok. The most frequent use of social media is WhatsApp (Very Often = 72%) and followed by YouTube (Very Often = 63%). None of the respondents chooses to answer “Never” using WhatsApp. WhatsApp is not only the highest frequent use but also the main mean of communication for Malaysian. The other interesting finding for the most frequent response is "Very Often," with 34 people (27.9%) saying they use Facebook frequently, 58 people (47.5%) saying they use Instagram frequently, and 63 people (51.6%) reporting that they use Twitter frequently.

### 4.3 Descriptive Analyses of the True or Fake Headlines

There are very few means differences between the True ( $m = 1.016$ ,  $SD = 0.127$ ) and Fake ( $m = 1.049$ ,  $SD = 0.217$ ) headlines. The mean ( $m = 1.016$ ) of True headlines means that some respondents believe that the news headline is fake. The mean ( $m = 1.049$ ) for Fake headlines means that respondents believe the fake news is true. However, the mean ( $m$ ) for believing “fake” headlines as truth is higher as compared to those not believing them. It implied that some Malaysian do fall into fake news.

In the headline Question no. 5 “*Menteri KPDNHEP mengeluarkan kenyataan menggesa pengguna menggantikan ayam kepada itik susulan kenaikan harga ayam*”/ “KPDNHEP Minister issued a statement urging consumers to replace chicken with duck following the increase in chicken prices”, many of the participants answer it as fake, in which by right it is true. Perhaps, since most of the participants are mostly students, they do not bother about the price of goods or raw groceries as long as they received money from their parents. It exhibits a degree of ignorance regarding current problems among social media users, especially among students.

For Question no. 9. *Terdapat tinjauan daripada Unit Perancangan Ekonomi, Jabatan Perdana Menteri (JPM) bagi mendapatkan pandangan orang ramai untuk penambahbaikan sektor pertanian* / There is a survey from the Economic Planning Unit, Prime Minister’s Department (JPM) to obtain public views for the improvement of the agricultural sector, about 77 respondents (63%) answer True, by right it is supposed to be Fake. For Question no.10. *Kisah Tak Terungkap “Krisis Ukraine”—Peperangan besar kadangkala bermula daripada kesalahan kecil.* / The Unrevealed Story of the “Ukrainian Crisis”—Big wars sometimes start from small mistakes, about 68 respondents (55.7%) answer True, by right it is supposed to be Fake.

Interestingly however, for Question no.15. *Bapa Allahyarhamah Adibah Noor sedia maklum mengenai penyakit kanser yang dihidapi anaknya* / The late Adibah Noor’s dad is aware of cancer that her daughter is suffering from, most of the respondents ( $n = 72$ ; 59%) know that the news is fake. Similarly, goes to Question no. 20. *Kumpulan idola terkenal Korea Selatan “BigBang” telah meninggalkan agensi hiburan YG* / South Korea’s famous idol group “BigBang” has left the YG entertainment agency, most of the respondents ( $n = 70$ ; 57.4%) know that the news is fake. The last two headlines are entertainment and music. Many youths, especially Gen Z, are really attached to it. There is no doubt they are really concerned about what happened in the music and entertainment industries.

## 5 Discussion

The results showed very interesting findings. Studying the mean ( $m$ ) of “True” headlines revealed that some respondents believe that the news headline is fake and vice versa. Another fascinating implication of the study is that some Malaysian do fall

into fake news because the mean (m) for believing “Fake” headlines as truth is higher as compared to those not believing them.

Some of the headlines in the survey were purposely created. The researchers were very enthusiastic to know the outcome. And it turns out worth it. Because people are too lazy to verify the information, it implied that fake news will probably persist in the system for a long time. Fake news indeed can be created and disseminated on purpose as part of disinformation campaigns by political actors, special interest groups, or even foreign entities that may launch these campaigns to manipulate public opinion, sow discord, or achieve specific strategic goals [16]. The strategic use of fake news can exploit existing societal divisions, emotions, and digital media platform vulnerabilities.

Some of the headlines that were circulated in the social media sphere always originate from the mainstream media, such as TV, radio, and newspapers. Hence, social media users are supposed to know or be aware of such news. The results also showed that social media users, the youth, especially GenZ love music and entertainment. They are only concerned about what happened in the music and entertainment industries. These results impliedly showed that the authority needs to do something for the new generation. It is worrisome if they care less to filter any news they receive.

However, the reality of this situation is far worse than we initially believe. For instance, Echo chambers and filter bubbles could frequently be formed because of social media algorithms and online platforms [17, 18]. Individuals are exposed to information aligning with their beliefs and preferences in these environments. Over time, this can reinforce and intensify ideological or political polarisation, making people more vulnerable to fake news that supports their beliefs while decreasing exposure to diverse viewpoints and fact-checking.

Another explanation for the continuing existence of fake news could be the analogy of the Supply and Demand theory [19]. The supply of fake news can be the creation and dissemination of false or misleading information. Creators of fake news, like suppliers in a market, create content to meet a demand or achieve specific goals. This supply is influenced by a variety of factors, including malicious intent, political motivations, economic incentives (for example, clickbait revenue), and ideological agendas. The desire or willingness of individuals to consume and believe false information is referred to as the demand for fake news. Cognitive biases, confirmation bias processes [8, 20, 21], social identity reinforcement, emotional appeal, or the desire to reinforce pre-existing beliefs and opinions [22] can contribute to this demand too. Because of personal preferences, social influences, or psychological factors, people may actively seek out or passively accept fake news.

Around the world, studies on fake news detection techniques have proliferated. Two examples include the Tri-Relationship Fake News detection framework (TriFN) [7, 23] and a tutorial online [24]. Though many fake news producers and those who unintentionally (and naively) believe and spread false information do not seem to be inspired by the impact of all those inventions in fake news detection. It is everyone's responsibility to care about true or fake news due to the numerous negative effects of fake news.

Besides, fake news's prevalence and impact, like economic markets, can be shaped by the interaction of supply and demand. When there is a high demand for fake news, the supply is incentivized to produce and disseminate more false information. On the other hand, if demand falls, supply might decrease as well, as creators find it not as satisfying or productive. Fake news supply and demand can create a feedback loop. As fake news is consumed and shared, it has the potential to influence public opinion, shape narratives, and increase demand for similar content. As a result, the supply side is encouraged to produce more fake news to meet the continuing demand. Indeed, when there is demand, there will be never-ending supply too. And it seems there will be never-ending demand too.

## 6 Conclusion

Fake news is a complex societal issue with psychological, social, and technological components that extend beyond the conventional economic framework. Humans are susceptible to a variety of cognitive biases that influence their information-processing and decision-making processes. Confirmation bias, for example, causes people to seek and perceive information which confirms what they already think, whereas availability bias causes people to rely on readily available data instead of looking for more reliable sources. These biases can make people more likely to accept and spread fake news that affirms what they already believe. Like [15], it is discovered that when people deliberated, they made fewer errors in judging the veracity of headlines, and were less likely to believe false claims, regardless of whether the headlines aligned with their ideology. Considering supply and demand dynamics contributes to a conceptual understanding of the production, distribution, and consumption of false information is something that could be done. A well-strategic plan needs to be formulated to stop or at least reduce the demand for a better healthy society and better well-being.

The limitation of the study that needs to be addressed in future research is the way the questions were designed. It will yield a more meaningful outcome if the questionnaire uses a Likert scale to get holistic views about the issue of fake news.

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# **Socioeconomics-Based Technology and Sustainability**



# Fostering Socio-Economic and Industrial Sustainability: The Vital Contribution of Stakeholder Engagement Programme in the Palm Oil Sector's Growth



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**Abstract** The palm oil industry plays a significant role in the global economy, serving as a crucial source of income for many countries and supporting millions of livelihoods. However, the industry has faced persistent challenges related to environmental degradation, deforestation, labor rights, and social issues. In recent years, there has been a growing recognition that sustaining the society and industry requires a proactive approach that goes beyond profit-driven strategies and encompasses the engagement of various stakeholders. This article presents the vital contribution of stakeholder engagement programme in sustaining the palm oil industry and socio-economic as a whole. It examines how the palm oil industry can effectively engage with stakeholders, including local communities, environmental organizations, governments, consumers, and investors, to address pressing challenges and foster long-term sustainability. This article also highlights the importance of stakeholder engagement in promoting transparency, trust, and accountability within the palm oil industry. It discusses the potential benefits of collaborative efforts, such as improved environmental management practices, social inclusivity, and responsible business conduct. By involving stakeholders in decision-making processes, the palm oil industry can better understand and address the concerns of diverse groups, thereby minimizing conflicts and promoting sustainable development. Thus it is important to shed light on key considerations and potential barriers to implementing effective stakeholder engagement programme within the palm oil industry. It emphasizes the need for robust governance structures, clear communication channels, and the integration of stakeholder perspectives into strategic planning and policy development.

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**Keywords** Stakeholder engagement • Sustainability development • Palm oil industry • Community

## 1 Introduction

The palm oil industry has become a significant global economic driver, contributing to employment, economic growth, and the development of many countries. However, it has also faced intense scrutiny due to its environmental and social impacts. In other words, it is arguable that the palm oil are ubiquitous in the global market place. The growth factor of the palm oil industry with high demand globally because as compare with other vegetables oil, it is a relatively cheaper vegetable oil in the world market due to the high yield production and also lower labour cost to be incurred for production. Such as palm oil production which is currently the most significant agricultural export for Malaysia represents an important commodity that is used as a platform for poverty eradication [1].

However, in many years of cultivation, most of the palm oil companies face a huge challenge in environmental conservation and sustaining the industry especially due to competitors and some big players when they enter into palm oil related and agro-chemical industry to diversify. Thus, in the international market, the giant companies also faces the same challenges that encourage their companies' management to find a better solutions to handle this issue. The major plethora of issues that are related to the palm oil industry such as haze and smoke, climate change, freshwater degradation, biodiversity loss, air pollution, labour shortage, forest fire and carbon dioxide, plant infection and many more [1–5]. The most debated issue in this industry is deforestation that later on dragged to other issues including the extinction of Orang Utan in Borneo Island as well as in Sumatera, Indonesia.

Due to those issues, many effective ways are implemented by the companies to overcome any risk to occur because of the palm oil expansion [6]. Particularly, giant companies that operate and supply product globally have a unique ability to create a comprehensive solutions by leveraging their diversity of influence and broad market reach with on supply side of the supply chains and customer demand. Simply put, due to their sizes, they have enough means and resources to preserve and conserve natural environment and to do something goods for the local communities. In light of this, it is crucially important to inquire about how palm oil companies address these issues during their plantation activities. Obtaining convincing answers is deemed necessary, as many believe that the palm oil industry has the potential to bring about substantial social and environmental responsibility in rural areas. Consequently, an increasing number of palm oil companies are implementing corporate social responsibility (CSR) initiatives and incentives as strategic approaches to tackle these concerns.

Malaysian businesses have also embraced and implemented this concept within their operations. Consequently, companies are now expected to go beyond solely focusing on financial performance and place increased emphasis on their societal and

environmental impact. By doing so, they can foster positive perceptions from both local and global communities. In recent years, the concept of stakeholder engagement has gained prominence as a means to address these concerns and promote sustainability. This article explores the applicability of stakeholder engagement programme in the palm oil industry, examining their potential to sustain both society and the industry itself.

## 2 Understanding Stakeholder Engagement

The components of CSR are not only philanthropy and public relation in nature but the Corporate-Community Engagement (CCE) also is one of the integral components of CSR. Meanwhile, a better understanding of engagement involves defining corporate governance, corporate philanthropy, CSR, and a new concept: corporate social entrepreneurship [7]. Engagement, according to Hewitt Association [8] is an emotional and intellectual commitment individuals have towards an organization, indicating the extent to which organizations have captured the loyalty and dedication of their stakeholders. Essentially, engagement focuses on how corporations win over the hearts and minds of the communities they operate in.

Long-term CSR engagement plays a crucial role in safeguarding the interests of shareholders and bondholders, serving as an effective risk management tool in the face of negative events. Investors may even consider a firm's level of CSR involvement as an indication of its moral capital and its ability to mitigate investment risks [9].

The engagement process can commence at the initial stages of a company's exploration or may initiate during project development. Alternatively, in some research literature, engagement is defined as a comprehensive term encompassing all of an organization's efforts to comprehend and involve stakeholders in the management's activities and decisions. The effectiveness of engagement hinges on grasping the purpose, scope, and identifying the key individuals who should be included in the engagement process [10]. Scholars and researchers have examined various approaches to engagement, and they have consolidated the primary approaches discussed by these scholars in her studies, which are summarized in Table 1.

Actually, the stakeholder engagement (SE) is not a new phenomenon but companies have engaged their stakeholders through communication and dialogues. SE refers to the process of involving individuals, groups, or organizations affected by or with a vested interest in a particular industry or sector. This inclusive approach acknowledges that the decisions and actions of a company can have far-reaching consequences beyond its immediate operations. By engaging stakeholders, companies can better understand their concerns, incorporate their perspectives, and build trust and collaboration. According [12], SE as a key component of Corporate Social Responsibility (CSR), entails effective communication and information sharing with the local community during the initial stages of exploration. This proactive approach enables companies to cultivate a positive relationship with the community and obtain

**Table 1** The main approaches of engagement

World Bank Group [11]	Eerola [12]	Minnesota Department of Human Services [13]	Partridge et al. [10]	Greenwood [14], O’Riordan and Fairbrass [15]
Policy and regulatory environment	Communication	Assessment	Communication	Developing, establishing and maintaining stakeholder relationship
Sustainable private sector investment	Basic consultation	Building Relationships	Consultation	Stakeholder identification
Benefit sharing	In-depth dialogue	Communication	Dialogue	Communication
Codes of sustainable practice	Working partnership		Partnerships	Dialogue and consultation

operational licenses. Notably, when companies communicate and inform the local community in advance, the acceptance and support from the community for the company’s project tend to be significantly higher.

Many Malaysian companies also utilize their annual reports as a platform for communicating and addressing public concerns regarding their CSR practices. Although not mandatory, the number of companies adopting this practice has been steadily increasing over time. As the business landscape evolves towards global standards, success and competitiveness require adapting to new requirements so, during their routine activities, corporations are encouraged to optimize the positive effects they have on society and minimize any negative impacts, even when not explicitly mandated by law and regulations. This approach reflects a proactive stance on social responsibility, where corporations take voluntary actions to go beyond compliance and strive for positive societal outcomes. By actively seeking ways to maximize positive impacts and mitigate negative effects, corporations can contribute to the overall well-being of society and foster a more sustainable and ethical business environment.

### 3 Palm Oil Industry Growth and Challenges

Palm oil production demonstrates exceptional efficiency, yielding more oil per unit of land compared to any other comparable vegetable oil crop. Despite utilizing less than 6% of the total land area dedicated to vegetable oil production, palm oil fulfils 40% of the global demand for vegetable oil. In contrast, producing equivalent quantities of alternative oils such as soybean, coconut, or sunflower oil would require 4 to 10 times more land, resulting in a mere relocation of the problem to other regions and jeopardizing ecosystems, species, and communities. Additionally, millions of



**Fig. 1** Comparison of global oil yields by crop plant oil yield in tonnes per hectares (t/ha)

smallholder farmers depend on palm oil production for their livelihoods. Avoiding palm oil altogether does not provide a solution. Instead, we should advocate for increased actions to address the challenges associated with the industry and drive progress forward. Figure 1 below show the illustration on the vegetables oil yield and palm oil yield in tonne per hectares.

Figure 2 shows the Global volume of palm oil production from year 2012 until year 2022. Extensively, global palm oil market share was valued at USD 68.2 billion in year 2022 and is expected to reach USD 95.32 billion in year 2030 with CAGR (Compound Annual Growth Rate) of 4.9% between 2023 and 2030.

Palm oil cultivation is primarily concentrated in Asia, Africa, and Latin America, with Indonesia and Malaysia being the primary producers. Following them, Thailand, Colombia, and Nigeria also contribute significantly to the industry. It is worth noting that Indonesia and Malaysia boast the largest certified palm oil plantations. Year by year among the continent, the Asian countries contributed the highest value of exported palm oil in since year 2017 with shipments valued at \$33.6 billion of global volume [16]. Table 2 shows detail of volume exported palm oil by the countries during year 2021. Indonesia and Malaysia are seen as the top ranked countries contributed for world export of palm oil and followed by Netherlands, Papua New Guinea and others.



**Fig. 2** Global volume of palm oil production from year 2012/13 to 2022/23 in Million Metric Tones

**Table 2** Top 5 countries export high volume of palm oil in 2021

Countries	USD \$	% of palm oil exports
Indonesia	US\$26.7 billion	54.7%
Malaysia	\$14.2 billion	29.2%
Netherlands	\$1.2 billion	2.5%
Papua New Guinea	\$783.9 million	1.6%
Thailand	\$713.5 million	1.5%

Sources from Workman [16]

In the last twenty years, various scholars, activists, and NGOs have extensively documented the issues arising from palm oil production and plantation activities. These issues include deforestation, forest fires, haze, social conflicts, and the alarming extinction of numerous plant and animal species [11, 17–19], and NGOs such as RAN, FOE, SAWIT Watch, WANGO). These problems ultimately have a profound impact on the quality of life for the communities residing in the vicinity of palm oil plantations. Furthermore, there is often an unequal distribution of benefits between the organizations involved and the local communities, exacerbating the adverse effects on indigenous peoples [11].

More than that, even Indonesian government has developed a comprehensive legal framework to control the pollution from this palm oil activities, the state agencies in the country are largely failed to ensure effective compliance due to the numerous reason. Among these reasons are corruption, lack of political commitment and worker support, lack of credibility and others [19]. The decree controls the issuance of permits to plantation companies and related companies which manage the processing industry in the palm oil sector. The plantation business permit holders (known as Ijin Usaha Perkebunan Budidaya – IUPB by Indonesian) must facilitate the development of smallholder farms for an additional 20% minimum plantation concession which must be established within three years of receiving the permit [20]. Logically, this decree will support the future development of smallholder plantations in the country.

## 4 Benefits of Stakeholder Engagement in the Palm Oil Industry

In this regard, based on understanding of these contexts of stakeholder engagement, it can be best summarized as a mechanism for consent, control, co-operation, accountability, as a form of employee involvement, as a method to gain trust or as a substitute for true trust, as a discourse to enhance fairness, and also as a mechanism of corporate governance [14]. This practice also can be a mechanism to gain support from the local community. Engagement practices offer several advantages: (i) they help organizations fulfil tactical and strategic needs by gathering information and identifying trends that can impact their activities; (ii) these practices enhance transparency and

build trust with the local community, which is crucial for the organization’s long-term success; (iii) engagement practices stimulate innovation and enable organizational change to address new challenges [10]. Essentially, engagement practices not only benefit the organization itself but also provide collective benefits to stakeholders as a whole, fostering economic growth. Table 3 illustrates the benefits of stakeholder engagement for both the organization and the local community.

The purpose of engagement is not merely for a corporation to do what it prefers or offer what it desires. For instance, when a company writes a check to a local charity, it undoubtedly benefits the community, but it does not actively engage them. To truly engage the community, a company must actively listen to their concerns, involve them in decision-making processes, consider their interests, and ensure that their actions reflect the community’s needs. While sponsoring community organizations can provide a platform for these endeavors, simply writing a check and issuing a press release does not qualify as genuine engagement. The study by Visser [5] in the mining industry in South Africa suggested that stakeholder engagement has become an importance force for encouraging corporate governance and corporate citizenship. Indeed, it is widely recognized that corporations operate in a dynamic environment influenced by a complex interplay of commercial and social pressures. Consequently, companies are constantly striving to meet the ever-evolving social expectations. However, these challenges necessitate the adoption of effective community engagement strategies [21, 22].

Meanwhile, in order to maintaining a long-term and positive relationship with the community, it is crucial for the sustainability of an organization, but it requires proactive engagement [13]. Proactiveness can be achieved through various actions, such as conducting comprehensive community assessments, establishing connections with clients, potential clients, and other agencies, and effectively communicating with the larger community to increase the organization’s visibility. Community engagement (CE) has emerged as an important tool in plantation management, offering benefits such as smoother operations, improved land access, and enhanced corporate reputation, ultimately contributing to environmental conservation [22]. However, it is important to note that CE can be both costly and time-consuming, but it allows plantation companies to actively seek, listen to, and address social concerns and

**Table 3** The benefit of stakeholder engagement by the organization

Organization	Local community
1. Better management of risk and reputation	1. Equitable and sustainable social development
2. Enable to understanding a complex business environment	2. Employment opportunities
3. Enable the organization to learn from stakeholder and resulted in product improvement	3. Empower knowledge and right
4. Build trust	4. Improving standard of living

expectations related to their activities (Centre for Corporate Public Affairs 2000, as cited in [22]).

Based on the aforementioned literature, an effective CSR strategy with robust stakeholder engagement comprises three essential elements: building relationships, capacity building, and socio-economic development. These elements collectively contribute to the industry's sustainability and the development of the local community. Furthermore, by implementing such practices, the company can emerge as a prominent entity, garnering support not only from the local community but also on an international level. This, in turn, enhances the company's brand image and reflects positively on the host country. Hence, it demonstrates how SE generates positive outcomes for both the community and the organization, particularly in industries like palm oil that directly and indirectly impact the local community.

## 5 Discussion

While stakeholder engagement holds promise for the sustainability of the palm oil industry, its successful implementation faces numerous challenges, including diverse stakeholder interests, power imbalances, limited resources, and differing cultural perspectives. To overcome these barriers, industry players must prioritize inclusivity, establish robust communication channels, allocate sufficient resources, and commit to long-term engagement efforts.

To align with global SDGs, such as decent work and economic growth, it is crucial for the palm oil industry to address them within their stakeholder engagement efforts. By prioritizing decent work and economic growth, palm oil companies can ensure fair labor practices, better working conditions, and inclusive economic opportunities for all involved stakeholders. This could include efforts to eliminate exploitative labor practices, provide fair wages, and empower local communities with economic development initiatives that go beyond mere job creation. Furthermore, as one of the SDGs, Sustainable Cities and Communities also play a significant role in the palm oil industry's stakeholder engagement approach. As palm oil plantations can have significant impacts on surrounding communities and their habitats, promoting sustainable cities and communities involves respecting the rights and needs of local populations. Throughout the stakeholder engagement, its encourages transparency within the palm oil industry. This transparency builds trust and credibility among stakeholders and consumers alike. By involving stakeholders in decision-making processes, companies become more accountable for their actions and more responsive to societal expectations. Additionally, engagement programme provide a platform for addressing conflicts, grievances and considering their input on matters such as land use, environmental conservation, and infrastructure development can lead to more sustainable outcomes.

Indeed, Partnerships for the Goals, as another SDG, are inherently connected to stakeholder engagement. To achieve the broader sustainability goals, the palm oil industry must form partnerships and collaborations with governments, NGOs,



local communities, and other relevant stakeholders. These partnerships can leverage combined expertise and resources to address environmental and social challenges effectively. Engaging in multi-stakeholder initiatives and fostering public–private partnerships can create a more holistic approach to sustainability, promoting shared responsibility and collective action. Furthermore, stakeholder engagement can improve the reputation of palm oil companies by demonstrating their commitment to sustainability and responsible practices, in alignment with SDG 8, SDG 11, and SDG 17. This enhanced reputation can lead to increased market access, as consumers and investors increasingly seek products that align with their values. As the conclusion, by actively engaging stakeholders, the palm oil industry can navigate challenges more effectively, promote sustainability, and build stronger relationships with the communities and organizations affected by its operations.

In an era where sustainability is of utmost importance, stakeholder engagement programme offer a way forward for the palm oil industry. By actively involving stakeholders and addressing their concerns, in line with SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities and Communities), and SDG 17 (Partnerships for the Goals), the industry can move towards more sustainable practices, ensuring the well-being of society and the longevity of the industry itself. Through collaboration, transparency, and accountability, the palm oil industry can navigate its challenges, build trust, and create a more sustainable future for all stakeholders involved.

## 6 Conclusion

In conclusion, the palm oil industry's integral role in the global economy and its impact on livelihoods cannot be understated. Despite its contributions, the industry grapples with complex challenges spanning environmental degradation, deforestation, labor rights, and social issues. A progressive shift beyond profit-centered approaches is recognized as essential for sustaining both the industry and society. This article has underscored the significance of stakeholder engagement programme in achieving this objective. By effectively involving diverse stakeholders – from local communities and environmental organizations to governments, consumers, and investors – the palm oil sector can proactively address pressing challenges and work towards long-term sustainability. Transparency, trust, and accountability, crucial elements in this endeavor, can be fostered through robust stakeholder engagement. Collaborative efforts have the potential to yield multiple benefits, including enhanced environmental practices, social inclusivity, and responsible business conduct.

Engaging stakeholders in decision-making processes enables the industry to gain insights into the concerns of various groups, ultimately minimizing conflicts and promoting sustainable development. To this end, it is imperative to acknowledge the key considerations and potential obstacles in implementing effective stakeholder engagement programme within the palm oil industry. The establishment of strong

governance structures, clear communication channels, and the integration of stakeholder perspectives into strategic planning and policy development are pivotal steps toward a future where sustainability is not just a goal, but a reality.

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# Post-covid-19 Pandemic: Food Delivery Riders Intention to Participate in Retirement Planning Schemes



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**Abstract** Since the beginning of 2020, the coronavirus disease (covid-19) pandemic has created overwhelming effects globally. The covid-19 pandemic has also disrupted the Malaysian economy and people's daily lives. Nevertheless, food delivery services have been affected after the covid-19 pandemic. While the demand for food delivery services increased during the pandemic as more people ordered food online, the number of food delivery riders also increased. When the competition rises, food delivery riders' income decreases, and they may encounter challenges in retirement savings. Additionally, there has been an increase in the cost of living, such as costs of fuel, motorcycle maintenance, daily expenses, and thus retirement savings might become more difficult. Therefore, this study investigates the factors influencing food delivery riders' intention to participate in retirement planning schemes. Applying the theory of planned behaviour (TPB), this study used variables: attitude, subjective norm, perceived behavioural control, and behavioural intention. This study also used a quantitative approach through a survey questionnaire. A total of 205 food delivery riders, including GrabFood, FoodPanda, ShopeeFood, and Lalamove in Klang Valley, participated in this study and were collected using judgemental sampling. The data were analysed using structural equation modelling with a partial least square approach (SEM-PLS) and assisting SmartPLS 4.0.9.5. The results showed that only perceived behavioural control significantly influence food delivery riders' intention to participate in retirement planning schemes. However, attitude and subjective norm do not significantly influence food delivery riders' intention to participate in retirement planning schemes. Despite the challenges food delivery riders face, they remain a part of the growing economy in the food delivery sector. Consequently, this study has several implications, such as the creation of awareness

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programs by government and non-governmental organisations and the provision of advice regarding retirement funds and financial advisors.

**Keywords** Retirement • Behavioural intention • Attitude • Subjective norm • Perceived behavioural control • Theory of planned behaviour

## 1 Introduction

The coronavirus disease (covid-19) pandemic has been creating overwhelming effects globally since the beginning of 2020. The covid-19 pandemic also has disrupted the Malaysian economy and people's daily lives. Some people may be having financial difficulties and be able to recover by using their emergency or pension plans. Nevertheless, for people not adequately connected to pension plans, it would cause an economic catastrophe and result in financial incapability. According to Bank Negara Malaysia (BNM) report, more than 47% of people have difficulty saving RM1000 for emergency needs, with the high living cost and economic uncertainties [1]. The savings plan of RM1000 is the minimum pension for public-sector employees, and they expect to live approximately 73.4 years, which is the average life expectancy of Malaysians [2]. However, RM1000 will likely not be sufficient after retirement because this suggested savings amount is based on expenditure for basic needs. Peoples need to look into other factors such as increased living standards, protection for spouses and dependents, rising medical expenses, and protecting post-retirement lifestyles. Besides, BNM also reported that 28% of young-aged employees are apprehensive, and 36% are worried about their retirement savings after retirement. Of middle-aged employees, 30% are apprehensive, and 32% are worried about retirement savings [1].

After the covid-19 pandemic, Sun Life Malaysia [3] conducted a survey on retirement called "Kembara Bersara". It revealed that 63% of the respondents identified living costs as a significant concern in retirement, with the fear of insufficient funds for a comfortable retirement life being their biggest worry. Consequently, there are evident gaps in financial planning, particularly concerning the structure of sufficient financial resources. In addition to that, according to Utusan Malaysia [4], an estimated 97%, approximately 1.08 million out of 1.2 million gig economy workers (of which 80% are young people), do not contribute to the Employees' Provident Fund (EPF), despite the government's introduction of retirement incentives through the i-Saraan scheme. For instance, based on EPF [5] estimates, the monthly living expenses in Klang Valley range from RM1930 to RM6890. It implies that by age 55, if gig economy workers are married couples without children, they would need at least RM1,101,600 in savings to cover their monthly expenses securely due to inflation and lifestyle changes.

Furthermore, food delivery riders are also gig economy workers who work for food delivery platforms on a flexible basis rather than being traditional employees. Given the lack of employer-provided benefits and the uncertainty of their income,

participating in retirement planning becomes crucial for these riders. By actively planning for retirement, they can take control of their financial future, manage fluctuating income, and ensure a reliable income source during retirement. Retirement planning also helps them tackle rising living costs, benefit from compound interest, and reduce dependence on external support, providing greater financial independence and flexibility for a comfortable retirement. Therefore, using the theory of planned behaviour, this study aims to investigate the significant influence of attitude, subjective norm, and perceived behavioural control on food delivery riders' intention to participate in retirement planning schemes.

## **2 Literature Review**

### **2.1 Attitude**

Attitude is how we think about things and how it influences our actions. It is based on our beliefs about the product we are considering [6, 7]. Attitude can be positive or negative and plays a key role in responding to specific behaviours [6, 8–10]. In consumer evaluations, attitude is like an emotional signal. A good attitude is linked to positive intention [11–15]. Thus, having a positive attitude towards retirement planning or valuing its importance will increase the likelihood of taking action. Positive attitudes also significantly influence savings and retirement planning, as they are socially accepted and respected by others [16, 17]. Moreover, having a positive mindset about retirement is essential for preparing individuals for this stage of life, helping them overcome challenges and enjoy their retirement journey [18]. Decisions about retirement preparation and financial management significantly affect our behaviour. Money plays a crucial role in shaping attitudes and decisions related to retirement savings [19]. Some with higher incomes might overlook saving, assuming they have enough savings, while others with limited funds may struggle to save due to living expenses [20]. Good money management is vital, especially for people like food delivery riders and young adults, as it promotes overall well-being [21]. Therefore, the subsequent hypothesis is formulated:

H1: Attitude significantly influences food delivery riders' intention to participate in retirement planning schemes.

### **2.2 Subjective Norm**

Subjective norm is how societal influences impact people's behaviour, including normative beliefs and motivation to follow those norms. It involves an individual's perception of social expectations for specific behaviours. Normative views reflect how people perceive others' expectations of their behaviour. Motivation to comply is

related to influencing people and the desire to conform to their expectations. Subjective norm can be influenced by various reference groups like peer influence and superior influence [22, 23], friends, family members, colleagues [24], primers, externals, partners [25], spouses, and neighbours [26]. Regarding prepurchase decisions, customers use two channels: personal and non-personal sources. Internal sources rely on memories and experiences, while external sources include personal recommendations and advertising [27, 28]. When internal sources are insufficient, consumers rely more on external sources, including advice from friends and word-of-mouth [28]. For complex services, consumers may prefer external sources to reduce ambiguity [29]. Considering both internal and external sources is essential for consumers when making purchase decisions. Hence, the subsequent hypothesis is proposed.

H2: Subjective norm significantly influences food delivery riders' intention to participate in retirement planning schemes.

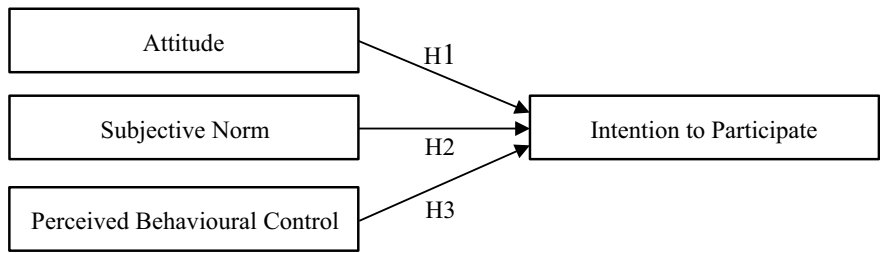
### **2.3 Perceived Behavioural Control**

Perceived behavioural control refers to people's subjective assessment of how easy or difficult it is to perform a certain behaviour [30]. People with a positive attitude, subjective norm, and perceived behavioural control are more likely to engage in that behaviour. This concept considers situations where people may not fully control their actions [31]. The association between perceived behavioural control and intention depends on the specific behaviour and its context [32]. Sometimes, strong beliefs or social norms can influence the impact of perceived behavioural control on behavioural intention. Perceived behavioural control includes internal factors like knowledge and abilities, and external factors like time, support from others, and financial resources [31]. Previous studies have shown mixed results regarding the impact of perceived behavioural control on behavioural intention. Some studies found a positive correlation between the two [33–46], while others did not show a statistically significant correlation [23, 47]. Due to these conflicting findings, more research is needed to fill the knowledge gap. Consequently, the following hypotheses are suggested:

H3: Perceived behavioural control significantly influences food delivery riders' intention to participate in retirement planning schemes (Fig. 1).

## **3 Materials and Methods**

This study used a non-probability judgemental sampling method due to the absence of a sampling frame. The target sample consisted of full-time food delivery riders in Klang Valley, Malaysia, have been selected. This selection was based on three key factors; (1) full-time food delivery riders do not have specific compulsory retirement schemes; (2) the dominance of fulltime food delivery riders in Klang Valley, the most developed region in Peninsular Malaysia; and (3) Klang Valley is a good sample area



**Fig. 1** Research framework

due to its highest monthly household income in Malaysia [48]. This study determined the sample size by following the suggestion from Hair et al. [49] and employing power analysis. Based on G\*Power analysis, the suggestion of 89 respondents is suitable as the minimum sample size for four predictors. Thus, 205 surveys were conducted, ensuring a power above 0.80% [50].

In addition, to achieve the objectives of this study, a structured questionnaire was employed to get answers and feedback from the target sample. The questionnaire assessed research constructs, dimensions, and demographic information through a self-administered format. The questionnaire is divided into two sections; Section A consisted of measurement questions using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5), while Section B seeks the respondent’s demographic details such as gig category, gender, age, marital status, highest education level, number of dependents, gig job experience, gig net income, monthly household income, and monthly saving. Moreover, the questionnaire is designed using an adapted questionnaire, revised from previous studies addressing similar research: Ajzen [32], Hershey and Mowen [51], Lai and Tan [21], Moorthy et al. [17], Noone et al. [52], Petkoska and Earl [53], Taylor and Todd [23]. 21 were modified to align with the aims of this study, and a pre-test was conducted to minimise possible ambiguity in the questionnaire items.

**4 Results and Discussion**

**4.1 Respondents’ Demographic Profiles**

Food delivery riders can be categorised based on their respective platforms, and Food-Panda emerges as the most prevalent, accounting for 40.5% of the sample. GrabFood follows closely behind, representing 34.6%, while ShopeeFood and Lalamove constitute 14.1 and 9.8%, respectively. A smaller percentage, approximately 1.0%, falls under other platforms such as PopMeals and AirAsia. In terms of gender distribution, the majority of food delivery riders are males, constituting 92.7% of the sample, while female riders represent a smaller proportion at 7.3%. The age group of 18 to 24



**Table 1** Result of multicollinearity test using variance inflation factor (VIF)

Attitude	Subjective norm	Perceived behavioural control	Behavioural intention
1.284	1.407	1.606	1.342

years old dominates, comprising 33.7% of the food delivery riders, followed closely by the 25 to 29 years old category at 29.8%. The age groups of 30 to 34 years old, 35 to 39 years old, and 40 to 44 years old represent 20.5, 8.3, and 6.8%, respectively. a smaller percentage, approximately 1.0%, falls within the age bracket of 45–49.

As for marital status, most food delivery riders are single, making up 55.1% of the sample, while married riders form the second-largest group at 40.0%. A smaller percentage of approximately 4.9% falls under the divorce category. Regarding educational qualifications, most food delivery riders have completed SPM or its equivalent, constituting 66.3% of the sample. Following this, riders with STPM/Diploma/Certificate make up 21.5%, and those with a Bachelor's Degree represent 10.2%. A smaller percentage, approximately 0.5%, has attained a Master's Degree and above. Finally, most food delivery riders have no dependents, accounting for 54.6% of the sample, while those supporting 1 to 3 dependents represent 34.6%. Riders supporting 4 to 6 dependents constitute 10.2%, and a tiny fraction, approximately 0.5%, supports seven dependents and above.

## 4.2 Data Analysis

This study utilises two statistical software packages: IBM SPSS Statistics and SmartPLS. IBM SPSS Statistics was employed for descriptive analysis, while SmartPLS was chosen to evaluate the study's measurement and structural model [54] due to its alignment with the research objectives. The data were confirmed to be not normally distributed by WebPower statistical power analysis [55], as indicated by Mardia's multivariate skewness ( $\text{Skewness} = 5.316 > 2$ ) and multivariate kurtosis ( $\text{Kurtosis} = 40.858 > 7$ ). Therefore, SmartPLS was deemed suitable for this study. As this study relies on a single source, it is essential to consider the potential common method variance (CMV) issue [56–59]. Moreover, it was essential to assess multicollinearity. Table 1 displays the results of the multicollinearity test using the variance inflation factor (VIF). All VIF values were lower than 3.3, indicating this study's absence of CMV issues [59–61].

## 4.3 Measurement Model

In the initial stage of the analysis, the measurement model was employed to establish how latent constructs are measured through observed variables. This step

must be satisfied before evaluating the structural model [62–64]. The reflective measurement model is assessed based on four primary criteria, including outer loadings, composite reliability (CR), average variance extracted (AVE), and heterotrait-monotrait (HTMT) ratio. Firstly, to determine the significance of each indicator, the outer loadings should meet a cut-off value of 0.50 or higher [63, 65]. Table 2 presents the outer loadings for all indicators in this study, ranging from 0.525 to 0.871, indicating that all indicators were retained in the measurement model for further analysis. Moreover, composite reliability [66] is a primary measure of internal consistency reliability. The composite reliability was determined to assess the discriminant validity, and the reliability values between 0.70 and 0.90 are considered satisfactory to good [63]. In this study, all constructs achieved composite reliability values exceeding the cut-off 0.7: attitude (0.935), subjective norm (0.871), perceived behavioural control (0.880), and behavioural intention (0.878). Furthermore, convergent validity ensures that multiple indicators effectively measure the same constructs [63, 67, 68]. The minimum acceptable AVE is 0.50, indicating that the construct explains 50% or more of the indicators' variance, which constitutes the construct [62, 63, 69]. The analysis conducted in this study reveals that all the AVE values presented in Table 2 exceed the recommended threshold of 0.50: attitude (0.704), subjective norm (0.581), perceived behavioural control (0.598), and behavioural intention (0.598). Therefore, these findings demonstrate that the measurement model exhibited sufficient convergent validity.

Finally, to establish the discriminant validity, this study used the Heterotrait-Monotrait Ratio (HTMT) criterion, and the HTMT value should be below 0.85 [63, 70, 71]. As indicated in Table 3, all HTMT values meet the criterion for discriminant validity. It can be concluded that the measurement model demonstrates satisfactory discriminant validity. Hence, it is suitable to proceed with parameter estimation for the structural model.

#### **4.4 Structural Model**

The structural model was employed in the second stage of the analysis procedure. At this stage, 10,000 bootstrapping with a 95% confidence interval was applied [63, 71]. Table 4 indicates that only perceived behavioural control significantly influences food delivery riders' intention to participate in retirement planning schemes ( $\beta = 0.442$ ;  $t = 5.373$ ;  $p = 0.000$ ), thus supporting hypothesis H3. Conversely, attitude ( $\beta = 0.108$ ;  $t = 1.494$ ;  $p = 0.135$ ) and subjective norm ( $\beta = 0.055$ ;  $t = 0.819$ ;  $p = 0.413$ ) do not significantly influence food delivery riders' intention to participate in retirement planning schemes, leading to the rejection of hypotheses H1 and H2. Furthermore, the study includes the determination coefficient ( $R^2$ ) and effect size ( $f^2$ ) to measure the strength of the relationships. The  $R^2$  value for behavioural intention was 0.274, indicating that the combination of constructs between attitude, subjective norm, and perceived behavioural control explained 27.4% of the variation in food delivery riders' intention to participate in retirement planning schemes. Meanwhile,

**Table 2** Results summary for the reflective measurement model

Construct	Item	Statement	Loading	CR	AVE
Attitude (ATT)	ATT1	I think participating in retirement planning schemes is a good thing to do	0.817	0.935	0.704
	ATT2	I think participating in retirement planning schemes is beneficial	0.815		
	ATT3	I think participating in retirement planning schemes is valuable	0.864		
	ATT4	I think participating in retirement planning schemes is a wise idea	0.869		
	ATT5	I think participating in retirement planning schemes is useful	0.861		
	ATT6	I would be happy if I participated in retirement planning schemes	0.809		
Subjective norm (SN)	SN1	People who influence my decision think I should participate in retirement planning schemes	0.525	0.871	0.581
	SN2	People who are important to me think I should participate in retirement planning schemes	0.749		
	SN3	People whose opinions I value think I should participate in retirement planning schemes	0.807		
	SN4	People who are close to me think I should participate in retirement planning schemes	0.810		
	SN5	People who influence my behaviour think I should participate in retirement planning schemes	0.871		
Perceived behavioural control (PBC)	PBC1	I could participate in retirement planning schemes for financial preparation after retirement	0.815	0.880	0.598
	PBC2	Participating in retirement planning schemes is entirely within my control	0.815		
	PBC3	Whether or not to participate in retirement planning schemes is mostly up to me	0.624		
	PBC4	I have the resources (capital, information, etc.) necessary to participate in retirement planning schemes	0.806		

(continued)

**Table 2** (continued)

Construct	Item	Statement	Loading	CR	AVE
	PBC5	I have the ability (skills, understanding, etc.) necessary to participate in retirement planning schemes	0.787		
Behav- ioural intention (BI)	BI1	I intend to participate in retirement planning schemes in the near future	0.691	0.878	0.592
	BI2	I am likely to choose retirement planning schemes in the future	0.735		
	BI3	I expect to participate in retirement planning schemes	0.820		
	BI4	I would like to participate in retirement planning schemes	0.750		
	BI5	Given the chance, I expect to participate in retirement planning schemes in the future	0.842		

**Table 3** Hetrotrait-monotrait ratio (HTMT)

	ATT	BI	PBC	SN
Attitude (ATT)				
Behavioural intention (BI)	0.329			
Perceived behavioural control (PBC)	0.434	0.612		
Subjective norm (SN)	0.475	0.354	0.571	

to measure the effect size, the study used Cohen [72] and Hair et al. [63] guidelines:  $f^2 \geq 0.02$  (small),  $f^2 \geq 0.15$  (medium), and  $f^2 \geq 0.35$  (large). The analysis shows that attitude and subjective norm have a small effect size, with  $f^2$  values of 0.013 and 0.03, respectively. On the other hand, perceived behavioural control has a medium effect ( $f^2 = 0.196$ ) on food delivery riders' intention to participate in retirement planning schemes.

**Table 4** Summary of hypothesis testing

Hypothesis	$\beta$	SE	BCI LL	BCI UL	t-value	pvalue	$R^2$	$f^2$	Decision
H1: ATT $\rightarrow$ BI	0.108	0.073	-0.029	0.248	1.494	0.135	0.274	0.013	Not supported
H2: SN $\rightarrow$ BI	0.055	0.067	-0.077	0.181	0.819	0.413		0.003	Not supported
H3: PBC $\rightarrow$ BI	0.442	0.082	0.265	0.586	5.373	0.000		0.196	Supported

Note: This study used a 95% confidence interval with a bootstrapping of 10,000

## 5 Conclusion

This study investigates the significant influence of attitude, subjective norm and perceived behavioural control on food delivery riders' intention to participate in retirement planning schemes, using a theory of planned behaviour (TPB). The conceptual framework was evaluated using a partial least square (PLS) test on 205 full-time food delivery riders in Klang Valley, Malaysia. According to the statistical results from this study, only perceived behavioural control significantly influences food delivery riders' intention to participate in retirement planning schemes, thus supporting hypothesis H3. Conversely, attitude and subjective norm do not significantly influence food delivery riders' intention to participate in retirement planning schemes, leading to the rejection of hypotheses H1 and H2. In addition to that, the  $R^2$  value for behavioural intention explained 27.4% of the variation in food delivery riders' intention to participate in retirement planning schemes. The analysis also shows that attitude and subjective norm have a small effect size, while perceived behavioural control has a medium effect size on food delivery riders' intention to participate in retirement planning schemes.

Furthermore, this study has several implications. Malaysian government might focus on the awareness of food delivery riders' retirement savings, particularly for young and middleaged adults. It is encouraged by providing retirement training or seminars, roadshows, campaigns, and intervention programmes. Second, financial advisors might consider establishing their practices to be family-oriented by encouraging food delivery riders to bring their spouses, parent, relatives, friends, and others. This practice can provide better guidance concerning retirement savings. In addition, financial advisors are more capable of assessing and advising the appropriate retirement funds needed for their clients after identifying clients' retirement goals. Finally, food delivery riders must have an effort to plan their investments and spending. Having sufficient funds for post-retirement expenditures might ease the financial burden during retirement.

For further studies, it is advised to consider sampling a more varied workforce that reflects the Malaysian population. To broaden the study context, this paradigm can examine food delivery riders' intentions to participate in personal financial planning, such as investment and insurance planning. Not to mention, more study is needed to explore this construct's conceptual implications and quantification.

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# Analysis of Brand Equity to Assist the Preparation of Corporate Strategy in the Project Division of PT XYZ



Suharno and Tatang Akhmad Taufik

**Abstract** Given the immense market potential, presence of global competitors, and intensifying competition, it is crucial to implement the right corporate strategy. The aim of this research is to analyze the factors that have a significant influence on the paint brand, assess the acceptance of PT XYZ's paint brand by project stakeholders in Indonesia, and provide recommendations for developing a company strategy. The initial stage involves analyzing the company's Business Model Canvas (BMC) based on nine fundamental principles that facilitate systematic thinking. Subsequently, the study analyzes the impact of brand equity dimensions on brand equity using the Aaker Model and the 7P marketing mix (Product, Place, Price, Promotion, People, Process, and Physical Evidence). The research utilizes non-probability sampling, specifically purposive sampling, with a sample size of 282 respondents who have utilized the company's sales and after-sales services. The questionnaire data obtained is analyzed using Smart PLS-3. The research findings indicate that brand equity, perceived quality, and brand associations significantly influence brand equity. Additionally, Process, Physical Evidence, Place, Price, and Product indirectly impact brand equity. To enhance brand awareness, increase brand loyalty, improve technical knowledge and salesmanship, and optimize supply chain management, it is recommended that the company evaluates and enhances its promotional programs.

**Keywords** Business model canvas (BMC) · Marketing mix 7P · Brand equity

## 1 Introduction

With enormous natural resource potential and good management, it will create added value that is beneficial to the Indonesian people's economy, the national construction start value for building projects is estimated to increase more in 2023 by IDR 175.49

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trillion or 10.13% compared to 2022, while the civil construction value will slightly increase by 1.31% in 2023 with a value of IDR 157.46 trillion [1].

In 2022, the potential for paint materials in Indonesia is very large and plays an important role in the world of development in Indonesia. There are 150 companies, consisting of 92 Domestic Capital Companies, 34 Foreign Capital Companies (PMA) and 24 Small and Medium *Industries* (IKM). The paint industry absorbs a workforce of more than 36,000 people with new production utilities up to 73% of the installed production investment. Its installed production capacity is 1,500,000 MT and the current need for paint is 1,100,000 MT / year. There are 67 companies that are members of the Indonesian Paint Manufacturers Association (APCI). So that there are various brands of paint circulating in the Indonesian market today, including foreign brands as well as local brands.

In recent years, PT Avia Avian Tbk has been aggressively increasing its production capacity from 2021 until now. They are also preparing a new factory in Cirebon with a capacity of 225,000 metric tons. PT Propan Raya has constructed a new factory since 2017 to increase production from 100,000 metric tons to 200,000 metric tons. In 2023, PT AkzoNobel will increase its production capacity by 40% compared to the previous year. Meanwhile, Jotun Indonesia has increased its production capacity to 100,000 metric tons in 2022.

Brand management aims to build a strong, resilient, and unique brand [2], creating a strong brand identity in the minds of consumers. The strength of a brand lies in what customers have learned, felt, seen, and heard about the brand over time, essentially what is embedded in their minds and hearts [3]. A strong brand becomes the preferred choice for consumers when making purchasing decisions [4, 5]. Understanding the measurement of brand equity and investing in its development can create a competitive barrier and lead to brand assets [6], playing a strategic role in guiding Brand Managers to gain a competitive advantage and make informed management decisions [7]. Defines brand equity as a set of brand-related assets and liabilities associated with the brand name, symbol, and other attributes that contribute to the increase or decrease in value for the company's products or services and/or its customers [8].

PT XYZ undoubtedly still survives and grows, but there is a need to increase the utility of its large production capacity by improving sales volume and capturing a higher market share in Indonesian projects, currently standing at only around 9.78%. With the continuously increasing market potential, the emergence of world-class competitors with well-known brands, and the intensifying competition in the market, coupled with the lack of a comprehensive and exploratory evaluation of specific strategies in the past 10 years, it becomes necessary to evaluate the brand's strength or brand equity from the customers' perspective. Problem identification and literature study are conducted first. Next, determining the research model and variables, formulating hypotheses, collecting data and questionnaires, processing and analyzing the data, discussing the results and their managerial implications, drawing conclusions, and providing recommendations for this study. The results of this analysis will provide feedback on the market's acceptance of the brand, offering in-depth insights that can be utilized to plan strategies or benchmark against existing competitors' activities.

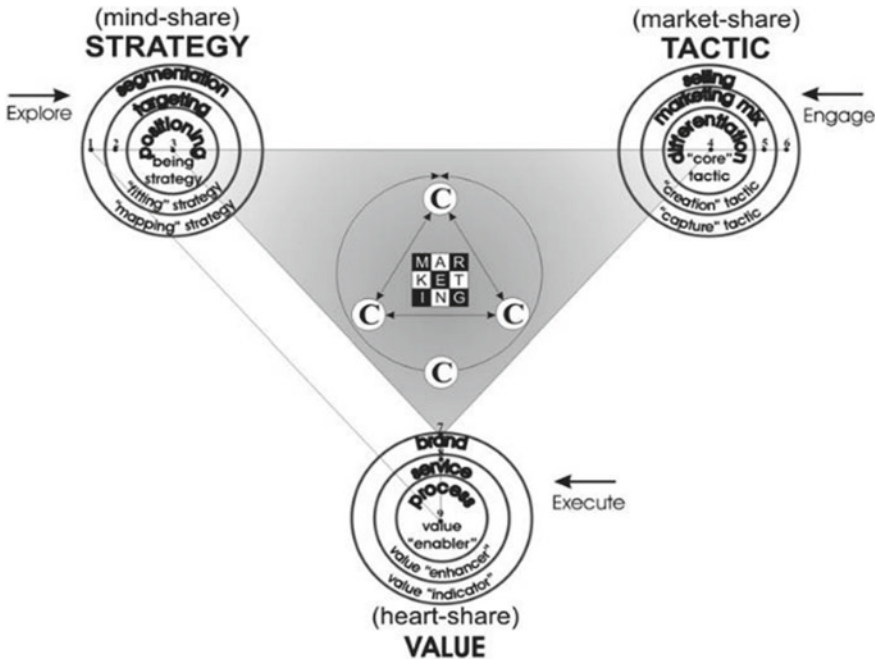
## 2 Literature Review

Turón (2022) demonstrates that a business model not only presents how a company operates but can also be used to develop monetization plans. Additionally, a business model allows companies to identify their own position and existing market niches, define target customers, plan product or service portfolios, select sales methods and channels, and collaborate with third-party manufacturers in a complex and highly competitive environment. The Business Model Canvas (BMC) serves as a visual tool to assist designers, business practitioners, entrepreneurs, and managers in business or nonprofit organizations to easily create new strategic alternatives for the company [9].

There are changes that are significantly influenced by various factors, such as technology shaping new consumer behaviors. Consumer behavior refers to the actions involved in using, evaluating, and consuming products and services in order to satisfy their needs [1]. One of the earliest and most widely used frameworks to describe the customer journey is AIDA (attention, interest, desire, action). Derek Rucker from Kellogg School of Management offers a modification to AIDA called the 4 A's: aware, attitude, act, and act again. This model directly depicts the funnel through which the learning process about a brand occurs (aware), forming a liking or disliking toward a brand (attitude), making a purchase decision (act), and deciding to repurchase (act again) [10]. However, with the emergence of new consumers, they may skip the 4 A's process and directly make a purchase (action). In the era of high connectivity and information openness, loyalty can lead to advocacy for a brand. As loyal supporters take risks to recommend a specific brand, they are also more likely to continue purchasing that brand in the future [10]. Based on this experience, the 4 A's have been rewritten as the 5 A's.

Marketing encompasses nine elements that can be grouped into three main categories: strategy (segmentation, targeting, positioning), tactics (selling, marketing mix, differentiation), and value (brand, service, process) [11]. The nine elements grouped into three categories are clearly shown in Fig. 1, which includes strategy, tactics, and value.

Marketing strategy that integrates the elements of product, place, promotion, and price comprehensively [12]. The theory of Marketing Mix 4Ps has further developed and been used worldwide by both small and large businesses. To design marketing strategies, marketers identify target markets and create a marketing mix to satisfy consumers in those markets [13]. The marketing mix encompasses product characteristics, distribution, promotion, and pricing (4Ps) designed to create mutually beneficial exchanges with the target market. Marketing managers can control each part of the marketing mix, and strategies for all four elements should be combined to achieve optimal results. According to [14], tangible products or services use the conventional 4Ps model, while the service-focused sector uses the 7Ps method to meet the needs of service providers' consumers. The additional 3Ps include People, Process, and Physical Evidence.



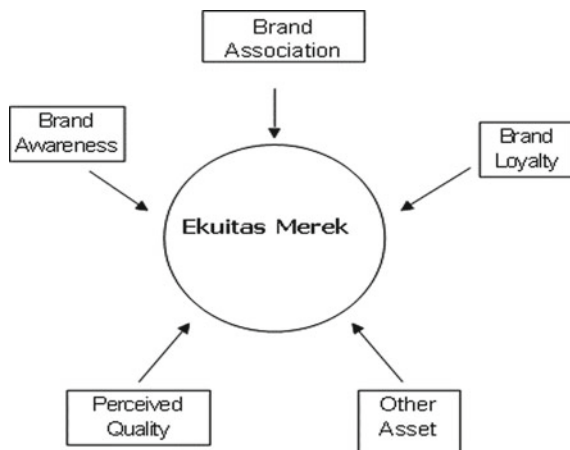
**Fig. 1** Nine (9) element marketing strategy [11] (Source Kotler et al.)

Figure 2, brand equity is created and evaluated through five dimensions: brand awareness, brand loyalty, brand associations, perceived quality, and other assets [2, 8]. The first four dimensions are customer-oriented, while the last dimension is related to the market in which the company operates. Keller (1993) states that when people form information about a brand, the level of involvement determines the strength of brand associations in their minds. Brand awareness influences consumer decision-making by affecting the strength of these brand associations. Keller further argues that positive brand image and brand awareness have a significant impact on marketing activities related to the brand’s products. Moreover, brand associations involve the characteristics, benefits, and perceptions that can be retained in customers’ minds once brand awareness is established [3, 15].

Perceived quality refers to customers’ evaluation of a product or service as superior to alternative offerings [2, 16]. According to [17], perceptions of quality can encompass two main aspects: “product quality” and “service quality.” They suggest that perceptions of product quality consist of six elements, including performance, convenience, product specifications, customer support, purchasing process quality, usability, aesthetic design, and differentiation.

Brand loyalty is an important indicator for measuring the success of a brand, determining whether customers are brand-focused (Kim and Kim 2004), and plays a significant role in competitive markets (Singh et al. 2015). Loyal customers are less likely to switch to competitors solely based on price, and they also make more

**Fig. 2** Brand equity.  
(Source [2])



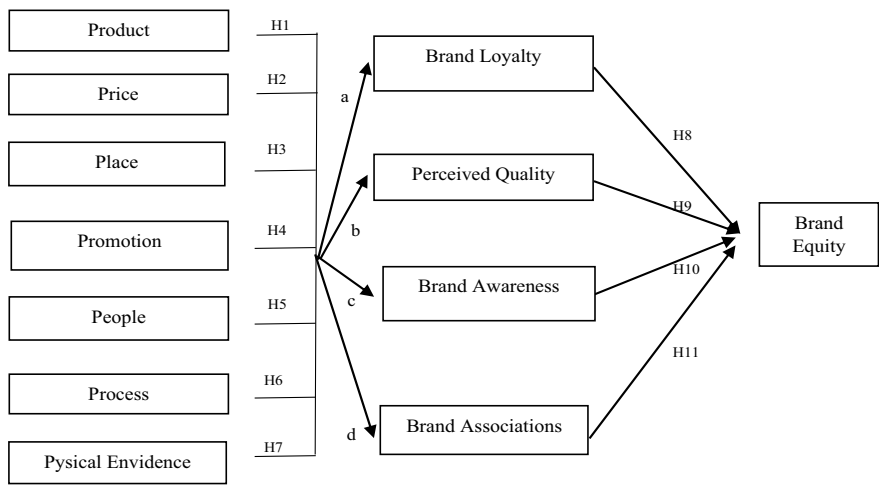
frequent purchases of the brand's products compared to other brands, leading to cost savings and customer retention.

According to [18], brand associations are anything that can be linked to a brand in the minds of customers. Brand image is the perception held by consumers about a brand, which is reflected in the brand associations they hold in their minds [19]. The terms brand image and brand associations are often used interchangeably (Hsu et al., 2011). Brand associations are the concepts that connect consumer memories to a specific brand name [19, 20]. Consumers often base their purchase decisions on their perception of a company's brand image (Kim and Kim, 2005). When consumers have a positive brand image, they usually associate the brand with benefits and positive expectations of its quality [21].

### 3 Methods

This research was conducted for one semester from February to June 2023. It involved a qualitative research method that examined the strategies used by PT XYZ, as well as a quantitative research method that utilized a questionnaire with a Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Data processing was performed using SEM PLS 3.2.9. The research process included determining the research model and variables, formulating hypotheses (Fig. 3), data and questionnaire collection, data processing and analysis, discussing the results of the methods, reviewing the Business Model Canvas (BMC), drawing conclusions, and providing recommendations for the study.

The researcher selected samples based on research knowledge. The sample was chosen based on specific criteria, including project owners (Managers/Decision-Makers), contractors (Project/Site Managers), consultants (Doc. Spec/Team Leaders), and Paining Contractors (Owners/Team Leaders) who purchased



**Fig. 3** The conceptual framework of the research

products in the Jabodetabek, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Bandar Lampung, Palembang, Medan, and Balikpapan regions. According to Table 1, the questionnaire data was distributed online through the Google Forms application or provided directly to the respondents, with the potential involvement of a survey team from the company.

Primary information was obtained through direct interviews with internal personnel of PT XYZ and Focus Group Discussions with the Management Division. Secondary information was obtained from construction associations, institutions involved in construction, other construction stakeholders, as well as seminar literature, websites, and colleagues from PT XYZ. Meanwhile, the indicators and question items were based on references from several international journals with similar research. The minimum sample size should be 10 times the maximum number of arrows pointing to latent variables in the PLS path model (Hair, et al. 2017), resulting in 282 sample respondents. The respondents were individuals working on High-Rise Buildings, Industrial Buildings, Infrastructure, and Residential Real Estate projects with potential coating purchase values exceeding 150 million Indonesian Rupiah.

**4 Results**

**4.1 Respondent Data**

The data consists of 282 respondents, with 228 males (81%) and 54 females (19%). The respondents are project actors involved in various types of projects: 113 (40%) in high-rise projects, 75 (27%) in industrial projects, 65 (23%) in residential projects, 27

**Table 1** Question items and references

Indicator		Question items	Reference
Products	1	The company provides after-sales service ( <i>after sales services</i> )	Akroush et al. (2006)
	2	The company accepts suggestions from customers in product development	
	3	The company sells specific products that are not available in competitors	
	4	The company provides information if there is a product innovation	
	5	The company provides various types of products	
The price	1	Products are sold at a reasonable selling price	Venkatesh et al., 2012, [6]
	2	In general, the price given is according to my wishes	
	3	The prices given are commensurate with the quality of the services provided	
	4	The prices provided are competitive compared to competing products	
The distribution/place	1	The company has a branch in my work area	[6]
	2	Products are available in various distribution channels (Branch, Show Room, Modern Market Building and Building Store)	
	3	The number of branches is greater than its competitors	
	4	Easy to find company branch locations according to my needs	
The promotion	1	The advertising campaign looks creative, compared to competing brands	[6]
	2	In general, I can feel the quality of the ads is good	
	3	The company cares about cultural activities and program sponsors (CSR PUPR, PEMDA, IAI, Inkindo, Rei etc.)	

(continued)

**Table 1** (continued)

Indicator		Question items	Reference
	4	The company carries out promotions at exhibitions, conferences, press releases, word of mouth, and technical consultants	
	5	The company actively carries out promotional activities	
People	1	The staff can provide the required services quickly	Akroush et al. (2006)
	2	The staff often had time to answer my questions	
	3	The staff is well trained and knows how to handle customers	
	4	The staff treated me as a valued customer	
	5	The staff is often willing to provide services to me	
Physical evidence	1	The staff has a good appearance	Akroush et al. (2006)
	2	Company facilities are generally good (office, waiting room, meeting room, etc.)	
	3	The company uses modern technological equipment (Factory, Laboratory, Equipment, warehouse etc.)	
	4	The overall atmosphere of the company facilities is comfortable	
Process	1	The procedure for getting the required services is easy	Akroush et al. (2006)
	2	Companies often provide services as promised	
	3	The company provides services to customers properly	
	4	The company maintains the confidentiality of customer privacy data	
	5	The company took my complaint seriously	
	6	The company is committed to what it offers to customers	

(continued)



**Table 1** (continued)

Indicator		Question items	Reference
Brand loyalty	1	I am satisfied with Propan Company	Anderson and Sullivan (1993), Oliver (1999); Kim, Park, and Jeong (2004)
	2	I have confidence in the Propan company	
	3	I will purchase Propan again in the future	
	4	would recommend Propan to others	
Perceived quality	1	Company <b>high credibility</b> when compared to its competitors	[6]
	2	I feel the quality provided <b>consistent</b>	
	3	There is <b>real reliability</b> in Company services	
	4	The company provides services that <b>superior</b>	
	5	Possible with the Company <b>beneficial</b> is high	
Brand awareness	1	I know Propan	[6]
	2	It's easy to recognize the name Propan in my mind	
	3	It is easy to recognize the Propan name among other competing brands	
	4	Several characteristics of Propan come to mind quickly	
Brand associations	1	I can quickly remember the Propan symbol/logo	[6]
	2	I know what Propan is like	
	3	Reliable local paint company	
	4	An innovative company in product development	
Overall brand equity	1	It makes sense to buy it over other brands, even if they are the same	[6]
	2	Even if other brands have the same features as Propan, I would prefer to buy Propan	
	3	If there was another brand that was as good as Propan, I would prefer to buy Propan	
	4	If other brands are no different at all from Propan, it seems better to buy Propan	

(9%) in infrastructure projects, and 2 (1%) in combined high-rise residential projects. These construction-related jobs require special skills, high project mobility, high stamina, tight deadlines, flexible field demands, overtime work, and multitasking abilities. Modern construction work requires a high level of specific skills, which is reflected in the respondents' educational backgrounds. Among the respondents, 85.4% have a bachelor's degree, including 5 respondents with a D3 degree, 203 with an S1 degree, 32 with an S2 degree, and a few with an S3 degree. The majority of respondents (224, 79.4%) have been working in the construction industry for more than 5 years, which correlates with their level of expertise and skills in their respective roles. The company is based in the Jabotabek area, with 160 respondents located there, while 122 are spread across other regions. Among them, there are 31 respondents from West Java, 26 from Bali, 23 from Central Java and Yogyakarta, 21 from East Java, 16 from Sumatra, 4 from Kalimantan, and 1 from Sulawesi. In several regions, there are local project actors actively involved in local development, including project owners, consultants, contractors, and painting contractors based in those areas.

## 4.2 Data Analysis

The analysis of the measurement model (outer model) in the initial stage involved testing convergent validity. In this analysis, there was a value for the third question in the product construct (PD3) with a loading factor  $< 0.7$ , which was 0.601. The data for this value was removed, and the model was run again, resulting in all loading factors being above 0.7. Therefore, the loading factors have met the requirements for good convergent validity.

Next, a test of convergent validity was conducted by evaluating the Average Variance Extraction (AVE) values. If the values are greater than or equal to 0.50 and higher, it indicates a sufficient level of convergent validity. A higher AVE value indicates a better ability to explain the level of variation in a construct gathered from its indicators. According to the data in Table 2, the AVE value is  $> 0.5$ , so it can be concluded that the convergent validity test is appropriate.

The analysis continued with a test of discriminant validity, which involved evaluating the cross-loading values and correlations between latent constructs. In Table 3, it can be observed that the loading values of the Brand Association (BA) construct with its indicators, namely  $BA1 = 0.828$ ,  $BA2 = 0.873$ ,  $BA3 = 0.859$ , and  $BA4 = 0.876$ , are higher than the cross-loading values of other indicators with the Brand Association (BA) construct, which are  $BAw1 = 0.636$ ,  $BAw2 = 0.635$ ,  $BAw3 = 0.672$ , and  $BAw4 = 0.719$ . After checking that the correlation (loading) values of the construct with its indicators are higher than the cross-loading values, it indicates that the construct (latent variable) predicts the size of the indicators in its block better than the size of other blocks, confirming that the data meet the criteria for discriminant validity based on the evaluation of cross-loading values.

**Table 2** The values of AVE, Cronbach's alpha, and composite reliability

	Average variance extracted (AVE)	Cronbach's alpha	Composite reliability
Product (PD)	0.615	0.791	0.865
Price (PC)	0.711	0.865	0.908
Place (PL)	0.620	0.795	0.866
Promotion (PR)	0.747	0.915	0.937
People (PP)	0.825	0.947	0.959
Physical evidence (PE)	0.775	0.902	0.932
Process (PS)	0.801	0.950	0.960
Brand loyalty (BL)	0.850	0.941	0.958
Perceived quality (PQ)	0.787	0.932	0.949
Brand awareness (BAw)	0.750	0.888	0.923
Brand association (BA)	0.738	0.882	0.919
Brand equity (BE)	0.810	0.922	0.944

Another way to test discriminant validity is by comparing the square root of the AVE values for each construct with the correlations between constructs. In the data shown in Table 4, the square root of the AVE value for Brand Associations (BA) is 0.859. The correlation values of BA with each construct are as follows: BAw 0.769, BE 0.779, BL 0.748, PC 0.622, PD 0.606, PE 0.738, PL 0.642, PP 0.617, PQ 0.811, PR 0.627, and PS 0.709. If the square root of the AVE value for each construct is greater than the correlation between the construct and other constructs, then the model has sufficient discriminant validity.

The next step is to evaluate the Outer Model by assessing the measurement consistency (reliability) using Composite Reliability. Reliability tests are used to demonstrate the accuracy, consistency, and precision of the instrument in measuring constructs. The reliability of a construct can be assessed using two methods: Cronbach's Alpha and Composite Reliability. High reliability (values > 0.7) indicates that the questionnaire items have high consistency and reliability. According to Table 2, all constructs measured have Cronbach's Alpha and Composite Reliability scores above 0.7, indicating high reliability consistency in the study.

The Structural Model is evaluated based on the criteria of R-Square values and significance levels. R-Square values are used to measure the relationships between latent variables (constructs). Referring to Table 5, brand equity has an R-Square value of 0.752, meaning that 75.2% of the research model can be explained by the dimensions of brand equity (brand loyalty, perceived quality, brand awareness, and brand associations). The remaining 24.8% can be explained by other variables outside the scope of the study. An R-Square value of 75.2% for brand equity falls into the category of strong influence. The individual R-Square values for brand loyalty, perceived quality, brand awareness, and brand associations are 0.707, 0.721,

**Table 3** The values of cross loading indicators for the test of discriminant validity

	BA	BAw	BE	BL	PC	PD	PE	PL	PP	PQ	PR	PS
BA1	<b>0.828</b>	0.657	0.640	0.561	0.550	0.503	0.620	0.574	0.515	0.639	0.551	0.564
BA2	<b>0.873</b>	0.692	0.670	0.606	0.548	0.491	0.643	0.511	0.491	0.715	0.527	0.558
BA3	<b>0.859</b>	0.631	0.677	0.698	0.501	0.504	0.601	0.540	0.525	0.708	0.501	0.628
BA4	<b>0.876</b>	0.662	0.689	0.702	0.538	0.582	0.669	0.580	0.586	0.722	0.575	0.684
BAw1	0.636	<b>0.817</b>	0.511	0.576	0.487	0.493	0.552	0.515	0.511	0.599	0.421	0.514
BAw2	0.635	<b>0.875</b>	0.627	0.636	0.483	0.547	0.557	0.579	0.524	0.616	0.482	0.565
BAw3	0.672	<b>0.902</b>	0.650	0.584	0.508	0.493	0.573	0.579	0.540	0.624	0.518	0.577
BAw4	0.719	<b>0.868</b>	0.627	0.594	0.496	0.512	0.613	0.548	0.549	0.641	0.499	0.609
BE1	0.776	0.663	<b>0.906</b>	0.715	0.648	0.569	0.656	0.636	0.569	0.804	0.590	0.713
BE2	0.675	0.655	<b>0.899</b>	0.696	0.579	0.556	0.604	0.584	0.546	0.752	0.564	0.664
BE3	0.651	0.593	<b>0.907</b>	0.620	0.567	0.553	0.604	0.551	0.477	0.748	0.597	0.618
BE4	0.694	0.604	<b>0.887</b>	0.676	0.611	0.538	0.579	0.561	0.565	0.749	0.536	0.698
BL1	0.664	0.555	0.682	<b>0.905</b>	0.617	0.583	0.630	0.568	0.663	0.760	0.531	0.746
BL2	0.670	0.630	0.692	<b>0.937</b>	0.592	0.652	0.652	0.604	0.610	0.754	0.538	0.733
BL3	0.740	0.703	0.733	<b>0.923</b>	0.576	0.618	0.669	0.631	0.655	0.790	0.534	0.736
BL4	0.682	0.652	0.669	<b>0.922</b>	0.576	0.665	0.683	0.605	0.652	0.726	0.540	0.754
PC1	0.464	0.466	0.482	0.523	<b>0.846</b>	0.556	0.478	0.576	0.567	0.486	0.509	0.539
PC2	0.464	0.435	0.555	0.447	<b>0.806</b>	0.413	0.500	0.486	0.466	0.485	0.454	0.528
PC3	0.575	0.509	0.577	0.585	<b>0.855</b>	0.525	0.541	0.576	0.615	0.609	0.504	0.571
PC4	0.575	0.503	0.632	0.588	<b>0.863</b>	0.476	0.542	0.503	0.521	0.621	0.509	0.604
PD1	0.407	0.411	0.381	0.483	0.400	<b>0.712</b>	0.428	0.425	0.371	0.438	0.312	0.455
PD2	0.547	0.489	0.550	0.602	0.526	<b>0.809</b>	0.550	0.564	0.512	0.567	0.477	0.593
PD4	0.440	0.426	0.472	0.539	0.422	<b>0.804</b>	0.520	0.472	0.399	0.531	0.549	0.506
PD5	0.494	0.519	0.513	0.511	0.477	<b>0.808</b>	0.536	0.526	0.510	0.532	0.452	0.560
PE1	0.673	0.667	0.604	0.664	0.592	0.584	<b>0.799</b>	0.630	0.770	0.662	0.488	0.742
PE2	0.641	0.531	0.595	0.601	0.530	0.542	<b>0.917</b>	0.533	0.527	0.673	0.614	0.692
PE3	0.633	0.585	0.591	0.600	0.489	0.567	<b>0.884</b>	0.567	0.568	0.646	0.614	0.705
PE4	0.641	0.537	0.596	0.639	0.535	0.592	<b>0.916</b>	0.545	0.526	0.663	0.608	0.722
PL1	0.529	0.560	0.469	0.484	0.479	0.464	0.480	<b>0.790</b>	0.554	0.519	0.451	0.460
PL2	0.435	0.453	0.459	0.548	0.484	0.582	0.472	<b>0.771</b>	0.489	0.477	0.480	0.526
PL3	0.424	0.463	0.482	0.349	0.441	0.370	0.494	<b>0.724</b>	0.405	0.483	0.537	0.467
PL4	0.608	0.539	0.619	0.641	0.581	0.574	0.591	<b>0.857</b>	0.655	0.654	0.587	0.638
PP1	0.511	0.479	0.495	0.610	0.566	0.520	0.575	0.619	<b>0.884</b>	0.561	0.526	0.639
PP2	0.548	0.545	0.544	0.630	0.585	0.504	0.566	0.620	<b>0.909</b>	0.590	0.505	0.645
PP3	0.566	0.562	0.521	0.631	0.599	0.518	0.652	0.614	<b>0.918</b>	0.581	0.510	0.661
PP4	0.585	0.590	0.576	0.649	0.611	0.518	0.643	0.609	<b>0.921</b>	0.619	0.496	0.689
PP5	0.585	0.601	0.583	0.656	0.572	0.554	0.667	0.625	<b>0.910</b>	0.633	0.499	0.695

(continued)

**Table 3** (continued)

	BA	BAw	BE	BL	PC	PD	PE	PL	PP	PQ	PR	PS
PQ1	0.702	0.684	0.772	0.694	0.533	0.554	0.647	0.633	0.542	<b>0.860</b>	0.564	0.687
PQ2	0.691	0.539	0.708	0.699	0.631	0.536	0.635	0.561	0.524	<b>0.852</b>	0.539	0.658
PQ3	0.676	0.647	0.731	0.692	0.526	0.592	0.630	0.584	0.567	<b>0.877</b>	0.551	0.683
PQ4	0.751	0.647	0.790	0.791	0.618	0.642	0.709	0.616	0.644	<b>0.925</b>	0.621	0.783
PQ5	0.773	0.655	0.763	0.765	0.615	0.609	0.715	0.639	0.635	<b>0.920</b>	0.604	0.747
PR1	0.538	0.480	0.587	0.525	0.479	0.546	0.585	0.597	0.457	0.605	<b>0.884</b>	0.542
PR2	0.529	0.454	0.606	0.512	0.550	0.486	0.599	0.560	0.509	0.598	<b>0.878</b>	0.566
PR3	0.548	0.453	0.552	0.454	0.490	0.427	0.536	0.503	0.419	0.533	<b>0.829</b>	0.457
PR4	0.561	0.527	0.496	0.527	0.494	0.530	0.558	0.566	0.490	0.540	<b>0.838</b>	0.512
PR5	0.535	0.485	0.506	0.491	0.523	0.491	0.574	0.589	0.533	0.531	<b>0.890</b>	0.518
PS1	0.622	0.591	0.664	0.691	0.555	0.584	0.755	0.557	0.651	0.694	0.539	<b>0.879</b>
PS2	0.612	0.558	0.658	0.728	0.599	0.604	0.720	0.586	0.643	0.729	0.526	<b>0.917</b>
PS3	0.656	0.612	0.657	0.735	0.618	0.609	0.744	0.614	0.628	0.731	0.526	<b>0.928</b>
PS4	0.624	0.588	0.664	0.704	0.580	0.606	0.714	0.619	0.616	0.675	0.551	<b>0.861</b>
PS5	0.613	0.566	0.670	0.726	0.577	0.610	0.726	0.573	0.680	0.735	0.525	<b>0.884</b>
PS6	0.679	0.601	0.710	0.738	0.645	0.625	0.721	0.645	0.717	0.747	0.562	<b>0.898</b>

**Table 4** Square root of AVE values and correlations between constructs

	BA	BAw	BE	BL	PC	PD	PE	PL	PP	PQ	PR	PS
BA	<b>0.859</b>											
BAw	0.769	<b>0.866</b>										
BE	0.779	0.700	<b>0.900</b>									
BL	0.748	0.690	0.753	<b>0.922</b>								
PC	0.622	0.570	0.669	0.640	<b>0.843</b>							
PD	0.606	0.590	0.616	0.683	0.585	<b>0.785</b>						
PE	0.738	0.663	0.680	0.714	0.613	0.651	<b>0.880</b>					
PL	0.642	0.642	0.649	0.653	0.635	0.637	0.649	<b>0.787</b>				
PP	0.617	0.613	0.600	0.700	0.646	0.576	0.685	0.679	<b>0.908</b>			
PQ	0.811	0.716	0.849	0.822	0.659	0.662	0.753	0.684	0.658	<b>0.887</b>		
PR	0.627	0.556	0.636	0.582	0.587	0.575	0.660	0.652	0.558	0.650	<b>0.864</b>	
PS	0.709	0.655	0.750	0.805	0.667	0.678	0.816	0.670	0.734	0.804	0.601	<b>0.895</b>

Bold value represents if the P value is smaller than 0.05, then H1 fails to be rejected (has a significant effect)

**Table 5** The value of R-square

	R square
Brand loyal (BL)	0.707
Perceived quality (PQ)	0.721
Brand awareness (Baw)	0.547
Brand associations (BA)	0.628
Brand equity (BE)	0.752

0.547, and 0.628, respectively. These values indicate that the four dimensions have a moderate level of influence.

According to Table 6, in the brand equity dimension, perceived quality has a significant impact on brand equity (H9), and brand associations have a significant impact on brand equity (H11). However, brand loyalty and brand awareness have a positive but non-significant impact on brand equity. Perceived quality has a significant influence of 55.2% on brand equity, while brand associations have an influence of 18.7%.

In the marketing mix, the product has a significant influence on brand loyalty (H1.a), price has a significant influence on brand associations (H2.d), place has a significant influence on brand awareness (H3.d), promotion has a significant influence on perceived quality (H4.b), people have a significant influence on brand loyalty (H5.a), physical evidence has a significant influence on brand awareness (H6.c) and brand associations (H6.d), and process has a significant influence on brand loyalty (H7a) and perceived quality (H7.b).

According to the research conceptual framework in Table 6, the indirect effects can be observed by examining the indirect effects values for the influence between constructs through mediator or intervening variables. In this study, the analysis investigates the indirect effects of the 7P marketing mix elements as latent constructs on brand equity through their dimensions collectively. The aim is to develop marketing strategies in PT XYZ based on the prioritized marketing mix strategies.

The values of indirect effects from the data analysis using the SEM method can be seen in Table 7. With a t-statistic greater than the critical t-value of 1.96 and a p-value less than 0.05, H1 is not rejected (significantly influential). Constructs with p-values below 0.05 have a significant impact on brand equity. In descending order of p-values, the constructs are process (0.000), physical evidence (0.012), place (0.018), price (0.036), and product (0.046), indicating indirect positive and significant effects. The smaller the p-value, the higher the confidence in the significance level. People and promotion have a positive impact but are not significant.

**4.3 Business Model Canvas (BMC)**

A Focus Group Discussion (FGD) was conducted with the Executive Committee and Project Division Team of PT XYZ on July 3rd and 4th, 2023. A review was

**Table 6** The significance test values in SEM-PLS data analysis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Kesimpulan
PD → BL	<b>0.181</b>	<b>0.181</b>	<b>0.062</b>	<b>2.934</b>	<b>0.003</b>	<b>H1.a has a positive and significant effect</b>
PD → PQ	0.088	0.088	0.052	1.692	0.091	H1.b has a positive effect but is not significant
PD → BAw	0.113	0.109	0.079	1.434	0.152	H1.c has a positive effect but is not significant
PD → BA	0.060	0.063	0.068	0.890	0.374	H1.d has a positive effect but is not significant
PC → BL	0.070	0.073	0.061	1.139	0.255	H2.a has a positive effect but is not significant
PC → BAw	0.069	0.075	0.072	0.957	0.339	H2.b has a positive effect but is not significant
PC → PQ	0.103	0.107	0.057	1.800	0.073	H2.c has a positive effect but is not significant
PC → BA	<b>0.127</b>	<b>0.125</b>	<b>0.064</b>	<b>1.992</b>	<b>0.047</b>	<b>H2.d has a positive and significant effect</b>
PL → BL	0.054	0.050	0.062	0.866	0.387	H3.a has a positive effect but is not significant
PL → PQ	0.120	0.116	0.063	1.912	0.056	H3.b has a positive effect but is not significant
PL → BA	0.116	0.119	0.061	1.892	0.059	H3.c has a positive effect but is not significant
PL → BAw	<b>0.209</b>	<b>0.210</b>	<b>0.074</b>	<b>2.820</b>	<b>0.005</b>	<b>H3.d has a positive and significant effect</b>
PR → BL	0.027	0.027	0.060	0.448	0.654	H4.a has a positive effect but is not significant
PR → PQ	<b>0.124</b>	<b>0.123</b>	<b>0.062</b>	<b>2.004</b>	<b>0.046</b>	<b>H4.b has a positive and significant effect</b>

(continued)

**Table 6** (continued)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Kesimpulan
PR → BAw	0.044	0.042	0.075	0.577	0.564	H4.c has a positive effect but is not significant
PR → BA	0.126	0.129	0.067	1.878	0.061	H4.d has a positive effect but is not significant
PP → BL	<b>0.145</b>	<b>0.150</b>	<b>0.072</b>	<b>2.029</b>	<b>0.043</b>	<b>H5.a berpengaruh positif dan significant</b>
PP → PQ	-0.009	-0.007	0.073	0.124	0.902	H5.b has a positive effect but is not significant
PP → BAw	0.107	0.103	0.091	1.172	0.242	H5.c has a positive effect but is not significant
PP → BA	0.015	0.011	0.075	0.198	0.843	H5.d has a positive effect but is not significant
PE → BL	0.036	0.029	0.082	0.441	0.660	H6.a has a positive effect but is not significant
PE → PQ	0.147	0.139	0.092	1.607	0.109	H6.b has a positive effect but is not significant
PE → BAw	0.222	0.215	0.097	2.302	0.022	<b>H6.c has a positive and significant effect</b>
PE → BA	<b>0.328</b>	<b>0.317</b>	<b>0.083</b>	<b>3.955</b>	<b>0.000</b>	<b>H6.d has a positive and significant effect</b>
PS → BL	<b>0.447</b>	<b>0.452</b>	<b>0.080</b>	<b>5.615</b>	<b>0.000</b>	<b>H7.a has a positive and significant effect</b>
PS → PQ	<b>0.407</b>	<b>0.413</b>	<b>0.086</b>	<b>4.714</b>	<b>0.000</b>	<b>H7.b has a positive and significant effect</b>
PS → BAw	0.106	0.115	0.111	0.961	0.337	H7.c has a positive effect but is not significant
PS → BA	0.152	0.161	0.084	1.816	0.070	H7.d has a positive effect but is not significant

(continued)



**Table 6** (continued)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Kesimpulan
BL → BE	0.093	0.088	0.067	1.387	0.166	H8 has a positive effect but is not significant
PQ → BE	<b>0.552</b>	<b>0.551</b>	<b>0.079</b>	<b>6.967</b>	<b>0.000</b>	<b>H9 has a positive and significant effect</b>
BAw → BE	0.097	0.101	0.071	1.362	0.174	H10 has a positive effect but is not significant
BA → BE	<b>0.187</b>	<b>0.189</b>	<b>0.080</b>	<b>2.336</b>	<b>0.020</b>	<b>H11 has a positive and significant effect</b>

Bold value represents if the P value is smaller than 0.05, then H1 fails to be rejected (has a significant effect)

**Table 7** The values of indirect effects in the SEM-PLS data analysis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Kesimpulan
Process (PS) → Brand Equity (BE)	0.305	0.313	0.067	<b>4.526</b>	<b>0.000</b>	<b>H7 has a positive and significant effect</b>
Physical Evidence (PE) → Brand Equity (BE)	0.168	0.158	0.067	<b>2.516</b>	<b>0.012</b>	<b>H6 has a positive and significant effect</b>
Place (PL) → Brand Equity (BE)	0.113	0.112	0.048	<b>2.377</b>	<b>0.018</b>	<b>H3 has a positive and significant effect</b>
Price (PC) → Brand Equity (BE)	0.094	0.098	0.045	<b>2.098</b>	<b>0.036</b>	<b>H2 has a positive and significant effect</b>
Product (PD) → Brand Equity (BE)	0.087	0.086	0.044	<b>2.003</b>	<b>0.046</b>	<b>H1 has a positive and significant effect</b>
Promotion (PR) → Brand Equity (BE)	0.099	0.100	0.051	1.922	0.055	H4 has a positive effect but is not significant
People (PP) → Brand Equity (BE)	0.022	0.020	0.060	0.358	0.721	H5 has a positive effect but is not significant

Bold value represents if the P value is smaller than 0.05, then H1 fails to be rejected (has a significant effect)

Table 8 Business model canvas (BMC PT XYZ)

<b>A. Project stakeholder</b> 1. Project owner 2. Design and construction management consultant (MSO) 3. Main contractor (MSO-regional) 4. Applicator (Regional) <b>B. Government institution</b> 1. Ministry of PUPR 2. Kemenperin 3. LKPP / LPJK <b>C. Raw material supplier</b> <b>D. Association</b> 1. IAI 2. Inkindo 3. ACE 4. ISSC 5. REI <b>E. Testing Institution and Certification Body</b> 1. B4T (PD-PMM) 2. Sucofindo (PD-PMM) 3. GPCI (SCBC) 4. BSN (SCBC-BU PP) <b>F. Media</b> Digital media, BCI Central, Project Community dan Construction media	<b>A. Marketing activities</b> 1. Corporate branding and communication 2. Exhibition 3. Product knowledge sharing 4. Collaboration with university and association <b>B. Specifying activities</b> 1. Product consultancy 2. Pipeline management 3. Spec optimization <b>C. Sales activities</b> 1. Quotation 2. Dealing order 3. Order handling 4. Project supervision 5. Training/ workshop applicator <b>D. Key Account Management</b>	1. Reliable Response to Customer Requirement 2. Reliable Payment Policy 3. After sales service 4. Certification (TKDN, SNI, Green Label, etc.) 5. Original Indonesian company 7. On time delivery/supply 8. Competitiveness 9. Product guarantee 10. Product quality consistency 11. Full range of paint	1. Gathering and product knowledge sharing 2. Sponsorship 3. Business commitment 4. Entertainment 5. Merchandise, Gimmick and Souvenir 6. CSR and city beautification 7. Congratulation	<b>Project segment private:</b> 1. Residential 2. High rise and commercial building 3. Industrial 4. Infrastructure 5. Heavy industry <b>Government project:</b> 1. Ministry of PUPR 2. BUMN 3. Pemda 4. Other minis tries 5. Lembaga Negara
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(continued)

Table 8 (continued)

<b>9. Cost structure</b> Price List = HPP + OPEX* + Net Profit + Cadangan Diskon *OPEX including Operation Cost, Promotion Cost, AR, Inventory	<b>6. Key resources</b> 1. Physical: Project Regional and Branch Office, AMR, PDR 2. Intellectual: Technical Knowledge, Polymer Research Center, RPS 3. Human: a. Internal Organization: MSO, SO, TSR b. Supporting Organization: PD, PM, PMM, SCM, FA, IT c. SCBC Financial: Strong Cash Flow		<b>3. Channels</b> <b>A. Sales Channel:</b> 1. Direct Selling (Project Owner, Applicator, Steel Fabricator) 2. Dealer Project 3. E-catalog <b>B. Communication channel:</b> 1. Online: Webinar, Website, Soc-med, 2. Offline: Product Knowledge Sharing and Gathering, Sponsorship, Exhibition, CSR, Seminar 3. Printed Media: Calendar, Brochure, Color Fashion-Color Card	<b>Channels</b> 1. Applicator 2. Steel fabricator 3. Project owner 4. E-catalog
		<b>5. Revenue stream</b> <b>Project</b> 1. Residential 2. High Rise and commercial building 3. Industrial building 4. Infrastructure 5. Heavy industry	<b>Product</b> 1. APCT 2. CPC1 3. CPC2 4. MPC	

carried out on the existing Business Model Canvas by prioritizing work activities to maintain the influence of several strategies, particularly in the customer segments and value propositions blocks as shown in Table 8. In the customer relationship block, efforts were focused on creating significant impacts through promotional activities and increasing customer loyalty. In the Key Resources block, attention was directed towards people-related aspects, such as technical and salesmanship training. Improvement in the quality of supply chain management was emphasized in the channel block.

A discussion was held with the team of PT XYZ, where the results of this research were discussed to generate useful information and facilitate evaluation, reformulation of strategies, and potential reimplementation. As stated earlier, the objectives of this research are to analyze the factors that significantly influence the PT XYZ paint brand, assess the acceptance of PT XYZ paint brand among project stakeholders in Indonesia, and formulate recommendations to assist in evaluating the company's strategies to achieve its vision and mission. A Focus Group Discussion (FGD) was conducted with the participation of the Executive Committee and Project Division Team of PT XYZ, several recommendations based on the research findings are listed in Table 9.

## 5 Conclusions

Factors that influence brand equity, namely perceived quality and brand associations, have a significant effect on brand equity. Meanwhile, brand loyalty and brand awareness have a positive effect on brand equity but are not significant. The indirect effects of the marketing mix 7P on brand equity indicated that Process, Physical evidence, Place, Price, and Product have a significant impact on brand equity, in descending order of the smallest p-values.

Promotion (with a p-value of 0.055 and t-statistic of 1.922) has a positive effect but is not significant. Corporate promotion activities were evaluated to ensure they are targeted and impactful in terms of the 5W and 1H (who, what, when, where, why, and how). For example, managing the company website, conducting sharing and gathering sessions, providing product application training, and implementing other promotional activities with precise targeting.

People (with a p-value of 0.721 and t-statistic of 0.358) have a positive effect but are not significant. Periodic training sessions for technical knowledge and salesmanship were recommended for the frontliner team of PT XYZ.

The company has made efforts to create a Value Proposition that differentiates it from other brands through its marketing strategy, utilizing the 9 marketing elements listed in the Business Model Canvas (BMC). These efforts aim to differentiate PT XYZ from competitors in the eyes of customers. Evaluation and improvement of promotional programs to create brand awareness, implementation of customer loyalty programs to increase brand loyalty, technical knowledge and salesmanship training, supply chain management to reduce distribution complaints, and implementation of

**Table 9** Managerial implication

No	Important findings	Managerial implications	Persons in charge
1	<i>Statistically, Brand loyalty is not influenced significantly to brand equity, because of high competition in coating companies</i>	Program Loyalty creation, for example <i>cash back reward or Top Ten Awards</i> for customers	Project Div. heads
2	<i>Statistically, Brand awareness is not influenced significantly to brand equity</i>	<i>Corporate promotion</i> activities and promotion effort have been done and reviewed, comprising <i>who, to whom, what, when, where, why and how</i> (5W and 1H), for example management <i>website</i> company, <i>sharing and gatherings</i> , training application products and other activities with appropriate target	Strategic corporate brand
3	<i>Frontliners</i> must enhance <i>technical</i> ability, to be active, communicative, cooperative and responsive to customers	More train on <i>technical knowledge</i> and <i>salesmanship</i>	Human capital division
4	Some customers complain about <i>product supply</i> that doesn't meet their needs	<i>Analysis causes</i> and <i>provide problem solving by supply chain management</i>	SCM Div. head Project Div. heads
5	The nine elements of BMC were not done <i>comprehensively and integrated</i>	Repairing, developing and compiling the element of <i>Business Model Canvas</i> (BMC) base on priority by <i>brand storming</i> project division (FGD)	All stake holder project Project Div. heads

prioritized and comprehensive corporate strategies formulated in the Business Model Canvas (BMC) were among the initiatives undertaken.

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# Development of an Entrepreneurship Simulation Module for Teaching Entrepreneurship to Autistic Children in Kelantan



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**Abstract** Autism Spectrum Disorder (ASD) is one of the most perplexing conditions for which no precise cause or definitive treatment has been identified. Autism is a neurocognitive disorder typically observed in young children affecting multiple aspects of development. It exhibits a disparity in social interaction, manifested by the repetition of certain behavioural patterns and difficulties in verbal and nonverbal communication. As a result, they may struggle with self-management and rely on support from their families and community. Autism treatment centres, particularly in Malaysia are more inclined to teach self-reliance activities to these individuals, such as taking care of personal hygiene (bathing, cleaning utensils, etc.) and cleaning their living space. It's important to develop life skills, including the ability to work and earn a living to prevent becoming a burden on family and the community. However, this does not address other aspects of life which are equally important, including entrepreneurship skills. This study attempts to establish an entrepreneurship module for autistic children as an initial step for them to develop skills to access further education, work experience opportunities, and mainstream community facilities. To test the developed module, the simulation method will be employed. Additionally, observation and focus group discussions (FGD) will enhance the module. The training of trainers for its development will involve teachers and volunteers. This project will involve five teachers, five volunteers and seven high-functioning autistic children. The module consists of four parts: training of trainers, business simulation, business execution and assessment of its effectiveness. This project is expected to improve the module that has been developed, focusing on cognitive and psychomotor-based entrepreneurial skills for high-functioning autistic children. Creating an entrepreneurship module for autistic children in Malaysia would enhance their therapy and provide valuable life skills. In addition to developing work-related abilities, this module could help prevent individuals with autism, particularly those

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from the bottom-tier household income (B40) group, from falling into poverty in the long run. Policymakers could use this module as a reference for developing policies prioritising the needs of people with autism.

**Keywords** Autism · Entrepreneurship · Training · Well-being · Non-governmental Organisation

## 1 Introduction

According to the American Psychiatric Association (APA), Autism Spectrum Disorder (ASD) is a complex developmental condition involving persistent challenges with social communication, restricted interests, and repetitive behaviour. While autism is considered a lifelong disorder, the degree of impairment in functioning because of these challenges varies between individuals with autism. Research regarding ASD in Malaysia is crucial in order to improve people's knowledge, attitude and social perspective towards this community. According to research by [1], there is a moderately good association between knowledge and attitudes and the social perceptions of children with ASD. In addition, the findings show that the level of knowledge, attitudes and social perceptions of ASD children is high probably due to the access of technology nowadays as mentioned by [2–4]. These previous studies found that the majority of the respondents lack the understanding and identifying of autism in general and this can be resolved by using ICT or multimedia learning.

Due to positive knowledge, attitudes and social perception among Malaysians, the number of individuals who are clinically diagnosed with autism by government hospitals and private medical practitioners are increasing every year. Thus, improving the access of special and inclusive education to children with autism which are offered by the federal or state government, non-governmental organisation, therapy and private education institutions in Malaysia.

Most of the available therapies for autistic children focus on quality of life and personal well-being. These include multi-faceted interventions such as religious-based and art-based therapies within a meaningful social communicative context. The teaching of various skills including observation skills, limitation skills, motor skills, speech skills, receptive language skills, expressive language skills, self-management skills, living skills, social skills, and behavioural skills have always been the focus of any intervention programme for autism children in Malaysia [5]. However, other equally significant aspects of life receive little attention. Consider the attributes of entrepreneurship as part of maintaining oneself and one's way of life.

ASD is one of the most perplexing conditions for which neither the precise cause nor a definitive treatment has been identified. Autism is a disorder that is typically observed in young children and affects multiple aspects of development. According to statistics, there are currently more kids worldwide with special needs, particularly those with Down syndrome and autism. Some studies indicate an increase of 10–17% annually in the preceding few years, suggesting that the prevalence of autism appears



to be increasing at a potentially alarming rate. ASD is a form of neurodevelopmental illness that affects a person's mental, emotional, learning, and memory capacities [6]. Children with ASD may also face other issues or limitations including a disparity in its social interaction, manifested by the repetition of certain behavioural patterns and difficulties in verbal and nonverbal communication [7]. Claim that this group of kids frequently struggles with issues like impaired social interaction, poor communication, stereotyped behavioural patterns, interest, and activities [8]. They consequently exhibit issues with passivity, temper tantrums, and a lack of common sense, as well as aggression, rebellion, lack of spontaneous or imaginative play, as demonstrated by their physical movements such as body rocking while seated, flicking fingers, twirling around, spinning objects, staring at lights, sniffing the air, and flapping hands at the wrists. They may also display sensory losses, behavioural issues, and/or social issues due to these numerous disabilities. 70–80% of children with special needs showed sensitivity towards sensory stimulation, which affects their sensitivity to sight, hearing, touch, smell, and taste senses. Children with special needs also seem to be over responsive (hypersensitive), unable to endure some noises, uncomfortable with contact, and unwilling to eat with certain textures, smells, or tastes. Additionally, according to [9, 10], they are under responsive to sensory input, do not experience pain in a typical manner, repeatedly shake their bodies, and rub or push objects firmly into their skin.

### **Overview of therapies and model of ASD**

Numerous studies have been conducted to treat and create appropriate intervention options that can be applied by therapists, teachers and parents. According to [11], these interventions include; (a) auditory integration, (b) diet modification, (c) medicines adjustment, (d) music therapy, (e) occupational therapy, (f) physical therapy, (g) sensory integration, (h) social skill and behaviour intervention, (i) speech therapy, (j) vision therapy. As the number of ASD increases every year and prevalence of such issue is greatly varied across socio-demographic groups, numerous interventions, therapies and modules related to ASD are created.

In developed countries such as Russia, the development of multidisciplinary medical support model for children with ASD has begun in 2019 through collaborative efforts of the National Medical Research Center for Child Health of the Ministry of Health of the Russian Federation and the Center for Autism Problems. Additionally, this effort has created special conditions for pre-school education and successful socialisation of children with autism. It also prepares students with autism to switch to inclusive education within general education groups. It also offers an affordable and high-quality education environment for preschoolers with autism when moving from one educational level to another [12].

Meanwhile in the United States, another intervention model that is widely accepted is the Early Start Denver Model (ESDM). This intervention is created on the basis of developmental and applied behavioural analytic principles and delivered by trained therapists and parents for 2 years. In comparison to children who received community-intervention, children who received ESDM showed the efficacy of a comprehensive developmental behavioural intervention for toddlers with ASD for

improving cognitive and adaptive behaviour and reducing severity of ASD diagnosis [13].

Occupational therapy is one of the most common services received by children with ASD and their families. Occupational therapy practitioners have been offering services to children and adolescents with ASD in Malaysia as well [14]. The majority of the occupational therapy services for children and adolescents with ASD in Malaysia are provided in the hospital or clinic-based setting. Unfortunately in Malaysia, there is scant evidence to guide best practice approaches within this population [15]. Concerns have also been raised that the interventions implemented have not been adequately documented for evidence-based practice despite occupational therapy being widely accepted. Potentially risking the loss of occupational focus if there is no careful attention is given to this issue, in addition to other strategies [16]. Additionally, limited information regarding the theories, assessments, and interventions utilised by occupational therapists working with ASD children and adolescents in Malaysia has led to poor understanding of such issues.

Apart from occupational therapy, other therapies are also implemented as training and interventional module for children diagnosed with ASD. For example, religious-based therapy which includes the use of the Holy Quran, as discussed by [17]. This study proposed the combination of selected verses from several surahs that can be used as a general therapy for treating autistic diseases based on some common significance traits for all autistic patients. This combination can be used as a therapy or as part of the efforts to assist autistic patients, although it cannot be wholly cured. Other research also supports the positive impact of using Al Quran for autistic children. Research by [18] discovered there was an improvement in sleep score and TST (total sleep time), as well as improvement of the stabilisation of REM (rapid eye movement), and also reduction of insomnia symptoms after undergoing the Quranic therapy. Additionally [19] found audio therapy with Quran recital can decrease autistic children's behaviour disorder both in emotion, communication, and social interaction compared with music therapy.

Besides religious-based therapy, group music as an intervention strategy for a number of categories of special needs has been used by several researchers, including ASD. Moreover, some studies have supported the importance and advantages of music therapy to autism [20]. In Malaysia, a cross-case study analysis by [21] showed that group music teaching was generally effective in improving verbal and nonverbal communication and has demonstrated both positive motor skill development and negative motor reactions among the subjects.

On the other hand, [22] focused on developing an animation video as a therapeutic solution for children with verbal apraxia and evaluated the effectiveness of this animation. Animation videos with good graphic design, attractive animation, and background music have been found to help ASD with Childhood Apraxia of Speech (CAS); a speech condition in which a child's brain struggles to coordinate the complex oral motions required to convert speech sounds into syllables, syllables into words, and words into phrases. Alternatively, CAS is also known as verbal apraxia or developmental verbal dyspraxia.

The LEGO therapy discussed by [23] proves that LEGO also positively impacts autistic children. The children showed changes in terms of increased social interaction as it encourages them to interact positively. The subjects are also found to be more self-confident to interact and play with other friends. Who focused on drawing therapy to examine the psychomotor and emotional skills of autistic children found that the children show development in psychomotor aspects and communication skills not only with friends but they can even express their emotions through drawing [24].

## ***1.1 Entrepreneurship and Autism***

The prevalence of mental disorders has posed a significantly negative impact on the economy and is painful for those who experience them and their loved ones. However, such negativity also draws a silver lining as there is ample evidence that entrepreneurship can help people with mental illnesses to succeed and make a positive contribution to society [25]. In some cases, those with specific mental disabilities may even perform better in the world of entrepreneurship than those without these conditions. For instance, entrepreneurs with attention-deficit/hyperactivity disorder (ADHD) diagnoses were found to feel more at home in self-employment than in traditional employment, and some even thought their symptoms gave them an advantage over individuals without ADHD [25].

The frequency of ASD and learning difficulties among entrepreneurs has been studied in a number of studies. This is a prospective sample in which to investigate the relationship between leadership and autism as entrepreneurs who build and run their own businesses. Furthermore, numerous well-known businesses are run by people who are diagnosed with autism or learning problems. Among them are Bill Gates of Microsoft, Steve Jobs of Apple, Henry Ford of Ford Motor Company, John Chambers of Cisco and Bill Hewlett of Hewlett Packard [26, 27].

In Malaysia, the relationship between entrepreneurship and autism has not been significantly highlighted. Evidently, the existing focus is merely concerned with helping them to be a worker instead of training them to become an entrepreneur. One of the examples of business that highlights the relationship between autism and entrepreneurship is the Autism Cafe Project (ACP) located at DaMen Mall, UEP Subang Jaya (USJ). This social enterprise is primarily run by young individuals with autism, who are given tasks based on their skill levels. Additionally, the cafe offers a space designated for autistic people to showcase their artistic talents. Parents of autistic children may also assign them to work at the cafe so that they may watch how their children behave in a real-world environment [28].

In the context of the current study, this study aims to design an entrepreneurship module for autistic children as a first step in giving them the abilities to access higher education, opportunities for work experience, and mainstream community resources. It is believed that entrepreneurship is the most effective method for stimulating a nation's economy. In addition to fostering innovation and productivity to develop a nation's economy, entrepreneurship skills shape individuals to be employment

creators rather than job seekers. Therefore, entrepreneurial skills are a crucial factor in enhancing the independence and productivity of students with learning disabilities. Despite such idealistic factors, students with cognitive disabilities are frequently labelled as unproductive and ignored by society. These students with cognitive disabilities are often underrepresented in the workforce, frequently discriminated against by employers, and poorly served [29].

## 2 Entrepreneurial Activity Module for Autism Children

In collaboration with Kelantan Autism Care Centre (KACC) in Kota Bharu, an entrepreneurship module is designed for autistic children. The implementation of such module will involve 7 high-functioning autistic children aged between 5 to 14, 5 KACC formal caregivers, 6 UMK researchers and 7 volunteers from Kelab Penyayang UMK. This module focuses on cognitive and psychomotor-based entrepreneurial skills for these high-functioning autistic children. The module consists of four parts: trainer training, business simulation, business execution and assessment of its effectiveness, as shown in Table 1.

The module is designed to train entrepreneurship skills in a simple and easy-to-understand approach for children with high-functioning autism. In *Phase 1*, there will be multiple sections that involve providing equipment and making arrangements based on the project's needs. The equipment preparation includes purchasing suitable devices based on two factors: (1) user-friendly equipment and (2) its portability. Among the equipment that have been identified is a mobile booth, two units of coffee makers, a toaster and a popcorn maker. The food and beverage business, as determined by the researcher, will consist of coffee, toasted bread, and popcorn. There will be two types of coffee that will be made available: black or white, served

**Table 1** Project implementation by phase

Phase	Topic	Implementation
1	Introduction to the module concept for the facilitator	<ul style="list-style-type: none"> <li>· Setting up tools/materials/instruments needed for business</li> <li>· Module training to facilitators</li> </ul>
2	Business Simulation	<ul style="list-style-type: none"> <li>· Internal simulation at Kelantan Autisme Care Centre</li> <li>· Observation on module effectiveness</li> <li>· Continuous Quality Improvement (CQI) on module and facilitator training programme</li> </ul>
3	Business Execution	<ul style="list-style-type: none"> <li>· Execution of business project involving community and other agencies</li> <li>· Monitoring</li> </ul>
4	Assessment	<ul style="list-style-type: none"> <li>· Focus Group Discussion (FGD) with facilitators</li> <li>· Observation</li> <li>· Analysis</li> </ul>

either hot or cold. The toasted bread will use regular white bread with options of various spreads to choose from, including strawberry, blueberry, peanut butter, and chocolate. Lastly, the popcorn will only be available in caramel flavour. Five teachers from KACC will be selected as facilitators in this project. These teachers will be trained with the *usahaTistik* module.

In *Phase 2*, KACC will conduct an internal entrepreneurship simulation where high-functioning students will be trained to operate equipment and carry out business activities. The training will include using coffee makers, toasters, and popcorn makers. The teachers will supervise and ensure that the proper equipment and techniques are used. During this business simulation, the researchers will evaluate the module's effectiveness through observation. The Continuous Quality Improvement (CQI) approach will be utilised to assess the modules and facilitators. Any necessary improvements will be made to ensure optimal performance.

In *Phase 3*, this phase will focus on implementing business projects with the involvement of the community and related agencies. It is anticipated that the execution of business will be through community-organised carnivals or on-demand basis. To accomplish this, KACC will use their transport to move project equipment, facilitators and students to the respective sites. The stalls will be arranged based on the simulation. The researchers will be conducting periodic monitoring during the implementation of this business project.

In *Phase 4*, a focus group discussion (FGD) will be conducted by the facilitators as part of the evaluation process. Their valuable experience will be considered to enhance the implementation of this project in various aspects.

### 3 Discussion

The results of the module's quality assessment are expected to have a high level of validity. In this study, communication is crucial, and the motivation of teachers toward his or her students or the teacher's treatment of students may have a significant impact on the level of children's understanding and their willingness to attempt new things. On the other hand, the module is user-friendly and will act as a guideline for teachers to implement the entrepreneurship training.

This project anticipates several challenges. Teachers play an important role at KACC. It is a challenge for teachers to train autistic children based on the module provided. Teachers need to prepare themselves with an understanding of the module and project as a whole. Teachers play an important role in identifying potential children for this project. Training autistic children to perform a task requires continuous repetition of specific routines [30]. Children with autism may be inclined with segmented tasks because they are not overly complicated. For example, the coffee making process is divided into three simple tasks: espresso extracting, coffee-pouring, and coffee serving. Three designated students will be involved in completing these tasks. As an NGO, the introduction of new intervention programmes could potentially escalate their existing workload into a bigger constraint. Despite such

anticipation, the module is designed to be user-friendly and easily executable. In addition, this module should offer flexibility for continuous improvement based on business viability and ASD student's needs. As the current focus of the module capitalises ASD children, it could also be expanded for the use of ASD adults too. Ultimately, support from the community is vital in ensuring the placement of workers with autism in appropriate occupational fields [31]. Not only they manage to be self-sustained but also be able to become part of the workforce in the country; either as a worker or an entrepreneur.

## 4 Conclusion

This module is anticipated to help ASD treatment/intervention providers in Malaysia, particularly in Kelantan, to potentially broaden their approaches to treating autism. As entrepreneurship is considered as an intriguing factor within the local community, a similar approach that capitalises on entrepreneurship attributes is expected to assist autistic children in creating a brighter future.

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# The Enchantment of Social Media as a Child's Resilience During Covid-19 Pandemic



Suharmono Kasiyun, Sri Hartatik, Muhammad Thamrin Hidayat, Pance Mariati, and Nafiah

**Abstract** The enchantment in social media as resilience for children during the Covid-19 pandemic is interesting to observe in depth. This study discusses how children respond to the use of social media in their negotiations between education and entertainment in a resilience frame during the Covid-19 pandemic. This study uses a qualitative method with a netnographic (internet-ethnographic) approach to social media and virtual space. The data were obtained through internet networks in social media. The author discusses and analyzes the phenomenon of the interrelation of social media, digital technology, IoT, post-millennial generation, and children from the point of view of enchantment and how it has implications for resilience. The data is obtained from observing social media and borrowing aspects of the survey to support the qualitative analysis, and it conducted on 100 children aged 8–11 years who were searched purposively. Then, the data processed and analyzed to determine how the enchantments in social media can become children's resilience during the Covid-19 pandemic. The results show that social media implements presence in practice, which translates into being in a space and time simultaneously as communal resilience for children. The enchantment of social media as resilience elaborates the concept of presence about awareness and attention to a social media object simultaneously appearing together as resilience. Attendance in education, entertainment, and resilience includes three aspects: making-present, having-present, and being-present.

**Keywords** Enchantment of social media · Children resilience · Covid-19 pandemic

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## 1 Introduction

Covid-19 is reminiscent of Antonin Artaud's legendary quote, "The plague should not be resisted, but embraced," which cultural researcher and author Rustom Bharucha delivered at the end of 2020 as part of his public lecture series *Theater and The Coronavirus* at Freie Universitat Berlin [1]. Bharucha stated in his lecture series on social media resilience for children that this is not the first time the world has faced an epidemic [1]. A century ago, the Spanish Flu epidemic swept across Europe (and then the rest of the world), still making education open to access, albeit with risks [2]. So did the plague in the Elizabethan era in the early nineteenth century. This indicates that education is moving and changing even though it faces many threats to its existence, especially regarding outbreaks or pandemics [3]. Unlike the plague period in previous centuries, the era of the Covid-19 pandemic has made a significant difference to the children's education ecosystem in the world [4, 5].

Since entering the new millennium, virtual reality is increasingly being used by people worldwide, mainly through smartphones and computers. So, there is a form of communication and presentation of education through entertainment facilitated through what we often call this new media. In addition to facing a pandemic, children's education is also dealing with presentation methods using videos, multimedia, and other forms of virtual reality [6]. This Covid-19 pandemic occurs when almost all circles have used new media technology and virtual reality. Online gatherings are increasingly being used to enforce social restrictions imposed to prevent the virus from spreading [5]. The use of virtual technology is the main differentiator from the interaction between children's education through entertainment and the plague of previous centuries that in this day and age, children's education through entertainment can be switched between rides [7]. Out-of-school learning practices that can be implemented through virtual travel during the pandemic can contribute to success and create diversity in the teaching environment [8].

The media and trajectories needed today are those that offer complexity. The complexity in question is the multi nature surrounding the media and vehicles used in handling Covid-19, especially for children. As a result, it is necessary to understand in advance that the children of 2021 belong to the post-millennial generation. Post-millennials come to the surface when they transition between millennials (Generation X), Generation Z (Gen-Z), and Generation Alpha [9]. The post-millennial generation is a generation born together with the Internet of Things (IoT) and digital technology. As a result, the post-millennial generation is also referred to as digital natives, as they coexist with the digital world [10, 11]. Furthermore, in the context of the complexity of media and trajectories as a complementary response to the Covid-19 pandemic for children, the media must facilitate the primary needs of the post-millennial generation, namely resilience through social media.

Social media is a medium for sharing information and greetings, as well as indirect communication [12–15]. Social media has become popular since the Friendster era in the 2000s until TikTok in the 2021s. There are also premium social media platforms such as Netflix, Iflix, Disney Hotstar+. IoT also offers through various platforms

such as RuangGuru, Zenius, and Class, which are popular in Indonesia in the realm of education. It is a domestic platform, which does not include other international platforms. However, specifically for educational platforms, this is considered less attractive in terms of resilience for children. Therefore, this study focuses more on social media as the object of research.

The embodiment of resilience in the enchantment of social media for children via a variety of creative work endeavors, including those utilizing unusual forms and techniques [16–19]. The techniques used in representing the enchantment of social media as resilience are also an effort to realize the aesthetic expression sought by content creators. The sensations that arise lead the children as spectators to be 'enchanted' so that they enter a state where a force controls one's awareness and direction of attention outside of oneself [18]. As stated by Gell, in discussing aesthetic issues in art, he does not explicitly refer to beauty but refers to the sensation he calls enchantment [19–21]. Therefore, the issue of enchantment in social media as resilience for children during the Covid-19 pandemic is interesting to observe in depth. Furthermore, this study also discusses how children respond to the use of social media in their negotiations between education and entertainment in a resilience frame.

## 2 Method

This study uses a qualitative method with a netnographic (internet-ethnographic) approach to social media and virtual space. The netnographic approach was chosen because of the changing world conditions in the context of implementing the new order of the Covid-19 pandemic, so adaptive and dynamic methods are needed [22, 23]. Netnography itself is a type of ethnographic approach to the Internet social network, or from the words "Inter[net] and eth[nography]", which is a new qualitative research methodology that adapts ethnographic research techniques to examine various conditions, cultures and communities collected through communication using computer media [22–25]. "Netnography" is an ethnography adapted to the study of appropriate online communities to be a method for researching the enchantments of social media. As a method, "netnography" is faster, simpler, and less expensive than traditional ethnography and much more naturalistic and less distracting than focus groups or interviews.

Therefore, in this study, the data were obtained through internet networks in social media. The author discusses and analyzes the phenomenon of the interrelation of social media, digital technology, IoT, post-millennial generation, and children from the point of view of enchantment and how it has implications for resilience. The data is obtained from observing social media and borrowing aspects of the survey to support the qualitative analysis [25, 26]. The survey was conducted on 100 children aged 8–11 years who were searched purposively, all of which were taken through the internet and other data which are very likely to be developed. The data is then

processed and analyzed to determine how the enchantments in social media can become children's resilience during the Covid-19 pandemic.

### 3 Results and Discussion

Like the rest of the world, Indonesia is dealing with the devastating effects of the COVID-19 epidemic. The virus has struck the ASEAN continent, with Indonesia being the second most severely impacted country so far, with over 160,000 deaths expected by the end of October 2020 [5, 27]. When social contact restrictions were implemented in most states and municipalities around the third week of March 2020, the first semester of the school had just begun in July, after nearly three months of pandemic suffering [5]. Many children's first experience in a daycare centre, a preschool, or an elementary school would be cut short for several months. At the end of 2020, some states and local educational institutions began reopening their doors, albeit with numerous restrictions and not to all students. However, because the epidemic is worsening, this regulation will not be implemented until July 2021.

The pandemic struck a country already grappling with a slew of significant issues, including an economic crisis marked by soaring unemployment rates, a political crisis, and education. Furthermore, the social isolation measures and the health crises are having a particularly negative impact on the poorest and most vulnerable families and their children [3]. According to a Ministry of Research, Technology and Higher Education report, states and towns, including public and private institutions, were held responsible for decisions about lockdown measures and school closures across the country [28, 29]. In the absence of federal government coordination and support, universities and research institutions, as well as many private agencies, professional and community associations, including television and other media networks, have begun to play an increasingly important role in this situation, as has the Internet of Things (IoT), such as social media [30, 31].

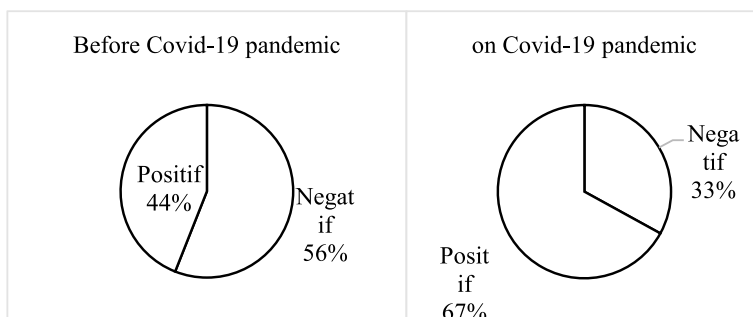
The Covid-19 pandemic in Indonesia has an impact on the psychological aspects of both parents and children. This is because their accessibility, especially for children to play and learn, is hampered by policies designed to prevent the spread of the Covid-19 virus in Indonesia from spreading further. In addition, the policies of several schools to disable and cut learning hours have a significant impact on children's mental health during the pandemic. The nature of education is one of them as a tool, media, and method to improve mentality and increase life force, one of which is through public pedagogy [32–34]. Public pedagogy, which has a broad scope in its media, collaborates with technological developments which are considered the most efficient trajectories in helping to improve people's lives during a pandemic [35]. The reasons are related to access that tends to be free, people's ownership of gadgets in accessing the internet as a form of technology, and the fact that today's society is dependent on gadgets and the internet [5, 36].

The significant change that social media brought during the pandemic in campaigns related to public pedagogy was when they broadened the interdisciplinary

wedge that made social media work more complex and collaborative [37, 38]. On the other hand, one of the ways that individuals can benefit from the development of IoT is through social media. This is related to community resilience through increasing the number of social connections that allow individual users to build connections and generate resilience. In this new context of communicating and interacting, the idea of community resilience needs to be rethought, with consideration given to the emergence of virtual worlds, alternative worlds, and personal relationships in cyberspace [39, 40].

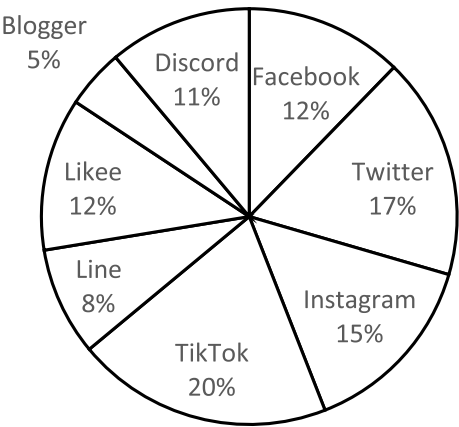
The term resilience has now been conceptualized in various disciplines but still has interrelationships. Resilience was initially recognized in psychology as a dynamic and adaptive psychosocial process of individuals experiencing difficulties [41, 42]. Resilience involves interactions that are multi and inter-related in terms of family, knowledge, skills, and culture, all of which complement each other [38, 43]. The resilience offered by social media in its campaign as public pedagogy is increasingly claiming the influence of the development of social media on social relations. Social media and resilience provide a sense of calm for individuals during the Covid-19 pandemic. This is related to the fact that social media can become a cathartic of life's problems, and is conveyed in the form of social relations that have never happened before with the broad access that social media has such as space and time networks [5, 44, 45]. Before the pandemic, social media was believed to be one of the arenas to "distance each other", which was close to its addicting nature. However, this contrasts with what happened during a pandemic, where social media became an arena for sharing enthusiasm, motivation, inspiration, and unlimited media of expression (see Fig. 1) [46, 47].

For example, Facebook was the only social media that was most frequently accessed [48]. However, the comfort of individuals with microblog social media with a minor character, and the emergence of other social media such as TikTok, has led to a tendency for social media segmentation (Fig. 2) [12, 49]. Twitter is popular because of its role as an arena in establishing social-relational relationships, mainly because it can interact simultaneously with many users in real time. It is different from TikTok, which on the other hand, also provides access to creativity freely with



**Fig. 1** Comparison of perceptions of the use of social media before and during the pandemic

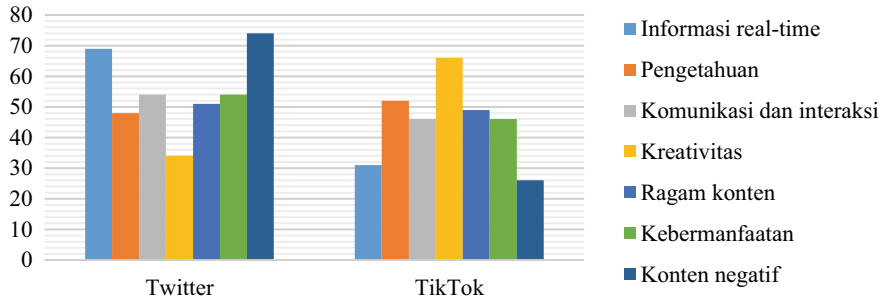
**Fig. 2** Percentage of using social media platforms during a pandemic



the complexity of its features. Therefore, Twitter and TikTok are considered to be social media platforms that are suitable for public pedagogy campaigns, as well as having resilience.

The resilience capabilities of Twitter and TikTok are in the typicality and utilization of their features. Furthermore, resilience opportunities occur when sharing the same interests allows for connection, discussion, and exchange of information, knowledge, motivation, and enthusiasm for life with various forms of expression (Fig. 3).

When individuals enjoy utilizing social media, interactions occur in imaginary spaces between individuals, social media, and their social networks. The interaction is always metaphorical, taking into account both the individual as a user and the social network with which he interacts [2]. Furthermore, the interaction built is persuasive as a tool to create new ideas and syntheses and provide an overview of the application of ideas or resilience approaches. Just as social media algorithms seem to be able to read the tendencies of their users, these interactions seem always to give advice or even what the users need. This ultimately provides them with collective strength,



**Fig. 3** Twitter and TikTok features comparison

with several examples serving as reminders of the capacity to endure and adapt to adversity and strengthen and even shift perspectives during a pandemic.

Therefore, the term social media post with all its creative aspects is the idea that the phenomenon in question must be visually stunning or attractive, whether in relation to beauty, extraordinariness, or other visual qualities [50]. Alfred Gell also emphasized that the power of social media objects stems from the technical processes they objectively embody: the technology of enchantment is founded on the enchantment of technology [19]. The enchantment or technology is the power that technical processes have of casting a spell over us so that we see the real world in an enchanted form. Social media, as a separate kind of technical activity, only carries further, through a kind of involution, the enchantment which is immanent in all kinds of technical activity [19–21]. The enchantment technology built on social media aims to grow enchantment, while in terms of technique (technology) itself, one of which is the level of difficulty, it is indeed enchanting [19, 27]. It is further said that the dazzling technique has a kind of aura or effect that emanates from the technique and envelops the object and creator content as the creative center of social media posts.

In practice, social media implements presence which translates into being in a space and time simultaneously as communal resilience for children [51, 52]. This confirms assertion that attendance is critical for educational experiences during the Covid-19 pandemic, which ignites the unconscious in education and transforms it into a form of experience that manifests as a form of resilience [27, 53]. So, it can be said that the enchantment of social media as resilience elaborates the concept of presence about awareness and attention to a social media object simultaneously appearing together as resilience [53, 54]. So the attendance in education, entertainment, and resilience includes three aspects: making-present, having-present, and being-present.

The making-present aspect relates to uniting presence with pretension to present fictional events through virtual communication of social media into real life as part of children's lives. This is done using an act of designation where content creators can lead children's imagination and virtual communication to believe in the situation and intimate virtual communication in front of them [42]. The making-present aspect is closely related to presenting self-consciousness to children to create a mix between the real and the unreal as a form of resilience.

Making-present cannot be separated from the manipulation process to create academic presence, entertainment, and communication on social media. This relates to the having-present aspect, which is identical to using aura as a medium of presence. Therein lies the enchantment of social media. As previously stated, presence will always occur in space and time simultaneously to elicit awareness and attention, for which social media manipulation via the formation of the body in its posts is required. The involvement of aura in the having-present aspect is often also associated with "the others" because the aura is often described as the energy that surrounds social media or its unexplainable attractiveness [55]. So, two elements make up the aura in the having-present aspect, namely aura as a transcendence of the presence of the world of children's entertainment and aura as a result of work between individuals in a work of popular culture [56, 57]. In other words, the aura can be formed by a series of interdependencies of complexity within it as an enchantment.

Children also benefit from resilience as a collection of behavioural capacities contingent on the resources available and how members of the community interact with those resources. This is why resilience is associated with “adaptive capacity”, where the main force of resilience is itself and how academic, entertainment and communication aspects are disseminated to children through social media. Children’s resilience through the enchantment of social media is also accommodated by the aspect of social capital that accommodates the question of how people involved in the community build their networks and use them wisely; through networking, the content of academic, entertainment and communication nature can be distributed evenly, and healthy network communication builds a collective narrative on how to deal with adversity [58, 59]. For social media as public pedagogy, the material resources of social media and their competence aspects determine how these tangible resources are distributed evenly and effectively and look at some alternatives for utilizing the resource itself.

Social media, some of which are managed by content creators, can help children recover quickly from social situations, shift focus, and take a broad perspective adaptive to unexpected changes during the Covid-19 pandemic. As actors in the cultural transition in social media, content creators must raise awareness and enthusiasm [59–61]. Through the enchantment of social media, content creators should be able to illustrate possibilities, provoke new ideas, and inform the situation as a potential transformation solution that can improve children’s psychology.

Collective resilience is obtained by children with the enchantment of social media related to self-efficacy. In this time of the COVID-19 pandemic, social media is transforming to conceptualize self-efficacy as children’s communal belief in their ability to mobilize motivation, cognitive resources, and institutions to exercise control over the Covid-19 pandemic as a specific event. Self-efficacy as resilience is context-specific and appears to be especially important when children face adversity. When children have positive beliefs, it is associated with increased motivation and perseverance and an increased possibility of resisting negative thoughts about their abilities, and this is very important to acquire and develop in this challenging time of the Covid-19 pandemic [62, 63]. Therefore, the self-efficacy that emerges from social media represents enchantment about the belief that a person can overcome the problems experienced in certain situations and produce positive results. *Self-efficacy* is a dimension associated with the difficulty of a phenomenon manifested and represented in the allure of social media. Children who consume social media and use it as a medium for communal resilience will have high self-efficacy. Furthermore, with this, children will have confidence in facing a pandemic or online school assignments that are very stressful, even though they have serious difficulties. Furthermore, children get dimensions related to the vast area of behaviour that believes that they can deal with a variety of varied situations. *Strength* is the next dimension related to the belief to stay strong to face various situations and difficulties.



## 4 Conclusion

The charm of social media as resilience has all the essential things to form awareness, especially in bridging cultural differences and the psychological impact that occurs on children due to the Covid-19 pandemic. Mutual belief in co-creation, igniting the behaviour of equality and efforts to use an inclusive and democratic framework are the outputs of the charm of social media. In addition, social media recognizes the importance of virtual community work as the future project of IoT. The exchange of knowledge, processes, and fair reciprocity through social media will foster a sense of ownership of children's work and group-based work. Finally, while collaborating, encouraging each other's curiosity and appreciating joy is an essential and integral part of dealing with this significant transition in the resilience ecosystem for children and the things that surround it.

Recommendations for further research are to explore the implications of social media for children's resilience, to make online learning successful with collaboration between teachers and parents. Parents and teachers must support each other in playing their respective duties; of course, the duties of parents during a pandemic like this are increasing. By utilizing social media, it is necessary to have an education-based application or create an educational group to accommodate children's academic needs and interactions. In addition, to maintain close relationships with parents, teachers, and other children widely and virtually to discuss academic-related materials, educational materials in entertainment, creative communication, and resilience.

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# Socioeconomic Activities' Effects on the Rukun Tetangga Community in Kelantan



Zaleha Embong and Nuradlin Syafini Nawi

**Abstract** In Malaysia, the government has established Kawasan Rukun Tetangga (KRT), which is monitored by the Department of National Unity and Integration (JPNIN), to foster good relations and help each other in the community. KRT is also a voluntary organisation that executes community development programmes in Malaysia. Especially in Kelantan, there is a KRT that actively executes socioeconomic activities. In fact, the socioeconomic activities carried out had a positive impact on the KRT community. Therefore, this study has two objectives. First, identify the level of involvement of Kelantan's KRT community in economic activities. Second, to examine the impact of economic activities on the socioeconomic level of the KRT community in Kelantan. This study used a quantitative method that used a questionnaire instrument and was distributed to 156 respondents. The Statistical Package for the Social Sciences (SPSS) software was used to analyse the data descriptively. The findings of the study found that economic activities have successfully helped improve the socio-economic status of the community and helped the community increase their side income. In fact, economic activities also build good relationships, get to know each other, and foster interaction and cooperation in the KRT community. This economic activity had positive implications for the quality of life in the local community.

**Keywords** Rukun Tetangga area • Economic development • Socioeconomic status

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# 1 Introduction

The Rukun Tetangga Scheme (SRT) is one of the government's initiatives through the Department of National Unity and National Integration (JPNIN) to organise a programme to manage pluralistic communities [1]. SRT is also a voluntary organisation that aims to help community development in Malaysia. Its implementation is a continuous effort to create a space of interaction in a pluralistic society. The aim of the SRT is basically to monitor and maintain unity among the community in the residential area through neighbourhood-based activities. The housing area that implements the SRT programme is called Kawasan Rukun Tetangga (KRT). KRT refers to housing areas that implement this scheme [1].

In 1975, KRT was established to enable the people to control and maintain the security of their residential areas. Then, KRT was renewed by cultivating the neighbourhood concept that used the “Kesejahteraan Kawasan Sejalan akan Menjamin Kesejahteraan Negara” philosophy. KRT has organised various activities so that the community can interact, get to know each other, and build relationships at the grass-roots level between leaders and citizens from various religions, races, languages, and cultures [2]. In 2001, KRT experienced changes towards community development aligned with current developments. This is due to the active involvement of KRT leaders and communities in various activities [1–3]. This approach focused on some new changes in the organisational structure, infrastructure, and role of the KRT itself. The various activities organised by KRT are more geared towards carrying out activities based on the needs of community members [4].

According to the Community Development Academy (CDA) [5], community development means the involvement of all parties and agencies to achieve the same goal, which is to improve the quality of life of the involved community. There are several interrelated elements in community development. Among them are education, economy, housing development, health care, leadership, agriculture, and infrastructure development. Elements such as cooperation, tolerance, and others are important in achieving community development goals. In fact, the concept of community development was introduced in the United Kingdom and the United States in the 1930s. At that time, the community, especially local leaders, was encouraged to get involved in urban planning activities [6, 7]. The British government has also implemented community development programmes in its colonies, such as in Africa in 1950 and India in 1952 [8].

Holdcraft and Jones [21] stated that the 1950s were the most dynamic decade for community development programmes in developing countries. At that time, funding for most community development programmes was channelled through voluntary agencies such as the Near East Foundation and the Ford Foundation. The countries involved in implementing this programme are India (1952), the Philippines (1955), Jordan (1956), Indonesia (1957), Iran and Pakistan (1953), and Korea (1958) [9]. Scholars identify that the professional implementation of community development began after the Second World War in 1945 [10–13].

This shows that the implementation of community development is able to help the local community improve its standard of living. In addition, community development is a process to create cooperation between the local community and the government as well as non-governmental organisations (NGOs). This cooperation is an effort to improve the economy, social life, and culture of the community. This is an initiative to build cooperative relationships in the community [16]. Because of that, KRT is the best platform that involves all social classes, regardless of race, ethnicity, or political beliefs. Economic projects, for example, can strengthen friendship and the spirit of cooperation within the community. According to the director of JPNIN, Kelantan, namely Norwahidah Zinalibdin, KRT Kelantan is a very active KRT in carrying out economic activities. They help each other by empowering the economy of the local community. This is the uniqueness of KRT Kelantan. Because of that, the economic activities carried out in KRT are very important to the community in improving its socioeconomic status.

## 2 KRT Background

KRT is an organisation that emphasises the concept of volunteerism and is the only voluntary organisation established under an Act of Parliament entrusted with a number of specific goals [1, 17]. KRT aims to promote understanding and interaction in plural societies in this country [18]. This coincides with the objective of the KRT establishment, which is to preserve, improve, and strengthen national unity and integration in line with government policy based on the Federal Constitution and Rukun Negara [1]. According to Afriva [19], KRT is able to act as a reconciliation agent because its organised activities foster a spirit of cooperation and mutual help in a pluralistic society.

For this reason, the establishment of KRT is prioritised in urban, rural, and high-risk areas [1]. Residential areas that want to apply for KRT establishment must have at least 5000 residents in the area. The KRT setting is done by the director general of JPNIN as stipulated in Section 5 of the Neighbor Rules Act 2012 (Act 751) (Government of Malaysia, 2012). Then, the KRT community will hold a meeting to appoint a committee among its permanent residents or residents in the area. The JPNIN director will consult with the KRT committee members to fill the following positions:

- (a) Chairman
- (b) Deputy chairman
- (c) Secretary
- (d) Assistant secretary
- (e) Treasurer

The members of the appointed committee are assigned to manage and plan various activities to increase unity in plural societies. JPNIN has prepared a module to facilitate the KRT committee members' carrying out activities systematically and continuously. Organized activities aim to create an independent and competitive society and a harmonious atmosphere.

### 3 Methodology

This article used quantitative methods to obtain the data. The research population is the KRT community in Kelantan. This article used a purposive sampling method. The research sample was selected based on the needs and objectives of the study. Therefore, the research sample collection is based on the respondents' activeness in carrying out economic activities in KRT continuously throughout the year. Therefore, a total of 156 respondents were involved in this study. This quantitative data was collected using a questionnaire instrument that was formed based on the objectives of the study. The obtained data was analysed using the Statistical Package for the Social Sciences (SPSS) computer software. The statistics that will be used in analysing the data are descriptive statistics. Descriptive statistics will present the study data in the form of a percentage, mean, and standard deviation.

### 4 Results and Discussions

The demographic findings of KRT community respondents who are involved in economic activities in KRT, Kelantan, include age, gender, marital status, ethnicity, education, occupation, and income. According to Table 1, there were 156 participants in this study, 23 of whom were from the KRT community and aged 20–29 years old (14.7%); 16 respondents (10.3%) were between 30 and 39 years old. While 15.4% are between 40 and 49 years old, which is a total of 24 respondents. Following that, 52 respondents (33.3%) were between the ages of 50 and 59; 31 respondents (19.9%) were between the ages of 60 and 69; and 10 respondents (6.4%) were between the ages of 70 and 79.

The analysis in Table 2 shows that 93 respondents (59.6%) are female and 62 respondents (39.7%) are male in this KRT study. A total of 156 respondents.

The analysis in Table 3 shows the distribution of the respondents' marital status involved in this study. The status of respondents who are single is 24 respondents, which is 15.4%, and the status of respondents who are married is 118 respondents, which is 75.6%, which is 15.4%, and the status of respondents who are married is 118 respondents, which is 75.6%. In addition, there are 11 (7.1%) and 3 (1.9%) respondents with widow or widower status.



**Table 1** Age distribution of respondents

Age	Frequency	Percent (%)
20–29	23	14.7
30–39	26	10.3
40–49	24	15.4
50–59	52	33.3
60–69	31	19.9
70–79	10	6.4
Total	156	100

**Table 2** Gender distribution of respondents

Gender	Frequency	Percent (%)
Female	93	59.6
Male	63	40.3
Total	156	100

**Table 3** Distribution of respondents' marital status

Marital status	Frequency	Percent (%)
Single	24	15.4
Married	118	75.6
Widow	11	7.1
Widower	3	1.9
Total	156	100

For the ethnic distribution of respondents analysis shown in Table 4, 151 Malay respondents (96.8%) and only 5 Chinese respondents (3.2%) participated in this study.

In this study, respondents' education levels were classified into eight categories. Table 5 shows the frequency distribution of the respondents' education level analysis. There were 8 respondents (5.1%) who did not attend school, 16 respondents (10.3%) who had a background up to the primary school level, and a total of 60 respondents (38.5%) who had an education level up to the junior high school level. While for the distribution of the percentage of respondents who have an education level up to upper secondary school, there are 37 respondents (23.7%). A total of 6 respondents (3.8%) have a certificate, and only 12 respondents (7.7%) have an STPM or diploma

**Table 4** Ethnic distribution of respondents

Ethnic	Frequency	Percent (%)
Malay	151	96.8
Chinese	5	3.2
Total	156	100

level of education. Next, a total of 15 respondents (9.6%) have a degree or master's degree, and only 2 respondents (1.3%) have other qualifications.

Next, Table 6 shows the respondent's type of employment frequency analysis, which consists of 12 government employees (7.7%) and 6 private employees (3.8%). While 64 respondents (41%) are self-employed and 74 (47.4%) do not have a permanent job.

Based on Table 7, 156 respondents showed that a total of 114 respondents (73.1%) earned less than RM1200, and a total of 32 respondents (20.5%) earned between RM1300 and RM2800. Next, a total of 8 respondents (5.1%) earned between RM2900 and RM5500, and only two respondents (1.3%) earned more than RM5600.

Table 8 describes the economic activities carried out by the KRT community, which consist of agricultural, husbandry, business, and composition activities. This activity is done commercially and in groups. This economic activity is done every year and is one of the main activities in KRT, Kelantan. The frequency (percentage) of economic activities carried out by the KRT community is 33.3%; agriculture is 33.3%; husbandry is 28.2%; business is 28.9%; and creativity is 9.6%.

In addition, the results of the study found that the level of community involvement in economic activities in KRT shows that the percentage of "VERY FREQUENT" for each item for this construct is between 15.4 and 46.8%. The item with the highest percentage of agreement VERY OFTEN is item 11, "I feel happy to work with the

**Table 5** Distribution of respondents' education

Education background	Frequency	Percent (%)
Not attend school	8	5.1
Primary school	16	10.3
Secondary school (Lower)	60	38.5
Secondary school (Upper)	37	23.7
Certificate	6	3.8
STPM/ diploma	12	7.7
Degree/ masters	15	9.6
Other qualifications	2	1.3
Total	156	100

**Table 6** Distribution of respondents' employment type

Profession	Frequency	Percent (%)
Government employees	12	7.7
Private employees	6	3.8
Self-employed	64	41.0
No permanent job	74	47.4
Total	156	100

**Table 7** Distribution of respondents' income

No.	Income	Frequency	Percent (%)
1	<RM1200	114	73.1
2	RM 1300–RM 2800	32	20.5
3	RM 2900–RM 5500	8	5.1
4	>RM 5600	2	1.3
	Total	156	100

**Table 8** Types of economic activities

Economic activities	Category	Frequency	Percent (%)
Agriculture	Vegetables, fruits, salad	52	33.3
Husbandry	Cow, buffalo, goat, chicken, duck, catfish, snakehead murrel, tilapia fish	44	28.2
Business	Crisps, spicy sambal, fermented fish, pastries, catering, homestay	45	28.9
Creativity	Flower Arrangement, Handicraft (basket, mat)	15	9.6
	Total	156	100

community to develop economic activities in KRT” (46.8%), and item 13, “I am looking for funds and grants to develop economic activities in our KRT,” obtained the lowest percentage of agreement VERY OFTEN, which is only 15.4%. Only ten items out of a total of fourteen received agreement NEVER. Item 13 and item 12 obtained the highest agreement percentage, which is “NEVER,” which is 30.8 and 28.2%. And the remaining eight items only get a percentage of agreement, which is NEVER between 0.6 and 5.1%. Therefore, the overall mean for this construct is also at a high level, which is mean = 3.79. The level of community involvement in economic activities in KRT is explained in Table 9.

In terms of the impact of economic activities on the socioeconomic status of the KRT community, as shown in Table 10, the majority of eight items out of ten received more than 30% agreement, with the exception of two items that received less than 30% agreement: item 3 (“economic activity in KRT creates job opportunities for the local community”; 27.6%) and item 4 (“economic activity in KRT can produce successful entrepreneurs”; 25%). Items 1 (36.5%), 5 (39.1%), 7 (32.7%), 8 (34.6%), 9 (35.9%), and 10 (36.5%) received a STRONGLY AGREE percentage of more than 30%, while items 2 and 6 received the same percentage (33.3%). while the percentage of those who agree ranges from 42.9 to 67.3%. Item 3, which is “economic activity in KRT creates job opportunities for the local community,” obtained the highest percentage of agreement with a percentage value of 67.3%, and item 1, which is “economic activity has a positive effect on the community of KRT,” obtained a low percentage of agreement with a percentage value of only 42.9%. Furthermore, the percentage of disagreement shows that the whole item gets less than 10%, which is

**Table 9** Level of community involvement in economic activities in KRT (N = 156)

No.	Item	Tp	Jj	Kk	K	Sk	Min	Sp
		Frequency (percentage)						
1	I am involved in all activities organised by KRT		6.4	14.7	49.4	29.5	4.02	0.838
2	I was involved in planning activities at KRT	0.6	12.8	17.9	47.4	16.7	3.58	1.072
3	I enjoy being involved in activities at KRT		2.6	12.2	43.6	41.7	4.24	0.765
4	I am involved in the economic activities carried out in KRT	2.6	7.7	19.9	50.6	19.2	3.76	0.937
5	I invite the neighbours to get involved in economic activities organised by KRT	3.8	7.7	18.6	50.6	19.2	3.74	0.984
6	I invite family members to get involved in economic activities organised by KRT	3.8	9.6	21.2	50.0	15.4	3.63	0.984
7	Neighbours are involved in economic activities in KRT	1.9	10.3	21.2	46.2	20.5	3.73	0.966
8	Many people in KRT want to get involved in economic activities		10.3	17.3	42.9	29.5	3.92	0.936
9	I strive to develop the economic activities carried out by KRT	1.3	7.7	12.2	48.1	30.8	3.99	0.926
10	I am willing to spend time and energy to implement economic activities in KRT	0.6	7.1	12.2	49.4	30.8	4.03	0.880
11	I feel happy to work with the community to develop economic activities in KRT		2.6	13.5	37.2	46.8	4.28	0.793

(continued)

**Table 9** (continued)

No.	Item	Tp	Jj	Kk	K	Sk	Min	Sp
		Frequency (percentage)						
12	I am involved in obtaining financial assistance and economic advisory services from external organizations	28.2	3.2	14.1	36.5	17.9	3.13	1.497
13	I am looking for funds and grants to develop the economic activities in our KRT	30.8	4.5	13.5	35.9	15.4	3.01	1.505
14	The KRT community cooperates in carrying out economic activities organised by the KRT	0.6	3.2	19.9	35.3	41.0	4.13	0.885
		<b>Total</b>					<b>3.79</b>	<b>0.78</b>

item 1, while item 6 and item 7 get the same percentage, which is 7.7%. As for items 3 and 8, they got a percentage of 2.6%, and items 2, 4, 5, and 10 only got 1.3%. The overall mean of the perception of society's influence on this construct is at a high level, which is mean = 4.16.

The purpose of implemented activities is to foster interaction and understanding among members of the community. A survey on the findings of the community's questionnaire in the aspect of the community's view of the activities at KRT Kelantan showed the items "I like the activities organised by KRT," "I hope the activities at KRT are carried out continuously," "I adhere to the proverbial Malay that *berat sama dipikul, ringan sama dijinjing* in making KRT activities a success," and "I have a good relationship with my neighbours" received a STRONGLY AGREE agreement of more than 40 % of respondents. While the other items, which are ten items related to the community's view of activities, are mostly obtained between 19.9 and 38.5%, This situation demonstrates a continuous relationship and involvement through activity implementation, capable of integrating the community in community development and participation in activities, and playing a role in transforming them into members of the community who are committed to strengthening the socioeconomic status of KRT in Kelantan in particular.

Therefore, there are still many improvements that need to be implemented to attract community involvement in activities to increase economic activity in KRT and promote progress in the area. From the findings of the survey on the level of community involvement in this construct, it was found that the percentage of agreement was frequently only 35.3% and very often only 41%. KRT communities cooperate with each other in developing economic activities organised by KRT. Nevertheless,

**Table 10** The effect of economic activities on the socioeconomic status of the KRT community (N:156)

No.	Item	Sts	Ts	Tp	S	Ss	Min	Sp
		Frequency (percentage)						
1	Economic activities have a positive impact on the KRT community	0.6	7.7	12.2	42.9	36.5	4.07	0.924
2	Economic activities can help the community generate side income		1.3	2.6	62.8	33.3	4.28	0.577
3	Economic activities in KRT create job opportunities for the KRT community		2.6	2.6	67.3	27.6	4.20	0.606
4	Economic activities in KRT can produce successful entrepreneurs	0.6	1.3	18.6	54.5	25.0	4.02	0.740
5	Economic activities can develop KRT	0.6	1.3	1.3	57.7	39.1	4.33	0.636
6	Economic activities in KRT can be focused on eco-tourism	1.3	7.7	5.1	52.6	33.3	4.09	0.897
7	Economic activities can encourage the community to develop KRT	0.6	7.7	11.5	47.4	32.7	4.04	0.901
8	Economic activities in KRT have changed the economic status of the community for the better		2.6	14.7	48.7	34.6	4.14	0.757
9	Economic activities have made the KRT community more independent			12.2	51.9	35.9	4.24	0.654
10	Economic activities help the community be more competitive	0.6	1.3	12.8	48.7	36.5	4.19	0.754
		Total					4.16	0.52

the percentage of agreement obtained very frequently had the highest percentage for the item “I feel happy to be able to work with the community to advance economic activities in KRT,” which is 46.8 and 37.2% for the frequently obtained percentage. This shows that community involvement can help generate the economy of the local people and, to some extent, strengthen the function and role of KRT in this new

millennium era. The socio-economics of the community can be seen in the community's activities in the economic field, including economic and social factors that aim to create a source of income for members of the community.

The lowest percentage of agreement (STRONGLY DISAGREE and DISAGREE) with the entire item for this construct as a whole demonstrates that economic activities can produce small entrepreneurs as well as a quality workforce for the community. This is proven by the findings of 67.3% agreement that the implementation of economic activities in KRT creates job opportunities for local residents. In fact, 48.7% found that the implementation of economic activities in KRT has changed the economic status of the local community for the better, and through economic activities, 51.9% have helped the KRT community become more independent. Therefore, these activities will have a direct or indirect effect on positive changes or otherwise.

In fact, KRT plays an important role in creating and maintaining a harmonious atmosphere in society. This harmonious atmosphere can be achieved if economic activities are carried out actively and continuously. This can be seen with the implementation of economic activities to create a spirit of helping each other among the KRT community, which has obtained the agreement of a strongly agreeing percentage of 42.3% and an agreeing percentage of 42.9%. In fact, 52.6% can be obtained from the percentages of AGREE for the item "economic activities give awareness of the importance of good relations in the community," which are 57.1 and 55.8%, respectively, that economic activities have a positive effect on relations in the KRT community and that the implementation of economic activities has created a harmonious atmosphere in the KRT community.

## 5 Conclusion

In conclusion, the economic activities carried out in KRT are a good effort carried out by the KRT community and need to be done continuously. This can have positive implications for the socioeconomic status of the community in KRT, Kelantan. The implementation of this activity has helped generate additional income for the KRT community. Most of the KRT community does village work and does not have a fixed income. Therefore, the economic activities carried out in KRT can improve the quality of life in the local community. In addition, activities organised by KRT allow the community to get to know each other, interact, and help each other. In fact, this activity can help build a relationship of cooperation and harmony in the community [14, 15].

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# Technological Disruption: Impact on Marginalized Groups—A Case Study of Women with Low Education in Indragiri Hilir Regency



Khusnul Hanafi, Raja Widya Novchi, and Asrinda Amalia

**Abstract** In the modern era dominated by technology, rapid advancements in information and communication technology have influenced various aspects of human life. One prominent innovation in technology is the widespread adoption of smartphones, which have permeated nearly every stratum of society. However, despite the significant benefits smartphones bring, their use also entails complex social implications that do not uniformly affect all segments of society. Indragiri Hilir Regency, as part of Indonesia's developmental landscape, also grapples with the ramifications of this technological transformation. In this context, one particular group that warrants attention is women with low educational backgrounds. Often facing various barriers in accessing and comprehending information and communication technology, the impact of smartphone usage on this group can be particularly significant. This study seeks to explore “Technological Disruption: Impact on Marginalized Groups - A Case Study of Women with Low Education in Indragiri Hilir Regency.” We will conduct in-depth research to understand how smartphone usage affects the social, economic, and daily life aspects of women with low education in this region. Throughout this research process, we will employ qualitative methods, including a case study approach focused on the relevant group of women. Data will be collected through in-depth interviews, observations, and document analysis. Through this endeavor, we aim to gain deeper insights into the technological impact on this marginalized group and formulate policy recommendations that can help mitigate negative effects while enhancing the benefits for women with low education in Indragiri Hilir Regency.

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**Keywords** Smartphones • Social change • Marginalized groups • Women • Indragiri Hilir

## 1 Introduction

In discussing technological advancements, it is impossible to divorce them from societal progress. Technology has become an indispensable part of contemporary life. The rapid evolution of technology keeps pace with the changing needs and demands of society. As Ogburn [1, 2] noted, when a discovery is adopted by many, its social influence often exceeds the arithmetic sum of individual habit changes. Social change can range from simple community life to intricate societal structures [3].

Technology is the application of knowledge to create tools to solve specific problems. Advancements in technology, such as automobiles, airplanes, radios, televisions, mobile phones, and computers, have brought significant progress and change to the world. Indeed, present-day technology has entirely transformed how people meet, interact, learn, work, play, travel, and conduct business. Those who do not keep pace with these developments risk being left behind. However, if technology users do not maximize its functionality and use it inappropriately, the results may not be effective. Technological advancements have provided numerous benefits to humanity, such as communication technology, which facilitates faster and easier interactions and information access, as exemplified by smartphones [4].

In recent years, the use of smartphones has proliferated across Indonesia and worldwide. Smartphone use brings numerous benefits, including simplified communication, information access, and enhanced work capabilities. Simultaneously, smartphone use can also have adverse effects on society, particularly for marginalized groups [5].

Marginalized groups, such as women with low education, often face barriers in accessing information and communication technology. Consequently, smartphone use can have more significant impacts on these groups. In the Indonesian context, especially in Indragiri Hilir Regency, there is limited research focusing on the impact of smartphone use on marginalized groups, particularly women with low education [6].

Statistics indicate that the average length of schooling (RLS) for women in Indragiri Hilir Regency in 2020, 2021, and 2022 was approximately 6.95, 6.96, and 6.98 years, respectively. This suggests that the average education level is at the primary school level. For the Riau Province, Indragiri Hilir Regency ranks among the lowest compared to other districts and cities [7].

This research is based on two primary factors:

The rapid development of smartphone technology significantly impacts society, especially marginalized groups like women with low education in Indragiri Hilir Regency. Inappropriate or insufficiently considerate technology use can have negative

effects on their lives. Therefore, in-depth research is needed to analyze and address these negative impacts.

**Social inequality issues:** Women with low education in Indragiri Hilir Regency often experience social inequality, especially regarding technology access and usage. Women with low education have limited access to technology and may struggle to leverage it to improve their livelihoods. Thus, research is required to gain a deeper understanding of this issue and provide appropriate recommendations to address the existing social inequalities.

The research questions for this study are as follows:

What is the impact of smartphone technology on women with low education in Indragiri Hilir Regency?

How do women with low education in Indragiri Hilir Regency respond to the social changes resulting from smartphone technology development?

**Problem-Solving Approach:**

The approach taken in this research is qualitative. This approach will allow the researcher to gain a deeper understanding of the experiences and perceptions of women with low education regarding the impact of technology and the social changes resulting from smartphone technology. The researcher will use interviews and observations to collect data from participants involved in the study [8, 9].

The researcher will also employ qualitative descriptive analysis to analyze the data obtained from the study. This analysis will involve collecting and categorizing data, identifying patterns and themes emerging from the data, and subsequently exploring the meanings and implications of these findings. By using a qualitative approach and qualitative descriptive analysis, this research will provide a comprehensive picture of the impact of smartphone technology on marginalized groups, especially women with low education in Indragiri Hilir Regency, and the ways to help them adapt to the social changes brought about by technology [10].

Regarding problem-solving, the objective is to find appropriate solutions or recommendations to address the negative impacts of smartphone technology development on marginalized groups [11]. Initially, this research will analyze the impact of technology on women with low education in Indragiri Hilir Regency. From this analysis, the problems or negative impacts faced by this marginalized group in technology usage will be identified. Subsequently, the research will focus on finding appropriate solutions or recommendations to address the identified issues. The solutions or recommendations found must improve the situation and help marginalized groups make optimal use of technology [12, 13].

The solutions or recommendations will be based on the research findings and analysis, and they will be discussed with relevant stakeholders, including government bodies, community organizations, and the women with low education themselves.

## 2 Method

This research employs a qualitative descriptive method, which is suitable for gaining an in-depth understanding of the perspectives, experiences, and perceptions of women with low education in Indragiri Hilir Regency regarding the impact of smartphone technology on social change. The steps involved in this methodology are as follows [14, 15]:

1. **Determining Research Objectives:** Before conducting interviews, the researcher must establish clear research objectives. These objectives can be articulated in the form of research questions to be addressed [16, 17].
2. **Observation Method:** This method can be used to directly observe the behavior of smartphone usage among marginalized groups, particularly women with low education in Indragiri Hilir Regency. Observation can be carried out in-person or using technology such as observation cameras [18].
3. **Selecting Respondents:** The researcher must identify the respondents to be interviewed. In this study, the interviewed respondents are women with low education in Indragiri Hilir Regency who are classified as part of the marginalized group [19, 20].
4. **Creating an Interview Guide:** The researcher should create an interview guide containing questions related to the research objectives. The interview guide should be pre-tested to ensure that the questions align with the research objectives and can effectively address the research questions.
5. **Conducting Interviews:** Interviews can be conducted in person or over the phone. The researcher should explain the research objectives and seek permission from respondents before commencing the interviews. During the interviews, the researcher should ask questions according to the interview guide and carefully record respondents' answers [17, 21, 22].
6. **Data Analysis:** After completing the interviews, the researcher should analyze the collected data. Data analysis involves identifying patterns that emerge from respondents' answers and drawing conclusions from the analysis results [23, 24].

In this study, in-depth interviews can be employed to gain a profound understanding of the views, experiences, and perceptions of women with low education in Indragiri Hilir Regency regarding the impact of smartphone technology on social change. The data obtained from the interviews can be used as material for analyzing the impact of smartphone technology on social change among marginalized groups, particularly women with low education in Indragiri Hilir Regency.

## 3 Discussion

1. **Impact of Smartphone Technology on Women with Low Education in Indragiri Hilir Regency.** The interviews conducted for this study provided valuable insights into the impact of smartphone technology on women with low education in

Indragiri Hilir Regency. These insights deepen our understanding of the nuanced effects of technology adoption on this marginalized group [17, 22].

### Positive Impacts and Adaptation

During the interviews, it became evident that smartphone technology has positively impacted the lives of these women. They expressed how smartphones have enhanced their ability to communicate with family members, friends, and acquaintances, even those living far away. This improved communication has not only strengthened their social connections but has also provided emotional support, particularly during the challenging times brought about by the COVID-19 pandemic.

Moreover, smartphones have opened doors to a world of information for these women. They highlighted how they could access news, educational content, health information, and various services through apps and the internet. This newfound access to information has empowered them to make informed decisions regarding health, education, and daily life.

Additionally, some respondents mentioned that smartphones had created economic opportunities. They shared stories of using smartphones to sell products online or find employment through various online platforms. This economic empowerment has the potential to improve their financial well-being and reduce economic disparities.

### Negative Impacts and Challenges

Conversely, the interviews also shed light on the negative impacts and challenges faced by women with low education in adopting smartphone technology. While technology has improved communication, it has, at times, resulted in social isolation. Respondents admitted spending significant amounts of time on their phones, which sometimes led to reduced face-to-face interactions with family members and friends. The addictive nature of smartphone use was a recurring theme, with some expressing difficulty in putting their phones down.

Furthermore, limited digital literacy emerged as a significant hurdle. Many respondents struggled with navigating smartphone functions and apps, reflecting a need for digital literacy programs tailored to their needs. Privacy concerns were also raised, indicating a lack of confidence in their ability to protect personal information while using smartphones.

2. Responses of Women with Low Education to Social Changes Resulting from Smartphone Technology. The interviews provided valuable insights into how women with low education in Indragiri Hilir Regency have responded to the social changes brought about by smartphone technology.

### Adaptation and Integration

Respondents overwhelmingly demonstrated their ability to adapt to smartphone technology. They have integrated smartphones into their daily routines, using them for communication, information access, and even financial transactions. Notably, some women found creative ways to overcome literacy challenges, such as utilizing voice commands and speech-to-text features.

**Challenges and Learning Opportunities:**

While adaptation was evident, challenges persisted. Limited digital literacy remained a significant barrier, hindering some women from fully realizing the benefits of smartphones. This finding underscores the importance of tailored digital literacy programs to bridge this gap.

**Social Dynamics and Family Interaction:**

The impact on family dynamics emerged as a notable theme. Respondents described changes in family interactions due to smartphone usage. While smartphones facilitated communication with family members, concerns arose about excessive screen time among family members, including children. These findings highlight the need for awareness campaigns promoting balanced smartphone use and emphasizing the importance of face-to-face interactions.

**Recommendations:**

Building on the insights gained from the interviews, the following recommendations can be made:

1. **Tailored Digital Literacy Programs:** Initiatives should be developed to enhance the digital literacy skills of women with low education. These programs should address their specific needs and challenges in navigating smartphone technology effectively.
2. **Privacy and Security Education:** Educational campaigns should focus on teaching these women how to protect their privacy and personal information while using smartphones, addressing their concerns and building confidence.
3. **Balanced Smartphone Use Awareness:** Awareness campaigns should promote a balanced approach to smartphone use, emphasizing the importance of face-to-face interactions within families and communities.
4. **Access to Relevant Information:** Efforts should be made to ensure that these women have access to information and resources that are tailored to their needs, including educational content and economic opportunities [13, 17].

In summary, the analysis of interviews provides a richer understanding of the impact of smartphone technology and the responses of women with low education in Indragiri Hilir Regency. It reinforces the importance of tailored interventions to address challenges and maximize the positive impacts of smartphone technology on this marginalized group, thereby facilitating their meaningful participation in the digital age [4].

## 4 Conclusion

The proliferation of smartphone technology has undeniably left its mark on the lives of women with low education in Indragiri Hilir Regency. This study, based on qualitative research and in-depth interviews, has illuminated the multifaceted impact of smartphone technology on this marginalized group and their responses to the resulting social changes.

### Impact of Smartphone Technology

The adoption of smartphones among women with low education has brought about both positive and negative consequences. On the positive side, smartphones have enhanced communication, providing a lifeline to family members and friends, particularly those living at a distance. The newfound access to information through smartphones has empowered these women to make informed decisions about health, education, and daily life. Additionally, smartphones have created economic opportunities, enabling some to engage in online businesses and find employment through digital platforms.

However, the negative impacts should not be overlooked. Smartphone use, while improving communication, has at times led to social isolation. Excessive screen time and smartphone addiction have been reported, affecting face-to-face interactions. Furthermore, limited digital literacy skills and privacy concerns have posed challenges, hindering these women from fully harnessing the potential of smartphone technology.

### Responses to Social Changes

Despite these challenges, women with low education in Indragiri Hilir Regency have demonstrated remarkable adaptability. They have integrated smartphones into their daily routines and found innovative ways to overcome literacy barriers, such as utilizing voice commands. However, digital literacy remains a significant learning opportunity.

Changes in family dynamics have been noted, with smartphones facilitating communication but also raising concerns about excessive screen time among family members. This underscores the importance of promoting balanced smartphone use and preserving face-to-face interactions within families and communities.

In conclusion, smartphone technology represents a double-edged sword for women with low education in Indragiri Hilir Regency, bringing both opportunities and challenges. By implementing the recommended interventions and fostering inclusive progress, society can work towards ensuring that these women can fully participate in and benefit from the digital age while preserving the essential fabric of face-to-face interactions within their communities. This study highlights the importance of addressing digital disparities and promoting equitable access to technology for all segments of society.

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# A Social-Based Study on Sustainable Well-Being (SoWell) Among Community in Tok Bali, Pasir Puteh, Kelantan



Ateerah Abdul Razak, Nur Azuki Yusuff, Amanina Abdul Razak Mohamed, Azahah Abu Hassan Shaari, Asma Lailee Mohd Noor, Z. M. Lukman, and Fairuz A. 'dilah Rusdi

**Abstract** Social well-being is a crucial aspect for every human being. It includes some aspects that help the individual achieves a sustained life and leads him to acquire a balanced well-being. To date, there are issues regarding social problems specifically for those who live in a certain community. This study tries to analyse social issues and identify certain components that contribute to sustainable well-being. It uses qualitative study; nominal group discussion and questionnaire distribution. There are several predicting factors that contribute to social well-being which are social, physical, health, economic and socio-political components. The respondents are among Pasir Puteh community as well as leaders who are responsible for the development in Pasir Puteh. This study identifies several important issues that have been faced among the community and proves that those elements are interrelated in contributing to a sustainable social well-being. The government should take into account the crises in order to promote a more sustainable social well-being especially among the community in Pasir Puteh.

**Keywords** Social well-being · Sustainable · Sowell · Health

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## 1 Introduction

Social well-being is an important aspect in sustaining one's life and balancing it requires several components i.e., friendship with peers is found to contribute positively towards psychosocial well-being as well as positive development [35]. In addition, well-being is also closely connected to physical health and longevity [8]. Furthermore, the term 'well-being' can be used interchangeably with happiness element [14]. Thus, it is understood that these components are crucial in producing a sustainable social well-being model. Other than that, well-being is also connected to academic and work performance [29] as well as citizenship [9]. This proves that people view a sustainable well-being in a broader context. This is because rapid development and numerous challenges faced by people drive them to be more innovative and productive in daily life. This study aims to develop a comprehensive social base-study to validate the related components that can be applied to obtain a sustainable life.

## 2 Literature Review

### 2.1 *The Significance of Sustainable Health Well-Being Among Community*

To date, many people suffer socially, mentally, economically, as well as in other essential aspects of human life. For example, the health crisis has gotten more critical all over the world and it is obviously spiking after the pandemic of Covid-19. Consequently, this has posed negative effects towards human well-being since health problem is closely related with the component of well-being [34].

Similarly, those with a more optimistic outlook on life will be healthier, as they will have lower body fat, lower blood pressure, and a normal body mass index [4]. In addition, modern technology provides a measurement to assess brain activity for the mental aspect. Regarding the quality of individual well-being [32]. According to [24], subjective well-being and health have a substantial correlation in contributing to a harmonious existence. Those with greater life satisfaction also tend to have improved health, a healthier diet, and an exercise routine [31]. Thus, well-being should encompass achieving a balanced level of life fulfilment that incorporates both physical and mental health.

Interestingly, previous study stated that good physical health is found cross-culturally [24]. It is mentioned that countries with a low gross domestic product obtain better quality of health and emotion level. In addition, residents with higher levels of life satisfaction obtain better health quality such as lower blood pressure and disability rates [17]. It is shown that the government's role is important to encourage their people to live healthily and it will form a wellness-pattern in certain countries.

Similarly, it is important to find positive feelings because it influences the aspect of longevity [8], healthy behaviour [4] and they can avoid risky attitudes like smoking and drug abuse. While negative emotions also contribute to other illnesses and reduce the likelihood of sticking to a healthy regimen [7]. Feeling is also a main component that will shape a person's character and it also controls one's social connection with society. This is also closely connected with people who obtain a good condition for life satisfaction. It is reported that people who have achieved good life satisfaction have a healthier lifestyle than those with lower life satisfaction [15]. Other than that, positive feelings such as induced smiling [16], and optimism [5] also contribute to a healthier well-being. Thus, this shows that life satisfaction has a broad definition, and it is crucial to analyze the aspects to achieve a sustainable well-being.

## ***2.2 Social Relationship in Forming a Balanced Community Cohesion***

In social aspects, equality is one of the indicators of subjective well-being [11]. This issue is related to the Malaysian context in how people are treated based on their status. The unequal social treatment can be seen in how the country gives special right only to certain social groups which thus leads to other social issues. In terms of political aspect, the crisis that happened during Najib Razak's era as the prime minister of Malaysia has causes critical crisis. Even though he faces many accusations, there are still followers who support him because of their selfish desires [27].

In addition, a further illustration of how political instability affects quality of life is provided by the implementation of a 6% increase in service tax on ASTRO subscribers [18]. The issues demonstrate that numerous organizations/individuals are affected by political malfeasance. This will then affect their perception of the political parties that administer the nation, and the followers may vote against the particular political party in the next election.

If the political party attempts to monopolise the nation's wealth, the erstwhile followers of the apolitical party will oppose their ideology [26]. It is evident from the 14th general election in Malaysia that the pursuit of power by competing political factions causes them to place national interests on the back burner. This conflict hinders the political, economic, and social empowerment of the Malay population [13].

### **3 Study Rationale and Aims**

This study was developed to measure social well-being in several related aspects such as physical, health, socio-political, social awareness, perception towards government projects, and individual practice. It has been adapted from a project funded by REPSOL, a multinational energy company based in Spain, to assist the company to build Community Social Responsibility (CSR) projects for the Pasir Puteh community in Kelantan, Malaysia.

This study is consistent with the vision of the state of Kelantan, which is to analyse the global planning and development in Pasir Puteh, Kelantan. This includes land development so that the land can be utilised efficiently and effectively by the community. In addition, REPSOL intends to provide adequate and suitable physical space for a variety of ongoing and prospective projects. In addition, the initiative seeks to preserve and improve the physical environment through conservation planning, landscaping, and pollution control. Lastly, the CSR project seeks to improve the population's access to service facilities and economic opportunities.

According to Pasir Puteh District Council, Pasir Puteh has the potential to become a maritime city because Tok Bali, a small fishing port in the vicinity of Pasir Puteh, is on the verge of development due to its direct involvement with the Economic Development Plan of the Eastern Region (ECER) and Tok Bali Port (PTB) project. PTB consists of three major components: international or commercial terminals, the Tok Bali Supply Base, and the Tok Bali Fisheries Port. Based on these projections, the small town of Pasir Puteh has the potential to become a viable city that does not rely on government funding, as this attraction will enhance the income of residents and local government in order to generate periodic urban development.

## **4 Materials and Procedures**

### **4.1 Study Design**

This qualitative study determined the answers to the following research question: what factors contribute to the social well-being of the Pasir Puteh community?

### **4.2 Settings**

Study participants were selected from Pasir Puteh district. They were interviewed at the Penggawa (Village's Head) office at Semerak, Pasir Puteh as well as Pasir Puteh Land and District Office.

### **4.3 Study Participants**

For the notional group technique, there were approximately fifty informants. They were selected on purpose and constituted a focus group. The information was shared with Pasir Puteh Office of Land and Tok Bali District officials, chiefs, and local leaders. Participants were given written informed assent for nominal group technique. The participants were encouraged to attend the discussion at a particular location.

### **4.4 Data Collection**

The qualitative data collection process required approximately three days and almost ten hours to complete. The discussion investigated the perceptions of the informants regarding a variety of elements related to the district of Pasir Putih's development progress. During the discussion, the participants also shared their experience leading the organisation as well as some of the difficulties they confronted because of the Covid-19 pandemic. In addition, we also explored problems in various aspects that occurred in the Pasir Puteh community and we solicited opinion from the informants on how to improve the issues. To ensure the reliability and validity of the data collection, we designated note-takers to record all information gleaned from the conversation.

### **4.5 Data Analysis**

Transcriptions were reviewed to check for accuracy before further content analysis was conducted. After that, clear pattern and consensus was reached among the study team and it was analysed using Nvivo software.

### **4.6 Ethics**

Scientific and ethical approval was granted by the Faculty of Language Studies and Human Development, University of Malaysia Kelantan. In addition, audio-recorded tape and notebooks were kept by an authorized person only.

## 5 Results

A total of 15 respondents were interviewed. Some were well-known leaders who were responsible for the development of the Pasir Puteh community. Among them were members of local authorities, political leaders, local agencies, namely police officers, Fisheries Board officials and district mosque imams. The following themes emerged in the current study: (a) Innovative mindset to survive (c) Resilience with unhealthy habit, (c) Awareness of social cohesion. The primary themes, subthemes, and illustrative quotes from the qualitative data are summarized in Table 1.

**Table 1** List of themes, sub-themes and representative quotes from qualitative study

Themes	Subthemes	Representative quotes
Innovative mindset to survive	Lack of resources and high demand of products	"Absolutely, we must take the initiative to address the problem of insufficient raw materials for distribution. During the monsoon season, there will be a greater demand for salmon, which could make the situation worse"
	Competition with foreign migration	"It is a very serious matter that many migrants can establish even a modest business in our village. We will be left behind if the community does not devise a more effective plan to endure this critical economic crisis"
Resilient with unhealthy habit	Smoking	"We concur that we are arrogant and that it is difficult to kick the smoking habit. Yes, we know that it is a dangerous habit but we live with it though"
	Unhealthy diet	"Typically, we do not bother about mealtime. We consume at any time, regardless of the hour, including late at night"
	River pollution	"We realised that river contamination occurs due to the neglect of a portion of the local populace. But because they disregard the worst that has occurred around them, there is little we can do"
Aware of social cohesion	The development of educational institution	"Education is the primary factor in determining the quality of social relationships within a community. Students and instructors will collaborate effectively to ensure the success of the organisations. It is difficult to accomplish the educational objective without the cooperation of society. It will also produce more educated individuals."
	Improve the recent political administration	"We lament the current state of political administration. We are adamant that we should have a more astute plan to select a suitable leader this time around, so as to promote community harmony."

## 5.1 Theme 1: Innovative Mindset to Survive

Most of the residents labour as farmers and fishermen, according to the qualitative study and the information gathered from the participants. For the industry of crackers, there is a substantial market demand. However, they occasionally lack resources due to a deficient fish stock. In contrast, the youth group in the district of Pasir Puteh has marketing expertise because they can use the media to promote their products. Other than that, Pasir Puteh's location contributes to the alluring ecosystem and benefits the tourism industry. In Tok Bali, there are numerous resorts and accommodations for tourists, including the Tok Aman Bali Beach Resort and the Raja Dagang Resort.

From the findings from the economic sector, it shows that the residents are very independent in surviving in their life. These attributes will promote subjective well-being if they have a supportive environment from parents, friends and other people [6]. In addition, the issue of insufficient fish resources should be addressed to promote positive economic contribution in the community.

"We really need to work hard to survive during the crisis of economy. I only have a small business, but it is important to be wiser to find another solution to generate more income".

From the discussion, it is revealed that the community is forced to put more effort to succeed in business. In addition, they also find other alternatives to make their business run well. Other than that, river pollution is also a serious issue in which it affects other related ecosystems such as hydrological cycle changes, food security, health, vulnerability to extreme weather conditions and stressed human well-being [21].

Other than that, the district confronts several economic crisis-related issues. First, marine vehicles and river pollution contribute to sedimentation, which increases toxic refuse and decreases the oxygen content of aquatic life. There are also 500 foreigners operating in Tok Bali, primarily in the fishing and business sectors surrounding Tok Bali. This issue will result in the marginalisation of the local community due to rising domestic and international migration. In addition, a number of resorts have ceased operations in the region. This may be because this study was conducted during the COVID-19 pandemic; consequently, many economic effects, including those on the tourism industry, can be observed.

Other than that, the findings reveal that the area of Tok Bali has certain problems such as raw material being insufficient to supply to the consumers especially during monsoon season. The community also lacks skills that help them to be more innovative in using the resource, especially fish instead of processing it into crackers and salted fish.

From the results, it shows that the element of social innovation is necessary to be instilled among the people. The adoption of different techniques in socially innovative ways will produce a solution to economic, social, cultural and health challenges especially during pandemics [12]. This is because this effort will boost the economic crisis and people can be innovative in promoting their service and product.



Nevertheless, it is revealed that the farming industry produces a lot of benefits towards the community in Pasir Puteh. It is mentioned that the farmers can generate income from the activities. Meanwhile, there is also the cracker industry which with great strategy, the enterprise could be geared towards producing more beneficial output. Furthermore, the community also uses a spatial location, and they participate in selling products at the night market, thus they could gain more income from the business.

In addition, they can provide preserved fish, particularly during the monsoon season. In terms of agricultural fields, they also sell vegetables like sweet potatoes and watermelon because geographically, the land in the area is appropriate for effective farming activities. They also utilise the source of the seafood industry, including lobster and tiger shrimp. Additionally, the community is involved in the salted fish industry and distributes it to multiple states. This demonstrates that this industry will enhance the local economy, as the drying process, particularly for salted fish, would have allowed it to be supplied year-round when external demand arises [36].

## ***5.2 Theme 2: Reluctance to Do Away with Unhealthy Habit***

In terms of health context, the findings reveal some strength and weakness among the community who live in the Pasir Puteh area. The current study had been conducted during the pandemic of Covid-19, and the rate of Covid-19 at the time was still controllable. In addition, chronic disease is also tractable and it does not hinder the development in the state. The productivity level among the elderly, which is 50 years and above, is still high and they make up a large population of the community.

However, they face some risks since the smoking habit is still at a hazardous level. Moreover the rate of ketum (a type of leave which is used as a drug substance) and drug addiction is increasing among the community. "I am a heavy smoker. I know that it is not a good habit. But it is really hard to move on and change to a healthier habit though".

The community's preference for a very unhealthy late supper is another undesirable practice. It has been demonstrated that eating a late supper and a snack before bed will significantly exacerbate the obesity epidemic [20]. In addition, the influx of foreign immigrants may result in the spread of incurable diseases. These hazards may impede the advancement of community health and wellness. In addition, the population growth rate in Tok Bali has decreased. This may be due to the economic downturn, which encourages the community to establish a solid family plan. From the discussion, it is evident that they also require health-related knowledge to prevent future chronic disease. Additionally, they disregard hygiene, and the results indicate that they maintain a moderate level of cleanliness. Therefore, it is suggested that the authority should encourage communities to be aware of the food safety crisis, in addition to developing and training human resources [23].

Several community health concerns have been addressed in the preceding discussion. It is understood that the community recognises they should adopt a healthier

way of living, and it may take some time for them to break their old, undesirable habits. In terms of the social context, this research reveals that there are no intrareligious conflicts in the study area, including the village of Ketik Nangka. In addition, there is a process of socialising the population with Tok Bali visitors and migrant communities, who are cordial and helpful [3]. This fortitude will increase community engagement and could reinforce a positive social change among them.

### ***5.3 Theme 3: Awareness of the Social Cohesion***

Nevertheless, there are some issues with religious practise. According to the head of Mukim Dalam Rhu, coastal residents are less appreciative of Islamic teachings than inland residents. In addition, drug addiction, smoking, bullying, and other social problems are on the rise among adolescents. From the interview, it is revealed that community concur that the physical infrastructure will be sustained if the community have a firm cohesion among them. Tok Bali is an advantageous and strategic location for the development of a modest industrial port. However, there is also a crisis of river pollution on the Semerak, resulting in the extinction of aquatic life. This is consistent with a previous study that analysed the contamination in the Pasir Puteh region, which included river pollution. The phenomenon of migration is one of the causes of leachate and the rise in water pollution [10].

The bad attitude of the community will contribute to the river crisis in certain areas. Thus, it is important to create awareness among the residents to practice cleanliness in daily life.

“Yes, we have several amenities that could facilitate community life, such as a decent route, beautiful scenery, and so on. We will not be left behind, however, if the community cooperates fully to maintain the infrastructure’s integrity. The most essential aspect is how the community can interact and maintain a healthy lifestyle in order to survive.” This shows that that the community requires a serious effort to ensure that they could contribute to a social well-being and development.

In addition, there are locations that require improvement to become a port, educational institutions, and rail station development site. In addition, the Tok Bali bridge impedes the entrance of large vessels into the port. These issues must be highlighted in order to lessen the impediment to economic and social development.

There are state-sponsored initiatives that contribute to the development of the region. For instance, the renovation of the freshwater area. This could improve the character of the fishing industry and activities associated with it. Also, fishermen must be adaptable and possess a high level of resilience to confront new risks, such as climate change, in order for future social development to occur [25].

In contrast, in terms of sociopolitical aspects, a few respondents mentioned that Semerak, one of Pasir Puteh’s suburbs, is home to several educational institutions, including primary and secondary schools. Therefore, it demonstrates the location’s potential for growth through community education. Additionally, there is a handicraft centre that exemplifies the ingenuity of the villagers and has the potential to be

commercialised. Additionally, the community is able to produce a traditional confection that has been commercialised in a number of states and is used in the production of batik products, thereby making the area well-known in the batik industry [2].

As a result of the limited employment opportunities in the state, however, one of the threats to the community is the propensity of the youth to seek employment elsewhere. In addition, the local community lacks cultural events such as wau (kite flying activity) competitions and *dikir barat* (Malay folk song) performances. This heritage will be forgotten, and the states' identity also would decline among future generations. Thus, it would have a negative effect on the tourism industry, as tourists could no longer discover the state of Kelantan's uniqueness. This is since the natural history and indigenous culture of certain regions play a role in attracting an increasing number of travellers [1]. It is understood that the community faces several challenges, and it is proposed that the community should have the initiative to create social innovation which could benefit social development and well-being.

## 6 Discussion

The results demonstrate that sustainable social welfare requires a concerted effort from multiple stakeholders. It demonstrates that several essential elements are required to develop the concept of sustainable social well-being. In terms of economic development, it is suggested that the marketing strategy be structured to circumvent the competency issue. In addition, cronyism should be eliminated to ensure the equity of community development. Moreover, the current negative impact of monetary issues is significantly worse than any previous economic or financial crisis in history [22]. It is recognised that a new design for a holistic model of economic development must be created for society to survive in a hostile environment.

The social awareness component demonstrates that social factors positively impact community development. Living in an intercultural society necessitates effective communication and mutual understanding [33]. In addition, the physical aspect is essential for ensuring that society has adequate facilities to practise a wholesome lifestyle. It is agreed that well-designed facilities in particular locations can improve the welfare of individuals. It is proposed that the government take action to construct a suitable facility for social development.

Regarding health, it is essential to reduce the epidemic of maladies. To create a sustainable community, the response also indicates that residents should acquire more knowledge in order to enhance their health and education. In addition, sociopolitical factors influence how individuals respond to their government. This is since followers' approval of their political team is affected by the legitimacy issue caused by the Malaysian political parties' weak coalition [28]. Therefore, the government should take additional steps to regain the public's confidence to sustain the political administration in Malaysia.

Moreover, the perception of the government's agenda also impacts the character of social development. As a result, the plan will operate smoothly if both the people

and the government have a solid initiative to foster cohesion. This is because the plan demonstrates the government's dedication to contributing to society [30]. For individual practice, it represents the internal factor of society, and analysing individual values is a crucial function. In social science, it is one of the predictors of behaviour [19]. It is also understood that social well-being is derived from the internal values of individuals, so that they can establish a harmonious relationship within society.

## 7 Conclusion

According to the present research, there are several modifications to the social well-being component. It is demonstrated that individuals are more anxious when confronted with a severe economic crisis. Aside from that, it is stated that the quality of health in society should be enhanced to achieve a balanced quality of life. To avoid other significant health problems, a healthy lifestyle should be followed. In addition, well-planned physical and infrastructure development is required. This will increase employment opportunities in the community, thereby reducing the economic hazard caused by the Covidian-19 pandemic.

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# The Influence of Media Communication on the Development of the Malay Language of Students Speaking in Dialect



Syafini Nuradlin , Mastura Lina , Zuriaty Wan , Embong Zaleha , and Bidin Azman

**Abstract** Verbal communication techniques are where human communication began. Message sharing is expanding from verbal to electrical to digital communication as the Industrial Revolution 4.0 era develops. People may now engage more easily, even when they are separated by great distances, thanks to the revolution in media communication technology. However, the use of networks in media communication not only bridges the distance but also facilitates communication. In reality, it has an impact on how school students learn the national language. As a result, the objective of this article is to examine how media communication has influenced the growth of the national language of dialect speakers in Kelantan. In-depth interviews and a thematic analysis approach are used in this article's qualitative data analysis. Fourteen form two students in total were chosen as respondents. The study's findings revealed that media communication networks can have a positive impact on how well school students who regularly speak in the Kelantan dialect learn the national language. Enhancing dialect students' national language has a positive impact. This is an important reference for the government, educators, and parents to empower the use of media communication content as a learning medium among teenagers.

**Keywords** Media · Communication · National language · Student · Dialect

## 1 Introduction

Media communication or mass communication is an abbreviation of the English term mass media communication [1]. Mass media communication occurs when the prevailing communication method uses media instruments such as speakers. For example, over the phone, radio broadcasts, and publishing content on television. Media is a word derived from the Latin language, which means a medium that means

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connecting, conveys, or informing [2]. Therefore, media communication becomes a link or mediator to deliver a message (communicator) to the receiver when the distance becomes a problem in the communication process.

The history of human communication begins with oral communication methods. Along with the development of the era of Industrial Revolution 4.0, the sharing of messages evolved from only verbal to electronic media and then digital communication. Today's generation of teenagers born in the era of traditional communication media such as radio, newspapers, and television is no longer the main channel to meet the needs of entertainment and information in society [3]. The advancement of communication technology has formed a new communication media network, which is social media. Social media has changed the way people interact, work, and share information [4, 5]. Various opinions have been expressed about the development of media communication with teenagers. On a positive note, the communication media have made the world feel like a global village. Each individual can find out about other individuals just by pressing one button [6].

The power of media communication is utilised by educators by involving their students in the global village to increase their knowledge, skills, and needs for developing a global community [7–11]. However, the concept of the global village is less accepted in Asian countries such as Indonesia and Malaysia compared to the West [12]. This is because it is feared that the original culture of a country or a place can be wiped out by the normalisation of the Western lifestyle [13].

There is no doubt that the influence of media communication plays a big role in the formation of students' personalities. Nevertheless, the use of media communication is a necessity for students, especially in a world where movement is restricted and epidemics are common [14–16]. Networks in media communication have facilitated learning, communication, and information sharing. Therefore, it is more appropriate to think about measures to reduce the negative influence of technological development than to deny the importance of media communication in the daily lives of these students [17].

In addition, each media communication network, such as television, radio, newspapers, or social media, has its pros and cons. The benefits obtained should depend on how the user manages them. This is because a method such as communication may work better than other methods in the communication process with students [18]. The revolution of media communication devices has made it easier for humans to interact even over long distances. Nevertheless, excessive and uncontrolled use of networks in media communication can create social problems. In fact, it affects the development of the Malay language among students. Therefore, the objective of this article is to examine the influence of media communication on the development of the Malay language among dialect-speaking students in Kelantan.



## 2 Literature Review

There are many articles regarding the influence of media communication on the spread of dialects, but not many have been done to examine the influence of media communication on the development of the Malay language of dialect-speaking students. Therefore, the main focus of this article is on the development of the Malay language of students speaking the Kelantan dialect using media communication. Dialect is a variation in a language that is a characteristic of a certain group among the speakers of a language called a regional language or accent [19]. Citing Ayatrohaedi's statement in Abdul Hamid Mahmood's study [20], the term dialect comes from the Greek word "dialektos" which is used in relation to the language situation of a place because of the existence of small differences in the language used by every resident of that place. Nichols [21] defines dialect as a form of language that is classified according to its users. This is because each dialect has its own characteristics that distinguish it from other dialects.

In addition, Malaysia has 13 states that use different dialects in their own districts. According to Norazila [22], a language or dialect can be influenced by differences in the elements of nature and the environment in the place where it is spoken. For example, the Kelantan community prioritises the Kelantan dialect in the communication process [23]. In other words, the Kelantan dialect is also used in the learning process between teachers and students at school. The Kelantan dialect is the first language of Kelantan people, regardless of race or religion.

Students who come from Kelantan are known for their high sense of identity and use dialect in their daily communication, including at school level [18]. The students combine the Malay language with the local dialect in their daily speech during the learning process at school [24]. This causes the existence of a variety of Malay languages in their daily communication. Kelantan dialect belongs to the non-standard language used in daily communication by the Kelantanese, which is only understood by the community or area that practises it [25].

According to Mustaffa et al. [25], the influence of dialect in communication can lead to a decline in an individual's level of self-confidence to communicate effectively. Ahmads [26] shows that there is a significant relationship between the weakness of the speaker's pronunciation and the pronunciation of the local dialect caused by the melting process of half the words. This reduces the speaker's level of self-confidence to be competitive with other parties due to a weakness in effective communication [26, 27].

According to Krish et al. [28], students who use dialect in the communication process will face many challenges and obstacles compared to students who use Malay in all matters. Among them are problems with learning and interviewing to get a job after finishing school. Therefore, these students choose to socialise only among themselves and socialise in groups even if they live in other states Krish et al. [28].

According to Shahidi and Aman [29], awareness of the strong influence of the use of dialect needs to be increased because this situation will make the current communication process difficult in the workplace. This happens because the interview panel

cannot understand the words used by the candidate, who is affected by the use of dialect. It is clear that the mastery of effective communication skills is very important for getting a job [30, 31].

Mahussain and Fathiah [32], on the other hand, stated that the dialect influence factor also plays a role in causing disruption to the development of students' Malay language communication skills and is a dominant factor in determining the occurrence of the matter. Ang and Mezah [33] asserted that Chinese students who grew up in an environment using the mother tongue did not achieve good results in oral test.

In fact, the quality of language in students' oral and written communication in the learning process in the classroom is also affected [24]. Rusidah [34] explained that it is difficult for students to master Malay communication skills well because this subject is considered a compulsory subject in the education system. Its application in daily affairs is not emphasised like other languages.

Students who grow up in a dialect-speaking environment often experience difficulties with effective communication skills, even though they obtain high exam marks in Malay subjects at school [35]. This is in line with the statement of Salinah [36] that there are many students, especially non-Malay students, who get excellent results in Malaysian subjects but fail to communicate well.

Therefore, the style of delivery or communication skills using the Malay language need to be prioritised. The communication process does not go well if the message being sent cannot be understood by the other party. This is due to several obstacles, such as language and spelling, which in turn affect students' confidence in sharing opinions [37].

Mastery of communication skills in the Malay language needs to be emphasised at the school level, especially in national schools, so that students are able to communicate and write well. According to Lee [37], the weakness of communicating in the Malay language needs to be taken seriously because it can damage the national language and even cause future generations to lose the ability to speak Malay correctly. This shows signs of the deterioration of the national education system [37, 38].

In addition, Mohammad [39] also opined that the problem with students who use dialects is that they lack effective communication skills. For example, activities involving public speaking and activities involving communication skills. This happens because they are less skilled in language code switching skills and get rid of the dialect directly or indirectly. According to Kreidler [40], correct and clear pronunciation is very important so that the message conveyed is easy to understand, and the speaker also needs to be confident when speaking so that the message is easily received by the other party. Furthermore, speakers are able to produce effective communication if they have good pronunciation and intonation, even if their grammar is not accurate.

Huat [41] states that the influence of dialects also often plagues teachers due to the weak basic mastery of the Malay language among students. This is related to the influence of the dialect or the disruption of the student's native language that affects

the oral learning process. According to Peng [27], students are also carried away by the influence of their dialect on writing activities.

The study of the uniqueness and understanding of dialects in Malaysia is not a new study among scholars. However, studies that examine the influence of media communication on the development of the Malay language of dialect-speaking students are still under-researched by other researchers. Therefore, in this study, the researcher wants to see the influence of media communication on the development of the Malay language among dialect-speaking students in Kelantan.

### 3 Research Methodology

This study focuses on researching the influence of media communication on the development of the Malay language among dialect-speaking students in Kelantan. The data for this article is taken from a qualitative case study. This research method is used to obtain detailed data on the experiences of the respondents who speak the dialect in their daily lives. Qualitative methods are more suitable to be practised if they involve problems involving emotions, motivation, and empathy regarding certain individuals or groups, social conditions, or certain events [42, 43]. In fact, some aspects cannot be explained based on quantitative data alone. Therefore, a semi-structured interview with each respondent was conducted. Semi-structured interviews require respondents to answer open-ended questions. In order to obtain complete information, an in-depth interview method was used to collect the data. Semi-structured interviews are in-depth interviews that are often used in qualitative methods [44]. A total of 10 basic questions have been constructed to answer the research questions. Interviews were conducted separately for each respondent to ensure confidentiality.

### 4 Sampling

A total of 14 respondents were involved with the help of the teacher and signed the submitted consent form as shown in Table 1. The demographic profile is as follows:

For the sampling process, the purposive sampling technique was used. Respondents are from two students at three national secondary schools in Kota Bharu, Kelantan as shown in Table 2. The criteria for the selection of respondents are divided into two categories: (i) the respondent is a dialect speaker; and (ii) both parents of the student are from Kelantan.

The location of the interview was chosen according to the teacher on duty to protect the privacy of each respondent, and the interview place was set in the vicinity of the respondent's school only. From two students were selected for complying with the field study respondent selection protocol set by the Malaysian Ministry of Education, which states that respondents should be from non-exam classes. List of schools involved.

**Table 1** Demographic profile of respondents

Respondent (code)	Age	Gender	Language
P1	14	M	Kelantan dialect
P2	14	M	Kelantan dialect
P3	14	M	Kelantan dialect
P4	14	M	Kelantan dialect
P5	14	M	Kelantan dialect
P6	14	M	Kelantan dialect
P7	14	M	Kelantan dialect
P8	14	F	Kelantan dialect
P9	14	F	Kelantan dialect
P10	14	F	Kelantan dialect
P11	14	F	Kelantan dialect
P12	14	F	Kelantan dialect
P13	14	F	Kelantan dialect
P14	14	F	Kelantan dialect

**Table 2** List of schools

School name (code)
SMK1
SMK2
SMK3

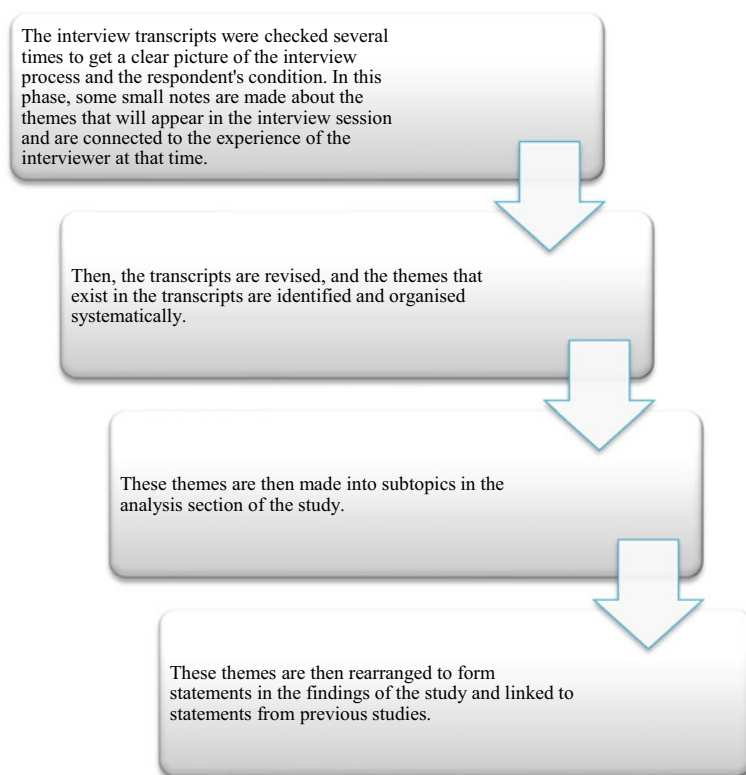
## 5 Research Instrument

In this data collection process, a voice recorder was used to record the conversation between the researcher and the student. The process of recording this interview uses a voice recorder only, not a video recording device. This is because the use of video recording equipment was found to be unsuitable for school students who are individuals under the age of 18. Even if the sample gives permission, the results of the interview will not be very effective and will not go smoothly because the sample will be more disturbed and embarrassed to respond to the questions asked. This will undermine the authenticity of the interview recording, give low value to the research findings, and undermine the process of analyzing the research findings to answer the constructed objectives. The oral respondent interview process was conducted for 5–15 min. A relevant interview period is neither too short nor too long. This is stated by [45], who state that the characteristics of an oral conversation that can be classified as an interview require a small number of individuals in the conversation, a short duration of the conversation, and a focus on the individual who will answer the question only, not the surrounding people.

## 6 Research Analysis

After the in-depth interview process, the results of the interviews were translated into transcripts, and the researcher conducted a thematic analysis process to obtain themes that emerged from the raw data. This method of analysis is carried out as in Fig. 1.

In this data collection process, a voice recorder was used to record the conversation between the researcher and the student. The process of recording this interview uses a voice recorder only, not a video recording device. This is because the use of video recording equipment was found to be unsuitable for school students who are individuals under the age of 18. Even if the sample gives permission, the results of the interview will not be very effective and will not go smoothly because the sample will be more disturbed and embarrassed to respond to the questions asked. This will undermine the authenticity of the interview recording, give low value to the research findings, and undermine the process of analyzing the research findings to answer the constructed objectives. The oral respondent interview process was conducted



**Fig. 1** Analysis method

for 5–15 min. A relevant interview period is neither too short nor too long. This is stated by Cook (1989) [45], who state that the characteristics of an oral conversation that can be classified as an interview require a small number of individuals in the conversation, a short duration of the conversation, and a focus on the individual who will answer the question only, not the surrounding people.

## 7 Findings and Discussion

Interviews that have been conducted with respondents have revealed various experiences and perspectives. Media communication themes were identified as a result of the frequency of repetition of the words while watching dramas and cartoons (animation) on television or devices. These themes illustrate the influence of media communication on the mastery of the Malay language by dialect-speaking school students. The identified media communication themes will further elaborate on the effects:

### Media Communication

The situation of dialect-speaking school students is different from other school students, especially for dialect-speaking school students in Kelantan whose family background is originally from Kelantan. This is because the national secondary school students in Kota Bharu, Kelantan, use the Kelantan dialect entirely in school communication, even though some of the students' parents are from other states. These students practise the use of the Kelantan dialect in communication with family and in the socialisation process with friends. This makes the Kelantan dialect the first language, while Malay becomes the second language, followed by English as the third language [41, 46].

The results of the research show that the respondents also carried out language code switching during the interview process. The respondents answered the interview questions several times using the Malay language to adapt to the current situation and the language used by the researcher. In addition, these respondents were also able to adapt the language smoothly, even though they grew up using the local dialect, the Kelantan dialect, in daily communication.

Based on interviews conducted with female respondents, these respondents stated that their mastery of the Malay language was developed through watching Malay dramas on television and devices. Broadcasting Malay dramas helps them master Malay vocabulary a lot as recorded in Table 3. The Malay drama they watch also exposes them to the sound elements of the correct pronunciation of some Malay words. This is supported by Iberahim and Mahamod [47], who argue that the technological facilities that are used now facilitate and increase students' interest in learning the Malay language more deeply.

In addition, some female and other male respondents also mentioned watching dramas and animations from other countries as factors that help them communicate fluently using the Malay language as recorded in Table 4. This is because watching

**Table 3** Examples of statements by female students about Malay drama

Student statement
<p>“...Boleh je cakap luar. Dah biasa duduk dengar cikgu mengajar guna bahasa standard. Lagi pon, kat tv banyak drama Melayu saya duduk tengok...”</p> <p>“I can speak Malay. I’m used to sitting and listening to the teacher teach using standard language. Besides, I always watch a lot of Malay dramas on TV”</p> <p>(P8, SMK1)</p>
<p>“Saya takde masalah nak cakap luar sebab suka tengok drama kat tv. Tak rasa kekok pon kalau sepupu bukan dari Kelantan balik sebab dah biasa dengar orang luar cakap kat tv”</p> <p>“I have no problem using Malay because I like to watch Malay dramas on TV. I don’t feel awkward socialising with my cousin, who is not from Kelantan, because I’m used to hearing people speak Malay on TV”</p> <p>(P9, SMK 2)</p>

foreign dramas or animations can help them develop their Malay vocabulary by reading the subtitles provided in Malay language.

In contrast to some other male respondents, they develop their mastery of the Malay language by watching animations that use Malay background voices as stated in Table 5.

Apparently, respondents mastered their Malay language using media communication in addition to the use of Malay language by teachers during learning sessions at school. This is in line with the statement of [48] that media communication is a medium that can educate the public about an issue and help them face that issue. The increase in the respondents’ mastery of the Malay language is the result of watching local or foreign dramas and animations broadcast on television or devices.

**Table 4** Examples of student statements about drama and animation from other countries

Student statement
<p>“...saya kurang sikit tengok drama Melayu sebab saya lagi minat drama Korea. Tengok drama Korea pon banyak boleh belajar jugak sebab ada <i>subtile</i> bahasa Melayu. Saya guna <i>subtile</i> bahasa Melayu. Best sikit senang faham...”</p> <p>“I don’t watch Malay dramas much because I’m more interested in Korean dramas. You can learn a lot by watching Korean dramas because there are Malay subtitles. I use Malay subtitles. Simple and easy to understand”</p> <p>(P10, SMK3)</p>
<p>“Sebab tengok drama Korea. Kan ada sari kata bahasa Melayu. Jadi kita tahu lah. Berlatih situ”</p> <p>“Because I watch Korean dramas. There are Malay subtitles. So I know Malay words from there. I practise there”</p> <p>(P11, SMK1)</p>
<p>“Saya suka tengok kartun Jepun. <i>Pehe</i> (Faham). <i>Kei ado subtile</i> bahasa Melayu (Kan ada <i>subtile</i> bahasa Melayu). <i>Belajar kecek luar situ</i> (Belajar bercakap bahasa Melayu di situ)...”</p> <p>“I like watching Japanese cartoons. Understood. There are Malay subtitles. Learn to speak Malay language there”</p> <p>(P1, SMK2)</p>

**Table 5** Examples of respondents' statements about voice-over animation in the Malay language

Student statement
<p>"Kalau dulu kan ada kartun macam Spongebob, Dora. Kartun tu kan guna bahasa Melayu. Sebab tu lah. <i>Berehi dulu tengok</i> (Suka tengok)"</p> <p>"In the old days, there were cartoons like Spongebob and Dora. The cartoon uses a Malay background voice. That's why. I like to watch at that time"</p> <p>(P2, SMK3)</p>
<p>"Belajar guna kartun. Tengok kartun macam Upin Ipin. Dulu ada banyak kartun kat TV9. Loni tengok di You Tube banyak (Sekarang banyak tengok di You Tube)"</p> <p>"I learned from cartoons. Watch cartoons like Upin Ipin. There used to be many cartoons on TV9. Now I watch a lot on YouTube"</p> <p>(P3, SMK1)</p>
<p>"Biasa <i>jah</i> (biasa je). <i>Tadok</i> masalah sebab <i>beso</i> tengok cerita kat tv (Tiada masalah sebab biasa tengok cerita di televisyen). <i>Kecek luar bulih</i> (Boleh bercakap bahasa Melayu baku). Tak takut"</p> <p>"It's normal. No problem because I used to watch animations on TV. I can speak standard Malay. I'm not nervous"</p> <p>(P6, SMK3)</p>

The network in media communication is not only an entertainment tool and a communication tool; it can even function as a learning medium for dialect-speaking school students, especially in Kelantan. This is in line with the principle of communication presented by Schramm [49], which states that communication functions as a process of informing, educating, persuading, and entertaining. In addition, it can also be seen that the background of the parents does not affect the development of the Malay language of the students. In conclusion, the findings show that the network of media communication can positively influence the development of the Malay language of students who practise the Kelantan dialect in everyday speech. Positive influences include improving the Malay language of dialect-speaking students.

## 8 Conclusion

The variety of dialects found in Malaysia has created opportunities for scholars in the field of communication to study and examine in depth the importance of technology, such as media communication, to society. The discussion on the findings of the study shows the role played by media communication in disseminating knowledge about the Malay language. This indirectly helps students hone their Malay communication skills outside the classroom. There is no denying that social media abuse occurs a lot among teenagers in school. Nevertheless, media communication has also become a necessity for students, especially in a world limited by movement restrictions and epidemics [14].

Today's teenagers are said to have had internet genetics since birth (Manap et al. 2016). This is because these teenagers were born in the era of internet applications that have begun to be widely used around the world. Media communication has



influenced today's society so much that it is hard to believe if an individual does not use any device. Nowadays, almost everyone owns a sophisticated device, including the young, old, rich, poor, and others.

Therefore, it is more appropriate to think about preventive and treatment measures for the issue of media communication abuse among teenagers than to deny the importance of media communication in the daily lives of students [17]. The advantages of traditional learning methods over modern learning methods should not be prioritised now. However, it is necessary to think about how both methods are able to help in achieving the goal of improving students' mastery of the Malay language, especially students who speak dialects. This is because the good or bad use of media communication should depend on how an individual uses it. Along with the statements of [50] Shamsul (2021), every good or bad experience of an individual using technology depends on the search and the need while using it.

### List of Interviews

1. Interview with Prof. Ulung Datuk Dr. Shamsul Amri Baharuddin at the Faculty of Language Studies and Human Development, Universiti Malaysia Kelantan, via the Google Meet network on September 27, 2021, at 10 a.m.
2. Interview with Prof. Dr. Mansor Mohd. Noor at the Faculty of Language Studies and Human Development, Universiti Malaysia Kelantan, via the Google Meet network on September 29, 2021, at 10 a.m.

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# Misconception Remediation Through the Probing, Present Previous Conception, Observation, Clarification, Confirmation and Reflection (P2OC2R) Learning Model



Muslimin Ibrahim and Pance Mariati

**Abstract** Concepts have a strategic position in science, misconceptions can lead to errors in the theory and also the laws built by the concept. The purpose of this study was to remediate misconceptions of science concepts found in elementary school teachers in Indonesia. Remediation is carried out using the Probing, Present Previous Conception, Observation, Clarification, Confirmation and Reflection (P2OC2R) model which is a brief learning steps carried out in remediation, namely probing, present previous conception, observation, confirmation/clarification and reflection. The results of the study on 284 teachers spread over 23 provinces were found to have misconceptions in 40 science concepts after being diagnosed using the three tier test. The results show that 87% of respondents have a shift in conception from misconception or did not understand the concept to understand the concept, 10% no change in concentration and 3% actually went from understanding the concept to being a misconception. The implication of this finding is that P2OC2R has the potential to be used in concept learning.

**Keywords** P2OC2R · Misconceptions · Concepts · Concept learning

## 1 Introduction

Misconception is a condition in which a person has a conception that is different from the facts or expert agreement about a particular concept. The concept consists of 5 elements, namely name, definition, attribute, example, and value. Misconceptions can occur in the several elements of the concept. Student learning is widely affected

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by the presence of misconceptions. These misconceptions are tightly held and can be transferred between courses, impacting students long-term and across disciplines [1, 2].

The concept is the basic structure of theory and law. Theories and laws that are built on the basis of wrong concepts will also lead to errors in those theories and laws. Previous research has described various ways to correct these misconceptions [3, 4]. Through the three tiers test [5] it is known that this is conception still occurs today [6–8]. This condition is certainly not good for the students' concept acquisition process.

The main causes of these misconceptions include (1) in teachers: through teacher reading books that have misconceptions, (2) in students: teachers who have misconceptions teach the student and the student read books with misconceptions, while (3) misconceptions in books are caused by the author that cites the wrong conception. The author does not verify the facts or sources that have high accuracy [9]. In addition, when the teacher teaches concepts inductively using the concept attainment model (CAM) learning model which starts from an example of a concept and students are asked to identify the attributes of the concept. This is where the weakness of the CAM model lies, namely that students find it difficult to find concept attributes and tend to assign concept attributes to characteristics that are easily observed, while characteristics that are easily observable are not necessarily attributes of a concept.

To remediate students' misconceptions or students who do not understand the concept, a learning model called P2OC2R has been developed [9]. The purpose of the study was to describe the effectiveness of P2OC2R in remediating science misconceptions in elementary school teachers, by looking at the shift in the profile of respondent's conception.

## 2 Method

This study involved 284 teachers from 23 provinces in Indonesia who are currently participating in the teacher professional education program in 2020 and 2021 with a pretest posttest design and conducted online.

$$O_1 \quad X \quad O_2$$

where O is three tiers test of 40 concepts and X is remediation learning using the P2OC2R model. The treatment steps refer to the P2OC2R Step [9] as follows.

1. Respondents are asked questions related to certain concepts. The question maybe concerning attribute, examples, or definition of the concept. (P)
2. Respondents provide answers according to their conception. Respondents' answers are inventoried (P)
3. The truth of the respondent's answer is confronted with the facts by inviting the respondent to observe the example of the related concept (O)

**Table 1** The examples of three tiers test item

Statement concerning certain concept	Answer		Confidence				
	True	False	5	4	3	2	1
Anaerobic respiration is respiration that does not require oxygen							
The specific characteristics (attribute) of birds are able to fly and have wings							
The image formed by a concave mirror is always inverted							
The blood in arteries is red and the blood in veins is blue							

4. Respondents are guided to confirm (C) and clarify (C) the correctness of their answers. The teacher can add examples of new examples of the concepts to strengthen. (C2)
5. Respondents are invited to reflect by reviewing their conception (R).

2.1 Research Instrument

Research instrument consist of the test namely three tiers test, rubric and power point slide to guide respondent observe the example of the concept their studied. The three-tier test are used to diagnose the respondent’s conception of each concept being tested. The conception of the respondent can be in the form of understanding the concept, not understanding the concept, or misconception. This test is a diagnostic test consisting of a statement about a particular concept, followed by answer choices, and the level of confidence expressed in numbers 5, 4, 3, 2, 1. Where 5 indicates that the respondent is very sure of the correctness of their response, while 1 indicates very not sure if the answer is correct. The Table 1 following is an example of the instrument items [5].

The responses given by the respondents were analyzed using the following rubric (Table 2).

The effectiveness of the remediation process was determined by comparing the respondent’s conception profile before (O<sub>1</sub>) and after (O<sub>2</sub>) treatment.

3 Results and Discussion

The results of this study indicate that the respondent’s conception profile from the three tiers test before and after remediation are shown in Table 3.

**Table 2** Rubric

Answer	Level of confidence	Meaning
True	High ( $> 2.5$ )	Understand concept
True	Low ( $< 2.5$ )	Do not understand concept
False	High ( $> 2.5$ )	Misconception
False	Low ( $< 2.5$ )	Do not understand concept

Source Mujizatul et al. [5]

Based on the data in Table 3 that there are 40 concepts, tested on 284 elementary school teachers, after being analyzed using a rubric (Table 2), gives the following results.

- 21 concepts found misconceptions in all respondents
- 4 concepts not understood by all respondents
- 3 concepts found misconceptions in at least 50% of respondents
- 7 concepts have been understood and there are no misconceptions
- 2 concepts are not understood by more than 50%

These results indicate a very concerning condition, since of the 40 concepts tested, only 7 concepts were understood by 284 respondents, while there were 21 concepts that had experienced misconceptions in 100% of the respondents. This condition potentially to become a snowball, because each teacher will teach the concept to a number of students. After remediation is done, then the respondents are tested again, using the same test but has been randomized. This test gives the following results.

For all (40) concepts tested, the majority of respondents changed in a positive direction. These changes can be explained as follows (a) Respondents who initially had misconceptions became aware of the concept, as well as respondents who did not understand the concept to understand the concept. (b) There are 13 concepts that were originally not understood to be understood and (c) there are 37 concepts whose misconceptions can turn into understanding concepts in most respondents. Even very interesting (c) 17 concepts that were not understood by 100% of respondents became understood and 22 concepts that 100% of respondents had misconceptions became understood concepts, 37 concept change from misconception to understood the concept in more than 65–75% respondent.

The positive effects obtained from remediation using P2OC2R in harmony can be achieved because P2OC2R is faced with something new [10, 11] namely facts that are directly observed by respondents. In science, facts are judges that determine the truth. Misconception remediation carried out through P2OC2 characterized by allowing respondent to express their conception first. In P2OC2R respondents were asked to verbally express their conceptions to be inventoried, then respondents were faced with facts to confirm their conceptions. This process is in line with [12] in their research, respondents were asked to Write-to-learn assignments (WTL) are characterized by their ability to promote in-depth conceptual learning by allowing students to explore their understanding of a topic.

**Table 3** Respondent conception profile before and after remediation

Concept Number	Number of respondent based on their conception					
	Before remediation (O1)			After remediation (O2)		
	Understand concept	Do not understand concept	Misconception	Understand concept	Do not understand concept	Misconception
1	0	0	284	272	0	12
2	0	0	284	284	0	0
3	0	0	284	272	0	12
4	0	0	284	80	12	192
5	0	0	284	272	0	12
6	0	0	32	260	0	24
7	168	0	116	260	0	24
8	0	0	284	272	0	12
9	0	0	284	236	12	36
10	0	284	0	260	0	24
11	0	284	0	248	0	36
12	0	0	284	260	0	24
13	0	0	284	272	0	12
14	0	0	284	272	0	12
15	108	56	120	260	0	24
16	0	272	12	284	0	0
17	0	284	0	260	0	24
18	12	272	0	272	0	12
19	84	48	152	152	0	132
20	284	0	0	224	0	60
21	0	0	284	248	0	36
22	108	60	116	148	0	136
23	120	12	152	176	0	108
24	0	0	284	272	0	12
25	120	60	104	260	0	24
26	108	120	56	284	0	0
27	0	0	284	272	0	12
28	0	0	284	272	0	12
29	24	108	152	272	0	12
30	0	0	284	272	0	12
31	12	0	272	260	0	24
32	84	60	140	284	0	0
33	0	0	284	272	0	12

(continued)



**Table 3** (continued)

	Number of respondent based on their conception					
	Before remediation (O1)			After remediation (O2)		
Concept Number	Understand concept	Do not understand concept	Misconception	Understand concept	Do not understand concept	Misconception
34	0	0	284	272	0	12
35	0	0	284	272	0	12
36	0	284	0	272	0	12
37	0	0	284	284	0	0
38	0	0	284	284	0	0
39	0	0	284	284	0	0
40	228	0	56	272	0	12

Unfortunately, apart from this success, there is one concept that was previously understood by 100% of respondents, after remediation it was found that 21% of respondents had misconceptions. Meanwhile, there are 4 concepts that were originally misconceptions, but remain in a state of misconception (resistant). This shows that dealing with misconceptions is not always easy. People who experience misconceptions tend to stick to their conceptions [9, 10]. By increasing the number of examples observed by respondents during remediation, it can affect the change in conception in a positive direction.

## 4 Conclusion

Misconceptions of science concepts in teachers still exist today. The P2OC2R learning model can be used to reduce the condition of misconceptions in teachers. The effectiveness of this P2OC2R model can be increased by presenting new examples, especially examples found in the respondent's environment.

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# Opportunities for the Growth of Competitive Organic Manufacturing in Ukraine



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and Alina Buriak 

**Abstract** The problems of greening become more and more relevant every year. One of the ways to solve them is the development of organic production and justification of measures for its stabilization. In modern economic conditions, the problems of the efficiency of production of organic products come to the fore. Only when agricultural commodities producers are aware of the benefits of organic agriculture over conventional production will they switch to organic farming practices. Therefore, the issue of increasing the efficiency of production of organic products remains relevant and requires further research. It should be noted that recently the market of organic products has been developing quite dynamically. The interest of farmers in the organic, ecologically clean method of growing agricultural crops is growing all over the world. On the world market, the demand for organic products is increasing every year, and this creates a good perspective for agrarian organic production. The article examines trends in the development of the organic products market and the level of its consumption in Ukraine and in the developed countries of the world. The analysis of the development of organic agriculture was carried out, the dynamics of the areas of Ukraine occupied by organic production were studied. It has been determined exactly what the state's policy is in the area of organic agriculture by analyzing the legislative and regulatory framework. The purpose of the article is to study the functioning of the market of organic products in Ukraine and highlight the problems and prospects of its development. The methodological and theoretical basis of the study of the development of the competitive environment in the market of organic products was formed by the methods of scientific research, logical

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approach, observation, comparison, analysis and synthesis, which made it possible to comprehensively analyze the development of the organic market in Ukraine.

**Keywords** Organic production · Agricultural products · Environmental safety · Export potential · Financial security

## 1 Introduction

In the twentieth century thanks to scientific and technical progress, humanity has intensified and improved all types of activity, including agricultural production. But the intensification of agriculture, as a rule, took place with the use of chemical means of plant protection, artificially synthesized medicines for the treatment of animals, which negatively affected both the environment and human health in general. Therefore, every year the problems of improving the ecological state of the environment become more and more urgent. In many countries of the world, including Ukraine, there is an active transition to organic production.

In addition, the issue of food safety for consumers has come to the fore in recent years. One of the key components of the agriculture sector's internal and external competitiveness is the product quality and environmental safety. This is a result of the practice of using biotechnology in agriculture rapidly gaining ground. Popularity and demand for environmentally friendly goods are rising quickly in industrialized nations' food markets, and a new sector of the global food trade is beginning to take shape.

## 2 Literature Review

Scientific research on organic agriculture began in the early 70s of the twentieth century by several research institutes in Europe and the United States. Financial support to these institutes was provided by private foundations. In the early 1980s, universities and agricultural colleges began to show interest in organic agriculture. Scientific developments of educational institutions laid the theoretical and methodological foundations of organic agriculture. Only since the 1990s have national governments paid attention to the development of organic agriculture and begun to finance research in this area, since the production of organic products helps to strengthen the domestic market of the country, increase exports, and also solve a number of economic and environmental problems [1 p. 19].

A significant contribution to the study of the economic efficiency of organic land use was made by the Ukrainian scientist A. V. Kucher. In his work, the theoretical and methodological principles of determining the effectiveness of organic land use from the standpoint of systemic and interdisciplinary approaches were further developed,

in particular in terms of determining the essence and hierarchical classification of the effectiveness of this land use [2].

According to O. Popova, organic farming is fundamentally a type of sustainable agriculture that fully appreciates the multifunctionality of agriculture and, most importantly, its social and ecological significance. According to the researcher, this type of management effectively embodies a new agricultural economy that successfully combines environmental responsibility, economic reason, and social logic [3, p. 186].

According to O. V. Shubravska, production that claims to meet agro-ecological standards is based on the activation of natural processes of increasing soil fertility and animal resistance to diseases, implies the practical application of conservation of natural resources, as well as increasing biodiversity and preserving the ability of ecological systems to self-renew. At the same time, chemical and artificially created substances and organisms are either not used at all, or their quantity is limited [4, p. 53].

The key need for conducting agricultural production that employs energy- and resource-saving methods, is based on the minimal use of mechanical soil cultivation, and is based on the use of synthetic chemicals, according to N. Berlach while researching organic agriculture [5].

Well-known researchers, who have furthered and clarified the essence of organic production and organic products, make the broad assumption that environmentally friendly production is a kind of prerequisite for developing a biotechnological foundation for medicine and enhancing the health of the rural population as a result of reducing pollution of land and water resources, the air basin, preserving forests, and preserving biological diversity [6, p. 304].

O. de Schutter identifies the definition of organic agriculture in the direction of ecological agriculture, while emphasizing its economic feasibility in the long term and a number of comparative advantages alongside traditional and intensive farming methods, focusing on its independence from oil price fluctuations on the world market [7].

In the world, the so-called organic production is becoming larger and more popular every year. More and more people in the countries of Europe and Asia, America and Australia are joining the holistic system of management and production of food products, which combines the best practices that simultaneously protect against chemical and genetically modified influences of the environment and people.

Organic farming is not a simple compromise between intensive and resource-saving land use, it is a certain complex of changes in the priorities of some effects over others, the coordination of economic effectiveness compared to the preservation and restoration of soils, increasing their economic efficiency as much as the natural fertility of soils, taking care not only of rational land use, but also about compliance with high standards of food quality and safety [8–10].

However, at the present time, the prospects for the development of the Ukrainian market of organic products have not been sufficiently analyzed, the criteria for adaptation to the external market environment have not been determined, the possibility of

integration into the world economic system has not been assessed, and mechanisms for its competitive development have not been developed.

### 3 Results and Discussion

Recently, the world market of organic products has been growing dynamically. Global sales of organic products are increasing annually and in 2020 amounted to more than 120.6 billion euros per year. In 2020, about 3.4 million producers from different countries of the world engaged in organic production, compared to 2019, this indicator increased by 7.6%. Similarly, the annual growth of the area of agricultural land for organic production is monitored, in 2020 it amounted to almost 74.9 million hectares. Only in EU countries, the number of “organic” farms has increased more than 20 times over the past 15 years [11, p. 6].

In recent years, there has been a greater interest of consumers in healthy eating. Buyers are willing to pay a premium for organic food products, the demand for which is growing rapidly worldwide. It should be noted that prices for organic products are usually 10–50% (and in some cases even 100–200%) higher than for conventional food products. Price premiums compensate manufacturers for higher labor costs per unit of production, better management skills, administrative, inspection and certification costs [12–14].

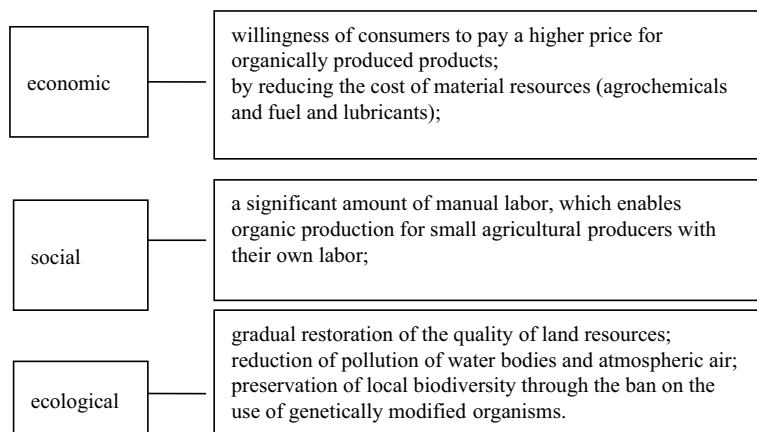
All over the world, the issues of ecology, preservation of the environment, and healthy nutrition are increasingly worrying people. The world market of organic products is growing at a rapid rate of 10–15% per year. About 97% of the total consumption of organic products falls on the countries of Western Europe and North America. The leaders in the sale of organic products are the USA, Germany and France.

The consumption of organic products per capita in the world is 12.8 euros on average. The most on average is spent on this product in Switzerland, where each resident spends an average of 312 euros on it, followed by Denmark and 231 euros in Sweden.

The specifics of organic production of agricultural products are the economic, ecological and social effects of this type of activity (Fig. 1).

Currently, the following main ways of developing organic production have been formed in the countries of the world:

- development of organic livestock and agriculture on a sufficiently high scale with financial support (USA);
- small-scale organic farming, export-focused agriculture, or other forms of small-scale production with inadequate investment security (Africa);
- small and medium-sized agricultural and other organic output under the condition that the producer receives significant financial support from governmental institutions (European countries, in particular the EU);
- mainly organic animal husbandry on a grazing system (Oceania and Australia);



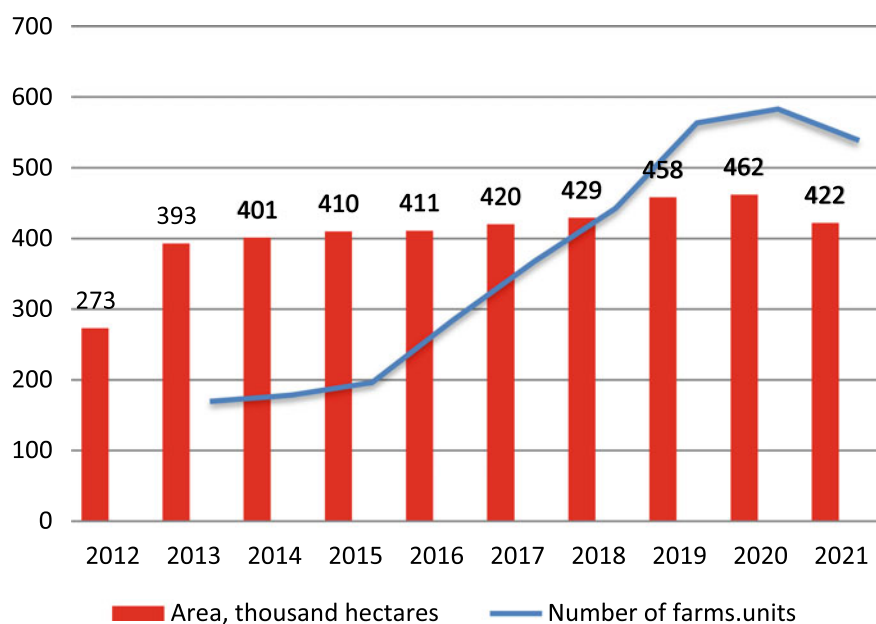
**Fig. 1** Effects of organic production. *Source* Developed by the author based on [15–17]

- mixed forms determined by favorable state support, domestic demand (in some countries—tourist demand), export opportunities.

In Ukraine, the production of organic products began at the end of the nineties. As noted by O. M. Maslak [15], large international trading organizations certified interested farms and exported their products. During the last decade, ecological production of agricultural products developed dynamically. Due to the formation of its own processing of organic raw materials, there has been a trend to fill the domestic market with its own organic goods during the last three years.

Cereals, liquids, syrups, jam, dried fruits, honey, meat, and dairy products are a few examples. At the end of 2020, according to the Federation of the Organic Movement of Ukraine, there were 549 organic operators, including 419 agricultural producers, who used more than 462.3 thousand hectares of agricultural land (1.1% of Ukraine's total land area is used for agriculture). According to these indicators, Ukraine ranks 21st in the world. It is important to note that Ukraine leads Eastern Europe in terms of certified organic arable land, specializing primarily in the production of grain, leguminous plants, and oil crops; 90% of domestically produced organic goods are exported; the profitability of one hectare of products sold within the nation is at a level of 70%, while sales to Europe are at a level of 200%.

The main factors restraining the process of development of organic production in Ukraine are: the great fragility of the countryside.—urban land, which in some regions reaches 80%, while in the developed countries of the world it is only 25–40%; unsatisfactory support and recognition by state structures; lack of state strategy, approved laws and regulations; there is no opportunity to study in this direction in educational institutions, lack of advisory services and special literature; psychological and economic barriers that prevent entrepreneurs from working in this direction; insufficient information on the organizational, economic and environmental aspects of obtaining high-quality and safe products; scientific disputes and lack of



**Fig. 2** Dynamics of organic production development indicators in Ukraine. *Source* Created by the author based on [18]

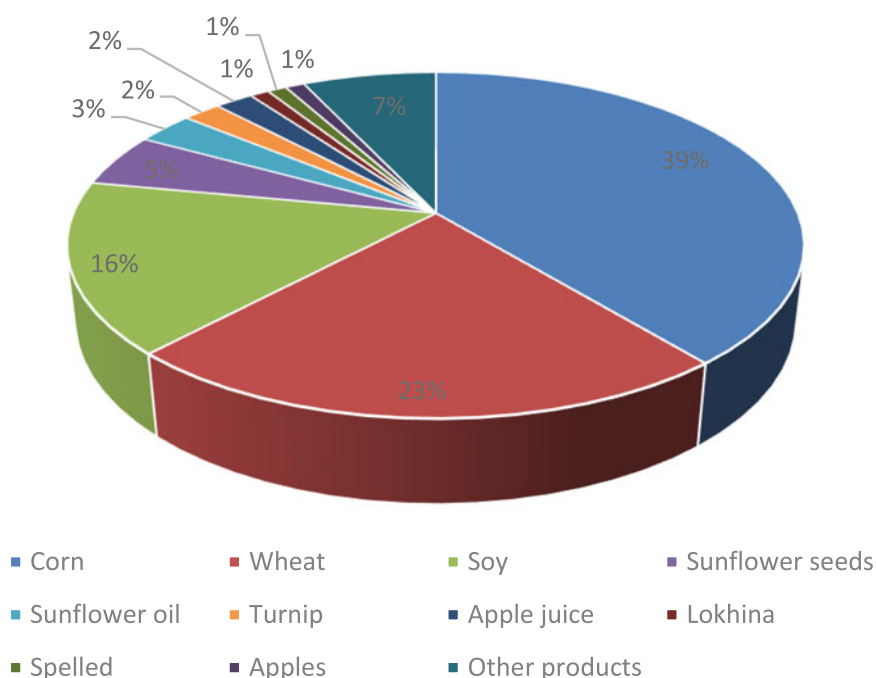
comprehensive research on the concept of natural production; lack of personalized sales markets and advertising for buyers of high-quality and safe phytoproducts, etc. (Fig. 2).

The dynamics of the development of organic production in Ukraine shows that during 2012–2021 there was an almost two-fold increase in the area under the production of organic products. As for the number of farms, in 2021 their number was 549, which is 2.5 times more than in 2012. Which shows the rapid development of organic production in Ukraine.

Organic products of Ukrainian production are becoming more popular in foreign markets. In terms of the quantity of organic goods sold to EU nations, Ukraine therefore came in first place in Europe and fourth overall (out of 123 countries) in 2021. The domestic market for organic goods is also expanding at the same time. An increasing number of Ukrainians choose organic products. The main types of organic products consumed in Ukraine are the dairy group—it makes up almost 65% of the total consumption of organic products. In the second place (18%) are cereals and grain products, flour and seeds.

Ukraine has emerged as a significant exporter of organic goods to Western markets in recent years. Grain, oil, leguminous crops, wild berries, mushrooms, nuts, and medicinal herbs are the primary organic exports from Ukraine [19]. The conducted studies show that the largest specific weight is occupied by corn—39%, wheat—23% and soybean—16% (Fig. 3).





**Fig. 3** Structure of export of organic products in 2020, %. *Source* Created by the author based on [18]

In 2020, Ukraine exported 332,000 tons of organic products worth more than 204 million dollars to the world market, but compared to 2019, a slight decrease in this indicator is observed. The most products were exported to the Netherlands, more than 97,000 tons worth 29.5 million dollars, to the USA—67,000 tons worth 48,500,000 dollars, and to Germany—41,600 tons worth 27,000 dollars.

Conducted studies show that more than 65% of exports go to the countries of the European Union. Thus, in 2020, 217,000 tons of products worth 116.7 million dollars were exported to these countries. The main leaders are the Netherlands, Germany, Poland, Lithuania and Austria (Table 1).

The analysis of Table 1 shows that five countries account for almost 90% of the total export of organic products of the EU in the amount of more than 97 million dollars. According to experts, Ukraine is able to provide a full range of organic agriculture products for the domestic market and make a significant contribution to the country's export potential. The study showed that today there are no official state statistics on organic agricultural production and the market of organic products, which makes it difficult to objectively assess the organic sector of the Ukrainian economy.

In general, the prospects for the development of organic production in Ukraine are determined by the following factors:

**Table 1** Importer countries of Ukrainian organic products in the EU, 2020

Country	Volume of sold organic products, tons	Share in the total volume of sales to the EU	Cost, million dollars	Share in the total cost of sales to the EU
Netherlands	97,400	44.88	29.5	25.28
Germany	41,600	19.17	27	23.14
Lithuania	21,500	9.91	5.8	4.97
Austria	18,600	8.57	15.8	13.54
Poland	15,300	7.05	19.6	16.80

Source Created by the author based on [18]

- Anthropogenic pollution of the territory in Ukraine is of a patchy nature, the remaining part of land is relatively clean, the level of pollution of which is much lower than in the countries of Western Europe;
- In Ukraine, the largest population employment in agricultural production in Europe (18% of working people), a relatively low level of wages, which can be attributed to the competitive advantages of the newly created industry;
- Advantages of organic production (independence from industrial chemicals, reduction of energy intensity of agricultural production, prevention of soil degradation).

Leaders in the production of organic products in Ukraine remain: Kyiv Region—83 producers, more than 60,000 hectares of land; Kherson region—54 producers, 84.5 thousand hectares of land; Odesa region—40 producers and almost 50 thousand hectares of land. According to the researchers [20, 21], these farms frequently collaborate with foreign businesses and take part in international programs aimed at introducing organic farming in Ukraine, particularly those with Switzerland and Germany. Wheat, barley, sunflower, and corn account for almost 60% of all agricultural land. These crops serve as the foundation for Ukraine's export offer of organic goods. Peas, rape, buckwheat, soybeans, rye, oats, sorghum, millet, mustard, sugar beets, and other crops are also planted on a portion of the land. According to the estimates of the association of producers of organic products "BioLan Ukraine", today organic products account for an insignificant share of the volume of sales of food products, although there is a trend towards an increase in the consumption of certified organic products in Ukraine. Results from 2020 show that the domestic organic market in Ukraine reached \$25.1 million US and expanded by 3% over the previous year. Without taking into consideration imported goods, we are solely referring to locally produced organic foods. For more than a year, dairy products have comfortably held the top spot in terms of consumption. It accounts for over 65% of all organic items consumed, followed by cereals and grain products (18%), flour, and seeds (12%).

Organic production has recently been one of the priority areas of agricultural development, in addition to changes at the government level and the development of various state support programs.

In March 2021, the Cabinet of Ministers of Ukraine approved the Resolution “On the Approval of the National Economic Strategy for the Period Until 2030” [22], which officially established the goal of achieving the indicator of the area of land with organic status of at least 3% of the total area of agricultural land in Ukraine, which is approximately 1.3 million hectares. Another indicator of the strategy is to increase the export of organic products to 1 billion US dollars by 2030.

In addition, the concept of state support for the development of the agro-industrial complex for 2021–2023 has been developed, among the priority areas of which are animal husbandry, horticulture, farming, lowering the price of equipment and loans, as well as supporting the development of organic production.

According to the Law of Ukraine “On State Support of the Agriculture of Ukraine” [23], it is determined that state support for producers of organic agricultural products is carried out by: allocating budget subsidies based on a unit of cultivated land and/or one head of cattle; reimbursement of up to 30% of the cost of organic production certification; reimbursement of up to 30% of the cost of purchasing approved plant protection products and fertilizers, seeds, planting material and feed.

In total, UAH 50 million has been allocated for producers of organic agricultural products for 2021. This will be the first state support for organic agriculture in the form of financial resources at the national level.

It is worth emphasizing the importance of the role of local authorities in each region, because organic community projects are the most promising for the development of these regions [24]. A few years ago, support for organic producers was provided at the regional level only in some regions of Ukraine, and according to the latest data from the State Organization “Organic Ukraine”, as of September 2021, all 24 regional state administrations provide such support.

Analyzing the current prospects for the 2022 sowing campaign of organic products in Ukraine from the point of view of martial law, it should be noted that its beginning is complicated to a great extent. First of all, this is due to the fact that a significant number of territories are subject to rocket attacks, active hostilities are taking place in the southern and eastern parts, and in the northern and northeastern parts, there is a need for reconstruction after occupation and destruction. It is also worth noting that due to the military aggression, a certain part of the workers who were supposed to be involved in the process of preparing and sowing the planned crops in the organic territories, were involved in defense measures, accommodation of refugees and volunteer actions, some had to temporarily leave their places of residence. The situation for the entire state is threatening due to the occupation, military attacks, bombing and mining of territories, but the most—in the already liberated Zhytomyr, Kyiv, Sumy and Chernihiv regions, partially occupied Donetsk, Zaporizhia, Mykolaiv, Kharkiv, Kherson regions, for Luhansk regions, where sowing the campaign has not yet started. Many producers, who were focused on selling their organic products abroad, had to refocus on the cultivation of other crops, in particular vegetables and spring wheat, reconsider the expediency of work due to a temporary partial ban and state licensing of the export of food resources to ensure food security of the population.

## 4 Conclusions

Therefore, the experience of organic production accumulated in different countries of the world proves the high efficiency of production of organic products in modern conditions. This is primarily due to the fact that it will improve the ecological condition of the environment and contribute to the economic and social development of the regions. The conducted studies show that Ukraine is intensively increasing its export potential for this type of product and establishing economic ties with other countries through the implementation of international organic projects.

In Ukraine, both the number of producers of organic products and the area of agricultural land used for their production are growing every year. But it is necessary to understand that the transition of producers of agricultural products to the principles of organic production requires significant financial investments, the development of comprehensive state support, an effective scientific and methodological base, advisory and consulting and educational support, support for producers of organic products and ensuring the stability of the economic situation in the field of organic agricultural production.

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# The Effect of Investment Perception, Self-efficacy, Initial Capital, and Investment Understanding on Cryptocurrency Investment Interest in Indonesian Z Generation



Martha Wulan Tumangkeng, Pricillia Kawilarang, and Lusianah

**Abstract** According to the data collected from the Ministry of Trade's Commodity Futures Trading Supervisory Agency (Bappebti), at the end of November 2022, there were 16.55 million crypto asset users, dominated by young investors aged 18–30. Compared to the number of crypto asset users at the end of 2021, this number increased by 48.7%. This study aims to investigate the factors affecting the investment interest of Indonesian Generation Z in cryptocurrency investment instruments. The research adopts a quantitative approach. The sample comprises 150 respondents from the Generation Z population in Indonesia, selected through a non-probability sampling methodology. The findings of the study reveal that Investment Perception (X1), Self-Efficacy (X2), and Investment Understanding (X4) do not have a significant impact on Investment Interest (Y), resulting in the rejection of the first, second, and fourth hypotheses. However, Initial Capital (X3) significantly influences Investment Interest (Y), leading to the acceptance of the third hypothesis. The anticipated contribution of this research is to provide additional insights into the relevant literature, facilitate future research developments, and offer benefits to appropriate parties.

**Keywords** Investment interest · Investment perception · Generation Z

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# 1 Introduction

Article 1, paragraphs (1) and (2) of the Law of the Republic of Indonesia No. 7 Year 2011 regarding Currency specify that the only lawful tender in Indonesia is the rupiah. Bank Indonesia published Bank Indonesia Regulation (PBI) No. 19/12/PBI/2017 on implementing Financial Technology in 2017 to reaffirm that Cryptocurrency is not recognized as a legal tender in Indonesia. Under the Coordinating Minister for Economic Affairs' Letter No. S-302/M.EKON/09/2018 explains that in Indonesia, crypto assets or cryptocurrencies may be used as investment instruments and included in commodities traded on futures exchanges. The Futures Trading Supervisory Agency (Bappebti) issued Bappebti Regulation No. 7 of 2020, which contains the Determination of the List of Crypto Assets that may be transacted on the Crypto Asset Physical Market [1]. As of 2020, over 20,000 registered cryptocurrencies were listed on CoinMarketCap [2]. In Indonesia, it is permissible to trade 229 types of crypto assets, including Bitcoin, Ethereum, Cosmos, Theta, Waves, Terra, Vidycoin, and Litecoin [3].

In 2022, the recorded value of crypto asset trading on the physical market in Indonesia was IDR 296.66 trillion, even though this transaction value is lower than the transaction value recorded in 2021, IDR 859.4 trillion. However, the commerce minister of Indonesia, Zulkifli Hasan, stated that this decline in transaction value is merely a bearish trend. In 2022, many businesses will begin integrating blockchain technology, including Meta, Google, and Twitter. It indicates that cryptocurrency exchanges will expand swiftly in 2023 [4].

In preparation for the anticipated growth of crypto in 2023, The Futures Trading Supervisory Agency (Bappebti) collaborates with the Indonesian Crypto Asset Trading Association (Aspakrindo) to hold a 'Crypto Asset Literacy Month' program, which aims to increase public knowledge of crypto asset trading. Didid Noor-diatmoko, the acting head of Bappebti, stated that this literacy is expected to increase the Indonesian population's awareness to ensure that the platforms and tokens used to conduct crypto transactions are registered with Bappebti to avoid fraudulent actions that can harm users [4]. Upadana and Herawati (2020) demonstrate in their research that investment decision is affected by financial literacy positively [5]. A previous study by Dewi et al. (2022) found that financial literacy significantly influenced the interest to invest cryptocurrencies [6].

The difference between this study and previous studies resides in the objects and topics examined. Previous research has analyzed the stock investment behavior in Generation Z and the Indonesian millennial generation [7]. Previous research has also discussed student interest in cryptocurrency investments in Bali [6].

This research aimed to determine the Generation Z investment interest in cryptocurrencies in Indonesia based on investment perception, self-efficacy, starting capital, and investment understanding. Therefore, the formulation of the problem to be discussed is whether the perception of investing affected Generation Z's interest in investing in Cryptocurrency? Whether self-efficacy affected Generation Z's interest in investing in Cryptocurrency? Whether initial capital affected

Generation Z's interest in investing in Cryptocurrency? and whether investment understanding affected generation Z's interest in investing in Cryptocurrency?

## **2 Literature Review**

Previous research determined that investment understanding, risk perception, investment motivation, and convenience of technology affected investment interest by 65.9% based on the calculation of the coefficient of determination. Comparatively, extra-study variables affected 34.1% (Nurmalia et al. 2020). The study included 125 from the age group of 17 and 30 [8]. Therefore, this study seeks to identify additional variables affecting Generation Z's propensity to invest in cryptocurrencies.

### **2.1 Theory of Planned Behavior**

Norsinita and Indriati (2020) explain that cryptocurrency investment interest can be predicted using the Theory of Planned Behaviour (TPB), a method for predicting individual behavior that can be used to make rational decisions [9]. The Theory of Planned Behaviour (TPB) postulates that individual actions are influenced by their intentions, with intentions motivating individuals to engage in activities and determine the level of effort they plan to invest in pursuing a particular objective [9]. According to TPB, three factors determine behavioral meaning: attitude towards the behavior, subjective norm, and perceived behavioral control [10]. Attitude towards conduct refers to a person's outlook on behavior [9]. If individuals perceive that Cryptocurrency transactions are risk-free, their intention to do that matter will increase, and vice versa [11]. Subjective norm refers to social pressure [12] and social effect on an individual's behavior based on assumptions regarded as typical in their environment [9]. The concept of "perceived behavioral control" pertains to an individual's assessment of the level of challenge associated with a task, whereby higher difficulty leads to decreased confidence in making decisions [13].

### **2.2 Investment**

Investment is placing funds in one or more assets during a specific period [14], expecting a future return. In the meantime, the Financial Services Authority (OJK) defines investment as a long-term investment for acquiring total assets or purchasing shares and other securities for profit.



### **2.3 Cryptocurrency**

Cryptocurrency is a digital or virtual currency secured through cryptography. This digital currency becomes nearly impossible to counterfeit, thanks to cryptography. Blockchain is used to record cryptocurrency transactions, and the nodes of each user verify the validity of each recorded transaction. Thus, manipulating and securing cryptocurrency transactions will require considerable effort [15].

### **2.4 Investment Perception**

Perception is an active process that identifies and interprets stimuli the human senses receive as objects or events [16]. Investment Perception positively affected students' investment interests [14]. This statement is consistent with the research findings that perception affected investment interest [17]. However, some periodicals still need to examine the relationship between perceptions and investment interest in cryptocurrencies. Consequently, this research develops the following hypothesis:

H1: Investment Perception affected Generation Z's cryptocurrency investment interest in Indonesia.

### **2.5 Self-efficacy**

Self-efficacy theory helps us understand the connection between our beliefs and capabilities within a particular area of behavior, influencing both our decision-making and performance. It plays a role in shaping our decisions and performance [18]. According to research from Rizkiawati and Asandimitra (2018), there is an association between self-efficacy and financial self-efficacy [19]. Ni Wayan Dian Irmayani's research demonstrates that self-efficacy affects investment interest positively and significantly [20]. In the meantime, research conducted by Frans and Handoyo (2020) indicates that self-efficacy positively, however, insignificantly affected interest in stock investment [21]. Due to the need for additional research on the connection between self-efficacy and cryptocurrency investment interest. Consequently, this research develops the following hypothesis:

H2: Self-efficacy affected Generation Z's cryptocurrency investment interest in Indonesia.

## 2.6 *Initial Capital*

Initial capital is the money used to purchase an investment with the expectation of future profits [22]. According to the study [23–25], minimum investment capital positively impacts a person's interest in investing. However, it is still uncommon to discover studies that examine the relationship between the effect of initial capital investment in Cryptocurrency and the motivation to invest. Consequently, this research develops the following hypothesis:

H3: Initial capital affected Generation Z's cryptocurrency investment interest in Indonesia.

## 2.7 *Investment Understanding*

Investors must have an investment understanding to avoid incurring losses, as investment understanding affects investment decisions [26]. Burhanudin et al. (2021) wrote that it is necessary to comprehend an investment to obtain the highest return [27]. Several studies [27–29] indicate that investment understanding positively affects investment interest. Nonetheless, periodicals discussing the relationship between investment understanding and cryptocurrency investment interest must remain accessible. Consequently, this research develops the following hypothesis:

H4: Investment understanding affected Generation Z's cryptocurrency investment interest in Indonesia.

## 3 *Method*

This study collected samples using non-probability sampling, using purposive sampling techniques or based on specific criteria [30]. The sample comprised Generation Z between ages 10–25, interested in cryptocurrency investment. According to Hair, if the sample size is too large, such as 400, the method becomes extremely sensitive, making it difficult to obtain accurate goodness-of-fit measures [31]. Therefore, the minimum sample size should be five to ten times the parameters. This study included 15 indicators; thus, the sample size ranged from 75 to 150. Based on these factors, the sample size for this research was  $15 \times 10 = 150$  samples.

This research used multiple linear regression analysis with SPSS (Statistical Package for the Social Sciences) to administer the obtained data. The following data analysis methods were utilized for this study:

The classical assumption test is one of the statistical test prerequisites that must be satisfied if multiple linear regression analysis is used in the research.

This study employed four classical assumption tests; normality, heteroscedasticity, autocorrelation, and multicollinearity.

In a regression model, the normality test determines whether the dependent and independent variables have normal or aberrant distribution. A decent regression model has a standard or nearly normal data distribution [32]. Normality tests can be identified in one of two ways: by examining the distribution of data (points) along the diagonal axis of the graph or by employing the Kolmogorov-Smirnov test. This study used the Kolmogorov-Smirnov test. If the significant value (Sig.) was larger than 0.05, subsequently, the distribution of the research data was distributed normally. On the other hand, if the significant value (Sig.) was smaller than 0.05, subsequently, the data were not distributed normally.

According to Ghazali [32], the heteroscedasticity test determines whether the variance of residuals from one observation to the next in a regression is unequal. The absence of heteroscedasticity symptoms is a necessary condition for the regression model. Thei multicollinearity test aims to ascertain whether the regression model has identified any associations among the independent variables. Thei most miniature squares model cannot be utilized if variables correlate precisely. Multicollinearity is identified using the Variance Inflation Factor (VIF) value ( $< 10$ ) and Tolerance ( $> 0.10$ ).

Multiple Regression Analysis is a statistical technique that describes the pattern of association between two or more variables. Using the Statistical Package for Social Science (SPSS) software, the multiple regression linear analysis technique was used to determine the regression equation of the effect of Investment Perception, Self-efficacy, Initial Capital, and Investment Understanding on Investment Interest. Thei analysis conducted helped establish the orientation of the connection between the independent and dependent variables, as well as whether the independent variable exhibited a positive or negative correlation with the dependent variable. The Moderated Regression Analysis (MRA) model was used to examine the relationship or effect of two or more independent variables on an independent variable. This MRA was a specific application of multiple linear regression in which the regression equation incorporates an interaction term (the product of two or more independent variables). The equation for multiple linear regression is:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e \quad (1)$$

Description:

- Y Investment interest
- a Constant
- b Coefficient of investment perception variable
- $b_2$  Coefficient of self-efficacy variable
- $b_3$  Coefficient of initial capital variable
- $b_4$  Coefficient of investment understanding variable
- $X_1$  Investment perception
- $X_2$  Self-efficacy

- X<sub>3</sub> Initial capital
- X<sub>4</sub> Investment understanding
- e Standard error

The coefficient of determination  $R^2$  essentially measures how far the ability to explain variations in the dependent variable is. The coefficient of determination is between zero to one. A small  $R^2$  value means that the ability of the independent variables to explain variable variation is minimal. A value close to one means that the independent variables provide almost all the information needed to predict variations in the dependent variable. The requirement to use the coefficient of determination is that the F-test findings were significant, which means that independent variables are affected simultaneously by the dependent variable. Conversely, suppose the F-test results are not effective. In that case, the coefficient of determination cannot be used to predict the contribution of the effect of the independent variables simultaneously on the dependent or dependent variable. Ghozali explains that the purpose of conducting a goodness of fit test is to assess the precision of the sample regression function in statistically estimating the true value. The effectiveness of the appropriate model can be evaluated by examining the F statistical value, which indicates whether the inclusion of all independent variables in the model collectively affects the dependent variable. Testing criteria: A significance value  $< 0.05$  indicates that this model test is suitable for use in research. The significance value  $> 0.05$  suggests that this model test is unsuitable for analysis.

This study aimed to determine the effect of independent variables on the dependent variable by testing hypotheses. Thei partial test (t-test) is used to test ideas. With a one-way test, a partial test (t-test) attempted to determine the significance of each independent variable's effect on the dependent variable (Fig. 1).

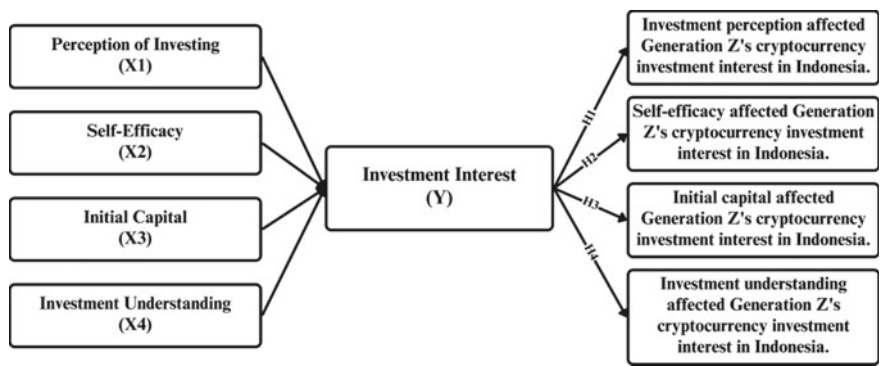


Fig. 1 Research model

## 4 Result and Analysis

Based on the summary of the reliability test of the research variables, the findings indicated that the four research variables, Investment Perception (X1), Self-Efficacy (X2), Initial Capital (X3), Investment Understanding (X4), and Investment Interest (Y) are declared reliable with the Cronbach Alpha value in each variable being more significant than 0.80, i.e., the research variables were declared very precise/very good and consistent; thus, they were very suitable for use in the research.

The findings of conventional assumption tests, including the normality test, multicollinearity test, and heteroscedasticity test, are described below. The One-Sample Kolmogorov-Smirnov Test was used to determine the normality of the data in this study; the Kolmogorov value was 0.062, and the asymptotic significance (2-tailed) was 0.605. The Kolmogorov-Smirnov value is larger than the Kolmogorov-Smirnov table value of 0.05; which means that the model satisfies the normality assumption. The findings of the normality test are detailed in Table 1.

Figure 2 portrays the examination through the utilization of a Scatter Plot. The diagram presents the anticipated value of the dependent variable, ZPRED, and the residuals SRESID. The absence of heteroscedasticity can be determined when there is no apparent pattern and the data points are uniformly dispersed both above and below zero on the Y axis [32].

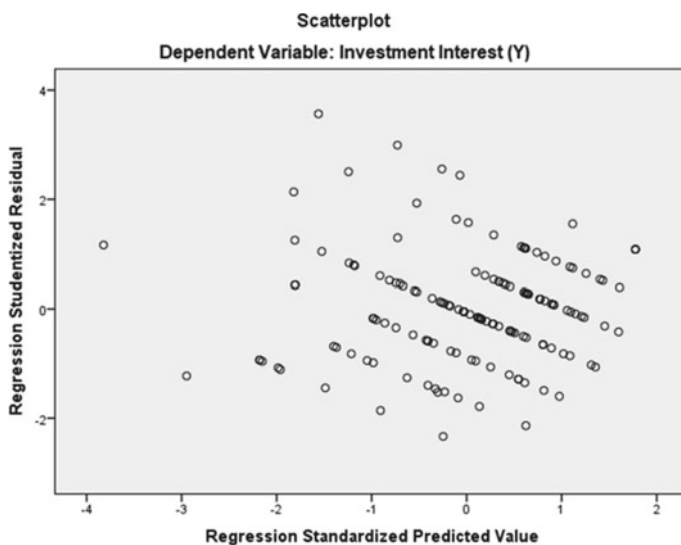
According to Table 2, the Adjusted R Square is 0.327, which indicates that perceptions of investing, self-efficacy, initial capital, and investment understanding affect 32.7% of Generation Z's cryptocurrency investment interest in Indonesia. Additionally, the remaining 67.3% is affected by variables not included in this research model.

**Table 1** Normality test finding

One-Sample Kolmogorov-Smirnov test		
		Unstandardized residual
N		150
Normal parameters <sup>a,b</sup>	Mean	0.0000000
	Std. deviation	1.22924759
Most extreme differences	Absolute	0.062
	Positive	0.062
	Negative	0.026
Kolmogorov-Smirnov Z		0.763
Asymp. Sig. (2-tailed)		0.605

<sup>a</sup> Test distribution is normal

<sup>b</sup> Calculated from data

**Fig. 2** Heteroscedasticity test findings**Table 2** Determination test findings ( $R^2$ )

Model	R	R squares	Adjusted R squares	Std. error of the estimate	Durbin-Watson
1	0.588	0.345	0.327	1.246	1.714

<sup>a</sup> Predictors: (Constant), Investment Understanding (X4), Initial Capital (X3), Self-Efficacy (X2), Perception of Investing (X1)

<sup>b</sup> Dependent variable: investment interest (Y)

Based on the F-test findings in Table 3, the regression significance value is either 0.000 or less than 0.05, indicating that the regression is statistically significant. Therefore, this research model is feasible, or the independent variable can explain the dependent variable.

**Table 3** F-test analysis findings

Model		Sum of squares	df	Mean squares	F	Sig.
1	Regression	118.727	4	29.628	19.116	0.000b
	Residual	225.146	145	1.553		
	Total	343.873	149			

<sup>a</sup> Dependent Variable: Investment Interest (Y)

<sup>b</sup> Predictors: (Constant), Investment Understanding (X4), Initial Capital (X3), Self-Efficacy (X2), Perception of Investing (X1)

According to Table 4, the Investment Perception variable has a tolerance value of 0.409 and a VIF value of 2.445. The tolerance value for the self-efficacy variable is 0.389, and the VIF value is 2.570. The tolerance value for the initial capital variable is 0.603, and the VIF value is 1.659. The tolerance value for the investment understanding variable is 0.523, and the VIF value is 1.912. There are no indications of multicollinearity between the variables of Investment Perception (X1), Self-Efficacy (X2), Initial Capital (X3), and Investment Understanding (X4), as indicated by these results.

The regression coefficient of Investment Perception (X1) is 0.026, the regression coefficient of Self-Efficacy (X2) is 0.148, the regression coefficient of Initial Capital (X3) is 0.283, and the regression coefficient of Investment Understanding (X4) is 0.131. It indicates that (X1)–(X4) will affect increasing Generation Z's cryptocurrency investment interest in Indonesia.

According to the analysis findings, it is stated that the Investment Perception variable (X1) did not have a positive and significant impact on the investment interest of Generation Z in cryptocurrency in Indonesia (Y). This conclusion is supported by a regression coefficient value of 0.030, a t-statistic of 0.290, and a significance level of 0.772. Consequently, it can be concluded that H1 is rejected. It is consistent with research conducted by Wulandari, Sinarwati, and Purnamawati (2017), which indicates that perceived ease of use did not affect student investment interest online [33].

The self-efficacy variable (X2) did not have a positive and significant impact on the investment interest of Generation Z in cryptocurrency in Indonesia (Y). This conclusion is supported by a regression coefficient of 0.177, a t-statistic of 1.639, and a significance level of 0.103. Therefore, it can be concluded that H2 is rejected. It is consistent with Ersya Daryati's (2022) finding that self-efficacy did not affect the stock investment interest of students at the Faculty of Economics at Muara Bungo University [34].

**Table 4** Multicollinearity test, MRA, t-Test

		Unstandardized coefficients		Standardized coefficients			Collinearity statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.844	0.847		5.721	0.000		
	Perception of investing	0.026	0.090	0.030	0.290	0.772	0.409	2.445
	Self-efficacy	0.148	0.091	0.177	1.639	0.103	0.389	2.570
	Initial capital	0.283	0.075	0.328	3.787	0.000	0.603	1.659
	Investment understanding	0.131	0.077	0.159	1.709	0.090	0.523	1.912

<sup>a</sup> Dependent Variable: Investment Interest

The initial capital variable (X3) has a positive and significant impact on the investment interest of Generation Z in cryptocurrency in Indonesia (Y). It is indicated by the regression coefficient value of 0.328 with a t-statistic of 3.787 and a significance value of 0.000. Therefore, it can be concluded that H3 is accepted. This finding is consistent with the research conducted by Anastasya Fauzianti and Retnosari (2022), which states that investment capital influences the investment interest of accounting students at Tidar University [35].

The investment understanding variable (X4) did not have a positive and significant impact on the investment interest of Generation Z in cryptocurrency in Indonesia (Y). This conclusion is supported by a regression coefficient of 0.159, a t-statistic of 1.709, and a significance level of 0.090. Consequently, it can be concluded that H4 is rejected. This finding is consistent with the research conducted by Nisa and Zulaika (2017), which states that student interest in investing is not affected by investment understanding [26].

## 5 Conclusion

The following conclusions can be drawn: Investment Perception did not affect Generation Z's cryptocurrency investment interest in Indonesia; Self-Efficacy did not affect Generation Z's cryptocurrency investment interest in Indonesia; Initial capital positively and significantly affected Generation Z's cryptocurrency investment interest in Indonesia; and Investment Understanding did not affect Generation Z's cryptocurrency investment interest in Indonesia. The authors sincerely hope that this article can be useful for the development of science in the field of accounting, finance, and technology; also, it can be beneficial for companies that are engaged in cryptocurrency. This study was limited since only 150 samples were collected. Therefore, it is recommended that future researchers increase the sample size and utilize other variables that can affect Indonesian Generation Z's interest in cryptocurrency investments, such as the inflation rate [36], risk perception [37], and level of security and ease of investing in Cryptocurrency [31].

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# Social Stigma and English Second Language Learners in Jordan: The National University College of Technology and Zarqa University Students as an Example



Ibrahim Alma'aqbeh and Hala Alma'aqbeh

**Abstract** This paper investigates the effects of linguistic Anxiety as an obstacle in the way of English language learning on a sample of 150 students from The National University College of Technology and Zarqa University. The results found that many societal issues face ESL students including being self-conscious of their level of English. The researchers have come to the result that the stigma around learning English stems from the prestigious status that the language is associated with in Jordan, especially as the upper class in Jordan frequently use it. The fact that the parlance of upper social circles youth overflows with English phrases and abbreviations. Consequently, the researchers recommend English Language educators be aware of this cultural context in their educational pedagogy by creating a stress-free learning environment.

**Keywords** Linguistic shame · Linguistic anxiety · ESL learners · ESL barriers

## 1 Introduction

A lot of Jordanians have the desire to learn English and work on their “accents” in order to feel part of the global English-speaking culture. Access to these cultural promises a more vibrant social life, more confidence, better jobs, and losing the feeling of listening from the outside.

For social reasons, mainly that the language is associated with prestigious status [1]. “English is the language that can be used only by those who are highly educated and who are ranked highly on the social strata of Jordanian society” (112). The

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concept of linguistic shame or anxiety is present in the literature about ESL learner's difficulties. In "The Role of Shame in Language Learning," Dominique Galmiche researches the roots of linguistic shame or anxiety for students stemming from being excluded for making mistakes while learning English. He does so by interviewing students and exploring the reasons behind their linguistic shame. Galmiche found that the lack of confidence and reluctance that students exhibit is often related to past incidents with teachers triggering shame for students. As a result of these shameful episodes, students' self-esteem is negatively impacted and the "shame" spreads to other school subjects. Most of all this anxiety affects ESL students' speaking skills [2].

In "A Study of Language Anxiety among English Language Learners in Saudi Arabia," Badia Hakim speaks on the state of Classroom anxiety in Saudi Arabian King Abdulaziz University. Hakim explores the reasons behind this apprehension. After the interviews, Hakim pinpointed some major factors that motivate these feelings of anxiety and inadequacy, mainly, "the pressure to achieve native-like mastery," as well as "Strict and tense" teaching environments and techniques. On the contrary, a more student-centered teaching style resulted in more relaxed students as opposed to more formal "drills" at perfecting the language.

## **2 Employability Value of English for ESL Learners in Jordan**

The MENA region has the highest rate of unemployment world-wide for more than 25 years (British Council) and employability skills largely depend on English language skills including writing the Curriculum Vitae, application forms, Interview, cover letters, etc. Furthermore, upon being hired, many employers require English interactions, and communications (emails, newsletters, advertisements, etc.). For these reasons, mastery of English becomes a phantom looming over students hindering their ability to gain linguistic skills and practice them.

## **3 The Native Speaker Complex**

In his article, "The Myth of the Native Speaker," Dr. Mahmoud Zidan criticizes the false advertising claim that native speakers have the upper hand in teaching English or helping students practice their skills. He argues that teaching skills are not inherent to native speakers or anyone else. On the contrary these skills have to be developed through long-term experiment and strategy. He asserts that "native speakerism," thus, is a myth and does not equate to effective teaching or learning.

## 4 Methodology

In order to fulfill the objective of this study, a qualitative survey was sent out to students from NUCT and ZU. The present study aims to investigate the factors surrounding language anxiety in (English Second Language) students. The survey employs a mix of yes/no questions, multiple choice, and open-ended questions. The design of the survey highlights understanding students' thought process when it comes to linguistic anxiety as well as collaborating with the respondents to find ways around this anxiety and through it.

## 5 Discussion of the Results

Many students identify lack of basic English education earlier in their education journey. However, the questions in this survey spotlight the role that anxiety plays in ESL learner's ability to practice English and participate in speaking the language in classes and other activities. The questionnaire was answered by 150 students from NUCT and ZU. The questions and answers were in Arabic in order to be inclusive of students who are not proficient readers of English and to avoid misunderstanding or ambiguity that might be 'lost in translation.'

The answers of the students invariably reveal a hidden layer of anxiety that is hindering students' progress, especially when in a class environment or potential job interview the fear of misspelling/mispronouncing is present in the back of students' minds. 20% of students answered, 'yes' to the statement "I have been made fun of by a teacher for mispronouncing a word in English" while 36% of them responded with "I have witnessed it happen to another student."

Significantly, the students answer (seen below) do not demonstrate discomfort with the English language. Rather, specific tension-heavy situations such as answering in class or job interviews (79% of students responded with 'yes' to the statement "job interviews in English make me nervous"). Moreover, students seemed to be keen on suggesting extra-curricular exercises that could help them practice their English along-side university courses. Breaking the ice, in other words, is a large part of the equation when it comes to linguistic anxiety.

According to the survey, 93% of students prefer flexible instructors who do not embarrass students who make mistakes rather than strict unforgiving educators. Relevantly, 58% responded with 'yes' to the statement "Making mistakes in English is embarrassing." Importantly, 70% of students did not associate English proficiency with intelligence.

## 6 Pedagogical Recommendations

Based on this and the literature above regarding student anxiety, it is crucial that we do not continue to create unattainable expectations of native speakerism for our students. These are teaching environments that encourages practice rather than perfection encourages and raises student's confidence levels by creating achievable tasks and rewarding honest attempts rather than natural talent.

In "the Role of Shame in Language Learning" Dominique Galmiche collects data from students about their traumatic experience with language learning. He concludes that the data demonstrates the need for a teaching style that builds children up instead of tearing them down. He describes this style as "having an unconditional positive regard," (123) which in essence is for the educators to put the effort in creating a friendly non-threatening teaching environment where all students are respected and appreciate despite skill differences or linguistic competency.

## 7 Full Survey with Questions and Answers:

1. Are you a university student?  
97% Yes  
3% No
2. What university do you attend?  
75% Zarqa University (113 students)  
21% National University College of Technology (31 student)  
4% other
3. What is the biggest obstacle in the way of learning English?  
50% making errors or mispronouncing words  
32% using correct vocabulary  
18% using correct grammar
4. My friends are likely to make fun of me if I speak English.  
64% no  
36% yes
5. I am afraid of mispronouncing English words.  
22% To a large extent  
14% Not at all
6. Practicing my English is a fun activity.  
97% somewhat  
78% I agree  
12% It feels like a heavy burden  
10% I feel neutral about it
7. I have been mocked for my English by teacher.  
36% I witnessed a situation like this  
20% Yes

- 44% No
8. I experience anxiety when applying to a job where the interview is in English?  
79% Yes  
21% No
9. Making mistakes while using English is embarrassing?  
58% Yes  
42% No
10. I feel uncomfortable if a friend of mine uses English words and phrases in their speech.  
11% Yes  
79% No
11. I prefer to stay away from settings where English is used heavily?  
19% Yes  
81% No
12. I feel comfortable when the English instructor uses Arabic.  
70% Yes  
30% No
13. I feel more comfortable in English lectures if:  
38% the lecturer has a fun style and does not criticize students' language.  
36% Students are given the chance to practice without mocking.  
23% the explanation is clear and requires no previous knowledge.  
2% None of the above.
14. I prefer educators who are:  
93% flexible and correct errors without personal offence.  
7% strict and reprimand those who make linguistic errors.
15. I feel that English speakers are smart.  
25% I agree  
6% Disagree  
70% Not necessarily
16. Do you have any advice for educators to limit the anxiety of ESL learners?  
The suggestions that students had can be grouped into four categories:  
Educator style, Confidence building exercises, extra-curricular activities.  
They encourage educators to be closer to students and set up workshops for practice, to make learning more fun, be more available and understanding, and build students' confidence in themselves, administer activities for the students, more practice outside of class, not to force students to speak English, correcting without mocking, don't over critique, and communicate with them in English.
17. What other obstacles lay in the way of English learners?  
Educators who mock students for making mistakes, anxiety about participating in class, lack of opportunities for practice, high cost of language courses, non-engaging lectures, fear of speaking in front of others and the inability to practice after graduating.

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# Methodological Approaches to the Study of Public Financial Policy of Capital Reproduction in the Agricultural Sector in the Focus of Information Technology Management



Olena Lemishko , Nadiia Davydenko , George Abuselidze ,  
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**Abstract** The purpose of the article is to substantiate the methodological approaches to the study of capital reproduction public financial policy in the agricultural sector of the economy. It is determined that the research methodology is the subject to general laws of scientific knowledge, and requires consideration of processes and phenomena specifics related to financial policy of capital reproduction in the agricultural sector. Methodological diversification is exhibited to define a set of methods for the formation and implementation of public financial policy. It is expanded the methodological basis for the formation and implementation of public financial policy, based on the methodological characteristics of the state, related to the justification, development, and application, evaluation of results and adjustment of capital reproduction financial policy in the agricultural sector.

**Keywords** Information technology management · Methodological approaches · Financial policy · Capital · Agricultural sector

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## 1 Introduction

The methodology of economic science covers a set of methods of scientific knowledge used to clarify the essential principles, methods and approaches to the study of the categorical apparatus. It provides a theoretical justification for the methods of scientific knowledge, which is due to the development of the economy [1–3]. Considering the methodological approaches to the study of financial policy of capital reproduction in the agricultural sector of the economy, we note that in the scientific literature there is no unambiguity in the interpretation of the definition of "methodology". Therefore, there is no methodological framework for the study of public financial policy of capital reproduction in the agricultural sector of the economy, which takes into account the characteristics of financial policy and the process of capital reproduction. The set of methods for the formation and implementation of public financial policy of capital reproduction in the agricultural sector of the economy has specific features depending on the model of state regulation of the agricultural sector of the economy. In the process of formation and implementation of this policy it is necessary to take into account that the agricultural sector is a budget-generating sector and the determining factor for the full cycle of reproduction of ecological balance, as well as the formation of social welfare of the rural population.

At the same time, financial policy as a component of economic development is an effective tool for regulating socio-economic processes and is to use and implement a set of appropriate economic measures, mechanisms of financial and economic regulation in conjunction with strategic priorities for social development, balanced, long-term economy [4, 5].

Following the introduction, Sect. 2 reviews the related literature. The study results are presented in Sect. 3. The last section concludes the paper.

## 2 Literature Review

Significant contribution to the study of theoretical, methodological and applied aspects of public financial policy and the functioning of capital was made by such prominent scientists as Bakumenko (2003), Borisova (2016), Vankovych (2015), Kravets (2017), Krupka (2015), Malyshko (2017), Savchenko (2016), Tulai (2016), Braunerhjelm (2022), Soumaré, Tchuigoua & Hesson (2020), Memon et al. (2021) etc. [6–15].

Studies of the peculiarities of financial relations in the agricultural sector of the economy are contained in the works of Gudz (2013), Fatas and Mihov (2013), Woodard (2013), Kohl and Penson (2013), Tanklevska (2010) and others [16–20].

Well-known researchers, including Birta (2014), Blagodarny (2018), Kerimov (2001), Lukyanets (2000), Novikov (2009), Popovych (2006), Shevchuk (2016), Yudin (1997), Spithoven (2019) and other formed a system of views on the essence of methodology, defined its role in the study of socio-economic processes [21–30].

The agricultural sector of the economy is an integral part of sustainable development of the national economy. However, today this sector is characterized by stagnant trends, lack of an effective innovation mechanism, unfavorable investment climate and limited financial resources [31]. At the same time, solving the problems of effective organization of financial support of production and investment needs of the agricultural sector, primarily through the optimization of the reproduction of capital, which is in the economic turnover of economic entities, is one of the priorities of financial policy. In other words, financial policy is the dominant tool for the development of agricultural relations in the state.

Paying tribute to the significant contribution of scientists to the development of methodological provisions for the formation of public financial policy, the functioning of capital in the agricultural sector, it is important to emphasize the lack of comprehensive, systematic study of public financial policy of capital reproduction in the agricultural sector. The need to intensify research to substantiate the theory and methodology of creating at the level of the agricultural sector of the economy the foundations of formation and implementation of public financial policy of capital reproduction, aimed at ensuring efficient use of capital determines the relevance of the research topic.

The purpose of the article is to substantiate the methodological approaches to the study of public financial policy of capital reproduction in the agricultural sector of the economy.

### 3 Results and Discussion

The development of a scientific field or theory of research is subject to a clear definition of the research methodology main components. The methodology of studying the financial policy of capital reproduction in the agricultural sector of the economy, on the one hand, is subject to the general laws of scientific knowledge, and on the other—requires consideration of specific processes and phenomena related to financial policy of capital reproduction in the agricultural sector. Tanklevska [20] proposes to consider the concept of "financial policy of sustainable agricultural development" as a set of legislative, organizational, managerial and socio-economic measures of state and local authorities and management, as well as business entities in the field of financial relations, based on scientifically sound concept of sustainable development of the agricultural sector of the national economy, which ensures the achievement of the planned dynamic socio-economic effect. Supporting this position of the author, we believe that more attention should be paid to financial regulation as a component of public financial policy. In this context, the thesis that financial policy should be flexible and adjusted according to changes in external and internal factors is apt; take into account the multicomponent and multivariate financial management to achieve the goal and perform tasks for effective development [16].

Zymovets [32] points out that the ultimate goal of public financial policy is to improve the welfare of the population, and the accumulation of capital—one of the possible ways to achieve it.

At one time, in the book “Economic Theory of Welfare”, the famous English economist Pigou [33] noted that the impact of economic, social and fiscal policy on national income and its distribution in the long and short term should comply with the principle of social justice.

Regarding financial policy, we are impressed by the essential approach to its understanding as: (1) the policy of the state and other economic entities in the field of finance; (2) an integral part of the economic policy of the state (economic entities); (3) a set of financial measures (distributive and redistributive), which are carried out by the relevant entities through the financial system [7]. In the context of our study, it is also reasonable to think that financial policy is a component of domestic policy [13]. Volatility of the state’s economic policy has a negative impact on the rate of financial and economic growth in the long term [17]. It should be noted that fiscal policy instruments are effective in enhancing long-term growth potential and promoting economic restructuring. Braunerhjelm [8] and Abuselidze [34] in their research noted that macroeconomic stabilization in the post-crisis period (including after the COVID-19 crisis) can be achieved, comprehensively, through fiscal policy measures.

We share the opinion of Vankovych [15], who believes that financial policy should be presented as a reaction of its organizers to nonlinear processes in an open multi-component system that performs a double burden to ensure general economic acceleration: first, solves the problem of stabilizing structural shifts, compensation, neutralization of harmful from the point of view of system stability fluctuations, creation of additional guarantees of preservation of rates of growth, full performance of the state target programs of development of certain kinds of economic activity according to the landmarks defined by strategy of macro systemic evolution; secondly, this type of policy acts as a pathogen aimed at strengthening the chaotic intra-system features, and hence the dynamic imposition of the system in case of weakening of its other organizational quality with the simultaneous use of opportunities and reserves of self-organization.

In this aspect, it is really important to substantiate the conceptual and methodological parameters of financial policy, which determine the most significant factors in accelerating the economy, highlighting the weightiest sources of increasing the dynamics of its capitalization.

We agree that financial policy should be considered as a set of targeted government measures for the formation and effective use of financial resources of the country, which include the resources of its individual regions, sectors of the economy, enterprises and households, to ensure sustainable socio-economic development financial and monetary levers and the creation of an appropriate institutional environment that contributes to the implementation of this policy [11].

Thus, the above substantiates the thesis that financial policy is an important area of economic policy. At the same time, this gives grounds to state that agricultural policy and financial policy are two interrelated components of the multifaceted process of

forming the economic policy of the state. Given that the capital of the entity is the main factor of production; an important source of shaping the welfare of owners; the main measure of its market value; characterizes the financial resources of the enterprise, which bring income, and its dynamics is the most important barometer of economic efficiency [6], a resource of corporate finance, it is extremely important to understand the financial policy of its reproduction in the context of solving methodological problems. The agricultural sector with its basic component, agriculture, is a system-forming in the national economy and forms the basis for preserving the sovereignty of the state (food, and within certain limits, economic, environmental and energy security).

Foreign scientific schools are characterized by a lack of distinction between methodology and research methods, i.e. these concepts are identified. In domestic science, it is common to understand methodology as a doctrine of methods of cognition or a system of scientific principles on which the study is based and the choice of a set of cognitive tools, methods, techniques. The consciously chosen research methodology makes it possible to evaluate the effectiveness of the methods used to solve scientific and practical problems in any field. Usually methodology (from the Greek “*methodos*”—method, and “*logos*”—science, knowledge) is interpreted as a set of research techniques used in a particular science.

We support the position that the most important for the methodology of scientific research is the study of the problem, selection of research tools, description of scientific theory, verification of the results [9]. In his research, Spithoven [29] pointed to the exceptional importance of methodological analysis of the functioning of economics, including the formation of a new institutional economic theory. At the same time, the Dictionary of the Ukrainian language considers methodology in two ways: (1) as a doctrine of the scientific method of cognition and transformation of the world, its philosophical, theoretical basis; (2) as a set of research techniques used in any science in accordance with the specifics of the object of its knowledge of language [35].

In our opinion, the methodology of research of financial policy of capital reproduction in the agricultural sector involves the construction of an algorithm for successive steps in scientific knowledge using a set of methods, techniques and methods used to solve scientific problems in accordance with the specifics of this economy. The use of a set of methodological tools helps to substantiate promising research areas for the formation of the basis for effective solution of the agricultural sector's strategic advantages based on the definition of its innovation potential. To identify the components of the methodology of research of the state financial policy of capital reproduction in the agrarian sector of the economy, in the context of which the corresponding integral methodological system should be built, the concept of Kerimov [23] deserves attention. At the heart of this concept is the recognition of methodology as an integral phenomenon that combines components such as worldview, fundamental general theoretical concepts, general philosophical laws and categories, general scientific and private scientific methods. We are impressed by the scientist's conclusion that the methodology cannot be reduced not only to one of these components, not to form through a simple generalization of the components identified in different branches

of science [23]. Thus, the effectiveness and efficiency of public financial policy of capital reproduction in the agricultural sector of the economy directly depends on a well-established methodology for studying this process.

At the same time, as Lukyanets, Kravchenko and Ozadovska [24] rightly point out, “modern epistemology excludes fierce competition of theoretical positions that are recognized as true, and provides for the fundamental entry of the subject of knowledge into the structure of the cognitive object, understanding the dialogic the nature of scientific knowledge”. This approach in the context of studying the financial policy of capital reproduction in the agricultural sector of the economy involves a thorough analysis of various scientific approaches, taking into account their genesis and links with the general processes of formation and implementation of financial policy.

To streamline the components of the methodology of financial policy research of capital reproduction in the agricultural sector of the economy, it is advisable to rely on the “scheme of the structure of the methodology”, which is substantiated in the works of Novikov and Novikov [25]. It provides consideration of the methodology from the standpoint of the system-activity approach and takes into account three groups of components:

- (1) Characteristics of activity (features, principles, conditions, and norms of activity);
- (2) Logical structure of activity (subject, object, subject, forms, means, methods, and result of activity);
- (3) Time structure of activity (phases and stages).

As the issue of forming the methodological basis of the state financial policy of capital reproduction in the agricultural sector is relevant at the present stage, we propose to focus on the three components of the system-activity approach described above. The multifaceted nature of these components necessitates their implementation, taking into account the specifics of the implementation of public financial policy of capital reproduction in the agricultural sector of the economy.

Thus, the first component reflects the methodological characteristics of the state activities related to the justification, development, application, evaluation of results and adjustment of financial policy of capital reproduction in the agricultural sector of the economy (Table 1).

The second component is a reflection of the methodological aspects of forming the logical structure of the state, related to the justification, development, application, evaluation of results and adjustment of financial policy of capital reproduction in the agricultural sector of the economy (Table 2).

The third component reflects the methodological aspects of the formation of the time structure of the state, related to the justification, development, application, evaluation of results and adjustment of financial policy of capital reproduction in the agricultural sector of the economy (Table 3).

On the basis of the conducted researches methodological diversification for definition of methods' complex concerning formation and realization of the state financial policy of the capital reproduction in agrarian sector of economy is exposed.

**Table 1** Methodological characteristics of the state activities related to the financial policy of capital reproduction

Structural component	Base narrative	Vectors of implementation of financial policy of capital reproduction
Signs of capital reproduction in the agricultural sector of the economy	Requirements for the organization of the cycle of reproduction of capital in the agricultural sector of the economy, which are related, directly or indirectly with its industry characteristics	Implementation of primary (which are a manifestation of certain specific features of the agricultural sector) and secondary (which are a consequence of the manifestation of primary) elements of capital reproduction in the agricultural sector, coordination of their interaction for productive activities aimed at obtaining effective results (added value, increasing the level of capitalization, stable dynamics of profitability, equalization of disparities in sectorial development)
Laws and patterns	Substantiation of connections that are objective, necessary, repetitive, general, internal, essential, stable	Implementation of objective economic laws, including the law of conformity of production relations to the nature and level of development of productive forces; the law of added value; the law of reproduction and circulation of social capital; law of money circulation
Problem	Unresolved interests (needs), which are formulated in general as a specific task that needs to be solved	Implementation of approaches to solving the problem of accumulation and reproduction of capital in the agricultural sector of the economy and focusing on its financial aspects
Hypothesis	The method of scientific knowledge, a reasonable, logically non-contradictory assumption that explains the observed phenomenon and justifies its objectivity	Reproduction of capital in the agricultural sector (expanded reproduction by intensive type on an innovative basis) requires the development and implementation of appropriate public financial policy aimed at: the implementation of public financial support; financial regulation of the formation, distribution and efficient use of financial resources within the cycle of capital reproduction
Principles	Basic rules, basis for action, essence and starting points	Application of the principles of scientific knowledge for the development of a scientifically sound concept for the mobilization and direction of financial resources to ensure the expanded reproduction of capital

Source developed by the author taking into account the approaches [21, 36]

**Table 2** Methodological aspects of the formation of the state logical structure of financial policy of capital reproduction

Structural component	Base Narrative	Vectors of implementation of the financial policy of capital reproduction in the agricultural sector
Approach	The initial statement, which is more general than the principle, and concerns the assumption of the most important features of the object of study or the way of knowing it	Application of general philosophical (dialectics, phenomenology, axiology, hermeneutics, anthropology, synergetic, praxeology), systemic, scenario, objective-oriented, subjective, emergent approaches
Theories and concepts	A system of probable scientific knowledge about a certain set of objects, which describes, explains and predicts the phenomena of a particular subject area	Application of the concept of sustainable development, the theory of cost of capital, the theory and concept of classical political economy, Casey theory, the theory of neoliberalism
Object	Any reality that is seen as something external and becomes the subject of theoretical and practical observation	Implementation of the processes of development and implementation of financial policy of capital reproduction in the agricultural sector of the economy. Optimization of the formation, distribution and use of financial resources within the cycle of capital reproduction in the agricultural sector of the economy
Methods	Knowledge with which new knowledge is extracted	Application of methods: institutional; socio-economic modeling; normative, axiological (value); abstraction; statistical; abductive
Result (criterion)	Criterion, requirements for determining or assessing the final consequences of an action or phenomenon	Increasing the level of economic growth of the efficiency of state financial regulation. Increasing value added, expanded reproduction of capital by intensive type on an innovative basis, ensuring capitalization of assets of economic entities, reproduction of land capital, expanding exports of agricultural products with a high share of value added by providing appropriate budgetary, tax and credit (government loans) export support instruments, sustainable development of the agricultural sector

Source developed by the author taking into account the approaches [22, 23]



**Table 3** Methodological aspects of the formation of the state time structure related to the justification of financial policy of capital reproduction

Construct	Base Narrative	Vectors of implementation of the financial policy of capital reproduction in the agricultural sector of the economy
The structure of the cycle of reproduction of capital in the agricultural sector of the economy	Reflection of the movement and reproduction of products and income of the agricultural sector of the economy in the cycle, which includes its own production, distribution, exchange and consumption of material goods	Taking into account in the financial policy of capital reproduction the inter-branch combined character of the latter, which is manifested in three interconnected inter-branch relations, autonomous cycles of capital reproduction—in agricultural production; in industrial processing of agricultural products and in procurement and trade activities
The structure of the cycle of formation and implementation of financial policy	The sequence of phases, stages and stages of the process of formation and implementation of financial policy	Carrying out of financial diagnostics, formation of a complex of the purposes and tasks of financial policy (formation of financial strategy), development of the financial mechanism of achievement of the set purposes and tasks, monitoring of change of a condition of reproduction of capital in agrarian sector of economy, evaluation of efficiency of financial policy

*Source* developed by the authors

Summing up the interim result, we note that forming the methodological basis of financial policy of capital reproduction in the agricultural sector of the economy must take into account, on the one hand, the financial policy of economic entities in this sector, and on the other—the financial policy of the state, and tax incentives for agriculture and credit, depreciation and pricing policies. Since the state, through the mechanism of financial policy implementation, is directly involved in the reproduction process, the financial policy of each business entity must contain common mandatory features that are basic for ensuring the efficient functioning of capital and its sustainable expanded reproduction.

Thus, in the context of our study, we can identify three methodological components, the correct application of which will achieve the purpose of the paper:

- (1) Philosophical or fundamental—a system of dialectical methods that are the most common and operate in the whole field of scientific knowledge;
- (2) General scientific, which is based on general scientific principles of research: historical, logical, systemic, modelling, etc.;
- (3) specific-scientific—a set of specific methods of economics, which are the basis for solving the research problem [4, 26, 27, 37].

It is established that in the scientific economic literature there are two types of methodology that can be adapted to our study:

- (1) Descriptive (descriptive) methodology—refers to the structure of scientific knowledge about the process, forms, means, methods of reproduction of capital, laws, trends and contradictions in the formation of financial policy, its effectiveness, etc.;
- (2) Normative (prescriptive)—aimed at regulating activities, which is a set of relevant recommendations and rules [23].

Thanks to the methods that form the normative methodology, the substantiation of financial policy and its further successful implementation is carried out. Descriptive methodology is formed in a logical relationship and interdependence with epistemology and tends to the model of ideal knowledge, and prescriptive is a set of methods and techniques of scientific knowledge that allow to master (identify, form) a system of goals and objectives of financial policy to ensure their achievement through an effective mechanism of state financial support and regulation of capital reproduction in the agricultural sector of the economy.

Thus, in the process of forming the methodological foundations of the study of public financial policy of capital reproduction in the agricultural sector of the economy it is necessary to ensure a systematic combination of its descriptive and prescriptive types.

## 4 Conclusions

The methodology of research of public financial policy of capital reproduction in the agricultural sector of the economy is a general scientific phenomenon that combines a set of methodological approaches, methodological principles, methods, tools and procedures, techniques, operations and forms of scientific knowledge (worldview, philosophical methods and philosophical methods), doctrines about them, general and specific scientific concepts and methods), developed by all social sciences, including the complex of financial and economic sciences, and used in the process of learning the specifics of the formation and implementation of relevant financial policy, its practical transformation conditions of internal and external environment. It can be considered as a holistic, structured by levels, subsystems and areas of activity system to ensure the most objective, accurate, systematic information on public financial policy of capital reproduction in the agricultural sector of the economy.

The process of studying the state financial policy of capital reproduction in the agricultural sector involves the study and systematization of goals, hypotheses, approaches, principles, methods, tools and procedures, taking into account the specifics of economic entities in this area of the economy. The undeniable advantage of this approach is the ability to study the subject area as a complex interaction of such components as: the need (the need to solve the problem), the subject, object, processes, conditions, results. This makes it possible to ensure the integrity, complexity, structure, purposefulness and self-organization of the process of formation and implementation of the relevant financial policy, its relationship with the external environment.

We have established the following conclusions:

- (1) The methodological basis of the study of public financial policy of capital reproduction in the agricultural sector of the economy should be formed taking into account the peculiarities of the field of its application, which determines the specifics of the formation of research tools;
- (2) Based on the system-activity approach, the methodology of research of public financial policy of capital reproduction in the agricultural sector of the economy can be organized as a holistic system with clearly defined characteristics and logical structure, according to which the results can be considered proven and reliable;
- (3) The methodology of research of the state financial policy of capital reproduction in the agrarian sector of economy is a system combination of its descriptive and prescriptive types;
- (4) Stratification of the methodology of research of the state financial policy of capital reproduction in the agr sector of economy depends on specificity of the maintenance of components of this methodology and directions of their application.

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# Simple Mediation Analysis: The Complementing Role of Parallel Multiple Mediation Approach via Process Analysis



Nabegha Mahmood, Noor Ul Hadi , and Mohammad Talha

**Abstract** So far, little attention has been paid to parallel multiple mediation analysis, and its practice is still less frequent in Business and Management literature. Therefore, the intent of scripting this paper is to extend the nature of a simple mediator and further investigate the intervening influence of each of the components of the mediator, through a parallel multiple mediator model approach. With investigative research design, 605 responses were analyzed from 348 firms. Overall, findings suggested that the predictor variable increased the attainment of the consequent variable, via the mediator variable by 67%. Specific indirect effects of all three components were significantly dissimilar from zero at  $p < 0.05$  and partially intermediated the pathway between antecedent and outcome variables. This article demonstrates the implementation of variants of mediation models incorporating conditional process analysis and offers learning opportunities to researchers and research students.

**Keywords** Simple mediation analysis · Parallel multiple mediations · Conditional process analysis · Bootstrapping

## 1 Background of the Study

Historically, mediation analyses topic is addressed through causal steps approach [1]; while more recently conditional process analysis is suggested for varied models of mediation and moderation [16, 17, 22, 31, 32]. Both SPSS and SAS cannot generate confidence intervals especially for products of parametrical values like indirect paths

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which form the bases of mediation analyses. With conditional process analysis, incorporating, bias-corrected bootstrapping technique, at least 5000 resamples produce confidence intervals, thereby, it is one of the most dependable and simplified methods assessing various effects in moderation, and mediation studies [17, 21, 32].

The method of Process is superior to the Sobel test and normal theory approach as well, because of its further two merits. First Sobel test and normal theory approach assume that sampling distribution of indirect path is normal which has been proved otherwise in many studies [3, 7, 16, 17, 35]. Thus, it becomes imperative to use a test that can handle irregular distributions in varied sample sizes. Secondly, the Sobel test approach has the lowest powers and generates concise confidence intervals [18, 21]. Thus, with the process incorporating bootstrapping technique, the most reliable confidence intervals can be generated with upper and lower bounds having higher power than the Sobel test. Comparing causal steps approach [1] it may be said that it is better to quantify an “indirect effect” as a product of its component parts as in conditional process analysis, rather than basing arguments that since path ‘a’ and path ‘b’ are different from 0, then so must indirect path be as in causal steps approach [11, 22] (Hadi et al. 2016).

Conditional process analysis reduces the number of commands and evaluates the “indirect paths” precisely. Not only this but replication research shows that this method has higher power and the best type 1 error control. More so, this approach has the capability to compare “specific indirect effects” of different intermediaries in parallel multiple mediator models to interpret which mediator exerts greater influence [17]. In this approach, the bootstrapping technique is applied to produce the analytically derived illustration of the sample spreading of “indirect effects”, and hence these approximations are consequently incorporated for the determination of “confidence intervals” of not only “indirect effects”, but also “total and direct effects”. However, in the normal theory approach, no premise is made about the nature of sampling distributions of any of the said effects. Bootstrapping confidence interval technique better caters for unevenness of the sampling distributions of “indirect effect”; and hence this attains influences that are possibly more accurate than the normal theory approach. For more details on bootstrapping more readings are available [20, 26, 30, 37].

In business and management literature, however, far too little attention has been paid to parallel mediation analysis, and its practice in the existing literature is still less frequent. Therefore, to comprehend the functioning of parallel mediation in the actual study, we will portray and summarize examples from the knowledge and learning processes, comprising of mediator1/m1/KMP [9], mediator2/m2/KCP [19, 27], and mediator3/m3/DT [8, 24, 25]. Further, the study will conclude with suggestions on parallel mediation procedures that can help researchers in analyzing parallel mediation in business and management studies.

## 1.1 Organization of the Paper

Since the nature of this paper is educational, therefore, the first part briefly introduces, model 4 of Process Macro in comparison with other techniques. In Sect. 2, the main points about the nature of simple and parallel mediator models are highlighted. In Sect. 3, a theoretical model for the hypotheses is discussed. In Sects. 4 and 5, the Simple mediator model and parallel multiple mediator models are conferred with a practical example. Section 5 is elaborated with the extension of the same practical example. Section 6 provides the limitations and conclusions of the study.

## 2 Simple and Parallel Multiple Mediator Models

Model four of conditional Process analysis is a statistical method used to measure how forerunner variable ‘x’ influences consequent variable ‘y’ through mediating variable ‘m’. “Simple mediator model” [17] only enables the researcher to consider one arbitrating mechanism. However, for the current study mediator is composed of three component intermediaries and thereby such instances, require that the “simple mediator model” approach check the main mediating influence of the combined mediator, while the “parallel multiple mediator models” check the mediating influences of all three component mediators [17]. This permits the determination of the relative strengths of the component mediators. Thus, parallel multiple mediator models have the flexibility to appraise more than two mediators, and even as many as seven mediators in the same model simultaneously [17].

### 2.1 Statistical Equations for Simple Mediator Model

Mediation analysis is a statistical method used to assess ‘how’ causal antecedent variable ‘x’ influences consequent variable ‘y’ through an arbitrating variable ‘m’. Simple mediation model [17] run in PROCESS macro can be summed up in the following equations:

$$m = i + a.x + e \quad (1)$$

$$y = i + c'/x + b.m + e \quad (2)$$

$$y = i + c.x + e \quad (3)$$

where i’s are regression constants while a, b, c, c’ are regression coefficients.



“Direct effect” is a pathway that leads from independent variable ‘x’ to dependent variable ‘y’ without the intervention of mediator variable ‘m’. “Indirect effect” is wherein independent variable ‘x’ first cause mediator variable ‘m’, which consequently affects dependent variable ‘y’. Referring to Eq. 2,  $c'$  estimates the “direct effect” of variable ‘x’ on variable ‘y’. A general understanding of “direct effect” is that two cases that vary by one unit on variable ‘x’ but are equal on variable ‘m’, are projected to vary by  $c'$  units on variable ‘y’.

The “indirect effect” of variable x on variable y is represented by the product of paths ‘a’ and ‘b’. Path ‘a’ measure how much two cases that differ by one unit on variable ‘x’ is estimated to differ on variable ‘m’. Path ‘b’ measures how much 2 cases that differ by one unit on variable ‘m’ but that are equal on variable ‘x’ is projected to differ by ‘b’ units on variable ‘y’ (Eq. 1). The “indirect effect” of variable ‘x’ on variable ‘y’ through variable ‘m’ is the product of paths ‘a’ and ‘b’ (Eq. 2). Path ‘ab’ shows that 2 cases that vary by one unit are projected to differ by ‘ab’ units on variable ‘y’ because of the impact of variable ‘x’ through variable ‘m’.

The “total effect” on variable ‘x’ is represented as c (Eq. 3) which computes how much 2 cases that vary by 1 unit on variable ‘x’ are estimated to vary on variable ‘y’. c path can also be calculated as  $c = c' + ab$ . The ratio of “indirect effect” to “total effect” is “effect size measure”, often viewed as a proportion of “total effect” that is interceded by the mediator. It can be measured through the formula  $P_m = ab/c$ . The closer  $P_m$  is to one the more the effect of, ‘x’ on ‘y’, is due to the indirect procedure through intervening variable. Secondly, Fairchild et al. [10] presented the concept of measurement of effect size by understanding and relating the variance explained by “indirect effects” with other variance effects in the model [15].

## 2.2 Statistical Equations for Parallel Multiple Mediator Model

Parallel multiple mediator model [17] with 3 facilitators ( $m_1$ ;  $m_2$  and  $m_3$ ), and OC as outcome variable is incorporated. The relationships of parallel multiple models can be expressed in the following equations:

$$m_1 = i_{(m_1)} + a_1x + e \quad (4)$$

$$m_2 = i_{(m_2)} + a_2x + e \quad (5)$$

$$m_3 = i_{(m_3)} + a_3x + e \quad (6)$$

$$y = i_{(y)} + c'/x + b_1m_1 + b_2m_2 + b_3m_3 + e \quad (7)$$

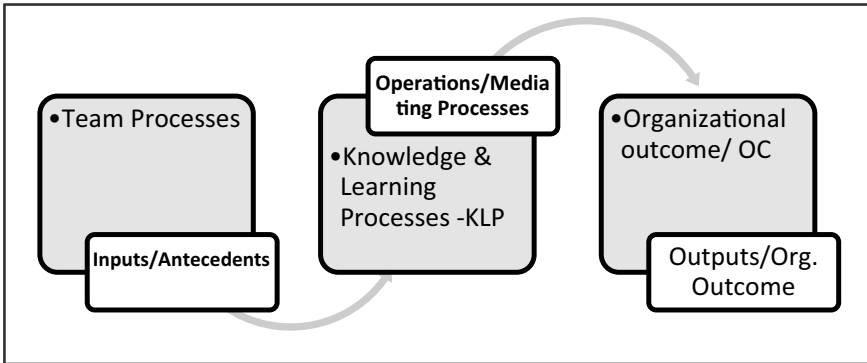
$$y = i_{(y)} + cx + e \quad (8)$$

In Eqs. 4, 5, 6;  $a_1, a_2, a_3$  calculates the quantity by which 2 cases which vary by one unit on independent variable 'x' is projected to vary on three mediating variables  $m_1, m_2$ , and  $m_3$ , respectively. In Eq. 7  $b_1$ , estimate the quantity by which 2 cases which fluctuate by one unit on  $m_1$  differ on dependent variable  $y$  keeping  $m_2, m_3$  constant.  $c'$  estimates the quantity by which 2 cases which vary by one unit on variable 'x' change on 'y' keeping  $m_1, m_2$ , and  $m_3$  constant. In this model  $c'$  is a direct effect from variable  $x$  to variable  $y$ , without passing through any facilitator. Each of the "indirect paths", pass through each of the mediators, and is referred to as "specific indirect effects". Thus, a model with 3 mediators has three "specific indirect effects" through mediator/ $m_1$  ( $x-m_1-y$ ); mediator/ $m_2$  ( $x-m_2-y$ ); mediator/ $m_3$  ( $x-m_3-y$ ). The first of these paths is the effect of variable 'x' on variable ' $m_{1,2,3}$ ', titled as path ' $a_{1,2,3}$ ' and the second is the path from variable  $m_{1,2,3}$  to dependent variable  $y$ , titled as path ' $b$ '. Thus,  $a_1b_1$  is the "specific indirect effect" of 'x' on 'y' through  $m_1$ ;  $a_2b_2$  is the "specific indirect effect" of 'x' on 'y' through  $m_2$ ;  $a_3b_3$  is the "specific indirect effect" of 'x' on 'y' through  $m_3$ . "Total effect" of 'x' on 'y' or Path  $c$  is the effect of 'x' on 'y' and can also be expressed as  $c = c' + a_1b_1 + a_2b_2 + a_3b_3$ . The ease and utility of Process lay in its ability to greatly simplify the estimation process by conducting all regression relationships in one command while also generating additional statistics and inferential tests like estimating "standard errors, significance statistics, and bootstrap confidence intervals" for "total and specific indirect effects".

### 3 Conceptualization and Hypotheses Development

Open Systems theory has been incorporated in many fields and domains. The theory proposes that a system is a set of inter-related components: inputs, processes, outputs [4–6, 33, 34] (Jhonson et al. 1964). Inputs may represent raw materials, people, capital, and information-related antecedent variables. Operations represent activities that add value to inputs. Outputs represent finished goods and services. This theory has been incorporated in the present study to string antecedent variables as inputs, mediating variables as processes or operations, and organizational outcome variables as output for the present study.

Figure 1 illustrates the bases of the research model incorporated in the present study. TMP/Team processes are taken as input or antecedents, KLP/Knowledge & Learning processes from three theoretical perspectives have been taken as mediating processes while Organizational outcome/OC have been taken as output or organizational outcome variables [24]. Team processes [36] include activities comprising of agreement on objectives; effective incorporation of resources, by team members and their leads; instituting elements of trust; shared leadership; efficient communications; and viable decision-making among team members. Knowledge and learning processes/KLP [24, 25] is taken as a combined mediator comprising of  $m1/KMP$



**Fig. 1** Conceptual framework

[9],  $m2/KCP$  [19, 27], and  $m3/DT$  [8, 25]. The dependent variable is Organizational Outcome/Organizational outcome [12, 13].

### 3.1 Hypotheses

- H1: Team processes positively affect “organizational outcome” (Path c).
- H2: Team processes positively affect “knowledge & learning processes” (Path a).
- H3: “Knowledge & learning processes” positively affect “organizational outcome” (Path ‘b’).
- H4: “Knowledge and learning processes” intercede between team processes and “organizational outcome” (Paths  $c'$  &  $a*b$ ).
- H4a: “Knowledge management processes/KMP/ $m1$ ” intercede between team processes and “organizational outcome” (Path  $a^1 * b^1$ ).
- H4b: “Knowledge creation processes/KCP/ $m2$ ” intercede between team processes and “organizational outcome” (Path  $a^2 * b^2$ ).
- H4c: “Intuition/DT/ $m3$ ” mediate between team processes and “organizational outcome” (Path  $a^3 * b^3$ ).

### 3.2 Data Collection

The sample size was determined based on the statistical techniques employed for the present study for confirming mediation analysis. Fritz and MacKinnon [11] recommended that to gain substantial results and effect sizes, at least 500 sample size is required and sample sizes greater than 558 are most favorable. The survey was closed on getting a fair sample size of 605.



Table 1 Model coefficients for TMP-KLP-OC

Independent	Consequent											
	M (KLP)				Y (OC)				Y (OC) Total effect			
		Coefficient	s.e	p		Coefficient	s.e	p		Coefficient	s.e	p
x (TMP)	a	0.5487	0.0268	0.0000	c'	0.1535	0.0358	0.0000	c	0.4648	0.0314	0.0000
m(KLP)					b	0.5674	0.0418	0.0000				
Constants	i <sub>m</sub>	1.2742	0.0875	0.0000	i <sub>y</sub>	0.8082	0.1044	0.0000	i <sub>y</sub>	1.532	0.1025	0.0000
	R <sup>2</sup> = 0.411; p < 0.001; F (1,603) = 420.6583				R <sup>2</sup> = 0.44; p < 0.001; F(1,602) = 235.3897				R <sup>2</sup> = 0.2671; p < 0.001; F(1,603) = 219.7243			

Source Own survey results

**Table 2** Coefficients for TMP-KLP-OC

Testing paths	B	SE(B)	95% CI
Path c: Dependent variable = OC			
$R^2 = 0.26$ , $F(1, 603) = 219.17$ , $p = 0.000$			
Independent variable = TMP	0.4648	0.0314	0.4032 to 0.5264
Path a: Dep V = KLP			
$R^2 = 0.41$ , $F(1,603) = 420.65$ , $p = 0.0000$			
Independent variable = TMP	0.5487	0.0268	0.4962 to 0.6013
Path b & c <sup>-</sup> Dependent Variable = OC			
$R^2 = 0.44$ , $F(2,602) = 235.3897$ , $p = 0.000$			
Independent variable = TMP (c <sup>-</sup> )	0.1535	0.0358	0.0832 to 0.2237
Independent variable = KLP (b)	0.5674	0.0418	0.4853 to 0.6494
Total = (a*b)	0.3113		

Source Own survey results

vary by '0.3113' units on the dependent variable because of mediating influence of the intervening variable. The "indirect effect" is statistically different from zero, as is shown by 95% bootstrap confidence interval (0.2591 to 0.3696).

The "direct effect" of independent variable/x/TMP is 0.1535 on dependent variable/y/OC when the m/KLP mediator is controlled. It shows that when two cases that vary by one unit on x/TMP but are equivalent on m/KLP are projected to vary by 0.1535 units on y/OC. Direct effect" was statistically different from zero  $t(602) = 4.3$ ,  $p = 0.0000$  with 95% confidence interval from 0.0832 to 0.2237. The "total effect" of TMP on OC is obtained by adding the "direct and indirect effects".  $c = 0.1535 + 0.3113 = 0.4648$ . "Total effect" counts how much in two situations that vary by one unit on x/TMP are expected to differ by 0.4648 units on y/OC. This effect is statistically dissimilar from zero  $t(603) = 14.823$ ,  $p = 0.0000$  with a 95% confidence interval from 0.4032 to 0.5264.

### 4.3 Summarized Results—Team processes/TMP/ Antecedent—Knowledge & Learning Processes/ KLP/ Mediator—Organizational Outcome/OC/Outcome Variable)

Referring to Table 2, Firstly, results showed that antecedent/TMP positively influenced outcome variable/OC ( $B = 0.4648$ ,  $t(653) = 14.28$ ,  $p < 0.001$ ). It was also established that antecedent/TMP positively influenced mediator/KLP ( $B = 0.5487$ ,  $t(603) = 20.51$ ,  $p < 0.001$ ). Furthermore, the findings supported that mediator/KLP, positively influenced outcome/OC ( $B = 0.567$ ,  $t(602) = 13.5$ ,  $p < 0.001$ ). Since both paths 'a' and 'b' were much significant, mediation investigation was run using the

“bootstrapping method with bias-corrected confidence estimates [23, 31]”. Results of the arbitration analysis established the interceding role of mediator/KLP in the association between outcome/OC and antecedent/TMP ( $a*b = 0.3113$ ,  $CI = 0.2591$  to  $0.3696$ ). More so, results, showed that the “direct effect” of antecedent/TMP on output/OC lowered but persisted to be noteworthy ( $B = 0.15$ ,  $t(601) = 4.28$ ,  $p = 0.0000$ ) when adjusting for mediator/KLP, therefore indicating partial mediation. Whilst analyzing for effect size 1:  $ab_{cs}$ ,  $CI = 0.2928$  to  $0.4037$ , thus “completely standardized indirect effect” of ‘variable x’ on variable ‘y’ does not have a zero in its confidence interval. Whilst determining effect size 2, the percentage of intervention is  $P_m = 67\%$ . This implies that mediating variable explains 67% of the “total effect”. Secondly, a small discrepancy in OC is explained by TMP ( $R^2 = 0.27$ ) whereas collectively both antecedent and mediating variables yielded greater variation ( $R^2 = 0.44$ ).

Thus H1-H4 are all confirmed.

5 Practical Implementation of Parallel Multiple Mediator Mod

Table 3, Fig. 2, show parallel multiple model with 3 mediators (m1/KMP, m2/KCP, m3/DT) and TMP and OC as independent and dependent variables are described as follows:  $a_1 = 0.564$ ;  $a_2 = 0.557$ ;  $a_3=0.5033$ ;  $c^l = 0.1380$ ;  $c = 0.4648$ ;  $b_1 = 0.332$ ;  $b_2=0.1753$ ;  $b_3 = 0.0831$ .

The “indirect effects” are:

$$KMP/m_1 = 1.21 + 0.5642x$$

Table 3 Point estimates and confidence intervals for TMP—KLP—OC

Mediation pathway	Point estimate	se	bc 95% c.i	
			Lower	Upper
Indirect effects				
Total	0.3268	0.0283	0.2734	0.3837
KMP	0.1873	0.0212	0.1459	0.2296
KCP	0.0976	0.0253	0.0496	0.1498
DT	0.0418	0.0158	0.0119	0.0745
Contrasts				
C1 = KMP-KCP	0.0897	0.0387	0.0113	0.1628
C2 = KMP-DT	0.1455	0.0258	0.0943	0.1950
C3 = KCP-DT	0.0558	0.0326	-0.0079	0.1222

$$\text{KCP}/m_2 = 1.3 + 0.557x$$

$$\text{DT}/m_3 = 1.4 + 0.5033x$$

The “direct and indirect effects” are  $y = 0.7945 + 0.1380x + 0.332m_1 + 0.1753m_2 + 0.0831m_3$ .

“Total effect model” is:  $y = i + cx$ ; or  $y = 1.54 + 0.4648x$ .

Little variance in  $\text{KMP}/m_1$ ,  $\text{KCP}/m_2$ ,  $\text{DT}/m_3$  is explained by ‘x’ ( $R^2 = 0.27, 0.34, 0.21$  respectively) whereas the combined effect of the independent variable and all 3 mediators has brought a much superior difference  $R^2 = 0.48$ . A “specific indirect effect” is understood as the quantity by which two cases differing by one unit on the independent variable are projected to vary on the dependent variable through the intervening variable independent of other mediators.

The “specific indirect effects” of TMP through  $m_1/\text{KMP}$  on OC is  $a_1b_1 = 0.1873$ . Two cases that vary by one unit on variable x/TMP are appraised to differ by 0.1873 units on variable y/OC through the institution of variable  $m_1/\text{KMP}$ . A “second indirect effect” of variable x/TMP on variable y/OC is routed through variable  $m_2/\text{KCP}$ , estimated as  $a_2b_2 = 0.0976$ . Two cases that vary by one unit on variable x/TMP are projected to vary by 0.0976 units on variable y/OC through the institution of variable  $m_2/\text{KCP}$ . A third “specific indirect effect” of variable TMP on variable OC is directed through variable  $m_3/\text{DT}$ , estimated as  $a_3b_3 = 0.0418$ . Two cases that vary by one unit on x/TMP are assessed to vary by 0.0418 units on y/OC through the institution of  $m_3/\text{DT}$ . The “total indirect effect” of variable x on variable y is the sum of all mediating paths. This is  $0.1873 + 0.0976 + 0.0418 = 0.3268$ . Thus 2 cases that vary by one unit on variable x/TMP when mediated through combined effects of 3 mediators bring about 0.3268 units change in variable y/OC. The “direct effect”  $c' = 0.1380$  quantifies the effect of the operation of x/TMP on y/OC independent of the effect of the proposed mediators.

The “total effect”.

$$c = c' + a_1b_1 + a_2b_2 + a_3b_3.$$

$$c = 0.138 + 0.1873 + 0.0976 + 0.0418 = 0.4648.$$

## 5.1 Statistical Inference for the Paths

Referring to Fig. 2 statistical inference for paths as shown in Fig. 3 is being shown. The “Direct Effect”:  $c' = 0.1380$ ,  $t(600) = 3.99$ ,  $p = 0.0001$ . Thus, path  $c'$  is significant because with 95% confidence interval (0.0701–0.2059) which indicates the influence of TMP on OC when all 3 mediators are controlled is significant. “Total effect”: is denoted by  $c$  in  $y = i + cx$ .  $c$  is the coefficient of  $x$  and is  $c = 0.4648$ ;  $p = 0.0000$  with a 95% confidence interval (0.4032–0.5264). “Specific Indirect Effects”: With several 5000 bootstraps estimates of each specific indirect effect, endpoints of the confidence interval are calculated. If 0 is outside of the confidence interval of



path ‘ab’ then path ‘ab’ is declared different from 0 with confidence, whereas if the confidence interval contains 0 then it leads to the conclusion that there is insufficient evidence that variable ‘x’ affects variable ‘y’ through ‘m’. Bootstrap confidence interval supports the claim with 95% confidence that antecedent/TMP influences outcome/OC indirectly through 3 mediators m1/KMP (0.1459–0.2296); m2/KCP (0.0496–0.1498) and m3/DT (0.0119–0.0745) as all three confidence intervals are above 0. Thus H4a, H4b, and H4c are all accepted.

## 5.2 *Pairwise Comparisons Between Specific Indirect Effects*

This section explores whether the “specific indirect effects” of proposed mediators differ from each other or is  $a_1b_1$  more powerful than  $a_2b_2$ . If the confidence interval of contrasts, has no zero, then it offers the indication that the two “indirect effects” or mediating mechanisms are statistically diverse from each other. Whereas if a confidence interval has a zero, then it offers the sign that the two “indirect effects” or respective intervening mechanisms are not statistically diverse from each other. As for the approximation of power of which mediator is superior, “point estimate values” for the two “specific indirect effects” are matched. The one bigger in total value has a superior effect than the other.

Contrast1/C1 = “ $a_1b_1 - a_2b_2$ ” is considered which is (0.0897) with no zero in confidence interval (0.0113–0.1628); so, they are significantly diverse from each other and thus,  $m1/KMP > m2/KCP$ . With respect to evaluating the difference between the first and third mediator, C2 = 0.1455 is considered, confidence interval of this “point estimate value” does not contain zero (0.0943–0.1950); so  $m1/KMP > m3/DT$ . While relating “specific indirect effects” of second and third mediators, it is seen that C3 = 0.5558 and the confidence interval of this “point estimate value” does contain 0 (-0.0079 to 0.1222), so, the 2 “specific indirect effects” are not statistically dissimilar from each other. In the parallel multiple mediator models, “total indirect effect” is the sum of all “specific indirect effects”. The “total indirect effect” of an independent variable on dependent variable through 3 mediators  $m1/KMP + m2/KCP + m3/DT = 0.1873 + 0.0976 + 0.0418 = 0.3268$ .

Secondly, it can be argued that we are 95% confident that the “total indirect effect” of precursor variable on the outcome variable, through 3 intermediaries is between 0.2735 and 0.3837. This confidence interval is more than zero, supportive of the fact that all three component mediating variables cooperatively arbitrate the result of the independent variable on the dependent variable (see Table 3).

## 6 Conclusion and Limitations

This study considered only simple and parallel multiple mediator models. It would be perhaps more apt if the loadings of items on factors incorporating Exploratory factor analysis and resultant reliabilities and validities utilizing confirmatory factor analysis are confirmed [14, 24, 25].

The parallel multiple mediator model has been adapted as a complementary approach with the simple mediation model on recommendations of Hayes [17]. The simple mediator model enabled the assessment of whether a single arbitrating, mediator can exercise an intervening influence between precursor and consequent variable. It helps to explain the process through which intervening variable affects their mediating influence. However, if either, more than two intervening variables are involved in a mediation analysis or if, the single mediator is in fact composed of more than one arbitrating variable, then perhaps, to get to know which mediating component has greater or lesser strength than the rest, then parallel multiple mediator models should be opted for. In this study, an extension of model four enabled us to explore the individual mediating effects of each component of the combined mediator, and secondly which mediator has stronger mediating influence than other mediators. Not only this but there are various other models offering mediation and moderation assortments to be checked through conditional process analysis with the generation of reliable confidence intervals through bootstrapping technique.

Secondly, the incorporation of open systems theory [4–6, 33, 34] (Jhonson et al. 1964) for getting to know the processes involved in a system of inputs and outputs, has been supplemented and authenticated with the help of model four of conditional process analysis. Thus, it is recommended that statistical technique, simple and parallel multiple mediator models of conditional process analysis may opt for all such studies exploring the intervening processes between an independent and dependent variable.

Thirdly, and most importantly, this study has confirmed the partial mediating influence of processes based on knowledge and learning, for organizational outcome in the presence of team processes [24]. Thus, these studies confirm the conclusions of seminal studies that recommended checking the processes for ambidextrously designed innovations in the presence of multifarious antecedents [2, 13, 28, 29]. It is thereby recommended that more studies with different assortments of knowledge and learning processes for organizational outcomes in the presence of varied precursor variables may be carried out, in other countries or economic sectors, taking into consideration their respective contextual factors, so that the tenets of this study may be authenticated.

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# Analysis of Fiscal Policy Systems in Ukraine and China



Mykhailo Yastrubskyy and Shu Zhang

**Abstract** The objective of the study is to analyze the tax systems of Ukraine and China and, based on the results of the assessment of their efficiency, to propose a model for the improvement of the tax system of Ukraine. To achieve this goal, the following methods were used: multivariate correlation and regression analysis; system analysis; integral evaluation; and expert analysis. The survey revealed the factors influencing the tax systems of Ukraine and China, as assessed by tax experts. Based on the results of the study, conclusions were formulated on the prospects for the development of the tax system, based on the trend of development of trade and economic relations between Ukraine and China. The expediency of improving and partially reforming the tax system, which will take into account the prospects for the development of economic relations between Ukraine and China, is substantiated. A model of expert assessment of factors influencing the tax system of Ukraine and China is proposed. The presented results can be used in the process of reforming the tax system of Ukraine in the post-war period. Building bilateral economic relations with China, which is one of the world's largest economies, requires a sensible approach to fiscal policy.

**Keywords** Tax system · Fiscal policy of Ukraine and China · Factors of the tax system · Assessment of factors of the tax system

## 1 Introduction

The role of fiscal policy in the system of levers for stimulating the national economy has been and remains a priority. An analysis of the fiscal systems of Ukraine and China is relevant at the present time, even though their GDP levels differ by more than an order of magnitude. The recommendations of the contemporary Ukrainian economist Mykhailo Kukhar [1] to provide the people with “economic freedom” through low

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and understandable taxes actually encourage tax reform, which is supposed to create an economic miracle in post-war Ukraine.

Tetyana Bohdan, Research Director at the PA “Growford Institute”, considers the introduction of new fiscal rules based on EU requirements [2], which includes the reform of the Ukrainian tax system. Leading economists, academics and tax analysts share a similar view on the need to reform the tax system.

It is clear that a reform of the tax system is inevitable. However, the choice of a tax system model needs to be scientifically justified. The article proposes a model for tax system reform that takes into account the experience of building the Chinese tax system.

For objective reasons, the issues of economic cooperation between Ukraine and China have received a lot of attention from scholars, government and political figures, and analysts. It is clear that fiscal policy is on the list of issues for such cooperation, as the creation of free economic zones is on the agenda. It is declared at the legislative level that Ukraine and China are strategic partners [3].

Actually, the works of analysts Kuzmin [4], Solonyna and Medved [5], Yerman [6], Fursenko [7], Ji [8, 9], and others are devoted to understanding place of Ukraine in this cooperation. At the same time, Ukrainian and Chinese economists have been working on fiscal policy making. Hushan [10] outlined the problems and prospects for the development of taxation in Ukraine, Yastrubsky and Zhang [11] consider the tax system as a guarantee of economic growth of the state, Harasymchuk, Varnaliy, Heits, Abuselidze and others studied the main indicators of the impact of the tax system [12–19].

Despite the considerable attention to the issue of tax policy paid by scholars and analysts who are experts in the field of taxation and economic relations between Ukraine and China, we do not currently have an optimal model for the harmonization of the tax systems of the countries involved in economic cooperation. The issues of deepening trade and economic cooperation between Ukraine and China and creating favorable tax conditions should be approached very sensibly. Therefore, it is important to conduct a comprehensive assessment of the tax systems of both countries.

The purpose of the paper is to improve the theoretical, methodological, and applied foundations for conducting a comprehensive economic assessment of the factors of the tax system and to form the conceptual framework for its development in the context of Ukrainian-Chinese economic cooperation.

## 2 Methods

To achieve this goal, the following methods were used: multivariate correlation and regression analysis—to establish the cause-and-effect relationship between the tax system and the level of economic growth of the country; system analysis—for the purposes of forming a system of taxes and fees and indicators for their evaluation;

integral evaluation—to find integral indicators of the tax system’s efficiency, expert analysis—to evaluate the factors of the tax system.

3 Results and Discussion

The establishment and effective functioning of the state tax system is a key to stable economic development. This is true for any state formation, as the state functions at the expense of taxes. In this paper we will try to analyze the system of the fiscal policy of Ukraine and China, which in fact is the system of the budget revenues.

In both Ukraine and China, the functioning of the tax system is controlled by a central government agency, which in Ukraine is currently the State Tax Service (STS), and in China—the Main State Taxation Administration (STA) of China.

In China, the State Taxation Administration includes territorial tax departments to which it delegates its powers. However, the activities of these departments are coordinated not only by the State Taxation Administration, but also by the provincial governments in which they are located and operate.

The taxation system in China consists of three main categories of tax payments: central, shared, and local. As of 2022, China’s tax system included 17 taxes, including 11 direct taxes and 6 indirect taxes. Table 1 shows a list of these taxes.

The taxation system in China is quite sophisticated, and taxes are paid according to a scheme that is conceptually aimed at self-sufficiency of the state and its residents.

Thus, in order to strengthen the regulation of land resources, their rational use, as well as to protect agricultural land, in 2008, the PRC adopted the Provisional Rules and Regulations on the Tax on the Occupation of Agricultural Land [21]. This document provides for the payment of a fee for the occupation of agricultural land

Table 1 List of taxes that form the Chinese system of taxation (2022) [20]

No.	Direct taxes	Indirect taxes
1	Corporate income tax	VAT
2	Personal income tax	Consumer tax
3	Tax on entrepreneurial activity	Tax on urban repair and construction
4	Transport tax	Additional tax on education
5	Tax on the purchase of motor vehicles	Tax on tobacco leaf
6	Tax on transfer of rights	Stamp duty
7	Real estate tax	
8	Tax on the increase in land value	
9	Tax on the use of urban land	
10	Resource tax	
11	Fee for the occupation of agricultural land	

when it is allocated for construction. Its rate depends on the average availability of land resources in the region and ranges from 5 to 50 yuan per square meter [22].

The main commercial tax in China is the Corporate Income Tax (CIT). Its amount depends on a several factors. Thus, for newly created enterprises, the tax rate is 15%, for small businesses with low profitability, the tax rate is 20%, and enterprises that have been operating for more than 1 year and do not belong to the first two categories are taxed at 25%.

The value added tax (VAT) is the first in the ranking of fiscal functions. It is worth noting that the tax was introduced in China only in 2016. Similar to the corporate income tax discussed above, the approach to VAT taxation is differentiated and its rate depends on a number of factors. Export transactions for the sale of goods are not subject to VAT [23].

The next most important tax in China in terms of fiscal function is the individual income tax (IIT). Residents’ personal income tax applies to all income earned in China and abroad. For non-residents, only income actually received in China is taxable if the period of business activity in the country does not exceed six months (183 days).

All income is legally divided into 9 categories, each with its own tax rates and other characteristics (Table 2).

A summary of individual income taxation is provided in Table 3.

Categories of income, such as rental income, casual income, dividends, and capital gains, are subject to a flat personal income tax rate of 20% [24].

Consumption tax is payable on the purchase of goods that require a special permit.

Transport tax payers are companies, individual entrepreneurs, and individuals who own commercial or passenger vehicles: cars, buses, trucks, ships, etc.

According to the data of the reporting year 2022, the share of taxes in the country’s budget is as shown in Table 4.

The chart in Fig. 1 illustrates the Chinese tax system.

As we can see, China’s taxation system is in constant flux, but the country’s leadership does not tend to simplify it. It is constantly being improved, supplemented, and adjusted in accordance with the requirements of the times.

**Table 2** Grouping taxes into categories in China

No.	Name of the income category
1	Income from employment (i.e., salary)
2	Remuneration of labor
3	Author’s remuneration
4	Honorarium
5	Income from entrepreneurial activity
6	Interest, dividends, and profit distribution
7	Rental income
8	Income from the transfer of property
9	Incidental income



**Table 3** Individual income tax rates in China

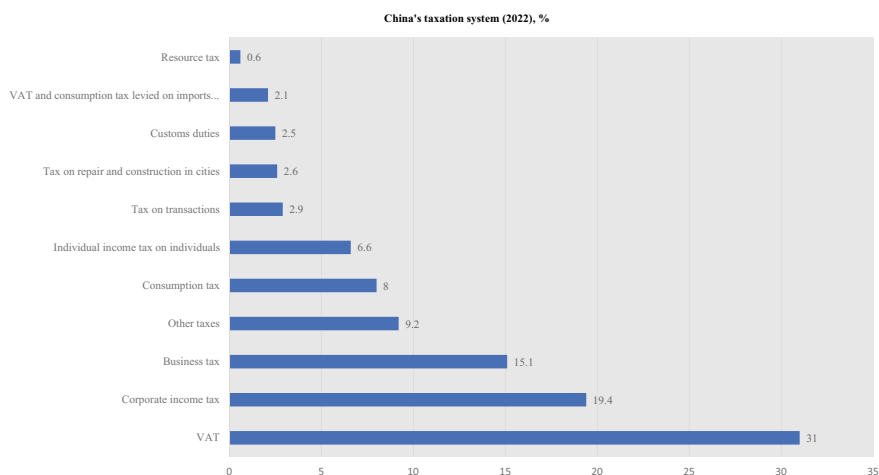
No	Taxation of annual taxable income received by individuals from private enterprises	%	Rates of the total tax on resident income (annual taxable income)	%	Rates of total tax on non-resident income (monthly taxable income)	%
1	From 0 to 30,000	5	From 0 to 36,000	3	From 0 to 3000	3
2	From 30,000 to 90,000	10	From 36,000 to 144,000	10	From 3000 to 12,000	10
3	From 90,000 to 300,000	20	From 144,000 to 300,000	20	From 12,000 to 25,000	20
4	From 300,000 to 500,000	30	From 300,000 to 420,000	25	From 25,000 to 35,000	25
5	More than 500,000	35	From 420,000 to 660,000	30	From 35,000 to 55,000	30
6			From 660,000 to 960,000	35	From 55,000 to 80,000	35
7			More than 960,000	45	More than 80,000	45

**Table 4** Distribution of tax equity in the Chinese fiscal system [25]

Name of the tax	Share in total tax revenues (%)
VAT	31
Corporate income tax	19.4
Business tax	15.1
Consumption tax	8
Individual income tax (for individuals)	6.6
Tax on transactions	2.9
Tax on repair and construction in cities	2.6
Customs duties	2.5
VAT and consumption tax levied on imports (net of export refunds)	2.1
Resource tax	0.6
Other taxes	9.2

Compared to China, the tax system in Ukraine tends to be simplified. Currently, the Tax Code of Ukraine provides for seven national and four local taxes and fees. At the same time, the national taxes, and duties in 2015 included the military tax, which was introduced as a temporary measure to meet the needs of the Armed Forces of Ukraine.

Among the list of mandatory payments to the budget is the single social contribution, which was introduced by the Law of Ukraine “On Collection and Accounting of the Single Contribution for Compulsory State Social Insurance” to replace a number of disparate social payments [26, 27].



**Fig. 1** Share of individual taxes in China's tax revenues

It is worth noting that for certain transactions, in particular, when buying and selling real estate, acquiring ownership of cars subject to the first state registration in Ukraine, when submitting jewelry and household items made of precious metals for stamping with a state assay mark to state-owned assay control enterprises, a mandatory state pension insurance fee is paid to the Pension Fund. This payment is sometimes also called a tax to the Pension Fund, although it is not specified in the Tax Code and therefore is not a tax. It is paid in accordance with the Procedure for Payment of the Compulsory State Pension Insurance Fee for Certain Types of Business Transactions [28].

Structure of the tax system of Ukraine is schematically shown in Table 5.

In most cases, tax rates are fixed. However, it would be more accurate to talk about the basic tax rate and other rates, since almost all taxes provide for different rates depending on the type of taxable transaction. This can be seen in the example of the main taxes: VAT, income tax, and personal income tax (PIT) [29, 30].

Having examined the taxation systems of China and Ukraine, it is appropriate to pay attention to the role of each tax system in filling the state budget. The share of individual taxes in the tax revenues of the state budget of the PRC is shown above based on the results of 2022 data. The analysis of the previous reporting years showed that the trend inherent in 2022 will continue. In Ukraine, with the outbreak of hostilities on February 23, 2022, and the introduction of martial law, there have been changes in both the country's economy as a whole and tax legislation. Therefore, to assess the effectiveness of the tax system, it is advisable to consider the data of the pre-war period, namely the reporting for 2021.

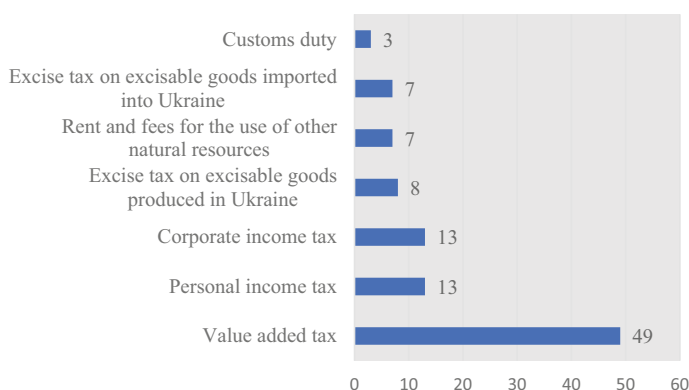
According to the Ministry of Finance of Ukraine, in 2021 the revenues of the state budget were 19.6% higher than planned. Actually, tax revenues amounted to 85.37% of the total revenues. We will focus our attention on tax revenues [31, 32].

The share of individual taxes in tax revenues is shown in the chart in Fig. 2.

**Table 5** Structure of the tax system of Ukraine

General state taxes	Local taxes and fees	
• VAT	• Single tax	• Property tax
• Income tax	• Group 1 of single tax payers	• Tax on movable property
• Personal income tax	• Group 2 of single tax payers	• Real estate tax
• Military fee	• Group 3 of single tax payers: – Individuals—entrepreneurs; – Legal entities—enterprises	• Land tax
• Environmental tax		
• Excise	• Group 4 of single tax payers—agricultural producers: – Individuals—farmers – Legal entities—enterprises	
• Duty		
• Rent: – Rent for the use of subsoil for the extraction of minerals – Rent for the use of subsoil for purposes not related to the extraction of minerals – Rent for the use of the radio frequency resource of Ukraine – Rent for special use of water – Rent for special use of forest resources – Rent for transportation of oil and oil products by main oil and oil product pipelines, transit transportation of ammonia by pipelines within the territory of Ukraine		
• Single social contribution • (mandatory payment to the budget)		

Share of taxes in state budget revenue, %

**Fig. 2** Share of taxes in the state budget revenue in 2021

This information about the tax systems of both countries shows that they have different approaches to the fiscal function of taxes. The PRC's tax system is quite developed and provides a number of benefits aimed at supporting taxpayers. In order to reduce the tax burden on individuals who have obligations for individual mandatory payments, the state provides discounts depending on the type of such payments. In this way, the state implements social programs aimed at supporting its citizens. As a rule, the discounts granted are individualized and targeted, taking into account the personal circumstances of citizens. The list of discounts that were relevant for the taxable income of individuals in 2022 is shown in Table 6.

The following payments are also not taxed: bonuses, salary supplements, insurance payments, remuneration for special merits, pension payments, and social payments.

For comparison, in Ukraine, personal income is subject to a tax social privilege (TSP). A PIT payer has the right to reduce his/her total monthly taxable income from one employer (wages, bonuses, compensation, remuneration, etc.) if the amount of the employee's monthly taxable income does not exceed the amount of the subsistence minimum multiplied by a coefficient of 1.4. In 2023, the maximum amount of an employee's income eligible for the tax social benefit in Ukraine is UAH 3760 [30]. The amount of the discount for this amount of income is UAH 1342, which is 336 CNY in comparison.

Having examined the tax systems of both countries, it is advisable to analyze the factors influencing the functioning of the tax system. The survey was organized by the Center for China-Ukraine Cooperation at Lviv Polytechnic National University, involving tax experts from Ukraine and China. The sample size was 120 people, including 56 experts from China and 62 experts from Ukraine. The purpose of the statistical study was to compare the tax systems of Ukraine and China by the most relevant factors that can reflect the significance of the impact on the tax system, to form an idea of the peculiarities of the structure and functioning of the tax system, and to clarify the areas for improving the existing tax system.

Experts were asked to rate five factors on a 100-point scale. Based on the results obtained, the mean score ( $M\bar{x}$ —mathematical expectation) and standard deviation ( $\sigma$ —root of the variance) were calculated for each factor. The obtained results were divided into groups depending on falling into predefined intervals of 5 points, for example, from 0 to 5 points; from 5 to 10, etc.

**Table 6** Discounts applicable to taxable income of individuals in China [33]

Type of individual mandatory payment	The amount of the taxable income discount
Rent payments	800–1000 CNY per month
Expenses for the child's education	1000 CNY per month
Support for elderly parents	2000 CNY per month
Health insurance costs	60,000 CNY per year
Mortgage lending	12,000 CNY per year

The processed results are presented in Figs. 4, 5, 6, and 7. The Y-axis shows the percentage (share) of respondents whose score falls within the selected interval. The X-axis shows the rating scale from 0 to 100 points.

The impact of controllability on the tax system of Ukraine and China is illustrated in the diagram in Fig. 3.

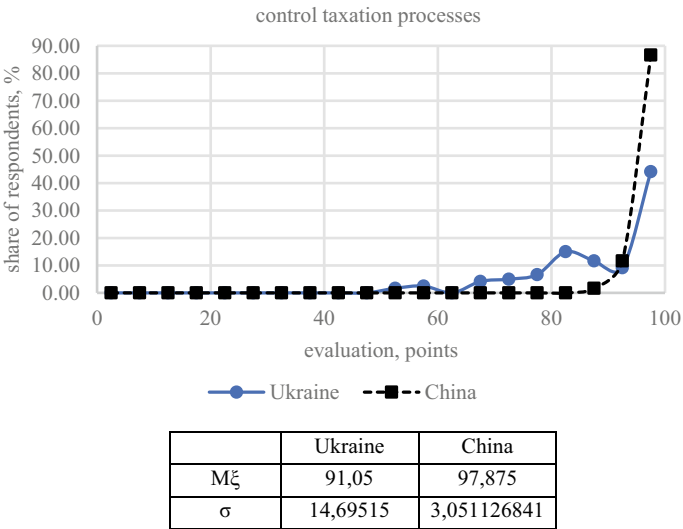


Fig. 3 Controllability factor in the tax system of Ukraine and China

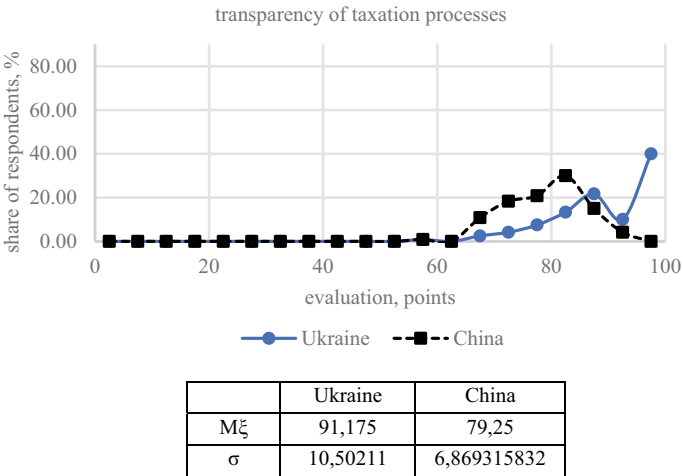
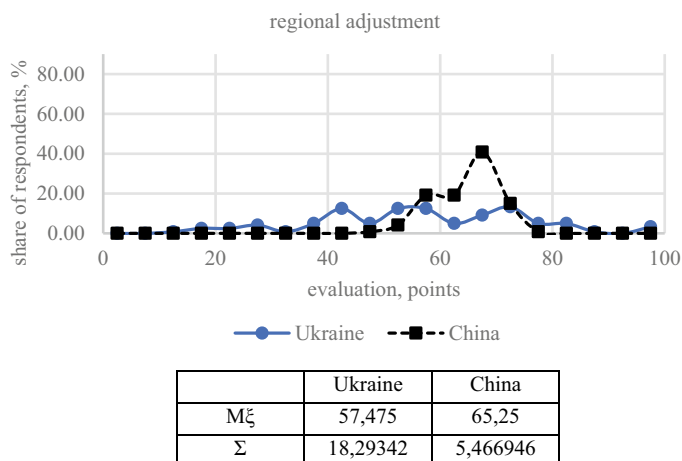
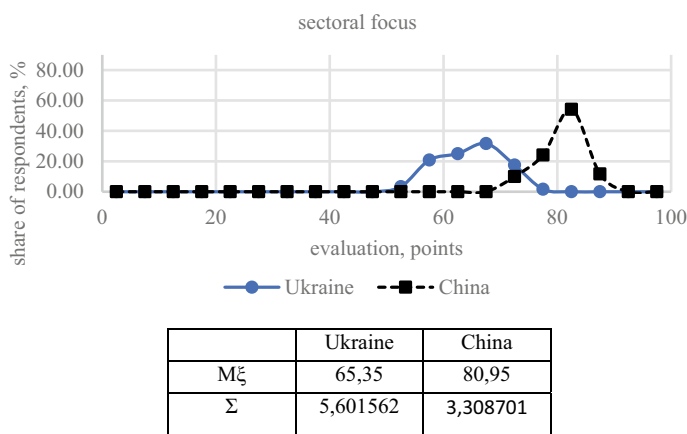


Fig. 4 Transparency factor in the tax system of Ukraine and China



**Fig. 5** Factor of regionality in the tax system of Ukraine and China

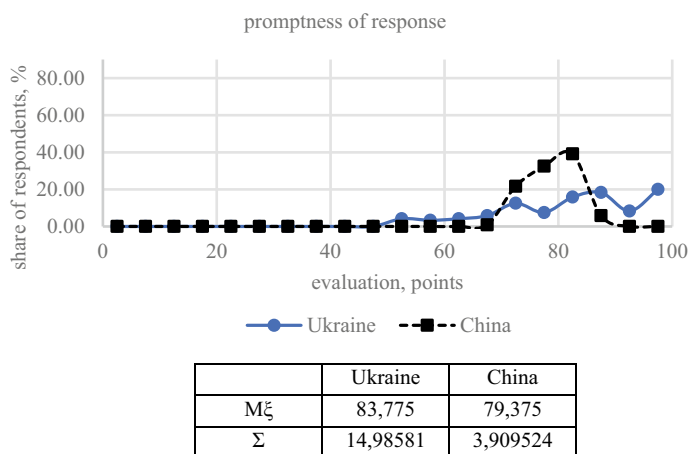


**Fig. 6** Sectoral factor in the tax systems of Ukraine and China

As the diagram shows, the controllability factor plays an important role in the Chinese tax system. In fact, due to the total digitization of business operations of business entities, it is possible to exercise prompt and comprehensive control over the activities of enterprises, and hence over the payment of taxes.

At the same time, experts' assessments of the controllability factor in the Ukrainian tax system differ, and the standard deviation is almost five times higher than that of the Chinese tax system. The lack of unanimity in the assessment may indicate a distortion of the results of the controllability factor.

The impact of transparency on the tax systems of Ukraine and China is illustrated in the diagram in Fig. 4.



**Fig. 7** Factor of responsiveness to changes in the tax systems of Ukraine and China

As shown in the table, the average value of the indicator for assessing the transparency factor in the tax system of Ukraine ( $M\bar{x}$ ) is quite high. Experts pay considerable attention to this indicator, taking into account the tendency of ambiguous interpretation of tax legislation by the controlling bodies of the State Tax Service of Ukraine and taxpayers.

It is important to note that the discrepancy between experts' assessments of the transparency factor in Ukraine is much higher than in China.

The relatively low level of transparency in the Chinese tax system is explained by the attitude to it as an objective necessity, which is confirmed by the mentality. If we take into account the effectiveness of tough measures against violators of tax legislation, the interconnection of transparency, controllability, and the fact that there is no shadow economy in the country becomes clear.

The impact of regionalism on the tax systems of Ukraine and China is illustrated in the diagram in Fig. 5.

The results of the experts' assessment show that the vision of the regionalization factor in the Chinese tax system is basically the same. The assessment of the regionalization factor in the tax system of Ukraine differs significantly. There is a significant discrepancy in opinions on the issue of the regionalization factor, as evidenced by the high  $\sigma = 18.29342$ .

The impact of the industry type in the taxation system of Ukraine and China is illustrated in the diagram in Fig. 6.

The level of sectoral focus in China is assessed to be higher than in Ukraine. Almost 60% of experts believe that the level of the sectoral focus in the Chinese tax system is almost 85 points. The assessment of the sectoral focus in the tax system of Ukraine shows that more than 30% of experts rate the indicator at 65 points.

The impact of the responsiveness to changes in the tax systems of Ukraine and China is illustrated in the diagram in Fig. 7.

More than 40% of the experts give a score of 84 to the factor of responsiveness to changes in the Chinese tax system. This confirms the fact that China's tax system responds very quickly to changes.

The diagram illustrating the experts' assessment of the factor of responsiveness to changes in the tax system of Ukraine shows a significant divergence in opinions. This conclusion is confirmed by the value of the standard deviation ( $\sigma = 14.98581$ ), which is almost four times higher than the value of this indicator calculated for China.

The analytical review of the main factors (controllability, transparency, regionalization, sectoring, responsiveness to changes) in the tax system of both countries gives grounds to state that there are significant differences in approaches to the organization of the tax system. This means that there is a need to harmonize the fiscal policies of both countries to a level that will ensure a balanced return on the development of partnerships.

## 4 Conclusions

Summarizing the above, we can state the following:

1. The efficiency of the country's tax system has a direct impact on socio-economic development.
2. A well-established tax system should make it impossible for the country to have a shadow economy.
3. An important factor in the process of taxation is the allocation of a regulated, specified part of the gross national product in the budget for public needs. This follows from the regulatory function of taxes, which implies their impact on various aspects of taxpayers' activities.
4. A flexible tax system allows for influencing the macro- and microeconomic processes in the country in order to balance the interests of Ukraine and China in trade and economic relations.
5. In the period of informatization and digitization of various spheres of society, it is advisable to introduce models of optimal tax burden and distribution of tax revenues of the national and local budget funds.
6. It is necessary to take into account the factors of controllability, transparency, regionalization, sectoring, and responsiveness to changes in the country's tax system, based on national interests and taking into account the interests of the partner country or economic associations of countries.
7. In the period of globalization and interpenetration of markets, it is important to bring the tax system to a form that balances national interests and prospects for interaction with foreign markets.



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# Smart Phone Addiction and Phubbing Behavior Among Indian College Students and Its Moderator Effect on Interpersonal Relationship



P. J. Emmanuel, N. C. Kiran Babu, Molly Joy, and Chandita Baruah

**Abstract** The present research pertains to smart phone addiction and phubbing behaviour and moderator effect on interpersonal relationship among Indian college students. The total sample consisted of 417 college students comprising of both boys and girls, between the age group 18–22 years. A correlation research design was used to measure the relationship of the variables. It was found that for phubbing the ( $M = 43.81$ ,  $SD = 13.91$ ), the results of ( $r = -0.30$ ,  $p > 0.05$ ) levels indicated that there was no direct effect between smart phone and phubbing. Whereas, when the mediator variable interpersonal relationship was introduced between phubbing and smart phone addiction the results were found to be ( $r = -0.82$ ,  $p < 0.01$ ) levels. Implication of the study reveals that interpersonal relationship becomes a major part among college students in order to reduce phubbing behaviour and smart phone addiction to have a balanced social relationship in the society.

**Keywords** Phubbing · Smart phone addiction · Interpersonal relationship

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## 1 Introduction

The constant and extensive progression of technology has ensued in a substantial alteration in the whole world routine and lifestyle. Use of mobile phones has been the major change in phase in the last decades. The Smartphone is a technological advancement that has changed for the better, how millions of people live by using them to surpass time and space to remain socially associated despite being thousands of miles away. It has made people's life so easy that they depend on it from day-to-day activity and smart phones have a vital role in people's lives.

Internet accessibility on electronic gadgets has helped people retrieve entire information from around the world and has helped people connect with various people sitting in different areas of the world. Chatting and the social connection between people have improved over time.

However, Constant engagement with gadgets such as mobile phones, laptop computers, tablets and other similar devices to check online messages and other social media news feeds, on the other hand, frequently disrupts on-going social interactions and has negative consequences for interpersonal relationships [1].

The term phubbing (a blend of snubbing and phone) insist on the performance of overlooking somebody in a community and relationship situation by paying consideration to the smartphone. Pubbing can be termed as a person endlessly involve in the habit of mobile phone while intermingling with others and not keenly involving in the discussion [2]. Phubbing is looking at your mobile phone in a conversation to avoid interpersonal interaction with other. Phubbing, which mentions to the action of disturbing continuous in a person discussions or overlooking other people who are present to intermingle with one's mobile phone [3]. Phubbing is amalgamation word that derived by combining the confrontations snubbing and phone. Phubbing happens when people ignore other people by means of condensing on their smart-phone rather accompanying them [4]. Pubbing explains mobile phone addiction, smart phone addiction, Internet addiction, and game addiction [2]. A phubber may ordeal vigor to device their smartphone usage appropriately, an obsessive worry about losing a chance for other substantial events, and a failure to control mobile phone use a proper protocol enticement being phubbed [5]. Researchers have mentioned to this behavior in precise settings as "phubbing" being phubbed by significant other people in interaction [3]. Phubbers seems to have adverse costs on maintaining relationship wisely [4]. It is no longer unusual to find people talking, slipping or being indulged in a game on their phone while being in public places.

## 1.1 *Smartphone Addiction*

Smartphones have not only supersede cellphones, to such an extent they have also substituted computers and other devices. Their big screen size and essential movement allow for a plenty of functions to be stepped into many times. With a smart-phone, a person be able to make calls, send e-mails, watch videos and share photos, play mobile application games and listen to music, keep track of personal and official appointments. Browse the Internet, use voice search engines, check for latest updates on news and weather forecast, use online chat applications for making voice calls and texting messages (e.g., Whatsapp) and interact on social networks (e.g., Facebook, LinkedIn and Twitter). Smartphones are fitting into an integral factor of human beings around the world. Human's sense detached from their smartphones [6].

Smartphones have become important gadgets used for all the means of work from sending emails to browsing the net, chatting, playing games, online shopping and connecting with others. Smartphones are making job easy for youngsters however it has its own threats and limitations for the personal and social wellbeing.

Smartphones have remain a considered importance in work and personal lives. They are used for social networking means, even have features like reading e-books, writing e-mails, sending messages, and playing online games and chat online. Commonly, people use smartphones for relaxation and amusement [7].

Since they can succumb instant satisfaction. Although, spending time on smart-phone can be difficult, which might be attended by a feeling of free will and create more smartphone usage [8]. Leading to mental health symptoms such as sleep disturbances, depression, and psychological distress [9–11].

As in effort of smartphone use has been growing all over the world, college students are the most accessible group for the smartphone usage [12]. Using advance features [13]. Smartphone use intents seldom for those even to what the Internet gives, but also to look into the operations which provide new opportunities to learn. These features allow users to communicate with others remotely and immediately.

India, by its highest population and advancing economy, has seen an increasing rise in smartphone usage over the recent era. The invention of reasonable smartphones and sweeping accessibility of mobile and internet have changed the way Indians interact, access information, engage in business, and engage with the outside digital world [1].

Smartphones have been an important part of the lives of college students around the world. These significant devices offer a several features and applications that enrich communication, productivity, and entertainment. Still, the wide use of smartphones among college students can understood both chances and opportunities. On the other hand India, by its highest population and advancing economy, has seen an increasing rise in smartphone usage over the recent era. The invention of reasonable smartphones and sweeping accessibility of mobile and internet have changed the way Indians interact, access information, engage in business, and engage with the outside digital world [1]. Whereas, smartphones have played an important role in creating the digital

split in India. With the rise of devices, indeed in villages, millions of Indians have attained entry to the digital foot print for the first time. Mobile phone connectivity has enabled individuals by providing gateway to information, online features, and social systems. Also helps students using educational resources, smartphones have become powerful tools for digital expansion, allowing previously underserved groups.

Therefore, smartphone inclusion has given accelerated to a booming digital economy in India. The progress of e-commerce forums, such as Amazon and Flipkart in India, has transformed the retail segment. The benefit of online shopping has gained a huge number of customers and stake holders, leading to a reflective increase in business quantity and employment openings. Besides, the rise of digital payment platforms and mobile wallets has accelerated needless financial deals, contributing to the country's drive toward a cashless economy.

However, smartphone usage has remodelled social dynamics in India. Social media platforms like Titter, WhatsApp, Facebook, and Instagram have turned essential parts of students' lives, aiding communication, information sharing, and community development. They have also surfaced as important tools for political agenda, social programs, and student journalism. However, burning issues regarding misinformation, online offense, and privacy have also grown, emphasizing the importance for digital literacy and steady smartphone use [14].

While, smartphones have changed the way college students interact and communicate with others people. Social media platforms and messaging apps empower ideal interaction with fellow beings, friends, and family members whatever of distance obstacles. This connectivity nurtures social strength, facilitates healthy relationships, and involves students to stay associated about college campus events and other recreational activities. Today, smartphones extend a wide variety of applications and gadgets that can improve academic achievement and knowledge. From note-taking applications to completing the assignment task commitment, students can mechanise their timetable, create study strategies, and avail educational information at the same time. Further, check email, follow digital libraries, and educational tools gives instant access to research contents, e-textbooks, and e resources, making learning more feasible and effective [14].

Smartphone use in India has confined a technological advancement, allowing individuals, transforming actions, and forwarding towards socio-economic creations. Connecting students to the wealth of information and providing educational avenues, smartphones have become mechanisms of difference. Nevertheless, it is relevant to address problems related to availability, affordability, and digital literacy to ensure that the boons of smartphone technology are accessible to all marginalised society.

Studies on academic performance among Chinese adolescents suggested that excessive mobile phone use was negatively correlated with academic performance. Even [15] found lower levels of well-being among university students in China' Therefore, a good method of investigation is needed to provide a complete understanding of smartphone usage and its detrimental influence on undergraduate's college student's academic achievement and interpersonal relationship.

## 1.2 *Phubbing Behaviour*

Phubbing across the globe is understood as “The pretence of snubbing someone in a social context by looking at your phone instead of paying attention to social relationships.” Phubbing has become progressively prevalent as smartphones have become more imbued in our daily activities. It includes regaling attention down from real-life interactions, social bondings, and face-to-face communication to involve with one’s phone. Whether it’s often checking messages, scrolling down social media messages, or replying to postings, phubbing often steers to a lack of disengagement and vigilance toward those physically acquaint.

Intense phubbing is known as being refused by social interactions and awareness of self and others and is hurting others because it endangers basic human needs, such as belonging to others, social connectedness and fostering self-esteem. Generally college students are called ‘phubbers’ use their Smartphone’s to look through their messages, it is the most usual thing, and definitely the abnormal thing. They don’t feel bored, checking the phone reinforces their behaviour to update their messages, type new messages, interact continuously without feeling being isolated. Even there may be multiple friends joining them for the same interactions, update their views for the similar messages in context ignoring around their surroundings, shortly connecting themselves to all their social media world. Phubbers even play online games like playing temple run, tic tac toe, or any other game on a mobile app can prevent other fellow beings. Phubbers are easily addicted to them especially if they get rewards and reinforcements every time they engage in play [16]. Phubbing has also suffused social gatherings and public spaces. In group settings, individuals may disengage from discussions and choose for their phones instead. This behavior not only interrupts the flow of conversation but also undermines the quality of interpersonal relationship. Phubbing has become a social fabric challenge, as it minimises the sense of proximity and watchfulness required for eloquent social connections. Therefore, the hunger for higher technology has resulted in, such as extreme technology usage [17], higher levels of association in technology [18]. And finally technology dependence [19]. Numerous studies indicate that computers are not the troublesome and of themselves, but that problems emerge as a result of the various mobile applications installed on them. Playing online games [18, 22–25]. And remaining online for longer periods of time [26–28]. Are instances of such Adversities?

Though, people always view phubbing disturbing also discourteous, they tend to perform similar behaviour [20]. Besides phubbing is also considered as disrespectful behavior with respect to others, it can disrupt real-life social relationship [2].

Phubbing has also resulted in many attainable goals, such as being rude toward other person, indifference for others, unconcerned about social settings and an associated with the virtual world over actual ones. While phubbing can be based on technological usage, such as the browsing or playing games and information transferred from one’s computer to his or her mobile phone through various third party

applications, the very inherent cause of Smartphone's may themselves incite addiction. Phubbing negatively affect relational factors [21–23]. Therefore, it was regarded important to explore the phubbing behaviour among college students.

### ***1.3 Interpersonal Relationship***

Student life is an exploring period identified by academic growth, personal wellbeing, and the maintaining of lifelong bonding. Interpersonal relationships play a pivotal role in this journey, providing comfort, friendship, and a sense of understanding. Whether its everlasting friendships, finding romantic partnerships, or nurturing professional communities, college students have a rare opportunity to develop interpersonal skills that can positively influence their personal and career growth. There is growing concerns among the youngsters who are facing many problems adapting and maintain a healthy friendship and become responsible social personal around his surroundings.

Many problems affecting the social, physiological, psychological conditions and influencing students negatively. Therefore there are many reasons and problems associated with them in context based due to increased use of smartphones and engagement of other social media platforms which in terms influence. 'Concepts of academic achievements' [29, 30]. 'Academic performance' [31, 32]. 'Academic postponement and excessive use of internet leads to anxiety' [33]. And depression [34, 35]. Furthermore, it has been discovered that extreme use of internet throughout phones has detrimental effects on the relationships between individuals (e.g. social relationships with family, peers, teachers and neighbours) [36, 37].

College is a time when many students search interpersonal relationships and learn about themselves in the context of relationships. Strong relationships require effective interpersonal skills, trust, and collective respect. It's necessary to set limits, prioritize individual progression, and help each other's goals. Welcoming open and rational dialogue, patiently listening to one another, and striking a balance between personal and shared knowledge are key to fostering healthy interpersonal relationships.

In academic settings maintaining interpersonal adaptation in teacher-student interaction is important [38–41]. However, the significance of the interpersonal relationships in education has been understood a long time back, from a larger viewpoints, slight attention has meted out to improve the conditions of wellbeing [42–45]. The above cited literature imply that fostering a good interpersonal skills for the college students in a positive way which the current need of the hour. Accordantly, interpersonal relationship needs to be fostered and nurtured from the school level so that there is smooth transition for students when they reach college and can uphold a healthy relationships with their friends and others using any medium and continue in exchanging the information for cordial communication within the society.



## 2 Need and Significance of the Study

Noble effects of technology are contributing enormous convenience in daily life. However, it also has an adverse effect on people and society as technology addictions are increasing. Smartphone addiction is one of the stark technology addictions causing serious psychological, Social and physical problems to teenagers and especially to students. Smartphone addiction drives students to check their phone frequently and compulsively, no matter what situations for study timings, meetings, walking or even during eating [6].

Interpersonal relationship is the relationship between two or more individuals and developing and maintaining an interpersonal relationship during the student life is important for success in life. Interpersonal relationship serves as a base for the peer and social support. It is noted that interpersonal relationship enhances the overall well-being of individuals. Interpersonal relationship predicts emotional distress. Students with high level of interpersonal relationship showed low level of emotional distress [7]. Although in the past, studies have focused primarily on adverse effects of partner phubbing, there have been some researches looking into students' phubbing on interpersonal relationships [8]. And problematic smartphone use among adolescent students [9]. Thus, this study predicated the role smart phone addiction and phubbing on interpersonal relationship among college students.

## 3 Method

### 3.1 Research Question

1. Is there any moderating effect of Interpersonal relationship between smart phone addiction and phubbing among college students?

### 3.2 Hypothesis

H<sup>1</sup>: There is a moderating effect of Interpersonal relationship between smart phone addiction and phubbing among college students.

### 3.3 Variables

Independent variable: Smart Phone Addiction.

Dependent variable: Phubbing Behaviour.

Moderating variable: Interpersonal Relationship.

### 3.4 Research Design

In the present, a correlational research design is used to measures variables and study the statistical relationship (i.e., the correlation) between them.

### 3.5 Sample

Sample consists of 417 college students from Bangalore urban region.

**Sampling Technique:** Sample of 417 college students from Bangalore urban region. The sample comprises of college students between the age group 18 to 22 years using purposive sampling technique.

### 3.6 Tools and Techniques

See Table 1.

## 4 Results and Discussion

The collected data was tabulated using descriptive and inferential statistical procedures, the results were discussed hypotheses wise using moderation analysis by process macros 3.4 (Fig. 1).

$h^1$ : There is a moderating effect of Interpersonal relationship between smart phone addiction and phubbing among college students.

Table 2 shows the means, standard deviations, and correlation. To assess the mediating effects between phubbing and smart phone addiction. For phubbing the ( $M = 43.81$ ,  $SD = 13.91$ ), the results of ( $r = -0.30$ ,  $p > 0.05$ ) levels which indicated that there was no direct effect between smart phone and phubbing. Whereas when the

**Table 1** Variables and tools

S. No.	Variable	Tool	Reliability	Validity
1	Phubbing behaviour	The Generic Scale of Phubbing (GSP)	0.92	0.94
2	Smart phone addiction	Smartphone addiction Proneness scale for youth	0.880	0.49
3	Interpersonal relationship	Interpersonal Relationships Questionnaire	0.87	0.84

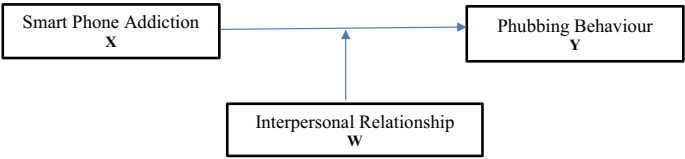


Fig. 1 Moderation model

mediator variable Interpersonal relationship was introduced between phubbing and smart phone addiction the results were found to be ( $r = -0.82, p < 0.01$ ) levels. Therefore, there were negative correlation effects between the phubbing and interpersonal relationship and as phubbing decreases interpersonal relationship increases. The interpersonal relationship ( $M = 54.48$ ) was higher compare to phubbing ( $M = 43.81$ ). Therefore, the results were statistically significant and had moderating effects between phubbing and interpersonal relationship.

Further, Research on the effects of phubbing suggests that it may create negative, resentful reactions such that people perceive their interaction to be of poorer quality [10]. Also, feel less close to their interaction partner when a phone is present [16].

The results were found to be ( $r = 0.027, p < 0.01$ ) levels, the strength was low and had a negligible positive correlation between the phubbing and smartphone addiction with the ( $M = 32.91, SD = 5.80$ ) the results were statistically significant. Finally, the moderator variable interpersonal relationship had an effect between both phubbing and smart phone addiction people often ignore others with whom they are physically interacting in order to use their smartphone instead. This seems to have become normative in everyday communication [5].

Table 3 shows the bootstrapped estimates of the moderation results. In the above given model the smart phone addiction and phubbing behaviour had no direct effect while considering the Bias-corrected bootstrapped 95% Confidence Interval estimates were found to be  $[-1.063, 0.450, p > 0.05]$  results were not significant. However, there was an indirect moderation effect between smart phone addiction and interpersonal relationship. Bias-corrected bootstrapped 95% Confidence Interval estimates was found to be  $[-0.002, 0.000, p < 0.01]$  the results were statistically significant. Also finally it was found that phubbing had an indirect effect with interpersonal relationship and the Bias-corrected bootstrapped 95% Confidence Interval

Table 2 Means, standard deviations, and correlation coefficients

Variables (n = 417)	Descriptive statistics		r		
	M	SD	1	2	3
1. Smart phone addiction	32.91	5.80	–	–	–
2. Phubbing	43.81	13.91		–0.30	–
3. Interpersonal relationship	54.48	9.46	0.032**	–0.82**	–

Note \*\*  $p < 0.01$

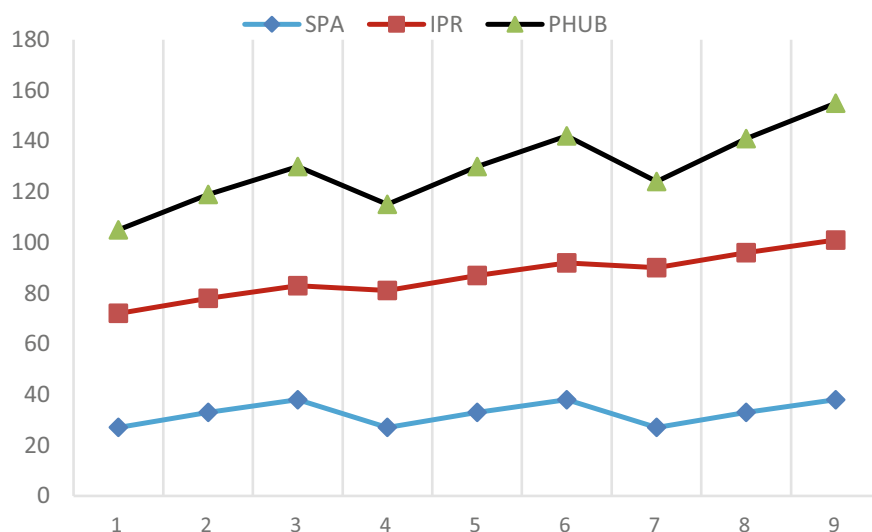
estimates was found to be  $[-1.270, -0.374, p < 0.01]$  and the results were statistically significant.

Figure 2 shows that between lower levels of phubbing and smart phone addiction the interpersonal relationship scores ranged between 45 and at average levels of phubbing and smart phone addiction the interpersonal relationship scores ranged between 54 while, at higher levels the phubbing and smart phone addiction the interpersonal relationship scores ranged between 64 scores. Further, it was found that at higher the levels the interpersonal relationship strength was also found to be increased. Researchers have found that both smartphone addiction and phubbing behaviour disrupt people's social functioning. According to social comparison theory and compensatory internet usage theory [11]. 'People's excessive smartphone use may be a sign that they are experiencing distressful feelings like loneliness. Their interaction with smartphones serves to suppress these feelings'. [12]. Therefore in the present study also highlights that as the phubbing and smartphone addiction increased with their levels the interpersonal relationship levels also increased.

**Table 3** Bootstrapped Estimates of the Moderation results

Model	Bootstrapped 95% CI estimates
Smart phone addiction → Phubbing	$[-1.063, 0.450]$
Smart phone addiction → Interpersonal relationship	$[-0.002, 0.000]**$
Phubbing → Interpersonal relationship	$[-1.270, -0.374]**$

Note \*\*  $p < 0.01$  levels



**Fig. 2** Moderating effects between phubbing, smart phone addiction and interpersonal relationship

## 5 Summary, Conclusion and Implications

There was no direct effect between the smartphone addiction and pubbing behaviour. While, there was an indirect effect between the smart phone addiction and phubbing behaviour when interpersonal relationship was introduced as a moderator. Finally, Interpersonal relationship plays an important role as a moderator between smart phone addiction and pubbing behaviour. This study aimed to see if there's any relationship with smart phone addiction and phubbing behaviour and the dependence by the college students and its effect on interpersonal relationship. The advancement in technology and everything going virtual, students spend significant amount of time on their gadgets due to which the interpersonal relation gets affected. In recent time, this is further disrupted due to COVID-19 and students were attending online classes. It results in change in relationship between the peer. These findings contribute to our growing understanding of how pubbing and smartphone addiction can affect the relationship.

An awareness campaign about the ill effects of smartphone addiction and phubbing on the interpersonal relationship. Finally, it can also be used to develop intervention strategies to reduce the usage of mobile phones among students. Later, it can be concluded by stating that the formulation of research objective could be widened down to gain more focus and intensify on the specific factors of each variable in the study.

In the present growing concern about smartphone addiction and phubbing behavior and how it impacts college going students in India, this research adds considerably to the majority of knowledge on its negative and positive outcomes of as the smartphone addiction increases with phubbing and requires more due awareness of interpersonal relationship to decrease the smartphone addiction and phubbing. Additionally, this study provided proof for the moderating influence of interpersonal relationship as well as evidence for the moderating effects of smartphone addiction and phubbing. Therefore, the study's conclusions have significant consequences for both theory and practice.

Smartphone usage and phubbing have become prevalent in today's growing world, and have a significant implications for college students on maintaining their interpersonal relationships leading to social neglect, self-isolation, and increased number of conflicts with managing relationships. Tedious smartphone usage can also result in various physical and mental health issues such as neck pain, eye strain, migraine and sleep disturbances. Further it is also decreasing the empathy levels. Therefore, students should practice a mindful smartphone usage by controlling their obsessive and compulsiveness at required times. Also, impart strict time constraints for smartphone usage in the designated places. Finally, improve their personal connections and reduce phubbing behaviour by public awareness campaigns.

## 5.1 Limitations of the Study

1. The sample was drawn from the Indian college students and the sample size can be increased.
2. The study can be included with more demographic variables.
3. The study can also understand how each of the boys and girls differ on the study variables.
4. Further mediating and moderating variables could have been included in the study.

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# Exploring the Relationship Between Performance Assessment and Employee Performance: The Role of Performance Planning and Performance Review



Majed Mohammed Al Thawadi and Noor Ul Hadi 

**Abstract** The current performance management system (PMS) in some Saudi organizations is not satisfactory as it specifically links performance assessment with employees' performance, which contradicts the literature on strategic human resource management. Therefore, the purpose of this study is to explore the relationship between performance assessment and employee performance from the perspective of performance management systems and social exchange theory. The study collected 100 valid responses from employees working in the IT department. Firstly, the study examines the direct impact of performance assessment on employees performance. Additionally, it posits that the relationship between performance assessment and employee performance can be improved with a solid strategic performance management system. Based on the literature review, quantitative, and qualitative analysis, the study indicates that performance planning and performance review play a considerable role in the relationship between performance assessment and employee performance. This is because employee performance, attitude, and behaviors may not change significantly without proper performance planning. Similarly, transparency in the performance assessment process through performance review can positively affect the relationship between performance assessment and employee performance. Thus, it is concluded that employees perceive improved performance through efficient and fair performance assessment reviews and performance planning.

**Keywords** Performance assessment · Employee performance · Performance planning · Performance review

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## 1 Background of the Study

Performance measurement studies have experienced rapid growth in recent decades, focusing on individual, group, and organizational levels. This has become more of an obsession for the new, goal-oriented, and objective-centered organizations in the modern-day. Yet, as one would expect, the overall performance of organizations ultimately relies on the success of individual performances. The importance of employee performance is vital for any organization striving to achieve high standards [8]. Hence, well-developed organizations prioritize improving individual performance and monitoring it through various measures. However, the relationship between performance assessment and employee performance in the context of Saudi Arabia remains relatively unexplored and lacks comprehensive documentation. From a managerial perspective, the current performance management system (PMS) in some Saudi organizations is unsatisfactory, as it predominantly focuses on performance assessment without a specific link to key variables under strategic performance management systems. The strategic role of key variables within the performance management system guidelines on the relationship between performance assessment and employee performance in Saudi Arabia requires further exploration, as it remains a scarce area of research. Al Taweel [3] also reported the ongoing struggle of companies in developing an infallible system. Thus, this study aims to examine the direct relationship between performance assessment and employee performance, while exploring this relationship further from a social exchange perspective.

The rest of the paper is arranged as follows: the next section will discuss literature on performance assessment, employee performance, performance planning and performance review. This is followed by research methodology and results and findings. The study conclusion and implications are then followed by limitations and directions for future research.

## 2 Literature Review

### 2.1 *Performance Assessment*

Looking at the different definitions of performance assessment, one may find that there is no real consensus about this concept. However, the mainstream theories consider it as tool to evaluate the extent to which the employee's work is done according to the set standards and yields the desired outcomes in the most efficient way. Performance assessment encompasses various tools and mechanisms that allow management and HR departments to set measuring and evaluation procedures against which they can assess the level of performance and task completion perfection of an employee [26].

This perspective emphasizes the importance of having clear expectations and targets against which employees are assessed and evaluated. Therefore, performance

planning becomes a prerequisite for performance assessment, where the assessment of behavior and assessment of results carry equal weightage. However, practices in some organizations may differ, and they may assess employees in their own way, which can lead to counterproductive behavior. Thus, the assessment of performance in organizations is crucial and should be systematic. The information collected through performance assessments serves as the basis for making decisions that affect salary, promotion, termination, training, transfers, and other staffing conditions [22]. In conclusion, performance assessment is not just a simple activity, but a measure of how well the employees are applying their knowledge, skills, and abilities towards organizational goals.

## ***2.2 Performance Planning***

An accurate performance assessment system must plan the frequency of assessments, the types of tests or evaluations, and set responsibilities and requirements for these assessments. Rudman [28] explains that organizations need a framework to determine what needs to be done, how, to what standards or levels, and by whom [32]. Additionally, Audenaert et al. [7] emphasize that performance reviews should include planning for employee growth and improvement through training, assignments, and rotations. Effective management of these aspects contributes to achieving expected targets. Performance planning plays vital role in clarifying the goals and objectives to be would achieved by employees in the coming cycle.

## ***2.3 Performance Review***

Performance reviews are cyclical events of well documented evaluations of employee performance and work quality based on observable and achievable criteria [27]. Qualtrics [27] reports that different types of performance reviews serve various purposes. A performance review is a formal regulated assessment mechanism in which managers and key stakeholders evaluate an employee's work performance, aiming to identify strengths and weaknesses, offer constructive feedback for skill development, and assist with goal setting [27]. In this sense, the performance reviews need to be systematic; managers should identify employees' strengths and weaknesses and provide feedback to help them achieve organizational goals. Nguyen et al. [25] and Qualtrics [27] explain that performance reviews can be weekly or bi-weekly to keep employee performance and projects related tasks on track. Additionally, monthly reviews which are particularly important as a monitoring tool for employees' performance and organizational performance.

## 2.4 *Employee Performance*

Employee performance is a multidimensional construct, encompassing aspects such as, quality, quantity, efficiency, and effectiveness of employees' work towards established organizational goals [16]. According to Waheed et al. [33], Hadi [15], and Arshad et al. [2] employee performance refers to the quality, quantity, and effectiveness of employees in achieving assigned tasks. Wijaya et al. [32] define employee performance as the outcomes of tasks assigned to employees with a specific target to be achieved. Atiqa and Hadi [6] found that training and development programs are key predictors of employee performance. They concluded that the presence of affective commitment, together with individual learning, predicts employee performance positively.

In the context of the current study, well-established performance management systems in the organization could positively affect employee performance. These individual-level outcomes also have a positively affect organizational-level outcomes, as employees' performance at workplace influences organization performance [1, 13, 14, 23]. In the presence of well-developed performance management systems, employees may perceive that their efforts can lead to positive appraisals and organizational rewards. This expectation intrinsically motivates employees and fosters creativity and innovation (4, 5, 9–13, 19–22) .

## 3 **Methodology**

A mixed-method approach has been used in the current study. Firstly, a quantitative design was employed to test the direct relationship between performance assessment and employees' performance. Additionally, a qualitative research design with a thematic deductive method was used to explore this direct relationship. Open and closed-ended questionnaires were conveniently distributed among targeted employees via an electronic link. After cleaning and screening, 100 valid responses were analyzed using SPSS. The two constructs-performance assessment, and employees' performance, are reflective in nature (for more details, refer to Hadi [17]).

## 4 **Results and Findings**

The 100 respondents who provided reliable and viable feedback were all males and were distributed across three main categories: 10% of them had been with the company for 15 years or more, approximately 45% had been there between 5 to 15 years, while the remaining 45% had been with the company for less than 5 years. Regarding their positions, 7% of the respondents held management positions,

25% were in supervisory positions, 13% were foremen or lead technicians, and the remaining 55% were either operators or technicians.

To assess performance management practices in the organization, data on key variables were collected. Regarding performance assessment, respondents expressed their opinions on each performance assessment item, and most of the answers were similar, with over 90% of them agreeing that an annual performance assessment is accurate and reliable. Additionally, around 95% of employees agreed or strongly agreed that they are brought to find effective solutions to their work-related problems, and almost 100% stated that they became very flexible and were able to adapt to changing situations easily. However, when it came to the sense of ownership and responsibility, the 5% of respondents were neutral.

After conducting descriptive statistics, the impact of performance assessment on employee performance was tested. The result showed a positive and significant relationship between performance assessment and employee performance. Specifically, a 100-points increase in the value of X (performance assessment) will bring around 52-points increase in the value of Y (employees' performance), as shown in the Table 1.

To explore the direct relationship between performance assessment and employee performance, qualitative data was collected and analyzed using thematic analysis.. The collected data was compared with predetermined codes, and two themes were generated: performance review and performance planning. Respondents were asked to share their opinions on performance planning, and most of the responses revealed that supervisors should discuss what needs to be done or what objectives should be achieved, along with how to achieve them. Additionally, supervisors need to discuss performance standards in a timely, manner, and performance planning should be reflected in performance assessment. Respondents also emphasized that performance assessment must align with performance planning, and the performance planning process must be accurate and satisfactory Overall, employees' responses indicated a lack of performance planning, as shown in Table 2.

Similarly, respondents were also asked about the timeliness and systematic nature of the performance review. Overall, their responses revealed a lack of systematic

**Table 1** Performance assessment and employee performance relationship

<i>Anova</i>					
Model 1	Sum of squares	Df	Mean square	<i>F</i>	Sig.
Regression	9.835	1	9.835	31.89	< 0.001
Residual	30.21	98	0.308		
Total	40.05	99	–		
<i>Coefficients</i>					
Model 1	Un Std $\beta$	Std. error	Std $\beta$	t statistics	p value
PA $\rightarrow$ EP	0.520	0.092	0.496	5.64	< 0.001
R Square = 24.6%					

**Table 2** Results of deductive thematic Analysis

Interview extract	Codes	Themes
I didn't receive any information of performance standard yet, I don't have proper guidelines on what needs to be done and how, I am not clear about my first priority at workplace, I am not sure how my efforts are contributing to organization goals	Information on performance standard, confusion on what to do and how, confusion on work priority, poor link between efforts and organization goals	Lack of performance planning
Personally, I didn't receive any timely feedback on my good and bad performance, my strength and weakness are not yet shared with me, I am not discouraged for wrong doing during work	Lack of timely feedback on good and bad performance, confusion on strengths and weaknesses at workplace, discouragement during work	Lack of systematic performance review

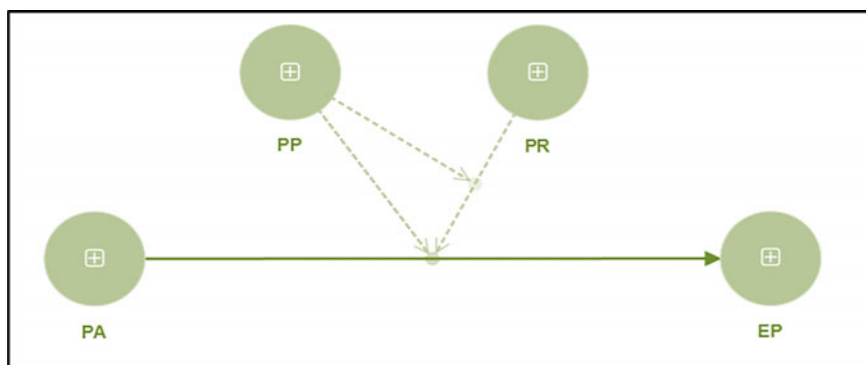
performance review, particularly, the absence of constructive feedback on their performance. They suggested that receiving timely feedback on both good and bad performance would improve their overall performance. Additionally, some respondents mentioned that strengths and weaknesses need to be discussed in performance reviews and that the information from performance reviews should be reflected in personal development programs.

The findings of the study align with social exchange theory. For example, when employees perceive a strong performance management system in return they will perform well. For instance, when employee performance assessment aligns with performance planning, and they receive timely feedback on both positive and negative performance, they may engage in extra-role behavior. Conversely, when employees do not receive timely feedback and unclear about their performance standards and expectations, they may engage in counterproductive behavior (negative reaction against poor actions). Therefore, the lack of performance planning and performance review may negatively affect the relationship between performance assessment and performance planning. Based on these findings, we can propose the following hypotheses:

**Proposition 1:** The relationship between performance assessment and employee performance may be strengthened in the presence of performance planning.

**Proposition 2:** Performance assessment is more positively related to employee performance with conditional effects of performance review and performance planning.

**Proposition 3:** Performance assessment, performance planning, and performance review have a three-way interaction effect on employee performance, meaning that performance assessment, and performance planning, together with performance review may have a positive effect on employee performance (Fig. 1).



**Fig. 1** Conditional effects of performance planning and performance review on performance assessment and employee performance relationship

## 5 Conclusion and Implications

Most organizations focus on performance assessment and consider it as a performance management system. However, performance management is not a single activity but a comprehensive process. Thus, the relationship between performance assessment and employee performance may be improved in the presence of strategic performance management systems. Based on qualitative and quantitative findings, the study indicated that the role of performance planning and performance review is significant in the relationship between performance assessment and employee performance... Without proper performance planning, employee performance, attitude, and behaviors may not change or improve adequately. Similarly, transparency in the process of performance assessment, through performance review, positively affects the relationship between performance assessment and employee performance.

As a result, it is concluded that employee performance is enhanced when there is effective performance planning and performance review. This means that organizations adopting well-structured performance management systems with clear objectives are likely to witness improved employee performance, leading to the achievement and even surpassing of set targets.

With reference to practical implication, our findings suggest several course of actions; A clear discussions between the supervisors or section heads and their employees be conducted. Supervisor(s) need to discuss performance standards, and how they can be achieved. Additionally, there should be a close alignment between performance planning and performance assessment. Regarding performance reviews, supervisors must provide timely feedback on both good and bad employee performance, and consider employees' strengths and weaknesses in their personal development programs (PDPs). Implementing a well-planned performance management system across all business sectors and in companies looking to improve their PMS has a direct and indirect positive impact on employee performance. With regards to

theoretical implication, findings of the study added the conditional effects of performance planning and performance review for employee performance under the rubric of social exchange theory. Further, addition of three-way interaction effect may have a positive effect on employee performance.

## 5.1 Limitations and Future Research Directions

Our study has some limitations that may offers avenues for future research. The current study was unable to analyze the effects of all variables empirically, however, future studies could examine these propositions. Future studies could extend our findings by testing our conceptual model in organizations with high performance management systems. Employee experience and age are crucial variables, hence, there controlling effects must be considered in future studies.

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# Data on Human Resource Management Practices and Organizational Performance



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**Abstract** This study aims to collect data in order to examine the relationship between human resource management practices (career opportunities, compensation, human resource planning, performance appraisal, promotion, recruitment & selection, training, and development) and organizational performance. The data of this study was gathered from a survey of 397 banking employees in Jordan using a cross-sectional methodology. Based on a methodical random sample procedure, the questionnaires were sent to personnel in the Jordanian banking industry. Using the statistical software of SmartPLS, this data employed bootstrapping methods to investigate the relationship between human resource management practices and organizational performance. In particular, this data provides details on demographic information of the respondents, descriptive analysis of constructs, internal consistency reliability and convergent validity, discriminant validity, and hypothesizes test. This information is crucial for understanding how human resource management processes are carried out by employees, including career possibilities, pay, performance reviews, promotions, recruiting & selection, training, and development. The information in this data is crucial for helping policymakers identify the variables that affect organizational effectiveness. Moreover, the data can be used by policymakers in the banking industry to increase support for human resource management practices and enhance organizational performance.

**Keywords** Human resource management practices • Organizational performance • Data • Banking sector

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## 1 Introduction

HRM is a crucial aspect of any organization that focuses on managing and maximizing the performance of its employees to achieve organizational goals effectively. While effective HRM refers to the successful and strategic management of an organization's workforce to achieve its goals and objectives [1]. It involves various practices and processes that focus on attracting, developing, and retaining the right talent while creating a positive and productive work environment [2]. Effective HRM involves creating clear job descriptions, using diverse and inclusive recruitment methods, and conducting thorough candidate assessments to ensure the best fit for the organization. Providing opportunities for employees to enhance their skills and knowledge not only benefits them but also adds value to the organization. Effective HRM involves designing and implementing training programs that align with the organization's needs and individual career aspirations [3].

Establishing a robust performance management system allows for setting clear performance expectations, providing regular feedback, and conducting fair evaluations. Effective HRM ensures that performance management processes are transparent, objective, and linked to the overall goals of the organization [4]. Offering competitive compensation and benefits packages is crucial for attracting and retaining top talent. Effective HRM involves conducting salary surveys, ensuring equitable pay practices, and providing benefits that address the diverse needs of the workforce. Effective HRM focuses on the strategic management of human resources, aligning HR practices with the organization's goals, and creating a positive and inclusive work environment that fosters employee productivity and growth [5]. Moreover, effective HRM is essential for creating a productive and harmonious work environment, which in turn contributes to the overall success of the organization. As the workplace evolves, HR professionals continually adapt their practices to meet new challenges and support the needs of the workforce [1].

Organizational performance refers to the overall effectiveness and efficiency with which an organization achieves its objectives and goals. It assesses how well an organization utilizes its resources, implements its strategies, and delivers on its mission and vision [6]. A high-performing organization is one that consistently meets or exceeds its targets and demonstrates excellence in various aspects of its operations. It's important to note that organizational performance is a multifaceted concept, and no single metric or approach can fully capture it [7]. A holistic approach that considers various aspects of the organization is necessary to gain a comprehensive understanding of its overall performance. Successful organizations are those that consistently achieve their goals, grow, and adapt to changing environments. They exhibit several key characteristics and practices that contribute to their success. It's essential to note that success can be measured in various ways, such as financial performance, customer satisfaction, employee engagement, and social impact. Each organization's path to success may differ, but these key traits often play a significant role in their achievements [8].

This study aims to collect data in order to examine the relationship between human resource management practices and organizational performance. The structure of this study includes introduction, experimental design, materials, methods, data analysis, and conclusion. Five tables describing the data are used. The demographic data of the respondents are shown in Table 1. The descriptive analysis of constructs is displayed in Table 2. The internal consistency, reliability, and convergent validity are displayed in Table 3. Heterotrait-Monotrait Ratio-based discriminant validity is shown in Table 4 (HTMT). The hypothesis test is shown in Table 5 as a last step.

## 2 Experimental Design, Materials and Methods

The data were collected using a quantitative approach and a survey questionnaire (cross-sectional). Data were gathered using the systematic random sampling method. This method provides equitable opportunity for community people to be chosen as a sample while also assisting researchers in making systematic connections with the sample. In Jordan's banking industry, 452 employees received questionnaires. But 397 answers were sent back fully filled. There were three sections to the survey questionnaire. The respondents' demographic data is included in the first section. Career opportunities (CO), Compensation (COM), human resource planning (HRP), performance appraisal (PA), promotion (PR), recruiting & selection (R&S), training, and development (T&D) are just a few of the practices that are measured in the second section of the questionnaire. The final section includes metrics for gauging organizational performance (OP).

Human resource management practices are "A set of distinct but interrelated activities, functions, and processes that are directed at attracting, developing, and maintaining a firm's human resource" [1]. Human resource management practices were measured by seven dimensions, each dimension has four items to measure it, which developed by [2–4] with a consistent reliability outcome greater than 0.82. The first dimension is career opportunities, which are defined as "The extent to which organizations have internal career opportunities for current employees" [5]. The second dimension is compensation, which is defined as "The combination of all cash incentives and the mix of fringe benefits that an employee receives from a company and it constitutes an individual employee's total compensation" [6, 7]. The third dimension is human resource planning, which is defined as "Forecast recruitment needs to ensure that sufficient experienced people are rising through the rank to fill vacancies at higher levels" [8, 9].

The fourth dimension is performance appraisal, which is defined as "Control of individual performance by externally imposed goals, monitoring result achievement and tying incentives to goal achievement" [9, 10]. The fifth dimension is promotion, which is defined as "The act of moving an employee from the lower level to upper level in hierarchy of the company with increase in responsibilities and salary and status" [11]. The sixth dimension is recruitment and selection, which are defined as "Matching the capabilities and inclinations of prospective candidates against the

demands and rewards inherent in a given job” [12]. The seventh dimension is training and development, which are defined as “A systematic approach to developing and enhancing employee skills, abilities, and knowledge, in order to increase their ability to perform tasks and duties effectively” [13]. Organizational performance mostly refers to the overall aim that companies want to accomplish [14]. Organizational performance was measured using a scale of [15, 16].

### 3 Data Analysis

Table 1 shows the demographic information in order to highlight the main characteristics of the respondents including gender, age, citizenship, status, No. of family members, working experience, education, place of work, salary, contract type, position, and bank type. For example, majority of respondents were male ( $n = 231$ ) which represented (58.2%) of data.

Table 2 shows the descriptive analysis of constructs including mean, standard deviation, and variance. For example, career opportunities achieved value of 3.27 for mean, 1.182 for standard deviation, and 1.398 for variance, as well as compensation achieved value of 3.36 for mean, 1.053 for standard deviation, and 1.109 for variance. Consequently, all variables of data are at the acceptable level [17, 18].

Table 3 shows the internal consistency reliability and convergent validity of constructs including factor loading, Cronbach’s Alpha composite reliability, and average variance extracted (AVE). The items of data achieved loadings between 0.635 and 0.906. Further, all constructs achieved values greater than 0.70 for Cronbach’s alpha and composite reliability. Simultaneously, all constructs achieved values greater than 0.5 for AVE. Consequently, all constructs have values greater than the limit suggested by [19, 20].

Table 4 shows discriminant validity based on Heterotrait-Monotrait Ratio (HTMT), where all constructs achieved values between 0.048 and 0.992, which fall within the range recommended by [16].

Table 5 shows Hypothesizes test based on bootstrapping techniques of [21] embedded with SmartPLS (version 3.3.7).

### 4 Conclusion

This study aims to collect data in order to examine the relationship between human resource management practices and organizational performance. Numerous studies have suggested that there is a positive correlation between effective HRM practices and improved organizational performance [22–24]. Hiring the right people for the right roles is crucial for organizational success. HR practices that focus on identifying and selecting candidates with the necessary skills, qualifications, and cultural fit contribute to improved performance. Providing employees with ongoing training and

**Table 1** Demographic information of respondents (N = 397)

Construct	Category	Frequency	Percentage (%)
Gender	Male	231	58.2
	Female	166	41.8
	Total	397	100.0
Age	Less than 20 year	4	1.0
	21–30 years	94	23.7
	31–40 years	140	35.3
	41–50 years	121	30.5
	51–60 years	31	7.8
	More than 61 year	7	1.8
	Total	397	100.0
Citizenship	Jordanian	357	89.9
	Arabian	25	6.3
	Asian	11	2.8
	Westerner	4	1.0
	Total	397	100.0
Status	Single	148	37.3
	Married	238	59.9
	Divorce	7	1.8
	Widow/Widower	4	1.0
	Total	397	100.0
Working Experience	Less than 1 year	13	3.3
	1–10 years	191	48.1
	11–20 years	146	36.8
	More than 20 years	47	11.8
	Total	397	100.0
Education	Diploma	62	15.6
	Undergraduate	219	55.2
	Postgraduate	116	29.2
	Total	397	100.0

development opportunities helps enhance their skills and knowledge, making them more capable of handling their responsibilities and adapting to changing circumstances. Effective performance appraisal and feedback systems enable employees to understand their strengths and areas for improvement, leading to better performance and increased motivation. Fair and competitive compensation, along with recognition and rewards for exceptional performance, can boost employee morale and commitment to the organization. Engaged employees are more likely to go above and beyond in their roles, leading to higher levels of productivity and better overall performance.

**Table 2** Descriptive analysis of constructs (N = 397)

Construct	Mean	Standard deviation	Variance
CO	3.27	1.182	1.398
COM	3.36	1.053	1.109
HRP	3.36	1.013	1.026
PA	3.63	1.066	1.138
PR	3.49	0.950	0.904
R&S	3.34	0.984	0.970
T&D	3.44	1.031	1.063
OP	3.55	1.003	1.006

While research generally supports the positive impact of effective HRM practices on organizational performance, it is important to note that the relationship can be complex and influenced by various external factors [25–27]. Additionally, the specific HRM practices that have the most significant impact may vary depending on the industry, organizational culture, and overall business strategy. Finally, organizations that prioritize and implement effective HRM practices are more likely to experience improved organizational performance, leading to a competitive advantage in the market and greater long-term success.

Effective HRM practices, such as performance appraisals, training and development, and rewards systems, can enhance employee performance and productivity. When employees feel supported and motivated, they are more likely to be engaged and deliver their best efforts. Well-designed HRM practices can attract and retain top talent. Organizations with strong employer branding and positive work culture is more likely to attract skilled individuals who can contribute to the organization's success in the long term. HRM practices that promote a healthy work-life balance, provide opportunities for career growth, and foster a positive work environment can lead to higher employee morale and job satisfaction. Satisfied employees are more likely to stay with the company and perform better.

On the other hand, HRM practices, such as performance appraisals, can be subject to bias and subjectivity. This may lead to unfair evaluations and decisions, affecting employee morale and organizational justice. Implementing comprehensive HRM practices can be resource-intensive, especially for small and medium-sized enterprises. Limited budgets and resources may hinder organizations from providing extensive training and development programs or competitive compensation packages. Employees and managers might resist changes in HRM practices, especially if they have been accustomed to a certain way of doing things. Implementing new practices requires effective change management strategies to overcome resistance. Overall, while HRM practices have the potential to positively impact organizations and employees, they need to be carefully designed, continuously reviewed, and adapted to the specific context of the organization and the evolving needs of the workforce.

**Table 3** Internal consistency reliability and convergent validity

Construct	Items	Loadings	Cronbach's Alpha	CR	AVE
CO	COP1	0.849	0.900	0.931	0.770
	COP2	0.906			
	COP3	0.892			
	COP4	0.863			
COM	COM1	0.781	0.883	0.920	0.742
	COM2	0.899			
	COM3	0.883			
	COM4	0.876			
HRP	HRP1	0.881	0.885	0.920	0.743
	HRP2	0.871			
	HRP3	0.882			
	HRP4	0.813			
PA	PA1	0.856	0.868	0.910	0.717
	PA2	0.875			
	PA3	0.793			
	PA4	0.862			
PR	PR1	0.854	0.856	0.903	0.700
	PR2	0.798			
	PR3	0.888			
	PR4	0.802			
R&S	R&S1	0.835	0.874	0.914	0.725
	R&S2	0.842			
	R&S3	0.883			
	R&S4	0.846			
T&D	T&D1	0.826	0.861	0.906	0.706
	T&D2	0.885			
	T&D3	0.854			
	T&D4	0.794			
OP	OP1	0.883	0.943	0.932	0.581
	OP2	0.875			
	OP3	0.898			
	OP4	0.705			
	OP5	0.644			
	OP6	0.744			
	OP7	0.695			
	OP8	0.635			
	OP9	0.742			
	OP10	0.747			



**Table 4** Discriminant validity based on Heterotrait-Monotrait ratio (HTMT)

Construct	HRMP	COP	COM	HRP	PA	PR	RS	TD	OP
HRMP									
COP	0.794								
COM	0.633	0.481							
HRP	0.657	0.177	0.067						
PA	0.636	0.415	0.330	0.121					
PR	0.673	0.569	0.313	0.055	0.351				
RS	0.652	0.138	0.048	0.992	0.130	0.049			
TD	0.474	0.247	0.131	0.056	0.038	0.191	0.085		
OP	0.298	0.074	0.138	0.283	0.092	0.183	0.361	0.056	

**Table 5** Hypothesizes test

H	Independent variable	Dependent variable	Path coefficient	T-value	P-value	Result
H1	HRMP	OP	0.140	1.463	0.042*	Accepted
H1a	COP	OP	0.210	2.709	0.003**	Accepted
H1b	COM	OP	0.144	3.124	0.001**	Rejected
H1c	HRP	OP	0.128	1.446	0.074	Rejected
H1d	PA	OP	0.056	0.763	0.223	Rejected
H1e	PR	OP	0.200	3.752	0.000***	Accepted
H1f	RS	OP	0.418	4.503	0.000***	Accepted
H1h	TD	OP	0.040	0.557	0.289	Rejected

Note \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

This data is crucial for understanding how human resource management processes are carried out by employees, including career possibilities, pay, performance reviews, promotions, recruiting & selection, training, and development. The information in this data is crucial for helping policymakers identify the variables that affect organizational effectiveness. Moreover, the data can be used by policymakers in the banking industry to increase support for human resource management practices and enhance organizational performance. Finally, this information can be utilized to determine how human resource management practices and organizational performance are affected by mediating or moderating variables. We recommend conducting more studies about the use of HRM analytics and people analytics in driving strategic decision-making within organizations. Moreover, analyze how data-driven HRM practices can lead to improved performance outcomes.

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# Stimulate Sustainability in the Workplace: A Survey on the Pro-environmental Behavior of Academicians



S. Gokilavani , Aasha Sujit , Kenneth Wilson , and Lydia Jemima 

**Abstract** Pro-environmental behavior (PEB) engages an individual to take protective actions towards the environment. Environmental quality strongly depends on the human behavior patterns. In order to understand the sustainable behavior of an Academician their attitude and interest which could lead to the pro-environmental behavior in the workplace are studied. The research aims at understanding the influence of attitude that contribute to pro-environmental behavior among the academicians. The relationship between the environmental cognition and pro environmental behavior of the academicians are also studied in this research. Based on a comprehensive literature review, factors were identified which could predict pro-environmental behavior in the workplace. Statistical tools including Anova and Multi regression are used to analyze the data that are collected from 104 respondents using a structured questionnaire. Based on the results of this study, it can be concluded that the attitude and environment cognition of the academician plays an important role in exhibiting pro environmental behavior. This behavior largely contributes to sustainability in the workplace.

**Keywords** Sustainability · Pro-environmental behavior · Environmental cognition · Attitude · Academician

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## 1 Introduction

Many studies have been undertaken in the last several decades to highlight the detrimental effects of human behavior in connection to the environment. An individual's demand for sustainable conduct and environmental cognition may be heightened under this situation. The patterns of human activity profoundly influence the quality of the environment. At this point, the idea of pro-environmental conduct began to take shape.

Pro-environmental actions are those that demonstrate a basic regard for the natural world. They seek to safeguard the environment and lessen harmful effects on the ecology. The development of this idea in people at a young age is crucial. The best method for spreading knowledge about upcoming environmental concerns and ways to protect the environment is environmental education. To enhance the environmental situation, a change in behaviour is a requirement.

The concept of pro-environment activity is not the subject of any glaring controversy among academics. The activity that reduces one's own behavior's harmful effects on the environment is the definition previously proposed and frequently cited. Pro-environmental behavior also refers to actions that enhance environmental sustainability from a sustainability standpoint. The first stage in being pro-environment is environment cognition or understanding the value of the environment and its resources.

This research article focuses on academicians' pro-environmental behavior, who have a significant impact on society. Academicians can also teach the next generation this value, which may have a long-lasting, positive effect on the environment.

### *1.1 Structure of a Research Paper*

1. Review of Literature
2. Objectives
3. Statement of the Problem
4. Data Analysis and Interpretation
5. Findings and Conclusion.

## 2 Reviews of Literature

The Concept of PEB in the Workplace: PEB, as defined by Anderson et al. [1], encompasses actions that minimize harm and promote environmental health. In the context of the workplace, this involves not just resource conservation but also adopting sustainable practices, such as reducing waste or supporting sustainable procurement [3].

**Role of Attitudes in PEB:** Several studies have highlighted the influence of individual attitudes on the exhibition of PEB. Jones and Clark [4] found a positive correlation between positive environmental attitudes and increased PEB among university faculty. Similarly, White et al. [5] affirmed that attitudes act as precursors to behavior, suggesting that cultivating positive environmental attitudes among academicians could be a strategic approach to fostering sustainability in educational institutions.

**Environmental Cognition and PEB:** Environmental cognition refers to how individuals perceive, understand, and process environmental information [6]. Thompson and Green [7] explored the direct link between an academician's environmental cognition and their likelihood to engage in PEB. Their study underscored the importance of environmental education and awareness in molding an academician's behavior.

**Factors Predicting PEB in Academicians:** Drawing from comprehensive reviews, several factors have been identified that influence PEB in academicians. Institutional support, peer influence, intrinsic motivation, and personal responsibility towards the environment are some of the key determinants [8].

**Impact of Academic PEB on Institutional Sustainability:** Academicians not only influence their peers but also the student body. A study by Patel and Kumar [9] emphasized that when faculty members actively participate in sustainable practices, it creates a ripple effect, inspiring students to adopt similar behaviors.

### **3 Objectives of the Study**

1. To analyze the influence of attitude that contribute to pro-environmental behavior among the academicians.
2. To study the relationship between the environmental cognition and pro environmental behavior of the academicians.

### **4 Statement of the Problem**

Researchers have attempted to provide an explanation for why some people engage in PEB while others do not during the past few decades. For instance, from the standpoint of psychology, behavior, or education. The majority of scholars attempted to explain these aspects from various perspectives due to their diverse scientific backgrounds. A person's need for ethical behavior and awareness of the environment may increase in this circumstance. The patterns of human activity have a significant impact on the environment's quality. The concept of being pro-environment is quite important right now. Hence, a study on academicians' pro-environment behavior is conducted. This study focuses on academicians' environmental advocacy because they have a big social impact. Academicians can impart this value to the next generation in a way that benefits the environment in the long run.

## 5 Data Analysis and Interpretation

### 5.1 Multiple Regression Analysis

A Predictors: (Constant), the respondent's attitude and behavior effect in the workplace environment (Table 1).

R can be seen of as one indicator of how well the dependent variable was predicted; in this case, the respondent's attitude and behaviour affected the workplace environment. A prediction level of good is shown by the value of 0.724. The R<sup>2</sup> value, also known as the coefficient of determination, is the percentage of variance in the dependent variable that can be explained by the independent variables and is displayed in the "R Square" column (technically, it is the proportion of variation accounted for by the regression model above and beyond the mean model). As demonstrated by the R<sup>2</sup> value of 0.525, which indicates that our independent factors account for 52.5% of the variability of our dependent variable, attitude and behaviour have an effect on the workplace environment.

#### Statistical Significance

The F-ratio in the ANOVA table tests whether the overall regression model is a good fit for the data. Table 2 shows that the independent variables statistically significantly predict the dependent variable,  $F(10, 94) = 10.376$ ,  $p < 0.005$  (i.e., the regression model is a good fit of the data) (Table 3).

Multiple linear regression was used to test if Environmental Cognition (level of awareness) and respondent's attitude and behaviour effected the workplace environment taken significantly predicted the pro-environment behaviour of academicians.

The overall regression was statistically significant ( $R^2 = 0.52$ ,  $F(10, 94) = 10.376$ ,  $p = < 0.005$ ).

**Table 1** Model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.724 <sup>a</sup>	0.525	0.474	0.5950

Source Primary data

**Table 2** ANOVA<sup>a</sup>

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	36.727	10	3.673	10.376	0.000 <sup>b</sup>
	Residual	33.273	94	0.354		
	Total	70.000	104			

Source Primary data

<sup>a</sup> Dependent Variable: Level of Awareness.

<sup>b</sup> Predictors: (Constant), respondent's attitude and behaviour affected the workplace environment

**Table 3** Coefficients<sup>a</sup>

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	beta		
1	(Constant)	1.038	0.696		1.492	0.000
	I'm in favour of behaving pro-environmentally in the workplace.	0.245	0.193	0.150	1.267	0.001
	The pro-environmental behavior in the workplace is important to me	0.742	0.191	0.555	3.893	0.000
	I would like to learn environmental friendly behaviour at work.	-1.113	0.313	-0.680	-3.554	0.001
	I switch off my computer/Lights/fans when I leave my workplace	-0.241	0.194	-0.139	-1.244	0.000
	I print on double sided sheets	-0.066	0.172	-0.065	-0.383	0.001
	The current facilities for recycling are sufficient at my working place.	-0.374	0.165	-0.326	-2.272	0.000
	I show the pro-environmental behavior even in the absence of my authority	0.472	0.302	0.358	1.563	0.002
	I am aware of the Institutional policy on environmental behavior	-0.177	0.191	-0.155	-0.928	0.001
	I am informed about the costs and amount of the energy/water/paper used by Institution	0.716	0.184	0.596	3.899	0.000
	I am informed about projects on sustainability in the institution	0.418	0.181	0.368	2.309	0.000

Source Primary data

A multiple regression was run to predict respondent's attitude and behaviour affected the workplace environment from level of awareness. These variables statistically significantly predicted respondent's attitude and behaviour affected the workplace environment,  $F(10, 94) = 10.376$ ,  $p < 0.0005$ ,  $R^2 = 0.525$ . All the variables added statistically significantly to the prediction,  $p < 0.005$ .

Academics' pro-environmental behavior have a significant impact on the society. The Academics can also teach the next generation this value, which may have a long-lasting, positive effect on the environment.



## 5.2 ANOVA

The null hypothesis ( $H_0$ ) of ANOVA is that there is no difference between environmental cognition and respondent's attitude and behaviour affected the workplace environment.

The alternative hypothesis ( $H_a$ ) is that at least one group differs significantly from the overall mean of the dependent variable (Tables 4, 5 and 6).

### Interpretation

Below are interpretations for each behavior/attitude:

- “A better environment starts with me”: With a p-value of 0.002, this is statistically significant at the conventional 0.05 level, suggesting that there is a significant difference in how different groups agree with this statement.
- “I’m in favour of behaving pro-environmentally in the workplace”: This is not statistically significant ( $p = 0.088$ ), suggesting there’s not a significant difference in how different groups agree with this statement.
- “The pro-environmental behavior in the workplace is important to me”: This is statistically significant ( $p = 0.009$ ), suggesting that there’s a significant difference in how different groups agree with this statement.
- “I would like to learn environmental friendly behaviour at work”: This is statistically significant ( $p = 0.004$ ), indicating a significant difference between groups.
- “I switch off my computer/Lights/fans when I leave my workplace”: This is highly significant ( $p < 0.000$ ), suggesting a very significant difference in how different groups practice this behavior.
- “I print on double sided sheets”: This is statistically significant ( $p = 0.011$ ), suggesting a significant difference in how different groups practice this behavior.
- “The current facilities for recycling are sufficient at my working place”: This is highly significant ( $p < 0.000$ ), indicating a very significant difference in perception of recycling facilities.
- “I show the pro-environmental behavior even in the absence of my authority”: This is statistically significant ( $p = 0.001$ ), indicating a significant difference in autonomous pro-environmental behavior across groups.
- “I am aware of the Institutional policy on environmental behavior”: This is highly significant ( $p < 0.000$ ), indicating a significant difference in awareness of institutional policies.
- “I am informed about the costs and amount of the energy/water/paper used by Institution”: This is highly significant ( $p < 0.000$ ), indicating a significant difference in groups’ information about resource consumption.
- “I am informed about projects on sustainability in the institution”: This is statistically significant ( $p = 0.00375$ ), suggesting a significant difference in awareness of sustainability projects.

**Table 4** Descriptive

		N	Mean	Std. deviation	Std. error	95% Confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
A better environment starts with me	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	2.800	0.6043	0.0722	2.656	2.944	1.0	3.0
	3.0	14	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	4.0	14	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	Total	105	2.867	0.5013	0.0489	2.770	2.964	1.0	3.0
I'm in favour of behaving pro-environmentally in the workplace	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	3.500	0.5036	0.0602	3.380	3.620	3.0	4.0
	3.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.467	0.5013	0.0489	3.370	3.564	3.0	4.0
The pro-environmental behavior in the workplace is important to me	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	3.500	0.6757	0.0808	3.339	3.661	2.0	4.0
	3.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	4.0	14	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	Total	105	3.400	0.6139	0.0599	3.281	3.519	2.0	4.0
I would like to learn environmental friendly behaviour at work	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	3.500	0.5036	0.0602	3.380	3.620	3.0	4.0
	3.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.467	0.5013	0.0489	3.370	3.564	3.0	4.0
I switch off my computer/Lights/fans when I leave my workplace	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	3.800	0.4029	0.0482	3.704	3.896	3.0	4.0
	3.0	14	4.000	0.0000	0.0000	4.000	4.000	4.0	4.0
	4.0	14	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	Total	105	3.667	0.4737	0.0462	3.575	3.758	3.0	4.0
I print on double sided sheets	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	3.300	0.9065	0.1083	3.084	3.516	2.0	4.0
	3.0	14	4.000	0.0000	0.0000	4.000	4.000	4.0	4.0
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.400	0.8038	0.0784	3.244	3.556	2.0	4.0
The current facilities for recycling are sufficient at my working place	1.0	7	2.000	0.0000	0.0000	2.000	2.000	2.0	2.0
	2.0	70	3.500	0.6757	0.0808	3.339	3.661	2.0	4.0
	3.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0

(continued)

**Table 4** (continued)

		N	Mean	Std. deviation	Std. error	95% Confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.400	0.7152	0.0698	3.262	3.538	2.0	4.0
I show the pro-environmental behavior even in the absence of my authority	1.0	7	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	2.0	70	3.400	0.6681	0.0799	3.241	3.559	2.0	4.0
	3.0	14	4.000	0.0000	0.0000	4.000	4.000	4.0	4.0
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.467	0.6212	0.0606	3.346	3.587	2.0	4.0
I am aware of the institutional policy on environmental behavior	1.0	7	2.000	0.0000	0.0000	2.000	2.000	2.0	2.0
	2.0	70	3.600	0.6681	0.0799	3.441	3.759	2.0	4.0
	3.0	14	4.000	0.0000	0.0000	4.000	4.000	4.0	4.0
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.533	0.7215	0.0704	3.394	3.673	2.0	4.0
I am informed about the costs and amount of the energy/water/paper used by Institution	1.0	7	2.000	0.0000	0.0000	2.000	2.000	2.0	2.0
	2.0	70	3.400	0.6681	0.0799	3.241	3.559	2.0	4.0
	3.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	4.0	14	3.000	0.0000	0.0000	3.000	3.000	3.0	3.0
	Total	105	3.267	0.6831	0.0667	3.134	3.399	2.0	4.0
I am informed about projects on sustainability in the institution	1.0	7	4.000	0.0000	0.0000	4.000	4.000	4.0	4.0
	2.0	70	3.500	0.8120	0.0971	3.306	3.694	2.0	4.0
	3.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	4.0	14	3.500	0.5189	0.1387	3.200	3.800	3.0	4.0
	Total	105	3.533	0.7215	0.0704	3.394	3.673	2.0	4.0

Source Primary data

It was found that a statistically significant difference in average between environmental cognition and respondent's attitude and behaviour affected the workplace environment. Hence the alternative hypothesis ( $H_a$ ) is accepted and at least one group differs significantly from the overall mean of the dependent variable.

There are significant differences between groups in most areas of pro-environmental attitudes and behaviors, except for the statement "I'm in favour of behaving pro-environmentally in the workplace." These results could be used to identify areas where further training or communication might be necessary to encourage pro-environmental behavior. It's worth noting that while ANOVA can tell us that there are differences between groups, it doesn't tell us which specific groups differ.

**Table 5** Test of homogeneity of variances

	Levene statistic	df1	df2	Sig
A better environment starts with me	6.313	3	101	0.001
I'm in favour of behaving pro-environmentally in the workplace	57,739,410,304,586,984.000	3	101	0.000
The pro-environmental behavior in the workplace is important to me	31.173	3	101	0.000
I would like to learn environmental friendly behaviour at work	57,739,410,304,586,984.000	3	101	0.000
I switch off my computer/Lights/fans when I leave my workplace	19.951	3	101	0.000
I print on double sided sheets	53.703	3	101	0.000
The current facilities for recycling are sufficient at my working place	12.469	3	101	0.000
I show the pro-environmental behavior even in the absence of my authority	35.069	3	101	0.000
I am aware of the Institutional policy on environmental behavior	19.497	3	101	0.000
I am informed about the costs and amount of the energy/water/paper used by Institution	35.069	3	101	0.000
I am informed about projects on sustainability in the institution	10.521	3	101	0.000

Source Primary data

## 6 Conclusion

This comprehensive study has provided significant insights into the field of pro-environmental behaviour, establishing a robust theoretical framework, and offering an important empirical contribution. By systematically reviewing previous research and clarifying the theoretical underpinnings of pro-environmental behaviour, the study has rendered the field more accessible to incoming researchers, potentially accelerating progress in this critical area. Such an undertaking not only benefits

**Table 6** ANOVA

		Sum of squares	df	Mean square	F	Sig
A better environment starts with me	Between groups	0.933	3	0.311	1.247	0.002
	Within groups	25.200	101	0.250		
	Total	26.133	104			
I'm in favour of behaving pro-environmentally in the workplace	Between groups	1.633	3	0.544	2.244	0.088
	Within groups	24.500	101	0.243		
	Total	26.133	104			
The pro-environmental behavior in the workplace is important to me	Between groups	4.200	3	1.400	4.040	0.009
	Within groups	35.000	101	0.347		
	Total	39.200	104			
I would like to learn environmental friendly behaviour at work	Between groups	1.633	3	0.544	2.244	0.004
	Within groups	24.500	101	0.243		
	Total	26.133	104			
I switch off my computer/Lights/fans when I leave my workplace	Between groups	12.133	3	4.044	36.472	0.000
	Within groups	11.200	101	0.111		
	Total	23.333	104			
I print on double sided sheets	Between groups	7.000	3	2.333	3.915	0.011
	Within groups	60.200	101	0.596		
	Total	67.200	104			
The current facilities for recycling are sufficient at my working place	Between groups	14.700	3	4.900	12.855	0.000
	Within groups	38.500	101	0.381		
	Total	53.200	104			
I show the pro-environmental behavior even in the absence of my authority	Between groups	5.833	3	1.944	5.726	0.001
	Within groups	34.300	101	0.340		
	Total	40.133	104			

(continued)

**Table 6** (continued)

		Sum of squares	df	Mean square	F	Sig
I am aware of the Institutional policy on environmental behavior	Between groups	19.833	3	6.611	19.467	0.000
	Within groups	34.300	101	0.340		
	Total	54.133	104			
I am informed about the costs and amount of the energy/water/paper used by Institution	Between groups	14.233	3	4.744	13.971	0.000
	Within groups	34.300	101	0.340		
	Total	48.533	104			
I am informed about projects on sustainability in the institution	Between groups	1.633	3	0.544	1.047	0.00375
	Within groups	52.500	101	0.520		
	Total	54.133	104			

Source Primary data

those directly involved in similar research but also the broader scientific community interested in environmental sustainability.

The research unearthed a key link between environmental awareness and proactive behaviours among academicians. This finding holds promising implications for shaping a sustainable future. It suggests that enhancing environmental consciousness among academics, people with substantial influence in educational settings and society, can effectively promote pro-environmental behaviour, subsequently leading to positive environmental outcomes. This result also signifies the potential of educational institutions as hotbeds for driving environmental action and consciousness.

Despite its sample size of 140 academicians, the study demonstrates the depth and quality of research that can still be achieved with a relatively focused participant pool. It underlines the significance of proactive environmental behaviours in leading to a sustainable future, hence highlighting the need for more such targeted investigations.

In conclusion, this work underscores the need for increased efforts to raise environmental awareness, especially among key influencers like academicians. The study serves as a critical reminder that the journey towards environmental sustainability requires not just institutional support but also individual consciousness and proactive behaviour. Future researchers can build on this work to continue refining our understanding of pro-environmental behaviour and to devise effective interventions to promote it further.

## 7 Future Research

This research highlighted the need for pro environmental behaviour from academicians's perspective, study on different opinions by various experts can give a detailed insights on pro environmental behaviour leading to better ecosystem for the future generations. Linking Pro-Environmental Behavior to Tangible Outcomes—Future research could also aim to quantify the impact of pro-environmental behavior on tangible environmental outcomes, such as reduced energy use, lower carbon emissions, or improved waste management in the workplace.

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# Economic Development in Alssunnah



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**Abstract** This study dealt with the topic of economic development in the Prophet's sunnah. Its importance, and its aim was to reveal the foundations of development by identifying the economic regulations established by the Prophet of God, The study examined its social and economic implications and found that the foundations of economic development were economic equity in earning and income distribution, Achieving self-sufficiency in necessities and needs, and demonstrating existence through production and export to new horizons, which is now referred to global trade. The study adopted a methodology of tracking and inference from the prophet's biography, analysing texts and events, devising the foundations of economic development from them, and comparing them with modern economic studies.

**Keywords** Development · Economy · Market · Agriculture · Industry · Trade

## 1 Introduction

One of the most important topics that occupy economists in our current era is economic development. The interest in this topic has significantly increased after World War II because of the severe deterioration that has taken place in many countries of the world. Economic development aims to improve people's living conditions and provide them with a decent life. Economic development, like other economic topics, has been given a great attention by the Islamic shari'a, which has laid its foundations and striving to achieve them. Thus, economic development in islamic shari'a is not limited to theoretical aspects but also includes practical application, and demonstrated realism and validity of its foundations in all times [1].

Economic development, like other terms, includes linguistic and terminological definitions.

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Looking at the linguistic definition, we note that “development” is derived from “growth”: the process in which someone or something grows or changes and becomes more advanced.

Economic development is: processes and policies taken by a State to improve the economic, political and social well-being of its people. Economists differ in their definition; however, its concept is based on the processes and plans achieved.

A decent life for society, the community is able to provide an excess of its diverse basic needs health, housing, food and security.

Economic development lies in three things: Economic equity in earning and income distribution, Achieving self-sufficiency in necessities and needs, and establishing presence through production and export, today’s so-called global trade.

The study attempts to answer the key question: How the prophet’s sunnah contributed to promoting development Economic?

### **The main question has a sub-set of questions as follows**

- What is the reality of economic justice in earning distribution in the light of the prophetic sunnah?
- What is the importance of achieving self-sufficiency in necessities and needs?
- How is proof of presence through production and export to prospects?

The importance of research into economic development in the light of the prophetic sunnah because of that all nations since ancient times have pursued development, and development is necessary to achieve the dignified life of society.

To achieve the study’s objective, the study relied on tracking and extrapolating to the prophetic and modern biography [2].

Analysis of texts and events and elaboration of the foundations of economic development from them, and their comparison with studies Modern economics.

### **The structure of the study is as follows**

- Research I: Economic equity in earning distribution.
- Research II: Self-sufficiency in necessities and needs.
- Research III: Proof of existence through production and export of prospects. conclusions and recommendations.

## ***1.1 Economic Equity in Earnings and Income Distribution***

Difference and inequality are a cosmic year that God Almighty made in his creation; They disagree in morality, beauty and ugliness, shapes and colors, They also differ in money, livelihoods, minds, concept, and other apparent and intrinsic forces, Surah al-Zukhruf 32 He has the wisdom of that difference so that the complementarity of creation can happen (ibn Kathir 7/226).

Despite this difference, God Almighty has enacted provisions for his worshippers and laid down grounds for them; Mitigate and prevent the aggravation of this difference so as to achieve interests and drive corruption [3]. These organizations,

which achieve economic justice in the distribution of income and wealth, include the following:

### **Labour is a Legitimate Right for all**

Islam has embarked work to earn money, making it available to all those who are prepared for it, and has removed restrictions on work for people. The Prophet, peace and blessings be upon him, established the free market, permitted dealing with Jews and disbelievers within the city, and trading with disbelievers outside it, but all in accordance with the provisions of the transactions in the Islamic Shariah and within its purposes, “The Prophet (ﷺ) bought some foodstuff on credit for a limited period and mortgaged his armor for it.” (Bukhari 2509) The trade of Muslims to Al-Sham and Yemen, whose were not yet Muslims, helping to spread Islam in these and other countries due to the morality of Muslim traders such as honesty, non-eating money with falsehood.

### **Qualification for Work**

Besides encouraging Islam to work and acquire in many texts in the Holy Quran and Sunna, and Prevent unemployment and laziness, Islam is interested in preparing and qualifying people for work, and encouraging them to learn careers [4].

The Prophet Allah’s Peace Be Upon Arwa bin Masud and Ghailan bin Salamah sent them to Jerash, Yemen, to learn the catapult, tank and others (Ibn Kathir-albidaya 4/395).

Omar Ibn al-Khattab said: “Learn the profession; He is about to have one of you need his profession” (Ibn Aby Aldonya 317).

The Messenger of Allah taught his owners how to manage their living order so that they would not lack and need to ask money, Once a young man came to him painting money, and the Prophet asked him, Do you own anything? So the young man told him that he owned a small rug that he spreads on the ground, and a vessel from which he drank water, so the Prophet said to him, “Bring them”. Then the Prophet sold it for two dirhams, and ordered him to buy with the two dirhams an ax and food for his family, so the young man did, then the Prophet said to him, Take the ax and firewood with it, then sell the firewood to earn the money (Abu Dawud 1641) [5].

The Prophet (ﷺ) passed by a boy who was skinning a goat. The Messenger of Allah (ﷺ) said: Give it up until I show you. He (the Prophet) inserted his hand between the skin and the flesh until it reached the armpit. He then went away and led the people in prayer and he did not perform ablution (Abu Dawud 185) [6].

As for Saad bin Ayah, he complained to the Prophet Prayer of Allah on him, and ordered him to trade, so he went out to the market, and he bought, sold and earned money, so he mentioned this to the Prophet of Allah’s peace and blessings on him, and ordered him to do so (Ibn Hajar, Alisuab 3/54).

The Messenger of Allah invited Muslims to teach each other and wished to do so, one man asked the Prophet, “What is the best deed?” He replied, “.... Help people in their work, or do what is needed by those who do not know work.” (Bukhari 2518) Help people in their work For example, Help the tailor or the carpenter in their work.

An example of help those who do not know the work, sew their clothes or write their letters (Alayni 13/80) [7].

The Prophet (ﷺ) said “The best people who offer benefit to people” (Sahih alJami 3289), Benefit is a broad concept that includes teaching and assisting people in their mundane interests.

### **Job Creation**

One of the most exquisite examples of this, for example; The market established by the Prophet, Peace Be upon Him, has given Muslims opportunities to work. Among them, industry, agriculture and fishing have flourished., one of his organizations is in the market, which has provided equal opportunities for all people to sell and buy; The cancellation of the tax system known before Islam, which was taken from traders and from all those who attended the markets, and the prohibition of the construction of rooms therein, as well as the erection of tents, neither rent, and the establishment of the right to place for those who preceded it first, so that the sale sites became renewed every day (Ibn SHabbh 1/304) [8].

### **Integrity at Work and in Obtaining It**

With qualification and employment opportunities, Islam has blocked the way for those who want to exploit his face, lineage or money to earn unworthy work, or to obtain a position that is not competent for him (Surah An-Nisaa135) It is justice in Islam that access to jobs, positions and money is neither kinship, friendship nor love, but by experience and ability, One of the meanings of the Holy Quran is Whoever intercedes for a good cause will have a reward therefrom; and whoever intercedes for an evil cause will have a burden therefrom. And ever is Allah, over all things, a Keeper (Surah An-Nisaa 85) [9].

And The Messenger of Allah (ﷺ) cursed the one who bribes and the one who takes bribe (Abu Dawud 3580), On the other hand, he offered work to those who had mastered it and were good at it. When he built his mosque, he saw a man who was good at building, praising him and presenting him at work (Ahmad 39/463).

In choosing the good for jobs and positions is a benefit to society.

### **Work Control**

The Prophet not only created the market and urged people to work but also monitored the transactions of Muslims in the market, taught them how to sell and buy, urged them to be honest, and warned them not to cheat and betray.

One day the Messenger of Allah (ﷺ) saw the people doing business so he said: ‘O people of trade!’ and they Listened to him, and he said: Indeed the merchants will be resurrected on the Day of judgement with the wicked, except the one who has Taqwa of Allah, who did good and was honest (Tirmidhi1210).

Once the Prophet was in the market, he went to a food salesman, he had a pot of barley beans, so the Prophet entered his hand in the pot and found the barley wet. He asked him:

What is this? The seller replied: "Rain hit him, messenger of God The Messenger of Allah said," Why didn't you make the wet on top until people saw it, who is cheating, is not from Muslims (Muslim 102).

In order to ensure the safety of transactions in the market, and alert to the need to take care of the market order and monitor it, Saeed bin Al-Aas took charge of the Mecca market after its conquest, (Ibn Abd al-Barr2/621) and the caliphs followed the Messenger of God, may God's prayers and peace be upon him, on his guidance in taking care of the market and taking over the accountants and their direction to monitor the market (alkatani 2117).

The prophet also monitored prices in the market; Higher prices on the market may be an indicator of monopoly, fraud or collusion between traders to raise prices, and the Governor must then intervene and prevent the oppressor and the monopolist and returning prices to normal, which may be natural depending on market movements such as supply and demand; So when The people said: Messenger of Allah, prices have shot up, so fix prices for us. Thereupon the Messenger of Allah (ﷺ) said: Allah is the one Who fixes prices, Who withholds, gives lavishly and provides, and I hope that when I meet Allah, none of you will have any claim on me for an injustice regarding blood or property. (Abu Dawud 3451) the price rise was normal.

The Prophet also began monitoring work and holding workers accountable. And he (ﷺ) appointed a man called Ibn Al-Lutabiyya to collect the Zakat from Bani Sulaim's tribe. When he returned, the Prophet (ﷺ) called him to account. He said (to the Prophet, 'This is your money, and this has been given to me as a gift. "On that, Allah's Messenger (ﷺ) said," Why didn't you stay in your father's and mother's house to see whether you will be given gifts or not if you are telling the truth?" Then the Prophet (ﷺ) addressed us, and after praising and glorifying Allah, he said: "Amma Ba'du", I employ a man from among you to manage some affair of what Allah has put under my custody, and then he comes to me and says, 'This is your money and this has been given to me as a gift. Why didn't he stay in his father's and mother's home to see whether he will be given gifts or not? (Bukhari 6979) This talk shows that gifts given to managers and other staff members are forbidden; Because it prompts the manager to promote the employee or increase his salary without right, So This will cut off financial corruption in all its forms.

### **Help and Support for the Incapacitated, Vulnerable and Widowed**

In society, a class of people are unable to work for illness, impairment and others, People who work but do not find enough money, and those like them have been cared for by Islam, He ordered Zakat to be taken out, urged and desired charity, and made it great in the afterlife and benefits in this life, Some of the Muslims' House of Money's resources were also disbursed to the poor and the helpless. Money is not only traded between rich also poor People have a share with them.

## 2 Self-sufficiency

The Prophet PBUH worked to equip the economic structure of Medina, establishing regulations for agriculture and watering, grazing and hunting, and regulations for industry, until the city became able to satisfy its diverse essential needs. Here are the prophetic strides in achieving this.

### Agriculture

The city was known for its fertility of volcanic soil and its abundance of wells. The Prophet PBUH organized the affairs of agriculture, watering and related matters, making it an important agricultural centre for the production of dates, grains and fruits. These organizations and directives include the following:

Encouragement of agriculture, and arrange the reward for it, Allah's Messenger (ﷺ) said, "There is none amongst the Muslims who plants a tree or sows seeds, and then a bird, or a person or an animal eats from it, but is regarded as a charitable gift for him." (Bukhari 2320), He urged landowners to cultivate them and not neglect them, if they cannot, they should give them to their fellow Muslims, they will plant them and benefit from them. Some men had superfluous land and they said that they would give it to others to cultivate on the condition that they would get one-third or one-fourth or one half of its yield. The Prophet (ﷺ) said, "Whoever has land should cultivate it himself or give it to his brother or keep it uncultivated". (Bukhari 2632), (keep it uncultivated) Reprimand for disabling the Earth from utilization (Harari 17/132) [10].

- Increased labour in agriculture when migrants were directed to help their al'ansar brothers and work with them on their farms. The Ansar said to the Prophet (ﷺ) "Distribute the date palm trees between us and our emigrant brothers". He replied, "No." The Ansar said (to the emigrants), "Look after the trees (water and watch them) and share the fruits with us." The emigrants said, "We listen and obey." (Bukhari 2325)
- He licensed prayer and peace to the farming system, but with a well-known portion of all the fruits coming out of the land, or in dirham and dinar, and prevented what the people of the city were making from farming on one side of the land without all, Narrated Rafi' bin Khadij: We worked on farms more than anybody else in Medina. We used to rent the land at the yield of specific delimited portion of it to be given to the landlord. Sometimes the vegetation of that portion was affected by blights etc., while the rest remained safe and vice versa, so the Prophet (ﷺ) forbade this practice. At that time gold or silver were not used (for renting the land). If they provided the seeds, they would get so-and-so much. (Bukhari 2327), Also licensed to lease the land with money,
- Licensed the sale of the ladder, which is to pay the price, and then receives the commodity after a specified period, The Prophet (ﷺ) came to Medina and the people used to pay in advance the price of dates to be delivered within two or three years. He said (to them), "Whoever pays in advance the price of a thing to

be delivered later should pay it for a specified measure at specified weight for a specified period.” (Bukhari 2240)

- Encourage the revival of dead land that no one owns by cultivating, constructing or otherwise, The Prophet (ﷺ) said, “He who cultivates land that does not belong to anybody is more rightfulto own it” (Bukhari 2335)
- regulate irrigation, particularly in the use of public water from Seoul, rivers and others; Lest disagreements arise between farmers, and all their interests are realized, the Prophet in Seoul ordered the valleys; The water in the ground reaches the heels, if it reaches the heels, it is sent to the adjacent land, and does not prevent the higher landowner—who is the principle of water for his part—water for the lower landowner. (Abo Dawud 3638).

### **Grazing**

Livestock is one of the basic needs of people, young and old; They ride their backs, eat their meat, drink their albinos, take advantage of their skins, and wool. These cattle need good pastures to feed from them, and water to drink from them. The Messenger of Allah’s Peace Be Upon Him has embarked to preserve them many things.

- The Prophet encouraged livestock grazing, The Prophet (ﷺ) said, “All of God’s messengers were herding sheep.” His companions asked him, “Did you do the same?” The Prophet (ﷺ) replied, “Yes, I used to shepherd the sheep of the people of Mecca for some Qirats.”
- The Prophet organized cattle grazing affairs and made pastures for all people benefit from them by grazing, urging that animals be watered and allowed to drink from wells.

### **Baiting**

Arabs had an interest in fishing on land and sea; They used trained dogs and trained birds of prey; For hunting wild animals and feral cows, deer, rabbits, dabs, birds, etc. When Islam came, it permitted hunting, regulated it, and clarified its rulings, in surah AlMaaida 4 They ask you, [O Muhammad], what has been made lawful for them. Say, “Lawful for you are [all] good foods and [game caught by] what you have trained of hunting animals which you train as Allah has taught you. So eat of what they catch for you, and mention the name of Allah upon it, and fear Allah.” Indeed, Allah is swift in account.

Islam made hunting etiquette and morals prevented from having fun and killing animals without benefit, The Prophet forbade tying up animals to play with and killing them (Bukhari 5514).

The Prophet ordered at the time of slaughter, to benevolence, and to use a sharp knife to slaughter so that the lamb would not suffer (Muslim 1955).

## Industry

The Prophet, may God's prayers and peace be upon him, encouraged his companions to suffice themselves and benefit others by making what they need, and he was an example for them in that, He used to mend his shoes, sew his clothes, and patch his bucket. (Ibn Hibban 5676), and he said "Nobody has ever eaten a better meal than that which one has earned by working with one's own hands. The Prophet (ﷺ) of Allah, David used to eat from the earnings of his manual labor." (Bukhari 2072).

He encouraged them to manufacture weapons, including shields, spears, arrows and swords, "Allah, Most High, will cause three persons to enter Paradise for one arrow: the maker when he has a good motive in making it, the one who shoots it, and the one who hands it" (Abo Dawud 2513).

And the Prophet, peace be upon him, ordered Salman Al-Farsi to manufacture the catapult when he indicated it to him in the siege of Taif, so Salman, may God's prayers and peace be upon him, made it, and it is the first catapult used in Islam (Al-Bayhaqi- dalayil 5/385), And previously, he sent Urwa bin Masoud and Ghaylan bin Salama, may God be pleased with them, to Jerash in Yemen to learn the manufacture of catapults and tanks, so they brought them in the siege of Taif.

In addition to the manufacture of digging tools such as axes, hammers, plowing tools, shoveling and the like, and they were used in digging the trench, which was completed in a short time, which indicates the abundance and quality of this equipment because part of the land is volcanic solid, and Some features of the trench remain today.

The Messenger of God, was urging to benefit from the skins of cattle by tanning them, Women often tan the skins in their homes, as Asma bint Amis, may God be pleased with her, once tanned forty pounds of leather in her home (Ibn Hisham 2/380), The Mother of the Believers, Zainab bint Jahsh, may God be pleased with her, used to tanner and sew and give it as alms (Ibn Hajar- al'iisaba 8/154).

Women were also in charge of the weaving industry, and twisting ropes, one day A woman brought a Burda (i.e. a square piece of cloth having edging) She addressed the Prophet (ﷺ) and said, 'I have woven it with my hands for you to wear (Bukhari 2093).

With these various industries, the city's market became full of its Diverse Products.

## 3 World Trade

The Prophet, may God's prayers and peace be upon him, made this Islamic state based in Al-Madinah Al-Munawwarah an important commercial center, with a major economic role in the Arabian Peninsula and the surrounding countries such as the Levant, Egypt, Abyssinia and its regions, through several steps:

First: Create the fair and free market; After the Messenger of God, may God's prayers and peace be upon him, finished building his mosque and his houses, he decided to save the city's economy from the control of the Jews who owned the

city's markets, and prevented non-Jews from selling in it, and imposed taxes on everyone who entered it, in addition to their greed, and their dealings with usury, fraud and monopoly.

The Messenger of Allah (ﷺ) went to the market of Nabit, [1] and looked at it, and said: "This is not a market for you." Then we went to another market and looked at it, and said: "This is not a market for you." Then he came back to this market and walked around in it then he said: "This is your market. It will always be your market and no duty will be levied on it." (Ibn Majah 2233).

This angered the Jews, and it was narrated that the Prophet, may God's prayers and peace be upon him, erected a dome in the place of al-Zubayr's baqi', and said: This is your market. Then Ka'b ibn al-Ashraf, a Jew, entered it and cut its ropes. The Messenger of God, may God bless him and grant him peace, said, "I will move it to a place that will anger him more than this." So he moved it to the place known as the city market known today, Then he said: This is your market, it is not confined, and Kharaj is not taxed on it (ibn shaba1/304), This market annoys the Jews on two sides; On the one hand, being wide, there is no building, On the one hand, it is located on a side that serves as the main entrance to the city, which enabled its people to receive merchants and delegations as soon as they arrived. In addition to that, the market was adjacent to the mosque, located to its west, and the mosque was considered the center of the city and the meeting place of its people.

Trade was active in the city market, and merchants from everywhere came to it. Neighboring tribes used to come to the city market, bringing with them their goods for sale and purchase, such as aqet and ghee. It was mentioned in the hadith that a man from the desert called Zaher used to come to Medina and sell his goods in the market (Ibn Hibban 13/107), and that the Messenger of God, may God's prayers and peace be upon him, bought goods from a Bedouin man (Ibn Majah 2184). Likewise, camels and horses were brought to Medina from the desert so much that it became a special market for it, known as the horse market (ibn shaba1/304).

And the Prophet, peace be upon him, ordered the good treatment of these Bedouins (Al Tabarani 3559).

As for Medina's trade with the Levant, it was very active, until a market in Medina was named after them and still exists. The most prominent commodities they traded with were grains and oil ((Bukhari 2244).

The city's trade was not limited to the Levant and neighboring tribes; Rather, it also included Egypt, as it was stated that Abd al-Rahman ibn Awf, gave alms of goods carried on a hundred camels that came to him from Egypt on the widows of the people of Medina (Abu Naim1/99), in addition to the trade with Abyssinia, which was by ship.

Second: Conclusion of economic and security agreements and treaties; The peace and blessings of God be upon him concluded agreements between the Muslims in Medina of different tribes and also with the Jews, and it was called the newspaper or the document of the city (Ibn Hesham 2/106), And also the conclusion of security treaties between him and the tribes surrounding the city; Kabni Ghifar and Bani Damra (Ibn Saad 1/210).



There is no doubt that security and the economy go hand in hand. Where there is security and stability, the economy grows and trade is active.

Third: It raises the value of the city's economy; The unification of the Prophet, peace be upon him, for the system of measure and weight according to the units of Makkah and Madinah, The Prophet (ﷺ) said: (The standard) weight is the weight of the people of Mecca, and the (standard) measure is the measure of the people of Medina (Abo Dawud 3340).

And the wisdom of the Prophet, peace and blessings be upon him, is evident in the measure being considered by the measure of the people of Madinah because they were the people of agriculture, so they are more knowledgeable about the conditions of the measures, and the weight is based on the weight of the people of Makkah because they were people of trade and their knowledge of the weights more.

And if we contemplate the Islamic Religion, we find many acts of worship and legislation estimated by civil standards in zakat, alms-giving al-fitr and expiations, and in the conditions of some types of sales.

As for the weights, they are used in the prices of gold, silver, dinars and dirhams, and the people of Makkah used to trade in dinars and dirhams, considering the weight as ore, so the Prophet, peace be upon him, approved their weights and prepared them as a legal standard.

Fourth: Approving money and preserving cash liquidity.

The Prophet, peace be upon him, approved the Roman, Persian and Himyarite money that was used by the Arabs and brought them back through trade and the exchange of goods for money. From AL Sham, Byzantine dinars were received, also called Heraclian and Roman dinars, and they were made of gold. From Iraq and Persia, the Sasanian dirhams, also called the Kasrawi, and from Yemen the Himyarite dirhams, and this money was the means of exchange in addition to barter, which is the exchange of a commodity for a commodity.

The Prophet, may God's prayers and peace be upon him, did not make any change to this money, but he urged Muslims to deal with it according to its weight due to the difference between them in weight, and set controls for dealing with it, and he forbade cheating and melting dinars and dirhams to get ore, he said "forbade to break the coins of the Muslims current among them except for some defect" (Abo Dawud 3449). In order to preserve the cash liquidity on which commercial exchange is based.

## 4 Main Findings and Recommendations

At the end of the research, we summarize the following main findings:

- The Prophet Muhammad achieved economic justice through several things: making work available to everyone who is prepared for it, qualifying for work through education and training, providing job opportunities, integrity in obtaining it, monitoring economic activities, and consoling those unable to work.

- The Prophet Muhammad achieved self-sufficiency in Medina by equipping the economic structure and supporting various economic activities.

In the field of agriculture, he prepared the labor force and legislated contracts that facilitate agriculture, such as Alsulm contract, Almuzaraea contract, land leases, organized watering affairs, and urged the cultivation of land. The Messenger of God also organized the affairs of hunting and grazing.

In the field of industry, he encouraged industry and helped to learn it, and thus several industries spread in the city, such as; Leather tanning, textile manufacturing, rope, and tools such as hammers, axes, cooking utensils, etc., and some war machines such as swords, shields, etc.

- The Prophet Mohammed achieved the city's economic strength and made it an important trading hub, creating several fair free markets, some of which still exist today, to which traders come from all over the Arabian Island. From Al-Sham, Yemen, Egypt, Al-Habshah, Medina exports its agricultural and industrial products everywhere, and the apostle has concluded several economic and security agreements with tribes and nations around him. It standardized and adopted the Medina and Mecca scale used by Muslims to date, and the messenger also maintained the city's cash flow which helped to spread the city's trade.
- The concept of economic development is: processes and policies taken by a State to improve the economic, political and social well-being of its people.

#### **Based on these findings, we recommend the following**

- Follow these developmental foundations, extrapolate prophetic biography and honorable conversations to extract more details that help to apply these foundations and achieve development.
- To strive for economic development and to raise the community's awareness of its necessity.

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# **FinTech and Social Impact**

# The Impact of Digital Marketing on Customer Interaction: Electronic Fashion Sales Stores



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**Abstract** The development of the business environment and the large number of challenges and competition have strengthened business organizations adopting various means and tools that activate their business in the markets, including promotion and marketing based on social digital media platforms, due to their great impact on customers' purchasing behavior. Accordingly, the current study came to demonstrate the impact of digital media platforms on customer interaction. To investigate this relationship, the analytical descriptive approach was adopted by reviewing the secondary and primary sources by distributing a questionnaire to the outlets of the clothing and fashion sector in northern Jordan. Four hundred electronic questionnaires were adopted for the purposes of analysis using the statistical package for social sciences. The results of the study showed their agreement with the previous study that dealt with the subject of the study, that digital media platforms positively affect customer interaction so that they enhance and encourage their purchasing

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behavior through the advertisements available through these platforms. Accordingly, the study recommends the decision-makers in this sector to intensify digital marketing campaigns through these platforms because of their significant impact in enhancing the movement of sales and purchases, which reflects positively on the activity of clothing and fashion organizations. In addition, to the need to intensify the fast videos with ads through the reels feature. The value is high for stakeholders in the service sector by employing the results and recommendations of this study in the field of marketing.

**Keywords** Social media · Digital marketing · Customer's interaction · Fashion industry · Jordan

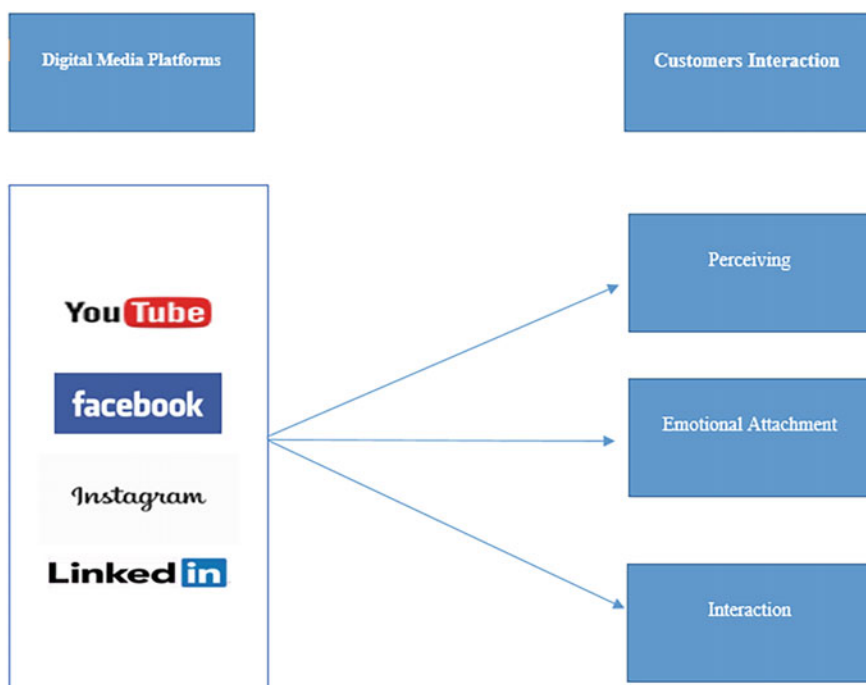
## 1 Introduction

Digital marketing allows businesses to reach a larger audience and engage with customers in more targeted and personalized ways [1–4]. It offers a variety of tactics and strategies to promote a brand, including social media marketing [5–8] to promote business products and brands, marketers use digital advertising networks, a new technology that allows them to upload advertisement messages in the form of videos and images to be shared with customers through their personal pages [9–12]. This has a favorable impact on consumers' actions, viewpoints, and interactions with marketers [13–15]. Due to the technical advantages of providing product specs and values to ensure pleasant customer interactions, digital advertising networks have become one of the most popular advertising tools used by business marketers [16–19]. Thus, there are open channels of communication, which enhances interaction between organizations and customers, as mutual opinions about a specific service or product are of importance to organizations. However, these criteria also bring certain difficulties, such as how to evaluate and enhance social media advertising strategies [20, 21]. Many marketers use digital media to boost sales and create a two-way conversation with existing customers or new customers there is a possibility of friendship between some of them in one platform [22]. In addition, the process of communication between customers and organizations with their various brands will be easier and without any commitments of time and effort directly [23, 24]. The more the content provided through the advertisement contains information, the greater its importance in front of customers and the brand that it represents, and this requires difficult efforts by the employees, so how to present meaningful content that achieves the desired goal. Therefore, it makes sense that companies choose to use online platforms, where it is easier to track the effectiveness of their advertising investments [18, 25]. A new relationship and form of communication with customers are brought about by the communications revolution brought about by technological advancements, the Internet, and the development of social media platforms and smartphones. This has piqued the interest of business owners and marketers across all industries, and customer interaction has grown significantly [22, 26, 27]. However, the use

of digital advertising networks by consumers was crucial because they provided powerful tools for attracting and altering consumers' views, behaviors, interactions, and number of customers [28]. Customer interaction is a key marketing goal that captures consumers' feelings, actions, desires, interests, and interactions with the promoted goods [29]. This study focused on the impact of digital marketing through social media platforms on customer interaction with online fashion sales stores, and accordingly, the previous literature will be reviewed to reach the study model and potential hypotheses, and then the appropriate methodology will be developed for the purposes of reaching the analysis of the collected study data and from Then discussions and recommendations.

## 2 Research Model and Hypothesis Development

The study model below shows the main study variables that were relied upon for the purposes of examining the impact of digital marketing, especially through social media platforms, where the most popular ones were taken to see the extent of their impact on customer interaction (Fig. 1).



**Fig. 1** Research model

## ***2.1 Digital Media Platforms and Perceiving***

One of the reasons why this website is so well-liked is due to the utilization of YouTube for business and marketing initiatives to engage customers [30]. With more than 2 billion monthly active users, Facebook is one of the most widely used social media sites in the world. It gives companies a great chance to interact with their clients, promote their brands, and increase sales [31]. Instagram is one of the more recent social media platforms that enables users to share photos and videos with their friends and talk about the things they like [32]. Instagram has the power to sway users' beliefs, trends, and views about product marketing [33]. For companies of all sizes, Instagram has emerged as a crucial marketing tool on social media [34]. The largest professional networking site in the world, LinkedIn has more than 700 million users in many countries and territories [35]. Professionals now rely on it more than ever to establish thought leadership, expand their personal and professional networks, and locate employment possibilities. But LinkedIn's significance extends beyond job searching and personal branding; it has developed into a potent marketing platform for firms of all sizes and sectors [36].

The kind of platform, the promotion's content, and the relationship between the customer and the brand all have an impact on how customers view advertised products [37]. Customers view marketed products differently on various social media channels, according to research. Customers see marketed products more favorably on Instagram than on Facebook. This is due to the fact that Instagram is a visual platform, and advertisements that are pleasing to the eye are more likely to be seen favorably by customers [38]. Brands must concentrate on producing interesting content, fostering relationships with their clients, and advertising goods that are valued and pertinent to their target market if they want to be successful [39]. Consequently, the following theories were put forth:

**Ho1:** There is a positive impact of Digital media platforms on Perceiving.

## ***2.2 Digital Media Platforms and Emotional Attachment***

The platform that has gained a wide range of fame in the field is YouTube. It is an active area [40–42]. Effective Facebook customer contact entails engaging your audience in worthwhile and meaningful ways, reacting to their comments and messages, and delivering pertinent information that speaks to their interests and needs [43]. The Facebook platform offers many features that allow members to interact with each other while sharing their thoughts and ideas on a variety of topics [44]. Facebook's social aspect enables users to discuss their thoughts and experiences with promoted goods and services [45]. LinkedIn is a social media platform that people use to network professionally, advertise their services, and build relationships with other LinkedIn members [46]. Because of how user-friendly the LinkedIn network is, marketers are better able to provide their goods and services to clients, which changes



how they behave when making purchases [47]. Based on their prior experiences and their judgment to assist them in stating their alternative product choices, customers' purchasing decisions sometimes include an emotional attachment to a certain product [48]. Customers' emotional attachment to the brands of marketed products plays a vital role, and marketers have concentrated on product brands, consumer preferences, and reputation through digital advertising networks [49]. Digital advertising networks' emotional attachment focuses on how commercials' messaging can evoke customers' feelings [50]. Consequently, the following theories were put forth:

**Ho2:** There is a positive impact of Digital media platforms on Emotional attachment.

### ***2.3 Digital Media Platforms and Interaction***

By producing engaging, shareable, and visually compelling content that connects with their target audience, brands can take advantage of this [51, 52]. Businesses can use Instagram's paid advertising opportunities to attract a larger audience. Businesses can target the ideal audience with Instagram Ads by using criteria like demographics, hobbies, and behavior [53]. With LinkedIn's advertising choices, companies may increase the visibility of their content and attract more users [54]. Companies may advertise their brands and products to specific audiences via Sponsored Content and Sponsored in Mail, and LinkedIn's ad targeting capabilities make sure the correct people view the content. Additionally, It is important for organizations to employ the features of the LinkedIn platform in their business in order to stay in touch with customers and to facilitate their access to the organization's information, products and services [55]. Customer interactions depend on how well social media network marketing can convey the benefits of a product to pique consumers' interest, awareness, and willingness to buy [56]. Customer interactions depend on advertising providing enough details and understanding of the benefits and values of the product to spur customer interest and action [57]. Promotion through digital marketing raises the value of the advertised product and service provided to customers, which enhances the interaction between the organization and the customer [41, 58]. Social media consumer contact has changed how businesses deal with their customers [59]. Consequently, the following theories were put forth:

**Ho3:** There is a positive impact of Digital media platforms on interaction.

## **3 Research Methodology**

This study was conducted in Jordan, specifically in the center of Jordan, the Capital Governorate, due to the large number of stores that provide electronic services related to fashion, to include the city of Amman., where nine fashion stores were

covered. Since the questionnaire doesn't take very long to complete, which encourages respondents' cooperation, Four hundred and ten questionnaires were distributed, and four hundred valid questionnaires were adopted for analysis by customers of these stores [40]. On the basis of the SPSS application, the study model was examined and hypotheses tested [60]. A unique and formal questionnaire was created. Alpha-Cronbach's test [61]. Internal consistency was employed, and the values varied from 0.74 to 0.91, with validity greater than (0.60) and dependable consistency [62].

## 4 Result

The measurement model will be evaluated using some computational analyses (Tables 1 and 2).

### 4.1 Hypothesis Test

**Ho1:** There is a positive impact of Digital media platforms on Perceiving (Tables 3, 4 and 5).

**Ho2:** There is a positive impact of Digital media platforms on Emotional attachment.

**Ho3:** There is a positive impact of Digital media platforms on interaction.

**Table 1** Independent and dependent factors analysis

No.	a variable	M	D S	Level\
4	Instagram	4.47	0.561	2
2	You Tube	3.61	0.723	4
3	Facebook	4.72	0.521	1
1	LinkedIn	4.12	0.498	3
	Total	4.256		

**Table 2** The perceiving dimension ranked

No.	a variable	M	SD	Level
1	Interaction	4.16	0.670	3
2	Emotion attachment	4.26	0.610	2
3	Perceiving	4.32	0.521	1
	Overall mean	4.31		

**Table 3** The variance in the dependent variables

Dep. var.	Model sum.		ANOVA			Coefficient				
	R	R2	F	DF	Sig. F	Ind. Vars.	B	S.D	t	Sig. t
Customers interaction	0.698	0.488	118.022	4	0.000	You Tube	0.368	0.110	2.977	0.004
						Instagram	0.202	0.144	4.112	0.000
						Facebook	0.012	0.089	0.086	0.898
						LinkedIn	0.341	0.112	8.211	0.000

**Table 4** The variance in the dependent variables

Dep. var.	Sum		ANOVA			Coefficient				
	R	R2	F	DF	Sig. F	Ivar.	P	SD	T	Sig. T
Perceiving	0.510	0.312	122.11	1	0.000	Digital advertising networks	0.489	0.042	11.066	0.000

**Table 5** The variance in the dependent variables

var.	Model sum.		ANOVA			Coefficient				
	R	r2	F	DF	F	Ind. Var.	P	SD	T	Sig. T
Emotional attachment	0.601	0.302	119.20	1	0.000	SM network	0.502	0.079	12.001	0.000

## 5 Discussions

The following conclusions were discovered: Both the general arithmetic means of consumer participation and the overall arithmetic means of digital platforms score highly, at 4.21 and 4.255, respectively. In addition, there is a positive impact of digital platforms in their various dimensions on how customers interact with online fashion retailers in terms of perception, emotional connection, and interaction. This confirmed the positive relationships that were hypothesized in accordance with the following studies [19, 63–66].

## 6 Conclusions

The researchers concluded that digital media platforms enhance organizations' relationship with consumers of clothing and fashion through electronic purchase, based on the advantages provided by these platforms and their role in raising the value of products and facilitating access by customers to them, which attracts the customer and raises awareness and desire for it. Accordingly, the study recommends, based

on its results, that fashion stores should focus on digital media platforms, especially those that deal with videos and the Real Estate feature, because of their positive role in raising their technical capabilities to engage customers through video clips to stimulate customers' feelings and stir their desires and perceptions. and their interactions, which develops customer interest and purchase decisions in order to improve their purchasing performance.

## 6.1 *Limitation and Future Directions*

Despite the study's contribution to science regarding how digital advertising affects customer interaction. There are some restrictions, however, as the study focused on the city of Irbid in the north of Jordan, but it would have been feasible to gather more in-depth and fascinating insights if multiple governorates were directed to cover the center and the south. The study also concentrated on the clothes and fashion industry, but it was also able to address other industries to assess the impact on a wider scale. Future studies must be followed up on, among other things, digital platforms are considered to be constantly evolving, and this requires the follow-up of scientific research to be compatible with the employment of this technology in various business sectors.

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# The Impact of Culture on Lean Supply Chain Management in the Jordanian Medical Sector: Theoretical Framework



Ibrahim Ezmigna and Siti Zaleha Omain

**Abstract** In the medical sector, Lean Supply Chain Management (LSCM) has emerged as a vital strategy for boosting productivity, cutting expenses, and raising overall performance. The application of LSCM techniques has been the subject of numerous research, but the influence of culture on these practices has received less attention. In particular, this study looks at how organizational culture affects how well lean supply chain management approaches are adopted in the medical industry in Jordan. The study uses a comparison method based on relevant previous studies by discussing them and finding gaps in a systematic manner. Previous studies that have investigated the topic are selected to provide a comprehensive understanding of cultural influences on LSCM practices. The analysis will include dimensions such as cultural values. The findings of this study will further knowledge of how cultural considerations affects the adoption of LSCM techniques in the medical sector generally and in Jordan as a developing nation specifically. This study will offer helpful insights for healthcare leaders and supply chain managers looking to improve their operations by identifying cultural barriers and drivers. Understanding how culture and LSCM practices interact will aid organizations in creating specialized tactics that capitalize on cultural advantages while mitigating potential disadvantages. The study's ramifications go beyond the medical sector because supply chain management is a field in which culture plays an important role. This study adds to the corpus of knowledge in supply chain management by addressing the cultural factors that affect lean supply chain management. The study concludes by highlighting the significance of creating a culture that supports continuous improvement and the effective adoption of Lean Supply Chain Management practices in the medical sector and beyond, as well as in other significant sectors that may support Jordan's economic situation in the future.

**Keywords** Culture · Lean supply chain management · Jordan · Medical industry

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## 1 Introduction

A supply chain encompasses the end-to-end network of organizations, activities, resources, information, and technology involved in the production, procurement, transformation, and delivery of products or services from suppliers to customers, ensuring the efficient flow of materials, information, and funds [1–3]. The objective of SCM is to coordinate the numerous moving components of a SC so that the chain's efficiency is maximized and not compromising the value of the product to the consumer or the quality of the product itself [4]. In order to cut costs and keep customers happy, the supply chain is made up of a set of management techniques that integrate and coordinate business processes and align business strategies along the production line [5]. In the last few decades, scholars and researchers have become more interested in choosing the best SCM plan because it can help a company do better and give it a competitive edge [6]. New technologies have changed the standard idea of competition and made it clearer than ever how important SCM is to a company's ability to stay competitive [7–9].

It is essential to have a supply chain that is well-managed in order to ensure that products are manufactured and delivered successfully, on time, and at a cost that is appropriate. Managing the supply chain entails organizing, coordinating, and exercising control over all of the activities that occur along the SC in order to ensure that it runs smoothly and effectively [10]. The sourcing and acquisition of raw materials, the planning and scheduling of production, the management of inventories, the transportation and logistics, and the provision of customer service are all essential components of supply chain management. By optimizing these components and ensuring that there is efficient coordination between all of the relevant stakeholders, businesses can improve the performance of their supply chains, bring down costs, and boost customer satisfaction [11]. The purpose of this paper is to evaluating the effectiveness of LSCM in reducing costs and improving efficiency.

## 2 Study Methods

Certainly, the study methodology is the broad outline that the study will follow [12–14]. In the current study, we aim to demonstrate the effectiveness of LSCM in reducing costs and improving efficiency. Accordingly, the method of comparison will be followed by reviewing the relevant previous literature that dealt with the subject for interpretation and discussion to cover any previous gaps, and then reach the conclusion and recommendations [15, 16]. is to contribute to the understanding of supply chain management in the medical industry of Jordan.

### 3 Relevant Previous Literature

The implementation of lean methodology raises the level of efficiency and productivity of participants in the SC, in addition to raising those metrics for the SC as a whole [5]. When it comes to the management of business processes and activities, the lean methodology places an emphasis on reducing inefficiencies and making more effective use of available resources. Real-world operations may produce waste during demand prediction, material and basic material procurement, inventory management, product manufacturing, storage, shipment preparation, transportation, and transportation services [17, 18]. All SC operations, including product planning, sourcing, production, shipment, and return, must be waste-free. It is critical to educate, respect, and engage all workers, from manufacturing laborers to the highest business and supply chain executives [4, 19]. Based on the foregoing, the following topics that make an important contribution to the subject of the study will be addressed.

#### 3.1 *LSCM and Medical Industry*

The main goal of the lean way of thinking is to improve customer value by finding and getting rid of the different kinds of waste in the system. The patient is the final customer in the health care business. Internal customers are “physicians,” “nurses,” and “workers,” while external customers are the patient’s family, friends, insurance company, and non-governmental society groups. All customers are unique, with varying needs, standards, and perspectives when it comes to quality Argiyantari et al. [10]. In recent years, the medical field has started to use lean concepts to try to keep healthcare costs from going up. There has been a lot of discussion about how well LSCM works in the medical field. Some studies show that it saves a lot of money and improves efficiency, while other studies show the opposite. LSCM plays a crucial role in the healthcare industry by coordinating the distribution of drugs, medical devices, and other consumables from their point of production to the point of delivery [6]. For the medical sector, Lean Supply Chain Management (LSCM) has emerged as a paradigm-shifting strategy that addresses the particular difficulties it has in providing high-quality healthcare while containing costs and guaranteeing patient safety. Medical firms can significantly boost efficiency and effectiveness by implementing Lean principles to supply chain operations [20]. Enhanced efficiency is one of LSCM’s main advantages for the medical sector. Medical facilities can improve lead times, stockouts, and inventory levels by using lean concepts, which emphasize eliminating waste and streamlining procedures. As a result, the supply chain is more efficiently run, ensuring that medical supplies and equipment are available when and where they are required [6]. Additionally, LSCM helps to increase patient safety and quality. Lean approaches provide a strong emphasis on error prevention and ongoing improvement, which forces medical firms to adopt rigorous quality control procedures. The danger of product flaws and patient injury is decreased by

making sure that medical supplies are handled, stored, and managed properly [21]. Another significant benefit of LSCM in the medical sector is cost savings. Healthcare facilities are under constant pressure to control expenses without sacrificing patient care. Reduce unneeded inventory, identify non-value-added activities, and optimize resource allocation are all aided by LSCM. In the end, this results in lower costs and better resource management [22]. Moreover, LSCM encourages greater adaptability and response. Adaptability is essential in the healthcare industry, which is evolving quickly. Medical organizations may respond swiftly to changes in demand, crises, or unanticipated events thanks to LSCM principles, assuring ongoing access to vital medical supplies [23], LSCM promotes collaborations and cooperation with suppliers and other stakeholders. In order to guarantee the timely availability and dependability of medical supplies, devices, and equipment, strong partnerships with suppliers are essential [24]. Continuous improvement is a fundamental principle of LSCM. The medical sector may continuously improve its supply chain operations, improving patient care and overall organizational performance, by establishing a culture of continuous learning and problem-solving [25].

### ***3.2 LSCM in Jordan Medical Industry***

Jordan is a developing country that has made significant progress in its healthcare sector over the years, but still faces challenges related to cost and efficiency [26]. Therefore, it is essential to investigate the application of LSCM in the medical industry of Jordan to identify opportunities for improvement [27]. Jordan is a developing country in the Middle East with a population of approximately 10 million people [28]. The country has made significant progress in its healthcare sector over the years, with improvements in healthcare infrastructure, the expansion of health insurance coverage, and the introduction of new healthcare technologies and treatments [29]. The healthcare sector in Jordan continues to face challenges related to cost, efficiency and culture.

### ***3.3 Collectivism is a Cultural Value***

Collectivism is a cultural value that emphasizes the importance of the group over the individual [30]. In collectivist cultures, people are more likely to value cooperation, interdependence, and group harmony [31]. They are also more likely to see themselves as part of a larger group, such as a family, community, or nation. Team orientation is a personality trait that describes people who are more comfortable working in teams than on their own [32]. Team-oriented people are typically good at collaborating with others, sharing ideas, and resolving conflicts [33]. They are also typically more motivated by group success than individual success. Collectivism and team orientation are two different concepts, but they are often related

[34]. In collectivist cultures, people are more likely to be team-oriented, as they are more accustomed to working with others [32]. However, there are also many team-oriented people in individualistic cultures [31]. There are a number of benefits to having a team-oriented workforce [33]. Team-oriented employees are more likely to be productive, as they can share ideas and work together to solve problems [35]. They are also more likely to be engaged in their work, as they feel a sense of belonging and purpose [30]. In addition, team-oriented employees are more likely to stay with their organizations, as they feel valued and supported [31].

## 4 Discussions

In [2], the aim was identifying industry technologies, which can improve LSCM and how these technologies can be implemented. The major findings were that these technologies can improve visibility of the supply chain. The authors stated that real-time data on inventory levels, delivery times and production rates are responsible in enabling the SC managers to identify and mitigate the bottlenecks, optimize resource utilization and minimize waste. In the study, there were other articles that were utilized which supported the finding of the study. For instance, in [36] the Radio Frequency Identification (RFID) usage could improve the visibility of the supply chain by enabling real time tracking of the products throughout of the supply chain. Also, according to Li et al. (2017), the use of Internet of Things (IoT) is responsible to enhance visibility of supply chain by providing real-time data on temperature, and product location in order to maintain product quality.

Also, Nunez et al. (2020) highlighted the potential of industry technologies to promote supply chain agility. They stated that machine learning algorithms and predictive analytics would assist SC managers to anticipate demand patterns and accordingly adjust the production schedules. The potential collaboration and sharing of information among supply chain partners could be facilitated by industry technologies as stated by Nunez et al. (2020). The authors noted that cloud-based platforms might enable real-time data sharing and communication between customers, manufacturers and supplies. The authors used several studies to support their claims. For example, according to Azimi et al. (2017) real-time data sharing and communication always improve transparency in supply chain and in most cases, it helps in the reduction of communication delays. Also, a study by Prajapati et al. [44] suggested that technology such as blockchain will secure transparent tracking of products throughout the supply chain reducing lead time thus overall efficiency improvements.

According to [37], elimination of waste in production processes to create wealth for the organization was their aim for the study. Therefore, the authors argue through the adoption of lean thinking, corporations would increase customer satisfaction, reduce cost, improve operation and gain a competitive advantage in the market place. The authors first went forward and defined waste as activities that utilize resources but fail to add value to the final product. The type of waste manufacturing processes

that were identified in their article were, unused employee creativity, unnecessary motion, excess inventory, over processing, defects, waiting and overproduction. Later, the authors suggested five principles of lean thinking that would reduce waste [38]. They included, pursue perfection, establish pull, create flow, identify the value stream and specify value. In the [39], there was a survey of 196 Indian manufacturing companies that investigates the effect of lean practices and green SCM on organizational sustainability. The results illustrated that green SCM and lean practices have a significant and positive influence on social, economic and environmental performance. The authors propose that organizations should adopt the lean practices and integrate them with the green SCM to improve their sustainability performance and promote their competitiveness.

The discussions from the articles used serve a great purpose to this research as they help identify approaches that will be significant to the study. Different authors have expressed their ideas on the importance of LSCM in different business and their impacts when implemented. Even there are ideas on how to reduce cost and making the process efficiency that have been highlighted in the different studies. For instance, involving employees in the improvement process is constantly identified in across all the articles. Also there have been strategies like reducing inventory processes which might lead to cost reduction in the supply chain. When there is a focus on reducing waste and quality of the products, there will always be impact on efficacy of the supply chain. Therefore, these ideas when incorporated to healthcare industry, will play a greater impact in improving the effectiveness of lean supply chain management.

## 5 Conclusions

In the list of literature that have been analyzed there are some studies which have mentioned supply chain management in medical industries. However, most of them have their emphasis on other aspects of supply chain like distribution and procurement. For instance, the likes of, (Al-Qireem and Zalloum 2019). The gap comes in where there are limited research discussing about cost reduction and improving efficiency of medical sector. Also, some studies have focused on finding the opportunities and challenges related to LSCM in other healthcare settings like clinics and hospitals. Most of these studies have a limitation of their scope and they provide inadequate analysis of the application of this methodology in healthcare industry of Jordan. The study of how culture affects Lean Supply Chain Management (LSCM) practices in the Jordanian medical sector has produced important insights into how cultural factors affect the uptake and efficacy of these strategies. The findings of this study highlight the role of organizational culture in influencing LSCM implementation and have significant ramifications for supply chain managers and healthcare executives in Jordan and possibly other situations that are similar. The results of this study show that organizational culture is crucial to the Jordanian medical industry's adoption of lean supply chain management techniques. The willingness of medical

organizations to adopt LSCM concepts was positively connected with cultural traits such a dedication to continual improvement and teamwork. Hierarchical and risk-averse cultures, on the other hand, frequently resisted change and impeded the adoption of lean principles. The successful adoption of LSCM principles was hampered in certain medical organizations by cultural obstacles such reluctance to change, fear of failure, and established hierarchies. Targeted interventions, such as training programs, cultural awareness initiatives, and top-down support for cultural reform, are necessary to overcome these barriers. In order to be effective, LSCM activities must be tailored to fit Jordanian cultural norms and values, according to the study. Lean Supply Chain Management's fundamental ideas are still applicable everywhere, but modifying particular approaches to fit the regional culture encourages acceptance and sustainability.

To address this research gap identified from the literature review, the study sought to address the gap by conducting a comprehensive study on the application of LSCM in the healthcare industry in Jordan. Challenges such as cost and opportunities associated with implementing LSCM in different healthcare settings will be analyzed in this paper. There will be an examination of the impact of LSCM on various aspects of the medical supply chain with culture. The results of this study will contribute to the current literature on SCM in the healthcare industry and will provide more insights into the implementation of LSCM I in developing countries such as Jordan. The study's recommendations could help healthcare providers in Jordan and other developing countries improve SCM practices, reduce costs, and enhance efficiency, leading to better patient outcomes and financial sustainability.

Finally, this study shows how organizational culture has a big impact on how successfully Lean Supply Chain Management principles are implemented in the Jordanian healthcare sector. Healthcare executives and supply chain managers may boost operational effectiveness, cut expenses, and ultimately improve patient outcomes by acknowledging the importance of culture and actively influencing it to promote Lean concepts. Creating sustainable and effective supply chain systems in the Jordanian medical business, as well as potentially in other similar contexts worldwide requires the implementation of LSCM methods that are customized to the local culture.

## ***5.1 Limitation and Future Research***

Despite the gaps discussed in previous related studies, indicating that this study is large-scale in nature, and has a special novelty in the post-pandemic era, it will also contain some initial limitations, as the researcher focused only on the medical supply chain, logistics, and culture. Current research while jobs have also been implemented in other various fields including food, agriculture, consumer sector and others. Which makes us emphasize the importance of conducting future studies in the field of study, but also in important sectors, especially in Jordan and what suffers from economic

and financial challenges, which may make the development of supply chains an important factor in supporting the trade movement.

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# A Study on Technological Revolutions in Dynamic Educational Sector Post-covid-19



M. Jeeva, R. Leelavathi, Bijin Philip , S. Kalaivani, and Reethu Rachel Raj

**Abstract** This study aims to understand the readiness of academicians to learn, relearn and unlearn the technology changes in the education sector. Continuous Professional Development (CPD) is the latest catchword in the education field. Professional Development is a continuous process and a lifelong journey in digitalized era; it is interlinked with significant factors such as unlearning, learning, and relearning. The need for academicians to focus on Professional Development has been highlighted in different ways in the recent past. Academicians become better teachers when they willingly and continually take steps to enhance their domain information and pedagogical skills. To be dynamic in their profession, teachers are required to prove their professional competence and also demonstrate their effectiveness in the technology-enabled classrooms. This study specifically identifies the various digital sources available to academicians. The Study variables have been identified from the electronic database. The questionnaire has been used to collect data from primary sources. The sample has been selected based on the Convenient Method. The Study results confirm the applicability of Continuous Professional Development in the digital world with significant influence of factors-unlearning, learning, and relearning.

**Keywords** Learn · Unlearn · Relearn · Continuous professional development (CPD)

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## 1 Introduction

Education the outburst of COVID-19 has obligatory revolution across all the segments and education is no concession to this. The intention of any education branch-like Management, Literature, and Engineering to empower the students to get into the workforce. So, the instructors, have to prepare the mind to learn, unlearn and relearn the new concepts before the students get into the new education system like digital learning and E-learning. In the traditional classroom method, the students depend on teachers' knowledge, however in the current era, the students have chance access to many other sources, like various journals, video lectures, digital library and uses the ICT tools. Till December 2019, academicians and students certainly not thought that they would be exposed to the digital world. Education is the sector, where you can get the direct impact of covid. From the traditional system to the digital world, education has changed dramatically. It's become clear that academicians need to gain knowledge on how to make use of their digital literacy creatively. The ongoing pandemic situation has allowed teachers to understand the need for integrating technology into education. As a result, many academic institutions changed their base to digital platforms, and academicians were asked to update technological skills themselves. The majority of academicians were not equipped, as they did not have proper training in online education. Fortunately, they have accepted the challenges and adapted themselves to the new normal. In a few cases, these technical skills are taught to academicians by students. Academicians have become learners to become better teachers. What a paradigm shift!

Great Academicians are always considered constant learners. Teachers believe that to be successful in the classroom, they have to unlearn outdated ideas and concepts, and relearn what is helpful and applicable to society. The Pandemic situation has supported many academicians to understand their potential and become creative. Many teachers have experience with virtual methods of teaching and evaluating students' knowledge. As a result, they have gained pedagogical skills and self-confidence.

### Digital Sources Available to Academicians

A digital source has made it more comfortable, speedy, and easy to use the stored intellect. Digital resources are comfortably accessible in remote areas. Digital information sources are becoming very significant for the teacher society. It controls the overflow of information, storage problems, and provides chances for a collaboratively learning atmosphere. The choice of digital resources can be done according to the want and requests of users. Common Digital sources available to academicians like E-Book, E-Journal, E-Newspaper, E-Thesis and E-forms and E-communication tools (Google classroom, Meet, Zoom, Team, Go to the webinar, etc.).

### Need for Digital Sources:

- Access to all information by all; from anywhere in the world
- Recovery of digital resources is faster than normal print

- Students can be directed to the information by giving a link.
- Quicker to search the information
- Most of the software and apps can guide in finding accurate information; hardly a middleman can help users.

### **Imagine We Were Born in 1900**

Period	Challenges/Difficulties faced
1914–1918	World war 1 (22 Million Dead)
1918–1920	Spanish flu (50 Million Dead)
1929	Global crisis
1933	Nazis power
1939–1945	World war 2 (60 Million Dead)
1952	Korean war
1964–1975	Vietnam war

*Source* Secondary source

A child born in the 1980s thinks, his grandparents have no idea; how difficult education and life are, but they have survived successfully several wars, disasters, and Global crises. Today we have all the comforts in our new virtual world, among a new pandemic. But we complain because we need to wear masks. We complain because we stay confined to our homes where we have food, electricity, running water, wifi, and even Netflix. Today, our educational system has all of the necessary resources, despite a new pandemic. Back in the day, none of this was possible. But humanity persevered in the face of adversity and never lost its zest for life. A slight shift in how we think about learning, unlearning, and relearning can produce miraculous results. We should be grateful for our lives and do everything we can to protect and assist one another by sharing our information, talents, experiences, and wisdom.

## **2 Review of Literature**

In education, learning opportunities are expanding or opening up through innumerable evolving distance innovations and technologies [19]. The review of literature explores the various technologies and innovations in the education sector and how the education sector adapts and copes with these recent innovations and technologies in the modern era.

### **Technology adoption during COVID 19 era**

Shah et al. [18]. The unforeseen COVID-19 catastrophe has wreaked havoc on medical education and patient care. Despite the difficulties, the healthcare system

and patients have been resourceful and resilient in devising solid “temporary” remedies. It’s unclear whether some of the COVID-era transitional processes will be kept in medical education and telemedicine in the future. Many trainees are “techno-omnivores,” meaning they are at ease with a wide range of technology platforms and procedures, and technological interventions such as telemedicine visits with patients, virtual meetings with colleagues, and online interviews have been employed. Webinars and e-learning are becoming increasingly popular, and their comfort of use, practicality, and cost-effectiveness may create them indispensable in the post-COVID era. Virtual events and online programs have become increasingly popular as a result of their convenience and cost-effectiveness. This pattern is expected to persist. Many of the technical changes wreaked on the healthcare system by the COVID-19 pandemic may be useful, and some of these transitions may be desirable to keep or modify as we move forward.

Ahmed [16]. This pandemic has had a significant impact on world education in general and our Indian educational system in particular. This article discusses the usage of technology in the event of a pandemic. How distinct synchronous and asynchronous modes are used by professors and students in teaching and learning. The article will also discuss how the pandemic has exposed India’s fragility and scarcity of both school and higher education. The purpose of this article is to bring to light the issues that stakeholders face during a pandemic. The suggestions to improve our educational skills utilizing technology are the focus of this article. Finally, we, as a teaching profession, have a responsibility to play in this present scenario. A role that requires independence, knowledge, skill, and education to hegemonies know-how rather than the other way around. We can’t ignore the truth: around are many more opportunities available online than the reasons we make for not taking advantage of them.

Spearing et al. [17]. The pandemic pushed all businesses throughout the world to reassess their strategies. Higher education institutions, particularly those with substantial groups of international students, faced comparable interruptions. In the face of an approaching skilled labor crisis, the technology used in the mining sector is fast expanding and necessitates unique and more specialized expertise. After the pandemic, this article considers how mining education may improve and connect with the needs of the mining sector and students.

Goh and Sandars [13]. As a consequence of the COVID-19 epidemic, medical education everywhere in the world has seen significant disruption, and technology has been deployed quickly and creatively to keep schooling and learning going. After the epidemic is over, the future of medical education is uncertain, but some possible future scenarios are presented to help guide current decisions about future teaching and learning. Emergent educational technology, such as artificial intelligence for adaptive learning and virtual reality, is anticipated to be critical components of the revolutionary change and future of medical education. The advantages and disadvantages of using technology in medical education are reviewed to teach all providers how the changes following the pandemic can benefit both educators and students all around the world.

Korkmaz and Toraman [14]. The global pandemic of the Coronavirus (COVID-19) has posed a significant challenge to our society, necessitating obligatory changes in practically every aspect of our existence. Without a question, one of the most affected areas by the pandemic is educational practice. Educators at all levels of the school have been compelled to adapt to online learning systems and platforms in a very short period. The major goal of this research is to look into the issues educators had with online learning during the COVID-19 pandemic, the changes they expect in educational practices in the post-COVID-19 world, and the educational measures that should be taken to prevent future outbreaks. As a result of this research, it was discovered that the majority of educators had some issues with their online learning practices, that they expect certain changes in educational practices in the post-COVID-19 world and that they believe essential measures in education must be taken to prevent a future outbreak. After the study, educational policymakers, practitioners, and researchers were offered some recommendations for the post-COVID world in education.

LM et al. [15]. The emergence of COVID-19 and its impact on the student movement has shown us that change in the educational system is unavoidable. It has posed a challenge and provided an opportunity for all educational institutions to find a solution by identifying appropriate platforms and strategies for the effective deployment of high-quality educational services that have not previously been employed. As a result, the education sector has been struggling to maintain its survival through digitizing challenges to eliminate the possibility of disease. This paper also discusses some of the steps done by the Indian government to offer a uniform education system across the country. The good and negative effects of COVID-19 are reviewed, as well as some practical solutions for restoring educational activities to normal during this difficult time. COVID-19 has forced every school to implement an online education model based on information, communication, and computation technology (ICCT). This examination focuses on how these technologies can assist schools in continuing online education and determining a student's ability to participate in online learning.

Aahavan [2] explained in his study many people that say that they know so much because they learned it 15, 20, 25 years before are breathing in dark danger waking up one day morning understand that, in understanding that, in truth, they know nil.

### **Technological changes in the education sector in the past**

Azmi [10]. Before attempting to unite the three conceptions, the purpose of this work is to highlight paradigm shifts in the existing literature. The FAST culture, which is symbolized by flexibility, agility, steadfastness, and tactfulness, is also offered in light of the LUR model. It also explores the strategic complexities, impediments, and requirements that come with implementing the LUR paradigm. It is agreed that implementing the LUR model will demand a planned and steady process of strategic transformation. It necessitates the dismantling of old assumptions and the building of fresh layers of assumptions. The line of attack for the firm must be seamlessly interwoven with the LUR strategy.

Namdev [11]. ICT has had a profound impact on all service sectors, as well as higher education and library practices and services. Because of ICT, the academic

environment is shifting from formal schooling to distant and online learning. Web and mobile technology have had a significant influence on the learning sector. The current study focuses on education and library innovation, as well as the influence of web 2.0 on students, teaching and learning processes, and educational policy. The future 3.0 generation will be thoroughly examined.

Walker et al. [12]. This article summarises significant findings from six technology-enhanced learning (TEL) surveys undertaken by Universities and Colleges Information Systems Association in collaboration with Jisc across the UK higher education (HE) sector. In the face of capital funding from the Higher Education Funding Council for England, institutions have made large investments in technology and infrastructure to support learning and teaching, particularly in learning management and assessment systems, according to the report. While improving teaching and learning has always been a driving force behind TEL development, the focus of this investment has been on enterprise-wide systems to manage and control learning processes, delivering scale and standardized learning experiences through centrally managed solutions rather than support for student-contractual learning. In contrast, as evidenced by students' informal learning habits and departmental initiatives, the spread of technology that promotes collaborative learning and information sharing has been a characteristic of local TEL offerings. Designing course delivery methods that prioritize active student learning and take advantage of the possibilities that online and mobile technology currently gives for interactive student-centered learning design remains a challenge, according to the findings. The current surge in interest in Massive Open Online Courses (MOOCs), according to the researcher, will act as a catalyst in this area, causing campus-based courses to embrace new learning methodologies aided by TEL tools.

### **Technology adoption by faculty members**

An and Reigeluth [9]. The purpose of this study is to learn more about K-12 teachers' beliefs, perceptions, challenges, and support requirements as they work to create technology-enhanced, learner-centered classrooms. The data was collected through an online survey, which was completed by 126 teachers. This study's findings offer practical suggestions for assisting instructors in developing technology-enhanced, learner-centered classrooms. The ramifications for professional development and the necessity for paradigm shift are discussed in this essay.

Van Eekelen et al. [8]. A small-scale qualitative study was conducted utilizing a semi-structured interview, observation, and retrospective interview approach to the data processing to investigate teachers' willingness to learn in the workplace. The desire to learn new practices, being open to new experiences and people, being proactive, attributing successes and mistakes to internal causes, questioning after the performance, taking action to learn, and acknowledging learning processes and results were found to be indicators of a desire to learn among teachers.

Jacobsen [7]. This study presents findings from research that develops and expands a diffusion of innovations framework and adopter categories to more properly reflect and explain faculty innovation in technology-enhanced teaching and learning.

Baltaci-Goktalay and Ocak [6]. Faculty will be asked to incorporate new technologies into their instruction as technology becomes more prevalent in classrooms. Others will be open to new ways of teaching with technology, while others will be resistant. The purpose of this article is to investigate the elements that influence faculty use of online technology as well as faculty concerns about it. The focus is on faculty development programs that can assist them in effectively integrating online technology into their education, as well as acceptance and dissemination of online technology.

Fathema and Sutton [5]. Despite its widespread availability at many colleges, faculty members underutilize the Learning Management System (LMS), a web-based tool designed to aid student learning. The research focuses on Blackboard, a particular learning management system. According to the findings, specific challenges such as system issues and design defects diminish teacher use of the LMS overall. There are also suggestions on how to get more faculty members to use Blackboard.

### **3 Significance of the Study**

COVID-19 pandemic situation has created a high demand for dynamic changes in the field of academics. The current study is significant in understanding the need for academicians to learn, relearn and unlearn. It is also necessary to have a realistic view of the effectiveness of virtual learning in the current situation. Thus, the Study has become a platform for bringing out the upliftments occurring in the academic field due to technological revolutions.

### **4 Objectives**

- To study the readiness of academicians to learn, relearn and unlearn the technological changes in the education sector
- To identify various digital sources available to academicians.
- To study the effectiveness and usefulness of virtual learning.

### **5 Methodology**

The Study is 'Descriptive' in nature. Primary Data was collected in the Convenient Sampling Technique from the selected samples with a sample size of 50 from the academic field in Bangalore. Secondary data was also used to gain in-depth knowledge in the domain area. The sources for secondary data were newspapers, journals, articles, online sources, and so on.



## 6 Hypotheses

H0-There is no relationship between learning and unlearning.

H1-There is a relationship between learning and unlearning.

H0-There is no relationship between unlearning and relearning.

H1-There is a relationship between unlearning and relearning.

H0-There is no relationship between relearning and learning.

H1-There is a relationship between relearning and learning.

## 7 Results and Discussion

Table 1 value shows that the Cronbach alpha for learning, unlearn, and relearn is 0.081, 0.85, and 0.94 respectively. In most social science research situations if Cronbach alpha value is more than 0.7 It is acceptable. The study analysis suggested that the items have relatively high internal consistency.

Table 2 value shows that the Correlation analysis value indicates the direction of the relationship among the variables. The study value 1 is more than 0 indicates a positive association; hence the study variables such as learn, unlearn and relearn have a positive relationship.

Table 3 Composite reliability and validity were checked to develop the model. The composite reliability value is 0.883, 0.873, 0.915 learn, unlearn, relearn respectively. And average variance extended value is 0.538, 0.631, 0.730 learn, unlearn and relearn. The study value suggests that proceed with the model further

Table 4 P-value is less than 0.05. So we accepted the all hypothesis. It has a significant relationship with each other

**Table 1** Reliability and descriptive analysis

Sn	Variable name	Cronbach alpha	Mean	Std.	No. of items
1	Learn	0.81	4.26	0.56	6
2	Unlearn	0.85	4.37	0.56	6
3	Relearn	0.94	4.01	1.01	5

**Table 2** Correlation analysis

Sn	Variable name	Correlation analysis		
1	Learn	<b>1.00</b>		
2	Unlearn	0.32	<b>1.00</b>	
3	Relearn	0.19	0.16	<b>1.00</b>

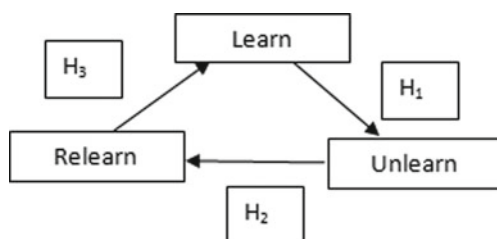
**Table 3** Composite reliability and convergent validity were checked

Variable name	No. of Items	CR	AVE
Learn	6	0.883	0.538
Unlearn	6	0.873	0.631
Relearn	5	0.915	0.730

**Table 4** Hypothesis testing

Hypotheses	S.D (Reg) ( $\beta$ )	P-Value	Remarks
H1: Learn $\rightarrow$ Unlearn	0.19	> 0.001	Supported
H2: Unlearn $\rightarrow$ Relearn	0.17	> 0.002	Supported
H3: Relearn $\rightarrow$ Learn	0.33	> 0.001	Supported

### Model-Technological Revolutions in Dynamic Educational Sector Post COVID -19 Pandemic



Learn, unlearn and relearn are interlinked with each other. It has a significant relationship with each other. Learning is the 1st stage but Academicians must be prepared to accept the virtual era. On the other hand unlearning is difficult because some of us are never comfortable jumping from version 1 to version 10 then they will be lost. A slow and steady learning environment always makes us happy and efficient. Successful unlearning makes relearning easier because it makes a forum for new practices.

### Findings

- In the conventional classroom method, Academicians are considered information sources, and students are just sponges. Such academicians never realize the requirement for updating their potential knowledge and skills. As a result, they become outdated.
- In the twenty-first century, Academicians are ready to learn, unlearn and relearn the new concepts, ideas, and technical aspects.
- However, many academicians have become virtual literates during the past few months, they require to learn how to use their virtual literacy innovatively and creatively.
- Study results found that in the virtual era academicians prioritize students learning over teaching.

## Suggestions

- Academicians should be happy to accept and passionate to undergo a paradigm shift. They need to become innovative.
- Academicians must realize that even they can learn from their students.
- In the twenty-first century, students must be considered co-creators of skills and knowledge.

## 8 Conclusion

This study offers a powerful overview of the current state of techno-logical revolutions in the dynamic educational sector post-COVID-19 Pandemic. This study provides means of understanding virtual learning and also study explored the learn, unlearn, and relearning can be used to support effective learning and education shift. In the twenty-first century, academicians should be happy to accept technological revolutions in the dynamic educational sector and willing to undergo a paradigm shift. The study result concludes that effective teaching in the virtual era re-quires a high level of potential knowledge and pedagogical skills.

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# Influence of Social Media on Investment Decisions of Women with Special Focus on Sovereign Gold Bonds



S. Saranya and Nittymol Antony

**Abstract** Investment is a common practice where people commit their funds in different avenues anticipating it to appreciate over a period of time. The various forms of investments are fixed deposits, Shares, Bonds, Real estate, Mutual Funds, Gold, etc. Gold investment stands out among these as it is practiced for many years especially in countries like India. Sovereign gold bond scheme is a parallel gold investment option which is accounted without the need of physical gold and is denominated in grams of gold. Investment in Sovereign gold bond scheme needs a mental shift where people will keep only those physical jewels that they really need and redirect the other money towards gold bonds. The present study was undertaken to understand the perception of women investors towards their investment in sovereign gold bonds. The study also aimed at analyzing the influence of social media in changing their attitude and perception towards investment. It is observed that the social media is a key factor that influences the choice of investment of women.

**Keywords** Women investors · Investment perception · Sovereign gold bond · Social media

## 1 Introduction

Investment is a sacrifice of current consumption of money, time, effort and enjoyment but generates income for the future. Investment is a common practice where people commit their funds in different avenues anticipating it to appreciate over a period of time. People prefer to invest to feel financially secure and independent. They tend to save the money and invest their savings to build wealth for their future that helps during inflation. The various forms of investments are fixed deposits, Shares, Bonds,

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Real estate, Mutual Funds, Gold, etc. There are certain avenues which have withstood the test of time viz. gold, house property, silver. Gold investment stands out among these as it is practiced for many years especially in countries like India. Though there are many investment avenues available in the market with high returns and minimal risks, women in India are emotionally connected with gold jewellery over many centuries that made investment in gold as their primary choice. Nowadays women started to overtake men in many ways and their way of thinking towards investment has also changed. Women started looking for other way of investing in gold like gold bond scheme by considering the risk and difficulty involved in keeping the physical gold. Sovereign gold bond scheme is a better investment than physical form as there is no risk involved in this investment.

Sovereign gold bond scheme is a parallel gold investment option which is accounted without the need of physical gold and is denominated in grams of gold. It also provides a nominal interest rate on the gold bonds which the physical gold does not provide. The bond is priced according to the price of 24 caret gold in the market. The bond tenure will be for eight years with an exit option in fifth year, sixth year and seventh year. The investors will hold the certificate for the investment in sovereign gold bonds. This provides the bond investors an option to hold the value of gold without having to hold the physical gold till they need it.

This needs a shift in mentality towards gold investment as people are used to hold physical gold with themselves. There is a practice of using gold in almost all occasions in India for many centuries. Investment in Sovereign gold scheme needs a mental shift where people will keep only those physical jewels that they really need and redirect the other money towards gold bonds. Social media started influencing people in all walks of life and women get no exemptions to this. It plays a vital role in influencing the women in taking decisions towards their investment. This article is an attempt to study how social media influences in this mental shift.

## 2 Review of Literature

Raju and Anita [7] stated that the currency strength and legal aspect of the company are the most influential economic and industry factors, legacy and new products of the company are the reputation and positioning factors influencing investment decisions.

Pooja [8] is of the opinion that the factors like creditability, fund characteristics, convenience are some of the main factors influencing buying behavior of mutual funds investors that gives essential boosting in the investment process.

Gopal Krishna et al. [9] in their study titled 'Investors perception towards Investment Avenues' revealed that the investment preference is different among the investment avenues. The factors like safety, return, risk is some of the influential preferences for investment. Investors tend to invest in shares for the benefit of high returns. The bond investors prefer to invest their money to gain more returns by facing the higher risk. The investors who do not want to take risk prefer to invest in mutual fund for the

future use. The researcher suggested the investors to focus on time value of money and risk level on each investment.

Mehathab and Shaik [11], is of the opinion that the respondents do have awareness about the various avenues of investment. The study reveals that the investors prefer to invest in gold or silver. It is also stated that the high returns on investment and maturity period were the most influential factors while making investment decisions.

Payal and Varsha [10] identified the factors like risk, return, investment plan, company's past records, tax savings and mutual fund size play a major role in investment during pandemic. The researchers suggested the mutual fund companies to organize more programs on safe investment in mutual funds to bring more confidence in the minds of investors.

Rathore [1], is of the opinion that investors do not have much awareness about the sovereign gold bond schemes. The investors in gold bond schemes take advice from professional experts before they invest. Therefore these investments are made by people who can afford the expenditure associated with investment. Women from nuclear family and having their won source of incomes are the major investors in these schemes. Education is another factor that support the investors. Investors perceive these investments as a medium of tax saving. Over the years the gold bonds are gaining attraction among the investors as they are free from transaction cost and it gives additional benefit in the form of interest.

Purohit [2] state that sovereign gold bonds schemes are always a better mode of investment as compared with traditional investment in physical gold. They are considered to be superior as it provides some additional benefits to the investors apart from the regular sale price. But the matter of concern is that these source of investments are not suitable all. It is mainly taken by investors who want to make long term investments and those who are expecting some sort of benefit in the form of tax saving. The perception of the investors and preference of the investors do not differ much when it comes to investment in gold bond schemes.

Sudindra and Naidu [3] explored the superiority of sovereign gold bond over other gold schemes and concluded that they are superior to others. The study revealed that gold bonds enjoy advantage over other modes of gold investment with regard to regular return, safety, storage cost etc. it can also be used as a security for availing gold loan without reduction the base value. The returns are associated with the holding period too. As the bonds are held for longer duration the returns associated with this will also be more. But the investments are not suitable for all categories of investors and it is recommended to diversify the investment into various investment schemes.

Ismail et al. [4], in their study on "influence of social media on investment decisions" state that the information disseminated from various social media has an effect on the investment decisions. The extent to which an investor actively participates in social media also plays an important role in effecting the investment behavior of the individual. Those who are a part of online community are very much influenced by the information and experiences shared through social media. Various posts shared and confidence of other investors their experiences and the investments of lead people all influence the investment decisions of individuals.

Mistri and Japee [5], identified that usage of social media is influenced by age of the participants. The participants who are middle aged are more prone to usage of social media as compared with those who have crossed middle age. The time spent in social media also influences the decision making. The individuals who spent more time on social media take most of their investment decisions based on information in the social media. But social media does not play much role in investment decisions among individuals who crossed middle age as they are not active in social media. Most of their investment decisions are based on past experiences and advices from experts.

Pettersson and Chapman [6] argue that social media is influencing the investment decisions of the people. But it do not affect the financial literacy. In their study social media could not prove significant in enhancing the financial literacy of the individuals. But one or the other way it has helped the individuals in taking decisions especially on investments. The study also highlighted that Instagram is the most influential social media that is used by majority of the investors to get updated information on investments.

### 3 Statement of the Problem

There are many investment opportunities available in the present world that provides high returns with minimum risk. Most of these investments are a medium of savings for future. Indian women are emotionally connected with gold jewellery over many centuries as it can be transferred from generation to generation as heirloom. The investment in gold is durable and it is a good source of financial investment. These have made investment in gold as a primary choice of investment among women. By considering the risk and difficulty involved in safe keeping of physical gold, the government has introduced sovereign gold bonds scheme in the year 2015. But women's attachment towards physical gold and its demand is still increasing drastically. There are many factors that make the women investors reluctant to invest in sovereign gold bonds. The study aims at assessing the perception of women towards investment in sovereign gold bonds.

In the recent years, the social media started influencing people in every walk of life. Most of the decisions of the people are also influenced by social media. Women are no way an exemption to this. It plays a vital role in influencing women in decision making especially with regard to investment. Over the years, women's perception towards investment has changed due to the influence of social media.

Hence, the study also focuses on exploring the influence of social media on investor's decision making in sovereign gold bonds.



## 4 Research Methodology

Research Methodology is a systematic approach adopted to solve the research problems. The present study aims to find out the influence of social media on investors decision making choice in sovereign gold bonds in Bengaluru City. The study is descriptive and analytical in nature. The objectives of the study are.

1. To assess the perception of women towards investment in Sovereign Gold Bonds.
2. To study the influence of social media on investor's decision making in Sovereign Gold Bonds.

The study was conducted by adopting convenient sampling method. The data for the study was collected through structured questionnaire and informal discussions with the respondents. Bengaluru city is a hub for many working women. Most of the women migrate to Bengaluru for their job requirement. Investments are one among their priorities. Investment in gold is yet again of priority among women. The data for the present study were collected from 100 respondents in Bengaluru City. The respondents were selected based on the availability and willingness of the respondents to participate in the survey. The collected were analyzed with the support of descriptive statistics and Mediation Analysis.

### 4.1 Data Analysis and Interpretation

The age group of the respondents was categorized into four groups. The majority of the respondents belong to middle aged group between 30–50 years. Women investors less than 30 years of age and more than 50 years were comparatively lesser in the study group. More than 75 percentage of the respondents were married and others were either unmarried, divorcee or widow. Most of the respondents were employed, 11 respondents were self-employed and a very few among them were not employed. More than 90% of the respondents had annual income more than Rs.150000. All the respondents had a portion of the investment in the form of gold. On an average, most of them spent Rs.50000 to Rs.100000 every year for investment in gold. Though 100% of the respondents invest in gold, 15% of them do not prefer gold bond scheme. They prefer to invest in physical gold like ornaments, coins, bars, etc. This may be due to their lack of awareness and fear to invest as it is not popular among common man. The details are given in Table 1.

### 4.2 Descriptive Statistics

The researcher has identified 5 statements in each of the four variables which measures perception of women towards investment in sovereign gold bonds. The

**Table 1** Demographic profile of the respondents

Age group	Frequency
20–29	9
30–39	30
40–49	20
50–59	16
<i>Marital status</i>	<i>Frequency</i>
Single	17
Married	58
<i>Occupation</i>	<i>Frequency</i>
Salaried	58
Self-occupied	11
Unemployed	6
<i>Annual Income</i>	<i>Frequency</i>
Below Rs.150,000	4
Between Rs.150,000 to Rs.500,000	60
Above Rs.500,000	11
<i>Investment in Gold p.a</i>	<i>Frequency</i>
Less than Rs.50,000	4
Rs.50,000 to Rs.100,000	45
Above Rs.100,000	26
<i>Investment in gold bond scheme</i>	<i>Frequency</i>
Yes	64
No	11
<i>Other mode of investment</i>	<i>Frequency</i>
Gold ornaments	9
Gold coins/bar	2

perception was estimated with the support of variables like financial knowledge, expected return, investment risk and liquidity. The women investors were given the questionnaire in form of likert scale in which values were rated from 5 to 1. Point 5 denote strong agreement to the statement and point 1 denotes strong disagreement.

The results of the descriptive statistics are arranged as per the variables used in the study. All constructs in the study have the mean scores of more than 4.00 that show consensus of women investors towards various parameters of perception towards sovereign gold bonds. Standard deviation is a measure that shows the deviation of responses from mean value. In the present study, all the constructs measuring perception have standard deviation of less than 1 which indicates that most of the respondents have agreed to the statement. Skewness and kurtosis measure the distribution of responses in comparison to normal distribution. According to, “the accepted range of Skewness is  $-1$  to  $+1$  and kurtosis is  $-3$  to  $+3$ . In the present study, the

**Table 2** Descriptive statistics for perception of women towards investment

Perception of women towards investment in Sovereign gold bond scheme	Mean	Std. Deviation	Skewness	Kurtosis
Financial knowledge	4.01	0.481	−0.421	−1.859
Expected return	4.19	0.792	−0.351	−1.149
Investment risk	4.03	0.790	−0.370	−0.549
Liquidity	3.99	0.669	−0.313	−0.729

**Table 3** Descriptive statistics for social media influence

Social media influence	Mean	Std. Deviation	Skewness	Kurtosis
Source of investment information	4.31	0.739	−0.678	−0.065
Motivation from friends	4.02	0.790	−0.318	−0.802
Real life experience	4.29	0.589	−0.224	−0.610
Social status	4.01	0.998	−1.201	1.456
Knowledge updation	4.56	0.504	0.140	−2.012

skewness values are positive and skewed towards left indicating that the responses are ranked highly by the respondents. The kurtosis values are also within the acceptable limit which indicates that the values are closer to normal distribution. The values of descriptive statistics are given in Tables 2 and 3.

### 4.3 Testing of Hypothesis

The hypothesis framed for the present study is as follows.

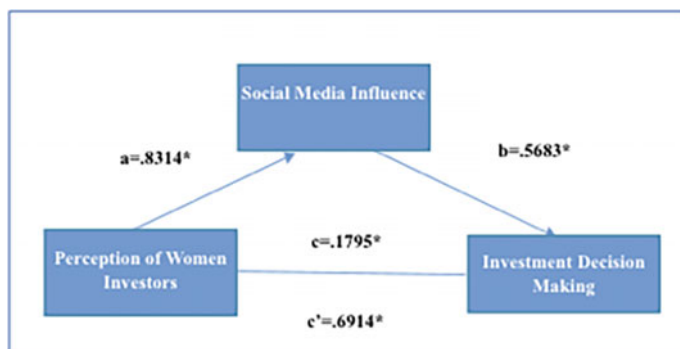
H<sub>0</sub>: Social media influence do not have a mediating effect on the perception of women investors towards investment in sovereign gold bond scheme and their investment decision making.

The results of the analysis are depicted in Table 4. Relationship between Perception of women investors and social media influence is significant as t value is 2.5612 and p value is 0.0141 which is less than 0.05. The lower-level and higher-level confidence interval are 0.1991 and 1.5513 respectively and the co-efficient is 0.8314 that shows that social media has a positive influence on perception of women investors towards investment in sovereign gold bond scheme. As they are more involved in social media, their perception also changes accordingly. Hence, it can be concluded that social media has an effect of 83.14% on the perception level of women investors. Relationship between investment decision making and social media influence is significant as t value is 3.5674 and p value is 0.017. The lower-level and higher-level confidence interval are 0.2519 and 0.9034 respectively and the co-efficient is 0.5683 which indicates that the investment decision making of women are influenced by

social media. Thus, social media brings a positive change of 56.83% in investment decision making of women investors.

**Table 4** Relationship between perception, investment decision and social media influence

Model: 4
Y: Investment decision making.
X: Perception of women investors.
M: Social media influence.
Sample.
Size: 75.
*****
OUTCOME VARIABLE:
Social media influence.
Model Summary.
R R-sq MSE F df1 df2 p.
0.451 0.2003 0.8345 7.0800 1.0000 17.0000 0.0141.
Model.
coeff se t p LLCI ULCI.
constant 1.158 0.450 2.4614 0.0140 0.2491 2.0612.
Perception of women investors 0.8314 0.3312 2.5612 0.0141 0.1991 1.5513.
*****
OUTCOME VARIABLE:
Investment decision making.
Model Summary.
R R-sq MSE F df1 df2 p.
0.6421 0.4074 0.6193 9.3294 2.0000 22.0000 0.0006.
Model.
coeff se t p LLCI ULCI.
constant 0.1581 0.4317 0.3758 0.7018 -0.7109 1.0506.
Perception of women investors 0.1795 0.3181 0.5612 0.0462 -0.4675 0.8298.
Social media influence 0.5683 0.1592 3.5674 0.0017 0.2519 0.9034.
***** $\Sigma$ EFFECT MODEL *****
OUTCOME VARIABLE:
Investment decision making.
Model Summary.
R R-sq MSE F df1 df2 p.
0.3591 0.1314 0.8841 4.2152 1.0000 17.0000 0.0486.
Model.
coeff se t p LLCI ULCI.
constant 0.8296 0.4758 1.8189 0.0789 -0.1029 1.7777.
Perception of women investors 0.6914 0.3413 2.0492 0.0486 0.0030 1.3681.
***** $\Sigma$ , DIRECT, AND INDIRECT EFFECTS OF X ON Y *****
The $\Sigma$ effect of X on Y.
Effect se t p LLCI ULCI c_ps c_cs.
0.6914 0.3413 2.0492 0.0475 0.0030 1.3681 0.6873 0.3571.
Direct effect of X on Y.
Effect se t p LLCI ULCI c'_ps c'_cs.
0.1795 0.3181 0.5612 0.5602 -0.4675 0.8298 0.1792 0.0873.



**Fig. 1** Mediating effect of social media on investment perception of women and their investment decision making

Relationship between perception of women investors and investment decision making is significant as p value is 0.0462. The lower level and higher-level confidence intervals are  $-0.4675$  and  $0.8298$  respectively that makes the relationship between perception and investment decision making more significant. Influence of social media on perception of women investors and investment decision making is significant as p value is 0.0486. The lower level and higher-level confidence intervals are  $0.0020$  and  $1.3709$  respectively which indicate that the social media also has a mediating effect on perception and investment decision making of women investors. Based on the results obtained through mediation analysis, null hypothesis is rejected. Therefore, it is concluded that social media plays a mediating role in changing the perception level of women investors and their investment decision making especially in sovereign gold bonds.

The mediating effect of social media on investment perception of women and their investment decision making is displayed in Fig. 1.

## 5 Conclusion

Women are selective in their choice of investment. They consider numerous factors before they invest their money. Factors like safety, returns, liquidity, riskiness, etc. are some of the key factors that are taken into consideration before investment. Gold is one among the favourite choice of women for investment. In the last decade, investment in gold has taken various forms other than physical gold. By considering the safety and risk involved, Government of India has launched sovereign gold bond scheme as a medium of investment wherein the investment can be done with less amount. These investments enable the investors to save for the future as they focus long term investment. The present study was carried out to understand the perception of women towards sovereign gold bonds and to know how their investment decisions

are effected by the influence of social media. Based on the responses, it is understood that women investors have positive perception towards sovereign gold bonds as they are financially secured and offers reasonable returns on maturity. Majority of the respondents prefer to invest in sovereign gold bonds and most of them have an investment of more than Rs. 50,000 per annum for investment. Though in the initial stages women were reluctant to invest in gold bonds, over the years there is a change in their attitudes and perception. These changes are mainly due to the influence of various social media. The success stories and experiences shared in social media have indirectly prompted the women investor to shift their choice of gold from physical gold to paper gold. The present study was conducted among middle class women in Bengaluru city alone. It is observed that the perception of women towards investment and their decision making is very much influenced by social media. They tend to follow the paths of successful investors and try to enhance their investment in gold bond schemes expecting safety and higher returns in future.

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# Providing Provision and Protection to Ageing Population via Cash Waqf Takaful Model in Malaysia



Aishath Muneeza and Sherin Kunhibava

**Abstract** According to reports, Malaysia is becoming an ageing nation faster than the global average. The country transitioned to an ageing society in 2020 (with 7% of its population aged 65 and over) and is projected to become an aged society in 2044 (14% aged 65 and over), and a super-aged society in 2056 (20% aged 65 and over). To support the well-being of people over 65, funding typically comes from society, savings, and insurance. However, many seniors above 65 face financial challenges. Insurance/takaful offerings are often limited for this age group, highlighting the need for new and sustainable takaful models that cater to their needs. This study aims to propose a cash waqf model that provides support and protection for the ageing population. The model not only focuses on their worldly needs but also offers an opportunity for ongoing rewards through sadaqah jariya (continuous charity) in the afterlife. Grounded on Shariah principles, this takaful approach aims for lasting sustainability rather than a one-time event. Through qualitative research, we explore challenges and opportunities for implementing this model in Malaysia. The results are expected to offer an innovative and lasting solution for caring for Malaysia's ageing population through takaful, benefiting participants during their senior years and beyond (sadaqah jariya).

**Keywords** Ageing population · Takaful Innovation · Cash Waqf model

## 1 Introduction

The demographic landscape of Malaysia is undergoing a transformative shift of profound significance, transcending national boundaries and echoing globally. As underscored by David's 2022 report, Malaysia's trajectory toward becoming an

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ageing nation has surpassed even international norms. A pivotal turning point was reached in 2020 when Malaysia officially transitioned into an ageing society, marked by 7% of its population being 65 years and older. Projections extend this trajectory, forecasting Malaysia's progression into an aged society by 2044, with 14% of its populace falling within the 65 and above age category. By 2056, the nation is anticipated to enter the ranks of a super-aged society, with a considerable 20% of its citizens aged 65 and over [2].

In response to this sweeping demographic transformation, Malaysia's societal, economic, and financial fabric is undergoing a profound change. The bedrock of support for those above the age of 65 rests on societal provisions, personal savings, and insurance mechanisms [14]. Nonetheless, this age cohort frequently encounters financial underservice, as prevailing insurance and takaful offerings are tailored exclusively to those above 65. This glaring gap underscores the pressing need for innovative and sustainable takaful models that effectively cater to the distinctive requirements of Malaysia's ageing population.

The main objective of this research is to present a groundbreaking model that offers both provision and protection to this burgeoning ageing population, leveraging on the concept of a cash waqf and takaful. This novel model surpasses conventional security paradigms, extending its reach beyond immediate material well-being to encompass the enduring realm of sadaqah jariya—an everlasting form of charity that bestows rewards in the hereafter. A linchpin of this takaful model's viability is its adherence to Shariah principles, ensuring not only its sustainability and furtherance of maqasid al-Shariah but also its continuity as a perpetually impactful mechanism, rather than a transient occurrence. Goal 3 of the United Nations Sustainable and Development Goals (UNSD) to ensure healthy lives and promote well-being for all at all ages will also be achieved through this novel takaful model [15].

This research adopts a qualitative approach, entailing a comprehensive review of primary and secondary sources. By delving into these sources, the study meticulously investigates the challenges and prospects tied to the implementation of this innovative takaful model within Malaysia's socio-economic tapestry. The projected findings of this research endeavors to hold the promise of unveiling a pioneering and sustainable solution, one attuned to the distinctive needs of Malaysia's ageing population through the conduit of takaful. Moreover, this solution carries enduring benefits, extending its positive ramifications not just to participants in their advanced years but persisting into perpetuity through the conduit of sadaqah jariya.

Many healthcare systems worldwide focus on treating illness rather than improving overall health, especially for vulnerable groups [4]. In this context, this study aims to address the specific challenges and opportunities in developing a cash waqf takaful model for senior citizens in Malaysia. Through a comprehensive analysis of the aforementioned dimensions, the research aspires to contribute valuable insights that can inform the design, implementation, and enhancement of takaful offerings for the ageing population. It is imperative to note that linking waqf with takaful might have some legal impediments as the Federal Constitution of Malaysia dictates that waqf is a state matter [5, 16] and therefore, the issues that may be triggered in linking waqf with takaful is required to be explored.



This paper is structured into six sections. Following this introduction, section two presents the literature review, section three focuses on the limitations of existing takaful products available in the Malaysian market for the ageing population. Section four highlights possible issues in linking the concept of waqf to takaful in Malaysia, and section five provides a detailed discussion of the proposed cash waqf takaful model for the ageing population in Malaysia. The paper concludes with section six.

## 2 Literature Review

The elderly has comparatively more health-related problems that require frequent hospital visitations and stays [3, 9], they are a vulnerable group that have special needs that require higher levels of protection and financial coverage [11]. A study on elderly and use of insurance shows those who are 'heavily insured used the most health care services' [7] (p. 129) this indicates that where there is no insurance or not enough coverage the elderly does not seek medical services. A study in China on medical insurance and elderly family income inequality, concluded that basic medical insurance reduces elderly income inequality [12]. These studies indicate that it is crucial to find solutions for medical coverage for the elderly, such as innovative takaful models with the use of cash waqf.

The 77th Fatwa Committee of the National Council for Islamic Religious Affairs Malaysia on 10–12 April 2007 decided that cash waqf is permissible in Islam. Cash waqf is a moveable waqf where the waqf asset is money [10]. The question occurs how is cash waqf used in a takaful?

Rahman et al. [13] studied the concept of waqf and its application in takaful and concluded that waqf can be incorporated in a takaful model, and suggested using cash waqf as a rider. Khan [8] examined the waqf-wakalah model for general takaful and concluded that it was viable model for general takaful.

Hassan et al. [5] have proposed a way to utilize zakat, waqf and takaful as social net to assist the elderly population. However, in their study, the focus is not made on linking cash waqf with takaful. As such, this proposed research is novel and would fill this gap. Nevertheless, there is literature focusing on the issues faced by elderly population in obtaining takaful/insurance and the need to have takaful/insurance to accommodate their needs [1].

Hassan et al. [5] reviewed the role of takaful, zakat and waqf in creating a holistic senior citizens program in Malaysia where they have highlighted a number of issues that will occur when Malaysia becomes an ageing nation in 2040. They observe that in 2020, the elderly population in Malaysia is expected to reach 3.21 million people [5]. They also observed that due to high demand required of work and life, many children are unable to take care of their parents and for the sake of public interest the government is required to intervene [5]. The outcome of their study proposes how these three instruments can be integrated for the utmost protection of policy holders and their beneficiaries when they reach old age. However, in their research cash waqf is not considered.

Hassan et al. [5] has provided the existing takaful products available for senior citizens in Malaysia and it is provided in Fig. 1.

Hassan et al. [5] recommend that there are three constitutive elements that must be established to provide a comprehensive safety net for the protection of the elderly which is shown in Fig. 2.

According to Hassan et al. in 2020 (p. 86), providing takaful services for the elderly requires takaful providers to offer appropriate products that cater to their protection needs. In addition to the existing product structures based on wakalah and mudarabah, there is also potential to explore the use of takaful waqf. The benefits of the policy should encompass various aspects, including accommodation in designated elderly homes, coverage for day care, and medical expenses. These benefits would become accessible upon the policyholder’s retirement, typically at the age of 60. At this

Takaful Company	Type of Takaful	Eligible Age to Purchase
Zurich Takaful	Senior Gold <sup>2</sup>	Minimum and maximum age limits for the life assured are set from 50 to 80 years old (last birthday) respectively.
Great Eastern Takaful	I-Great Harapan plus <sup>3</sup>	The minimum age at entry is 19 years ANB and the maximum age at entry is 70 years ANB.
	I-Great Ameen <sup>4</sup>	The minimum age at entry is 45 years age next birthday and the maximum age at entry is 75 years age next birthday.
NA	Skim Takaful Warga Emas (Kerajaan Negeri Johor) <sup>5</sup>	Applicant aged between 60 to 69 years old.
NA	Kifaalah (Kerajaan Negeri Kelantan)	The minimum age at entry is 60 years old.
NA	Skim Mesra Usia Emas (Kerajaan Negeri Selangor) <sup>6</sup>	The minimum age at entry is 60 years old.

(Source: Respective Institutions’ Websites)

Fig. 1 Existing Takaful Products available for senior citizens in Malaysia. [5] Source Hassan et al.

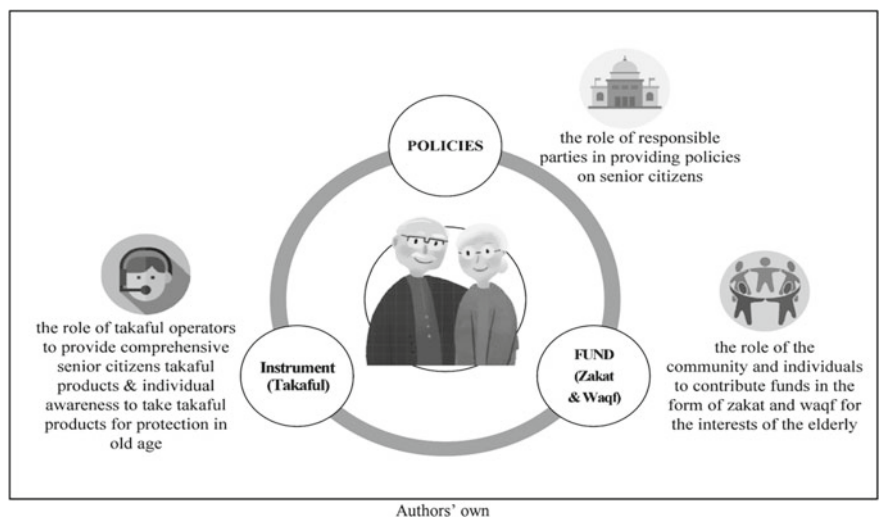


Fig. 2 Three constitutive elements that must be established to provide a comprehensive safety net for the protection of the elderly. [5] Source Hassan et al.

point, policyholders can choose to reside in specified facilities or alternatively opt for surrendering the value, which would be available in the form of cash if they decide to stay with their family members. To ensure the success of this product, a robust marketing strategy needs to be implemented to raise awareness among the public about its significance.

It is imperative to note that though Hassan et al. [5] have proposed the idea to use “takaful waqf,” how this concept could be expanded is not explored further. As such, this research will fill this gap. This will be achieved by exploring the way in which cash waqf could be linked to takaful to develop a suitable product to provide protection and provision to the elderly population.

### **3 Limitations in the Existing Takaful Products Available in the Malaysian Market for Ageing Population**

In the Malaysian context, the availability of takaful products tailored for the ageing population is marked by certain limitations that warrant examination. These constraints predominantly revolve around exclusions for individuals aged 65 and above from participating in various takaful offerings. To shed light on this issue, Table 1 provides an illustrative compilation showcasing examples of these limitations as gleaned from different takaful certificates available in the Malaysian market.

As can be seen from the above table, most takaful coverage end by 70 years. So how about the vulnerable elderly beyond the age of 70? They are left without takaful coverage, and therefore will be financially dependent on their family and children for their medical care needs or they will be dependent on government support through government hospitals.

### **4 Possible Issues in Linking the Concept of Waqf to Takaful in Malaysia**

The introduction of a takaful product linked with waqf in Malaysia presents a significant opportunity for innovation and social impact. However, this endeavor also comes with several challenges and considerations that need to be carefully addressed.

Firstly, the regulatory and legal framework governing takaful and waqf in Malaysia may need to be adapted or clarified to accommodate the unique features of a takaful product linked with waqf. Ensuring compliance with existing regulations while incorporating the principles of both takaful and waqf is crucial for the smooth offering of the product.

Another important issue is the role of State Religious Councils (SRCs) in waqf management. Obtaining approval and cooperation from SRCs for the establishment and management of the waqf fund embedded within the takaful product is essential.

**Table 1** Examples of limitations in existing takaful certificates in Malaysia

Takaful certificate	Limitation
Perlindungan Tenang Voucher Programm	Eligible Bantuan Prihatin Rakyat (BPR) recipients are still subject to underwriting criteria imposed by respective insurers and takaful operators such as age limits which would depend on respective life policies or family takaful. However, there is no maximum age limit for certain policies/certificates such as fire policies/certificates to protect building and/or household contents
Takaful myPA Care (Takaful Malaysia)	Age limit—This Certificate does not cover any person under the age of sixteen (16) years or over the age of sixty-five (65) years. Renewable until seventy (70) years
TakafulmyHealth Protector (Takaful Malaysia)	Takaful myHealth Protector is available to individuals between the ages of 30 days to 70 years on next birthday
Takaful myHealth Plus (Takaful Malaysia)	For persons above 61 to 70 years, the certificate can only be renewed. Certificate renewals up to 70 years old and renewal contributions are not guaranteed
Takaful Smart Plus (Maybank- A Shariah-compliant investment-linked Family Takaful plan)	For persons aged 18 years to 65 years old

*Source* Compiled from official websites of takaful/insurance companies in Malaysia

Clear guidelines and agreements would need to be established to define the roles and responsibilities of all parties involved.

The governance and accountability of the waqf fund is of paramount importance. Effective mechanisms for oversight, reporting, and audit should be put in place to ensure that the funds are utilized in line with the intended charitable purposes and participant contributions, promoting transparency and trust.

Moreover, participant education and awareness play a crucial role. The concept of waqf may not be widely understood among potential participants. Effective educational campaigns and awareness programs are needed to inform participants about the purpose, benefits, and mechanics of a takaful product linked with waqf.

Balancing risk management and sustainability is also a key challenge. Striking the right balance between the risk exposure of the takaful product and the charitable objectives of the waqf fund requires careful consideration. Adequate mechanisms must be in place to ensure the sustainability of the waqf fund, through proper investment in Shariah compliant opportunities.

Determining how profits generated by the waqf fund will be distributed and utilized for charitable purposes is a critical consideration. Clear guidelines should be established to ensure that profits are channeled to deserving beneficiaries while maintaining the financial viability of the fund.

In terms of product design and pricing, integrating the takaful product seamlessly with the waqf fund while ensuring competitive pricing and attractive features is a complex task. Striking the right balance between participant benefits, affordability, and charitable contributions is essential for the success of the product.

Identifying effective distribution channels is also important. Collaborations with financial institutions, agents, and digital platforms may be explored to ensure the takaful product linked with waqf reaches a wide and diverse audience.

Ethical considerations, including the alignment of the product with moral values and its positive impact on society, should be carefully evaluated and emphasized in the marketing and communication strategies.

In a nutshell, it can be said that introducing a takaful product linked with waqf in Malaysia requires a comprehensive and multiple-party approach involving Islamic finance experts, legal professionals, Shariah scholars, regulators, and representatives from State Religious Councils. Addressing these issues will contribute to the successful development and implementation of a product that not only meets the financial needs of the participants but also fulfills the broader social and charitable objectives of waqf.

## 5 Proposed Cash Waqf Takaful Model for Ageing Population in Malaysia

The introduction cash waqf is a unique concept in Islamic finance where individuals contribute money or assets to a charitable endowment with the intention of providing ongoing social and economic benefits. Takaful, on the other hand, is a cooperative form of insurance that aligns with Islamic principles, promoting mutual assistance and risk-sharing among participants.

The proposed Cash Waqf Takaful model aims to create a sustainable and compassionate solution for the financial well-being of the ageing population in Malaysia. By fusing the principles of cash waqf, wakalah (agency) and takaful, this model seeks to offer comprehensive protection and essential provision to elderly individuals during their retirement years.

The modus operandi of this proposed model is as follows:

1. **Establishment of Cash Waqf Fund:** The Takaful Operator (TO) initiates the creation of a dedicated cash waqf fund. Donations from the public from crowd-funding will be placed in this fund. This model actively engages the public and interested stakeholders in contributing to the cash waqf fund through crowd-funding. This approach encourages regular sustained donations from a wide spectrum of society, fostering a sense of shared responsibility and social solidarity. The TO as wakeel (agent) will invest this cash waqf fund in Shariah compliant investments. The returns from these investments will be fed to the takaful fund (explained below) which will specifically cater to the needs of the ageing population. The returns from the Cash Waqf fund is structured to provide

not only financial assistance but also essential services that contribute to the overall well-being of the elderly. Only the returns will be used for claims while the cash waqf fund is maintained to generate income and ensure sustainability of the takaful model.

2. **Establishment of a Takaful Fund**—Periodic Contributions from elderly participants will go into this fund. To further fortify the model's sustainability, elderly individuals are encouraged to become participants by making periodic contributions. This serves a dual purpose: it allows the elderly to actively contribute to their own retirement fund while also creating a participatory system. The returns from the Cash Waqf Fund will also be added to this fund. These contributions from the participants and the returns from the Cash Waqf Fund will be collectively known as the Takaful Fund from which direct payment may be made for claims of the participants.
3. **Holistic investment and Provision:** The contributions collected are prudently managed and invested by the TO as wakeel to generate optimal returns. The TO as wakeel will receive a commission based on pre-agreed terms where investments make a profit. The profits generated from these investments are channeled into providing holistic protection and provision for the elderly participants. This encompasses financial assistance for healthcare expenses, essential daily needs, and a dignified quality of life.

While the proposed model offers a promising avenue to address the financial challenges faced by the ageing population, several limitations and areas for future research is acknowledged below:

- **Sustainability and Longevity:** Ensuring the fund's long-term sustainability requires continuous engagement with the public and participants, as well as vigilant investment strategies to maintain steady growth.
- **Regulatory Framework and Compliance:** The development of a robust regulatory framework that aligns with Islamic finance principles and safeguards the interests of participants is essential for the successful implementation of the model.
- **Community Engagement and Education:** Raising awareness about the model's benefits and its positive impact on society is crucial for garnering public support and active participation.
- **Collaboration with Stakeholders:** Collaboration between TO, government agencies, and charitable organizations is essential to create a unified effort in establishing and maintaining the cash waqf takaful fund.

The proposed Cash Waqf Takaful model for the ageing population represents a transformative stride towards ensuring the financial security, protection, and well-being of elderly individuals in Malaysia. By harnessing the ethical principles of cash Waqf and Takaful, this model not only addresses the financial challenges faced by the ageing population but also fosters a sense of social responsibility and unity within the community. As a testament to the convergence of Islamic finance and social welfare, further research and concerted efforts are required to materialize and optimize the potential of this model for the betterment of society.

## 6 Conclusion

The imminent demographic shift towards an ageing population in Malaysia demands innovative and sustainable solutions to provide both provision and protection for its senior citizens. As Malaysia transitions into an ageing society, traditional support mechanisms are proving inadequate, emphasizing the urgency for novel approaches. This research has proposed a groundbreaking Cash Waqf Takaful model that seeks to address this pressing issue.

The Cash Waqf Takaful model integrates the principles of cash waqf, crowdfunding, wakalah and takaful to create a comprehensive and compassionate framework for the financial well-being of the ageing population. By establishing a dedicated Cash Waqf Fund, engaging public contributions through crowdfunding, and encouraging periodic contributions from elderly participants, the model ensures a sustainable pool of resources. These resources are then prudently managed to provide holistic protection and essential provision for the elderly during their retirement years.

However, implementing this model requires careful consideration of challenges and limitations. The regulatory framework must be adapted to accommodate the unique features of a takaful product linked with waqf, while maintaining compliance with existing regulations. Collaboration between stakeholders, effective governance, and participant education are pivotal for its success. Additionally, the model's profitability and risk management need to be carefully balanced to ensure its long-term viability.

Linking the concept of waqf with takaful offers the potential for lasting social impact, underscoring the model's alignment with Islamic values and principles. While certain limitations and legal impediments may arise, the overarching objective of creating a sustainable and compassionate financial solution for the ageing population remains paramount.

In conclusion, the proposed Cash Waqf Takaful model represents a significant stride towards safeguarding the well-being and dignity of Malaysia's elderly citizens. By embracing the principles of shared responsibility, community support, and perpetual charity, this model has the potential to reshape the landscape of financial protection for senior citizens. Further research, collaboration, and regulatory adjustments will be instrumental in realizing this transformative vision and ensuring the sustained prosperity of Malaysia's ageing population.

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# Banking Customers Perception of Digital Banking Efficiency and Digital Transformation Programme Adopted by Banks



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**Abstract** This paper study the holistic impact of Digital Transformation on the efficiency of Banks and understand from the perspective of consumers if they are satisfied with efforts of banks digitalizing their services. This study uses a set of questionnaire data collected from a set of 101 respondents and reveals that majority of participants are existing users of digital banking services. While most participant felt that digital banking services are much more efficient than traditional banking services, The study finding, most participants felt most banking digital transformation programs failed due to banks failing to understand real customer needs but instead focusing their attention of their digital transformation program on the application of new technologies.

**Keywords** Digital transformation · Customer needs · Digital banking services · Singapore

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# 1 Introduction

From past to present times, there is always constant change and evolution of consumer behaviour in terms of consumption and usage of products and services that span across all industries. Financial industry in particular, banks, which is well known to be conservative and resistance to changes for the last few decades, has been under pressure to innovate and implement new digital technologies to stay ahead of the curve and provide the best in class customer experience to the new generation of consumers whom are very different set of requirements and needs from the previous generation [1]. A great example the form disruption is happening in the banking industry would be the rise of digital banks that are formed by non-traditional financial companies like Ant Financial and recently in Singapore [2]. In terms of customer experience and offerings, Digital banks are known to offer customers a more personalised and efficient service where customers can complete entire transactions digitally without the need to visit a bank branch or manual intervention where most traditional banks are still struggling with due to legacy systems or processes [3]. With incoming threat of new technologies and under the pressure of new competitors whom are eager to take a pie of the lucrative financial market share with new services and better offerings, the incumbents have also began to embark their own digital transformation journey to stay competitive and to build their own capability to deliver multi-channel services experience for their customers.

Digital banking, defined as the use of internet and mobile devices as a remote delivery to provide services like opening of banking account and payment etc. has becomes one of key strategic focus for banks in their digital transformation journey to ensure that they remained engaged with their customers and provide the key banking services with the dwindling amount of customers visit bank branches [4]. DBS, a regional bank with operations in Asia that is headquartered in Singapore, is a great reference of how a traditional bank transformed it's operation digitally and winning multiple 'Best Digital Bank' titles in several years, and being the top in the customer satisfaction survey by Euromoney [5]. AI driven banking services to assist their customers with actionable insights to make more informed financial and investment decisions [5].

However, with every successful digital transformation example like DBS, there are many other banks which are still struggling to achieve or see the expected returns in terms of finance or customer experience for different customer segments despite investing a large of resources (Dick et al. 2019). For instance, a recent survey by J.D power has pointed out the fact that satisfaction level for bank customers who used only digital banking services are the lowest among all the different customer segments and ironically, customers who used both digital and branches services have the highest customer satisfaction [6]. Many studies have investigated digital banking service quality is measured, there isn't a lot of studies that delve into the relationship between the customer's usage behaviour on digital banking services and their perception of digital banking services efficiency and digital transformation programme of banks in Singapore.

## **2 Literature Review**

This chapter will be focusing on the literature review on how people define digital transformation, impact of it and what benefits do bank and its customers think that they are getting.

### ***2.1 What is Digital Transformation?***

Digital transformation has become a hot topic in the last several years and in the research of Gregory [7], the main objective is to evaluate and analyse how do people define digital transformation. The research adopted inductive approach and review the literature on Digital Transformation from 28 sources. This is further supported by the research conducted by Tobias and Pooyan (2020) where it mentioned that with digital transformation, organizations like banks had increased a lot more information and insights that are made available to decision makers compared to older days. Next, digital transformation also creates a wave of new critical elements with the organization which leads to creation of new roles like digital marketing specialist and architect who is an expert in cloud-based architecture etc. (Anthony and Yamit 2016).

### ***2.2 Digital Transformation Impact on Organizations***

In early 2000s, [8] in his research had mentioned that with the implementation of new technologies, many traditional business models have been rendered obsolete. Banks are Despite banks being known as resilient to changes due to having immense no. of customer sand financial power, Banks are not exempted being disrupted and it had become increasingly imperative for banks to transform in a digital economy through digital transformation. Impact on business models by digital transformation has been studied by Marcin (2018) and through ontology perspective. This is further illustrated by the sharp surge of 220% in transaction on DBS digital banking platform in January and May 2020 compared to the same period last year. Hie et al. [9] has stated in his research 'Impact of Transforming Organizational Culture and Digital Transformation Governance toward Digital Maturity in Indonesian Banks', that financial institutions like banks falls in the category of one of the riskiest industries that is facing severe digital disruption after hospitality, retail, and media and entertainments. The financial institutions are facing the challenge of the ever-increasing presence of new fin-tech companies that so far have been new innovate banking services and solution that give a much better experience to the customer.

### ***2.3 Digital Transformation Impact on Banks and Its Customers Perception***

Banks can often achieve clear and direct business incentives if they have executed their digital transformation programs successfully. Mark (2004) in his studies through interviewing 480 bank customers, he has mentioned if banks invested their resources in implementing new technologies that enables self-service digital channels for their customers, this will help the banks to increase their overall operational efficiency and business performance. Hie [9] had also done in-depth analysis on how organization culture affect the effectiveness of digital transformation programme and through a survey with a sample size of 315 respondents, the finding was that if an organization culture in nature is transformational, It will have significant influence and will bring positive impact on digital transformation programme. There are clear benefits on why banks should undergo digital transformation, in the research by Filotto et al. [10] that both have conducted 688 interviews and questionnaires with Italian banking customers, the finding indicates they do not see clearly on how they are benefiting from bank's digital transformation programs on customer channels.

In the research by Wassan (2018), it looks into 46 different studies and review of adoption and digital banking and has also suggested that the key dimensions for customers to adopt digital banking services are trust towards the banks, perceived security level of the platform and services and perceived usefulness like convenience, ease of use that leads to increase efficiency. Perception of customer service level can also be affected by age group of customers. In the research by Soniela and Klaudeta (2015), the results had found strong evidence that bank service quality were rated significantly higher for older age individuals compares to their younger counterparts based on four dimensions of service quality which are responsiveness, reliability, commodities and effective access.

### ***2.4 Critical Success Factors and Reasons for Failure in Digital Transformation***

In the study of 'Digital Technologies in Transformation of Classical Retail Bank into Digital Bank' by Sajiü [11], Customer relationship management to enable clear identification of specific customer segments to provide banks better insight of customers and launch product and services relevant to each specific segment (Mike et al. 2017). It is crucial to have a good engagement with the customers as customer engagement has significant influence on customer loyalty and customer satisfaction (Thakur 2016). The second phase is called 'Creating the Digital Bank', where it focuses on creating new e-banking like mobile banking which supports the findings of [8] the importance of building up the capability to provide digital banking to the customers in the journey of digital transformation and also enabling the banks to capture new customers segments.

Kazim [12] did a study that involves semi structured interviews with 8 individuals that holds various leadership or executive positions in digital transformation programmes and dive deep into understanding the personality and traits of each participants and also data-driven digital platforms supported by Bolden and Regan [13]. It is equally important to understand why transformation projects failed and often past case studies are being analysed. Finally, the fourth factor is the lack of conviction and determination of the executive team to see through the execution of the transformation where due to various factors like pressure from shareholders, they gave up the whole digital transformation programme halfway through. Elizabeth [14] had also conducted a study the influence of employee's mindset and belief in digital transformation within organizations. The researchers has stated that through social cognition research, it is extremely critical to ensure that a strong unified mindset are formed within the organization that believed in digital transformation. Thus, it is imperative for organization's leadership to engage the employees actively and ensuring that digital transformation can enable them to grow professionally and create more value always actively for the organizations.

Based on the research gap, the study will address the following research hypotheses,

**H1:** There is no significance relationship between age group in having positive perception of Digital Banking services efficiency level compared to traditional banking services.

**H2:** There is no relationship between age group of the participants to think that the main reasons that banks adopt digital transformation are to reduce operational cost and to provide better customer experience to customers.

**H3:** There is a positive relationship between customers thinks that digital banking services becomes less efficient than traditional banking services due to cumbersome processes that involves both digital and traditional journey to complete a transaction and poorly design mobile apps and web page.

**H4:** There is a positive relationship between frequent usage of digital banking services by participants with their perception of efficiency level of digital banking services.

### 3 Methodology

The main purpose for this study is to measure what is the customer perception on the efficiency level of digital banking, why do they think banks decided to undergo digital transformation, what are the main reasons banks failed in their digital transformation and in what situations makes digital banking less efficient.

The target population of this research are people located in Singapore who owns at least one or multiple bank accounts which 98% of adult Singaporean which is around 3.2 million [2]. Sample size of this study is 101 respondents. Due to limited resources and vast amount of population, the sampling technique used is simple

random sampling where every member of the population has an equal chance of being included as part of the sample. The online survey method was used for the research and was collected through the means of questionnaire that is hosted on Google Survey. The questionnaire is in English which is the official working language that is used by Singapore population. The formation of question derived from Peter and Kristizan [11, 15].

## **4 Results**

### ***4.1 Demographic Details of the Participants***

Out of 101 participants, most participants belong to the age group of 31–45 at the amount of 55 (54.5%), 23 (23.8%) in 18–30 years old age group, 14 (12.9%) in 56 years old above age group and 9 (8.9%) in 46–55 years old age group. In terms of gender, the amount is equally split where both each male and female stand at the count of 44 (43.6%) which is total of 88 (87.1%) participants. 23 (12.9%) participants do not wish to reveal their gender. When evaluating the Employment industry background breakdown of the participants, it is found that 25 (24.8%) of the participants works in the financial Industry, 18 (17.8%) in unspecific industries, 17 (16.8%) in Software Industry, 16 (15.8%) in Internet Industry, 17 (16.9%) in healthcare, education and hospitality & retail industry. The remaining of the 8 participants (7.9%) are not working at the moment when they submitted their responses.

### ***4.2 Type of Banking Customers***

When understanding the type of banking customers, it was found that majority of the participants which is 63 (62.4%) are hybrid banking customers who used both traditional and digital banking, 33 (32.7%) are pure digital banking customers and only 5 (4.9%) participants are pure traditional bank customers.

### ***4.3 Possible Reasons on Why Banks Digital Transformation Failed to Deliver Value***

Based on the 101 participants' responses, the top 3 reasons that why banks digital transformation programme failed to deliver value are failure to understand the real customer needs (69.3%), too much focus on application of technology (64.4%) and too much focus are placed on certain customer segments (49.5%) in the expense of other customer segments. Further, the study reveals that majority of participants

(95.4%) are existing users of digital banking services and 90.1% of them felt that digital banking service are more efficient than traditional banking services.

4.4 Possible Reasons on Why Digital Banking Services Might Be Less Efficient Compared to Traditional Banking

Based on the 101 participants’ responses, majority of the participants thinks that banks failed in their digital transformation because they are adopting cumbersome processes that involves both digital and traditional customer journey (64.4%) and giving their customers to use website and mobile apps that are poorly designed and do not serve their needs (63%).

4.5 Hypotheses Testing and Results

**Hypothesis 1** There is no significance relationship between age and customers in having positive perception of Digital Banking services efficiency level compared to traditional banking services.

A chi square test is performed between the data of Age and Customer perception of Digital banking services efficiency. In the following Table 1, that illustrate the result of Chi-square test, the p-value which is labelled as Asymp. Sig. is shown to be lesser than 0.05. Based on this result, it indicates that the variable are dependent on each other and there is statistical relationship. Thus, the null hypothesis 1 will be rejected.

**Hypothesis 2** There is no relationship between age group of the participants to think that the main reasons that banks adopt digital transformation are to reduce operational cost and to provide better customer experience to customers.

Table 2, that illustrate the result of Chi-square test, the p-value which is labelled as Asymp. Sig. is shown to be more than 0.05. Based on this result, it indicates that the variable is independent from each other and there is no or weak statistical relationship. Thus, the null hypothesis 2 will be accepted for “provide ease and

Table 1 Results of chi square test for hypothesis 1

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.096	6	0.000
Likelihood ratio	23.483	6	0.001
Linear-by-Linear Association	21.043	1	0.000
N of valid cases	101		

convenience for customers to complete their transaction digitally”. Further, in the Table 3 that illustrate the result of Chi-square test for variable “Reduce operational cost’ as a reason for banks to adopt digital transformation”, similar to the previous test on the variable “Provide ease and convenience for customers to complete their transaction digitally’, the p-value which is labelled as Asymp. Sig. is shown to be more than 0.05. Based on this result, it indicates that the variable is independent from each other and there is no or weak statistical relationship. Thus, the null hypothesis 2 will be accepted for this variable as well.

**Hypothesis 3** There is a positive relationship between customers thinks that digital banking services becomes less efficient than traditional banking services due to cumbersome processes that involves both digital and traditional journey to complete a transaction.

In the correlation test results (Table 4) it can be seen that the Sig (2 tailed) which is the P value is higher than 0.05. Thus, it can be confirmed there is no positive relationship between customers thinks that digital banking services becomes less efficient than traditional banking services due to cumbersome processes that involves both digital and traditional journey to complete a transaction.

**Hypothesis 4** There is a positive relationship between frequent usage of digital banking services by participants with their perception of efficiency level of digital banking services.

In the correlation test results that is shown Table 5, the Sig (2 tailed) which is the P value is lesser than 0.05. This indicates that there are significant correlations between these 2 variables, and which means that any form of changes in one variable

**Table 2** Results of Chi Square for Hypothesis 2 (Provide ease and convenience for customers to complete their transaction digitally)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.647	3	0.302
Likelihood Ratio	3.495	3	0.321
Linear-by-Linear Association	0.742	1	0.389
N of Valid Cases	101		

**Table 3** Results of Chi Square for Hypothesis 2 (Reduce operational cost’ as a reason for banks to adopt digital transformation)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.931	3	0.115
Likelihood ratio	5.886	3	0.117
Linear-by-linear association	0.174	1	0.677
N of valid cases	101		



**Table 4** Correlation test results perception of Digital banking services and customer thinking that Digital banking services less efficient due to cumbersome processes that involves both digital and traditional journey to complete a transaction

		Do you think that Digital banking services are more efficient (than traditional banking services?)	In your own opinion, what are the main reasons that might lead to digital banking services become less efficient compared to traditional banking services? 2. Cumbersome processes that involves both digital and traditional journey to complete a transaction
Do you think that Digital banking services are more efficient (e.g. spend lesser time to complete a transaction) than traditional banking services?	Pearson Correlation	1	0.006
	Sig. (2-tailed)		0.953
	N	101	101
In your own opinion, what are the main reasons that might lead to digital banking services become less efficient compared to traditional banking services? Choose Top 2. [Cumbersome processes that involves both digital and traditional journey to complete a transaction]	Pearson Correlation	0.006	1
	Sig. (2-tailed)	0.953	
	N	101	101

will significantly impact the result of the second variable. As Pearson correlation is positive, this means the more a participant used digital banking services, the higher rate of them having a positive perception of the digital banking services efficiency level. Thus, it can be confirmed there is a positive relationship between frequent usage of digital banking services by participants with their perception of efficiency level of digital banking services.

5 Discussion and Conclusions

This study focus is to understand the customer perception of digital banking and digital transformation which are not that widely covered in most of the related literatures. Through the review of literatures, from the perspectives of banks management, the key reasons for them to go through digital transformation is to achieve cost savings and meet the new demands of customers in the digital age. In this study, majority

**Table 5** Correlation test results for usage frequency of digital banking services on weekly basis by participants and perception of Digital banking services

		How often do you use Digital Banking services in a week?	Do you think that Digital banking services are more efficient (eg. spend lesser time to complete a transaction) than traditional banking services?
How often do you use Digital Banking services in a week?	Pearson Correlation	1	0.565
	Sig. (2-tailed)		0.000
	N	101	101
Do you think that Digital banking services are more efficient (eg. spend lesser time to complete a transaction) than traditional banking services?	Pearson Correlation	0.565	1
	Sig. (2-tailed)	0.000	
	N	101	101

of the participants are users of digital banking services and have a positive perception of digital banking services where they felt that it is more efficient compared to traditional banking services. The age of the participants has association to how they perceived digital banking services. Most participants are in the age group from 18 – 55 thinks that digital banking services are efficient while participants from the age group 56 and above have a significant more of them having negative perception of digital banking. Not surprisingly, majority of customers in this age group do not use any form of digital banking services. This implies two crucial facets. First, the banks have effectively onboarded most of their customers in different age groups onto their digital banking services and have provided certain benefits to them in the form of convenience, cost savings as most of them think that digital banking services are much more efficient. However, this also means banks still have a lot more to do to onboard customers in the age group 56 and above to start adopting digital banking services. Banks will need to ensure that their engagement and outreach programmes are reaching out to this group of customers so that they understand the benefits of digital banking services and finding out the exact key barriers like lack of smartphones or knowledge of digital interface [16] that are faced by them.

**5.1 Implications**

This study also highlights that the usage frequency of digital banking services is strongly associated to customers perception of digital banking efficiency. Based on the responses, there are more participants who used digital banking services 3 or

more times in a week think that digital banking services are efficient when compared to participants who used digital banking 2 times or lesser. Banks should consider introducing services like mobile payments that have high daily usage as part of their digital banking services or features in their mobile application. By building up the customers' habit of using digital banking services, this will allow them to appreciate the benefits of digital banking services which ultimately lead towards the objectives of achieving adoption and receiving positive perception of the digital banking services from the customers. In the area of digital transformation, the study has suggested most participants, regardless of age group thinks that the banks adopt digital transformation programmes to achieve cost savings and provide convenience to customers which is consistent to what the literature has suggested. However, it is important that for banks to ensure that their customers do not feel that the banks are trying to cut cost at the expense of customer service level [17] thus it is essential for banks to provide the same or even better customer service level through digital banking services. This finding suggests that before any implementation of new technologies, banks should instead first focus on the pain points faced by their customers. This is core essence of design thinking [15] that bank can adopt during the formulation of their digital transformation strategies and ensure their strategies and technologies are revolving around their customers.

## 6 Future Research Avenues

No research is perfect, and this applies to this study as well as it contains several limitations paving way for the scope of future research. In terms of the demographic data, the full range of demographic data [18] like education level, income level, ethnicity, marital status is not collected from the participants. If the full range of demographic data are collected that creates a clearer picture of participants' profiles participants, this can enable more ways to do participants segmentation which will lead to deeper insights of how each segmentation perceive digital banking and digital transformation. Contrary to the expectation of customer perception of digital banking services will be influenced by poorly design mobile app and cumbersome processes, this study is unable to provide the results of strong association between these 2 data variables. As this research participants are from Singapore, which is a developed country, it will be interesting to conduct research in developing countries to examine if there is any difference of results between participants from developed and developing countries which usually in a different state of development in terms of digital banking infrastructures..

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# The Role on Heuristic Biases Over Investor Decision Making—A Risk Perception as Mediator



M. Mathiyarasan and M. Krishnamoorthi

**Abstract** The study examines the direct and indirect effects of heuristic biases on investors' behavior on decision making (through how they perceive risk). The research also examines the potential moderating role of extraversion in investor's decision both direct and indirect connections between perceptual biases with irrational behavior. The findings of this study shows that there is a direct and indirect impact of heuristic biases on investor's decision making via risk perception. This is based on questionnaire data from 325 Indian investors registered with various brokerage firms, as well as analysis (mediation and moderation) performed in SPSS using the process macro technique (proposed by Hayes in Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression Based Approach. Guilford Publications, New York, 2017 [13]). Extraversion, a personality trait, was discovered to regulate both direct and indirect links among heuristic prejudices and irrational behavior.

**Keywords** Decision making · Investor behavior · Risk perception · Cognitive biases · Personality traits

## 1 Introduction

The outlook hypothesis contends that investors decisions are subject to cognitive, conservation, and individual variables that lead to illogical and constrained decision-making. Unreasonable investors believe on invalid market arbitrage and that prices cannot be in equilibrium since there are restrictions in enter and exit into the securities market [3]. Prospect theory-based research argues that a variety of factors, including human error-occurs when investors make decisions based on their emotions, habits, instincts, thinking, and social connections-can affect changes in stock values [4]. Cognitive biases and heuristic biases are major influences on investors decision

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making [6, 8] Oehler et al. [30]. An Investors' behaviors are driven by cognitive biases, in accordance with Ajzen's planned behavior theory from 1985. Investor views shift as a result of behavior, subjective norms (each person has their own beliefs, and Perceived behavioral.

Perceived behavior describes that, the investors are confidence about they have influence over some event or else behavior. The concept of planned or deliberated behaviour covers personal views and behaviour. The two magnitudes of perceived behavioural control and controllability, as well as self-efficacy, are related. An investor's self-efficacy displays their potential to meet a difficulty or complete a certain activity.

There was first introduction by Kahneman and Tversky [15] about cognitive biases to categories of judgement errors, that frequently result in recurrent errors of judgement [12, 15]. Heuristic bias often has an adverse effect on investors in the stock market (Kahneman 1974). The convenience heuristic is used in the decision making process of investment and the representativeness heuristic assists in comparing the data with investor rational archetypes [32].

The present study aims to fill up the gaps by looking into the relationship of heuristic bias and irrational decision making of investors. Mostly, prospect theory is used. Our primary goal is to examine and emphasise the boundary conditions (extraversion) and mediating mechanisms (risk perception) of the relationship because there hasn't been much research on these subjects [17]. When evaluating uncertain activities, people's subjective views of the seriousness of a risk are taken into consideration [36]. Investors' attitudes, assessments of risk and beliefs have an impact on their investment-related decisions [28] In 2004 [38], Given that investors regularly take risks when cognitive biases are insufficient to completely understand how investors make decisions; risk perception must also be taken into consideration.

## ***1.1 Objective of the Study***

The primary objective of the study is to measure a role on heuristic biases over investor decision making.

This study seeks to understand how the existence of personality traits and the risk perceptions determine investors decision making towards heuristic biases. It shows that how the irrational decision making of investors related with cognitive bias which is mediator by risk perception of investor. The relationship of cognitive bias and risk perception is neither well understood nor supported by the available data. The different ways that investors think and feel can have an impact on how they perceive risk and make investing decisions. We fill this gap by looking at how extraversion influences the relationships between cognitive bias, investors perception on risk and irrational decision making.

The present study focuses to understand the relationship of heuristic bias and irrational decision making of investors. The paper structured as introduction to study,

objectives,, development of theories and hypotheses, Research Methodology, data analysis, conclusion, practical implications and scope for further research.

## **2 Development of Theories and Hypotheses**

### ***2.1 Prospect Theory***

The prospect theory states that investors make decisions primarily on potential gains rather than anticipated risks when the outcome is uncertain [8].

Many research have undertaken to study the relationship between heuristic bias and risk perception to explain investors' behaviour because it is widely believed that the rational decision making includes the complete relevant information. Behavioural finance models claim that, in addition to being based solely on market data, investment decisions also take into account thoughts, feelings, and errors of judgement. Since they can be influenced by psychological and attitudinal motivations, investors' behaviours are not always rational.

### ***2.2 Decision-Making Regarding Investments and Cognitive Bias***

In wide, uncertain markets, investors utilise their intuition, perceptions, emotions, and intellect to make complicated decisions, yet these choices are typically irrational since heuristic biases are prevalent, hence all available data are overlooked [10, 14]. Investors commonly make rash decisions, according to study.

Investors typically run out of time when making judgments in challenging situations since changes in share values happen in a matter of seconds. They create heuristic biases to speed up decision-making [35, 38]. Investors don't have the time to undertake extensive probability analyses, so they base their decisions on information that is readily available and estimate other values using heuristics biases [30]. People frequently rely on notions or ideas that immediately spring to mind when making judgments. When people are confused about the possibility of a certain outcome due to the same things or experiences, this is known as representativeness heuristic bias. Tversky and Kahneman claim that seasoned investors also use availability and representational heuristics [37].

An investor may think that the present and past situations are same while making an investment decision and may evaluate the possibilities appropriately. The investor have to access a relevant information to changes their preferences, and occasionally, irrelevant information causes an investor to make a bad decision. As a result, we developed the following concept:



**H1.** There is a considerable positive correlation between heuristic biases and investors' irrational decisions.

### ***2.3 Understanding Risk as a Mediator***

According to 1998 research by Kahneman and Riepe, investors evaluate the likelihood that the assigning of values will take place to the right outcome. As a result measurement of values, norms and beliefs are to be considered for choosing risky possibilities preferences. Ritter [33] identified a number of factors that affect how someone sees risk and argued that these preferences may potentially result in misrepresentations. When deciding which assets to purchase, investors must weigh risk and profit margin, but they frequently choose risk free strategy (Tversky 1979), investing a sizeable sum of money in various securities which provide good returns as per the level of risk. Risk has a role in capital market investing decisions as well [26].

When faced with similar events and situations, most of the investors determine low risk, while others determine that it is high risk. Examining the root causes and contributing factors is vital if investors decision making considers risk perception [29]. Some researchers investigated whether less risk perception might arise from decision-making that is more vulnerable to cognitive biases (Barney 1997). Though bias support people get above cognitive limits, they can also prevent people from making thoughtful, logical decisions [5].

**H2:** Risk perception mediates the relationship between heuristic bias and decision making.

### ***2.4 The Mediator Function of Extraversion (Personality Traits)***

The extraversion and neuroticism affected financial judgement [30]. They came to the conclusion that extraversion and neuroticism have a significant influence on how people make decisions in the asset markets and that extraverted persons are more prone to be excited and engage in risk taking behaviour.

People are positive and active in terms of extraverted and they typically choose wisely [9]. According to Muller et al. in this present study the extraversion function is moderating to strengthen or alter the relationship between expected values and outcome variable [27].

**H3.** Although there is an association between heuristic biases and risk perception, extraversion moderates this relationship and renders it stronger when extraversion levels are high.

### 3 Data Collection and Analysis

The present study conducted based on empirical and analytical nature 325 individual investors participated in a time-lag (three rounds, three-month intervals) poll that produced the data. The convenience sample method was used to get in touch with investors. Convenience sampling is preferred when there are time and resource constraints, as well as with the participants' consent, according to Etikan et al. [11]. The sample size was selected based on the recommendation of Pallant's [31] of five to ten respondents for each topic. The return envelopes contained a confidentiality agreement, the survey questionnaire, and an information page detailing the objectives of the study.

Gender, age, experience, education, and money are examples of demographic aspects that are thought to be under our control. The researchers discovered that respondents' demographic characteristics have an effect on their decision-making and financial literacy relationship.

### 4 Data Analysis

A measure developed by Scott and Bruce in 1995 was used to rate rational decision-making [34]. (For instance, "I faith my internal emotional state and reflexes when making an investment". First, questionnaires with five dimensions of personality traits were given to investors. The findings show that extraverted personalities are present in 72% of the respondents.

#### 4.1 Means, Standard Deviation, and Correlations of the Results

We tested the moderated mediation, where extraversion moderates the indirect relationship (via risk perception) between heuristic bias and irrational decision-making, using Hayes' PROCESS model 8 to test the moderating effect of extraversion in the relationship between heuristic bias and risk perception, extraversion's direct effect on the relationship between heuristic bias and irrational decision-making (hypothesis 4), and the moderated mediation The findings indicate that extraversion moderates the positive link between heuristic bias and risk perception, with the interaction term between heuristic bias and extraversion having a significant influence on risk perception ( $B = 0.30, p < 0.01$ ) (Table 1).

Finally, the findings showed that extraversion moderates the indirect association between heuristic bias and irrational decision-making (mediated by risk perception) [bootstrap estimate = 0.05, bias-corrected CI (0.004, 0.11)]. As shown in Table 2, the

**Table 1** displays means, descriptive standard deviation, and inferential relationships

Construct	Means	SD	1	2	3	4	5	6
Heuristic bias	3.83	1.13						
Risk perception	3.48	1.02	0.23**					
Decision making	3.65	1.16	0.29**	0.23**				
Extraversion	3.38	1.09	0.11*	0.04	-0.03			
Age	45.51	11.56	-0.02	-0.06	-0.03	0.05		
Experience	8.35	5.48	0.01	0.02	0.01	0.02	0.81**	
Education	1.40	3.26	0.02	-0.05	0.03	-0.20**	-0.07	-0.08

N = 325, \*P < 0.05, \*\*P < 0.01 level(2 -tailed), SD, Education: 1 = Undergrade; 2 = master's degree.

**Table 2** The relationships of heuristic biases with risk perception and decision-making

	Risk Perception				Decision making					
	B	SE	T	LL	UL	B	SE	T	LL	UL
Age	− 0.04	0.01	− 2.86	− 0.07	− 0.01	− 0.01	0.01	− 0.57	− 0.03	0.02
Experience	0.08	0.02	2.55	0.01	0.14	0.02	0.02	0.47	− 0.05	0.07
Education	− 0.10	0.11	− 0.90	− 0.36	0.13	0.06	0.12	0.59	− 0.16	0.31
Heuristic biases	− 0.71	0.31	− 2.21	− 1.32	− 0.07	− 0.55	0.30	− 1.79	− 1.18	0.04
Risk perception						0.15	0.05	2.51	0.03	0.26
Extraversion	− 1.13	0.36	− 3.05	− 1.85	− 0.40	− 1.00	0.36	− 2.72	− 1.72	− 0.27
Heuristic biases X extraversion	0.29	0.08	3.17	0.10	0.46	0.23	0.08	2.57	0.05	0.40
R <sup>2</sup>	0.11					0.13				
<i>Conditional indirect effect of heuristic bias on decision making via risk perception</i>										
			Coefficient	Boot SE	LL(95% CI)			UL(95% CI)		
Extraversion (−1SD)			0.01	0.02	− 0.02			0.06		
Extraversion (+1SD)			0.09	0.04	0.01			0.19		
<i>Index of moderated mediation</i>										
			Index	Boot SE	LL (95% CI)			UP(95%CI)		
			0.05	0.02	0.004			0.11		

N = 325, B, unstandardized regression coefficient, Bootstrap sample size = 5000, Confidence interval = 95%, LL lower limit; UL upper limit; SE Standard error

indirect association between heuristic bias and irrational decision-making is substantial at high extraversion (+1 SD), whereas it is insignificant at low extraversion (− 1 SD).

## 5 Conclusion

Investors are more likely to buy shares of companies about which information is easily available than they are to examine all the relevant facts in-depth. Recent studies (Budescu 2018) have shown ability of investor to make decisions quickly is significantly impacted. This hypothesis is supported by the research, which implies that when choosing investments, investors use mental shortcuts. Our research suggests that investors behave irrationally when making investment decisions because their perceptions of risk are influenced by mental shortcuts like availability heuristics and representational heuristics.

The present study demonstrates there is a positive correlation between cognitive bias and investor decision making with effect by risk perception and also it advances the body of knowledge by demonstrating how improve the decision making and how risk perceptions directly influence investing choices. Extraversion is shown in the study to be a mediator and leads to bring positive correlation among the cognitive bias under decision making. Additionally, it expands the personality characteristics towards investment decision making.

## 6 Practical Implications

Investors, organisations' policymakers, brokerage firms, and businesspeople may find the study's findings useful in understanding of investors' capacity for sound decision-making (thinking and reasoning). And also how a person's personality influences how they perceive risk and make decisions.

## 7 Scope for Further Research

Since the present analysis dealt with Indian investors, the examination of various situations could be included in future research. To reduce the variation associated with the conventional approach, the present study employed time logged approach. Although it may not be possible to infer significant causal relationships from the time-lagged design. In order to derive causal linkages between decision making, risk perception and cognitive bias, we advise employing experimental and longitudinal strategies.

To learn more about the diverse behavioural effects, research might be done on individual commodity and stock market investors. Additionally, in upcoming investigations, demographic characteristics may function as a moderating factor.

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# Digital Horizons for MSMEs: Unleashing Potential Through Financial Inclusivity



M. Janani  and M. Jayanthi 

**Abstract** The MSME sector in Indian economy plays a major role by contributing to the growth of country, and these sector avail finance to their business from a large number of formal and informal source, though the formal sources of financing for the MSME business is available, but still the chance of availing finance and other financial services are not rendered at the expected level, thus in this era of digitalization, where the digital tools and digital technology has become the part and parcel of life of every individual. Thus, the ability to increase the digitalization of the business, is being affected by the financial inclusion was the major study focus, and the results also have shown a positive impact of financial inclusion on the factors of business process digitalization. The increased level of financial inclusion increases the level of business process digitalization, as the cost involved in digitalizing the business process is huge and also need the involvement of the employees. The further research can be focused on the problems and prospects in digitalizing the business, and the impact of digital tools usage in the business to increase the flow of funds from different sources can also be focused.

**Keywords** Financial Inclusion · MSME · Business Process Digitalization

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# 1 Introduction

## 1.1 Introduction

The MSME business play an vital role in the social and economic growth [2] of the country, create job opportunities [5]. Even with all these advantages, the financial inclusion of the MSME business is still a problem [3], and this continue to hinder the growth of the MSME business and eventually end up in reducing the performance of the business. This has initiated the RBI to undertake measures in improving the credit flow to the MSME business in the country and to address the problem of delayed payments, the TReDS, an electronic platform has been introduced to receive the finance against the trade receivables [9].

The digitalization allows the business to stay at a competitive advantage position than the competitors and remove the geographic limit to reach the customer virtually [11]. In the era of industrialization 4.0, the need for the business to digitalize the working process and the digital presence have become a necessity [22], thus the study focuses in determining the moderating role of the business process digitalization on the financial inclusion and the business performance. This article includes the previous literature review, theoretical background of the study, research objective, methodology, analysis and interpretation, results, suggestions, conclusion and the scope for the future study.

## 1.2 Review of Literature

Cicchello et al. [6] financial inclusion has become critical thing in the monetary policy. The financial system is important for the growth of the economy, and it also brings investment to the country. The result indicate that the GDP of the country has direct and significant effect on the financial inclusion of the country. The economic growth contributes to the financial inclusion. The developing economies depend on the rural agricultural income, and the financial inclusion of these rural area are less. The low financial inclusion leads to the low economic growth and development in the country.

Eton et al. [10] the survival of the MSME business is influenced by a large number of factors, the study indicates that the stiff competition in the domestic and foreign business, networking with the important people, maintaining cordial relationship with customer, and good interaction with the potential customer contribute to the SME businesses. There exist a significant and weak relationship between financial inclusion and the performance of the SME businesses.

Sestino et al. [21] the digital environment helps in creating new business models that combines the technology and the management with the concepts, tools and methods of digital environment. The study examines the role of the big data and the Internet of Things (IoT) in business managing their digital transformation. The usage

of big data and the IoT creates a huge opportunity for the business to develop and also restructuring the management through the business process digitalization. The introduction of the big data and the IoT created disorganized knowledge and have resulted in multiple paths to digitalize the business process, products and services. The digitalization helps in multiple areas of the business.

Crittenden et al. [7] the change in the digital technology is happening and the business units try to create and maintain good relationship with other business units and the stake holders. The usage of electronic devices may be disturbing in learning culture but the usage of digital technology in the learning eases the process and makes it much more flexible. The artificial intelligence, augmented reality, drones, gamification, machine learning, robots, virtual reality and internet of things helps in embracing the near future of business and leaning with digital environment. Faculty innovators to be encouraged, using institutional resources, the practical partnership, professional collaborations and institutional recognition help in embracing the digitalization to the future. The students to gain the conceptual knowledge, critical thinking, creativity and integrated learning skills.

Leeladhar [17] the consequences of financial exclusion vary depending upon the denial of the service. This creates the difficulty in accessing the credit, and the small business units would suffer, as the financial exclusion can end up in the social exclusion. The financial inclusion ensures the delivery of banking services to a large section of the unserved population at an affordable cost. The extension of financial inclusion would bring new reforms, and provide credit service rather than the savings and deposits, and the focus of priority sector lending to the weaker section of the population and providing government subsidies through banks and provide finance to the rural population.

### ***1.3 Theoretical Background***

#### **Financial Inclusion**

Financial inclusion is that the proportion of the individual and the business that using the financial services and the financial inclusion help in removing the disparities among different section on the access and usage of the formal financial services [1]. Financial inclusion would mean the usage of bank account by every individual in the economy, and the banking services to be made easily available to the customer [20].

The financial inclusion supports the growth of the SME business [10] and the digital financial inclusion have helped in the improvement and the restructuring of the business units [23], the small and medium business benefits more than the larger firms in the financial inclusion [16].

#### **Business Process Digitalization**

The usage of internet in the business process operations have increased, the e-commerce platform enables the usage of internet in the business activity [4], the

digital technology help in reducing the cost of production, improves the internal efficiency and increased process orientation and the information and communication technology has competitive advantage on the business [14]. The digital transformation in the process increases the profit generation of the business [12]. The information and communication technology includes the mechanical and electrical equipment and combining the hardware, software, sensors, processors and enhance connectivity contributing to the competition [18].

The factors of digitalization leads to higher business performance [19] and ICT has positive and significant impact on the performance of the business, [8], the information and communication has positive influence on the performance of the small and medium enterprises [13].

### ***1.4 Research Objective***

- To determine the effect of factors of financial inclusion on information gathering factor of business process digitalization.
- To find the impact of factors of financial inclusion on marketing factor of business process digitalization.
- To examine the influence of factors of financial inclusion on Administration factor of business process digitalization.
- To find out the impact of factors of financial inclusion on Communication factor of business process digitalization.

### ***1.5 Methodology***

#### **Sample Design**

The data were collected from the entrepreneurs of MSME business in the district of Coimbatore. The business that are involved in the manufacturing and business are taken into the study. The data from 384 business units has been collected, validated and used for analysing the results [15]. Simple random sampling has been used in collecting data from the sample. The data were collected from the month of August 2022 to October 2022.

The interview schedule method was used to collect the data from the MSME business entrepreneurs.

#### **Measurements**

The business process digitalization is measured with the factors of information gathering, marketing, administration and communication adopted from [4] with 12 items relating to the business process digitalization.

The financial inclusion is measured with the items adopted from [10], with 9 items relating to the financial inclusion.

All the items are measured using 5- point Likert scale, and the values are assigned as 5-strongly agree, 4-agree, 3-neutral, 2-disagree, 1-strongly disagree.

Business process digitalization is measured with three questions such as usage of internet for consumer research, competitive benchmarking and collecting general information under information gathering, three questions relating to internet for sales, advertise and market the product and for customer service under marketing, usage of variables such as using internet for purchase, sales and administration activity under the administration and usage of email for communicating with staff members, customers and stake holders under communication.

Financial inclusion was measured with nine questions relating to making payments with service providers, accessing ATM, operating bank account in low cost, depositing with financial providers, operating mobile money at nominal cost, well- structured financial systems, necessary information are provided, easy transfer through mobile, financial services provided with respect and dignity.

## 1.6 Analysis and Interpretation

Multiple Regression analysis (Table 1).

The banking institutions charging nominal charges in maintaining the banking accounts of the customer, the MSME business making deposit with the banks and the easy access to the ATM facility significantly impact the business process digitalization in the MSME business while other factors of financial inclusion do not significantly impact the business process digitalization.

**Table 1** Factors of Information gathering

Independent variables	B	T	P-value	Results
FI1	0.044	0.724	0.469	NS
FI2	0.172	2.807	0.005	S
FI3	0.187	2.734	0.007	S
FI4	0.260	3.208	0.001	S
FI5	-0.002	-0.026	0.979	NS
FI6	-0.042	-0.446	0.656	NS
FI7	0.034	0.387	0.699	NS
FI8	0.079	1.524	0.128	NS
FI9	0.162	1.905	0.058	NS
R <sup>2</sup>	0.335			
F (9, 384)	18.821			

$$Y = \text{Constant} + \text{Independent Variables (Beta)} + \text{Standard Error}$$

$$Y = 0.220 + 0.172(\text{FI2}) + 0.187(\text{FI3}) + 0.260(\text{FI4}) + 0.319$$

The dependent variables (Information gathering—business process digitalization) were regressed on predicting factor of financial inclusion, the independent variables of easy access to automatic teller machine, low cost in operating bank account and making deposit with financial providers significantly predict the Information gathering factor in business process digitalization, with p value less than 0.05. Moreover, the  $R^2 = 0.335$  show that the model represents 33.5% of variation in the Information gathering factor in business process digitalization.

Beta value indicates that changes in one unit of easy access to automatic teller machine, low cost in operating bank account and making deposit have variation of Information gathering—business process digitalization by 0.172, 0.187 and 0.260 units respectively. It is concluded that the variables of easy access to automatic teller machine, low cost in operating bank account and making deposit has significant impact on the Information gathering factor in business process digitalization (Table 2).

$$Y = \text{Constant} + \text{Independent Variables (Beta)} + \text{Standard Error}$$

$$Y = 1.706 + .158(\text{FI3}) + 0.215(\text{FI6}) + 0.115(\text{FI8}) + 0.304$$

The dependent variables (Marketing—business process digitalization) were regressed on predicting factor of financial inclusion, the independent variables of low cost in operating bank account, the service providers have well-structured system and Easy to transfer mobile money account significantly predict the Marketing factor in business process digitalization, with p value less than 0.05. Moreover, the  $R^2 = 0.434$

**Table 2** Factors of marketing

Independent variables	B	T	P-value	Results
FI1	0.044	0.792	0.429	NS
FI2	0.103	1.820	0.070	NS
FI3	0.158	2.493	0.013	S
FI4	0.131	1.752	0.081	NS
FI5	0.126	1.810	0.071	NS
FI6	0.215	2.498	0.013	S
FI7	-0.096	-1.176	0.240	NS
FI8	0.115	2.396	0.017	S
FI9	0.028	0.350	0.726	NS
$R^2$	0.434			
F (9, 384)	28.563			

show that the model represents 43.4 percent of variation in the Marketing factor in business process digitalization.

Beta value indicates that changes in one unit of low cost in operating bank account, the service providers have well-structured system and Easy to transfer through mobile money have variation of Administration - business process digitalization by 0.158, 0.215 and 0.115 units respectively. It is concluded that the variables of making payments to the financial institutions, low cost in operating bank account, the service providers have well-structured system and Easy to transfer through mobile money has significant impact on the Marketing factor in business process digitalization (Table 3).

$$Y = \text{Constant} + \text{Independent Variables (Beta)} + \text{Standard Error}$$

$$Y = 0.698 + 0.263(\text{FI1}) + 0.119(\text{FI2}) + 0.245(\text{FI3}) + 0.159(\text{FI5}) + 0.312$$

The dependent variables (Administration—business process digitalization) were regressed on predicting factor of financial inclusion, the independent variables of MSME business making payments to the financial institutions, easy in accessing the automatic teller machine facility, low cost in operating bank account and Nominal cost in operating mobile money account significantly predict the Administration factor in business process digitalization, with p value less than 0.05. Moreover, the  $R^2 = 0.226$  show that the model represents 22.6 percent of variation in the Administration factor in business process digitalization.

Beta value indicates that changes in one unit of Payments, ATM facility, low cost and mobile money transfer have variation of Administration - business process digitalization by 0.263, 0.119, 0.245 and 0.159 units respectively. It is concluded that the variables of making payments to the financial institutions, easy in accessing the automatic teller machine facility, low cost in maintaining bank account and nominal

**Table 3** Factors of administration

Independent variables	B	T	P-value	Results
FI1	0.263	4.995	0.000	S
FI2	0.119	2.248	0.025	S
FI3	0.245	4.125	0.000	S
FI4	0.129	1.824	0.069	NS
FI5	0.159	2.425	0.016	S
FI6	0.098	1.217	0.225	NS
FI7	0.008	0.104	0.917	NS
FI8	0.007	0.165	0.869	NS
FI9	0.055	0.742	0.458	NS
$R^2$	0.226			
F (9, 384)	37.090			

cost to manage money mobile has significant impact on the Administration factor in business process digitalization (Table 4).

$$Y = \text{Constant} + \text{Independent Variables (Beta)} + \text{Standard Error}$$

$$Y = 0.220 + 0.356(\text{FI1}) + 0.159(\text{FI2}) + 0.116(\text{FI8}) + 0.389$$

The dependent variables (Communication—business process digitalization) were regressed on predicting factor of financial inclusion, the independent variables of MSME business making payments to the financial institutions, easy in accessing the automatic teller machine facility and easy facility to transfer the money through the mobile phone significantly predict the Communication factor in business process digitalization, with p value less than 0.05. Moreover, the  $R^2 = 0.229$  show that the model represents 22.9 percent of variation in the Communication factor in business process digitalization.

Beta value indicates that changes in one unit of Payments, ATM, and mobile transfer facility have variation of Communication - business process digitalization by 0.356, 0.159 and 0.116 units respectively. It is concluded that the variables of making payments to the financial institutions, easy in accessing the automatic teller machine facility and easy facility to transfer the money through the mobile phone has significant impact on the Communication factor in business process digitalization.

**Table 4** Factors of communication

Independent variables	B	T	P-value	Results
FI1	0.356	7.310	0.000	S
FI2	0.159	3.239	0.001	S
FI3	-0.041	-0.743	0.458	NS
FI4	-0.006	-0.089	0.929	NS
FI5	0.056	0.932	0.352	NS
FI6	0.023	0.301	0.764	NS
FI7	0.007	0.100	0.920	NS
FI8	0.116	2.790	0.006	S
FI9	0.073	1.059	0.290	NS
$R^2$	0.229			
F (9, 384)	49.650			

## 2 Findings

Easy access to automatic teller machine, low cost in operating bank account and making deposit with financial providers significantly predict the Information gathering factor in business process digitalization.

Low cost in operating bank account, the service providers have well-structured system and Easy to transfer mobile money account significantly predict the Marketing factor in business process digitalization.

Making payments to the financial institutions, easy in accessing the automatic teller machine facility, low cost in operating bank account and Nominal cost in operating mobile money account significantly predict the Administration factor in business process digitalization, MSME business making payments to the financial institutions, easy in accessing the automatic teller machine facility and easy facility to transfer the money through the mobile phone significantly predict the Communication factor in business process digitalization.

## 3 Suggestion

The result indicate that the financial inclusion has influence on the business process digitalization, so to increase the usage of financial services and products do increase the digital usage in the business. As in the growing digital technology usage, the digital presence of the business increases the credibility and visibility if the business, that ultimately lead to the growth of the business sales and supply to the market demand. The efforts can be taken by the business to use the digital technology effectively to gather the information and also disseminate the information relating to the business through different platforms.

## 4 Conclusion

In this age of digitalization, every MSME business is trying to make its business in the online presence, by promoting their business and products digitally. The variables of financial inclusion of the MSME business are contributing to the business process digitalization, the MSME business when financially included, the business process digitalization happens, thus the MSME business should take imitative to avail the financial services and make use of various services offered by the financial institutions to increase the flow of fund to the MSME business, and thus the funds would be made available to the make investments in adopting the new technology.



## 5 Scope for Further Research

The future researcher could focus on the problems faced by MSME business in digitalizing the business.

The digital technology usage in the business has any chance of increasing the financial inclusion in the formal and informal way in an MSME Business.

The problems in accessing digital finance can also be studied by the future researchers.

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# The Role of Social CRM in Enhancing the Customer Loyalty and Satisfaction in Jordan: Theoretical Framework



Abd Alrahman Ratib Ezmigna  and Norasnita Ahmad 

**Abstract** The current study aimed to demonstrate the importance of managing social customer relations in creating satisfaction and loyalty among customers of small and medium companies, which constitute an important core in the global economic sector, especially in developing countries such as Jordan. Accordingly, the current study relied on the comparison method of previous relevant studies to show the trends reached by these studies and to interpret them by reviewing the most important discussions. This study contributed by reviewing 20 articles that were published from 2015 to 2023, where the reviewed research was classified based on its handling of the issue of loyalty and satisfaction in managing social customer relations. After analyzing the discussions, the study showed a positive relationship between social customer relations management and customers, which is reflected positively on small and medium companies in reaching their customers' satisfaction stage and then loyalty in light of the high competition in the business environment.

**Keywords** Social CRM · Customer loyalty · Customer satisfaction · Management information systems · Jordan

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## 1 Introduction

Organizations care about customers as they are considered as an important asset to them [1, 2]. Specifically, it can be said that if there are no customers, the organization will not achieve the primary goal of its existence, especially during the intense competition in the contemporary business environment [3]. Consequently, organizations that are classified as small and medium confront greater challenges than large institutions, demanding them to provide greater credibility [4, 5]. Especially today when the development of communication and marketing systems have increased access to customers to know their volatile desires and opinions [6]. In the same context, the market search for customers' desires and requirements through consistent and reliable strategies to reach customers' loyalty [7]. Similarly, customer loyalty is a critical issue for companies. In any case, when developments relate well to managerial tasks, the degree of consumer loyalty is affected. By employing CRM in small and medium-sized companies using social media platforms, there will be a positive effect customer loyalty, as strengthening the relationship with customers determine their demands. Additionally, providing services quickly and flexibly, enhances their loyalty [8]. The decline of small and medium-sized companies continuously over the past years, and thus the researcher can conclude that despite CRM, communicating via social media platforms for small and medium-sized companies is not a common method in Jordan and did not touch CRM social strategies, Although, communication via social media platforms is the fastest for SMEs in Jordan, and therefore the use of online business services based on social media platforms is still a challenge for policy makers. Adding to the traditional CRM method to increase customer loyalty more through adoption of social customer relationship management by social media platforms [9]. Finally, there has been insufficient research on this topic in the context of SMEs in Jordan. Therefore, the current research is being conducted in order to fill the gap in the scant scientific literature on the way companies may use social CRM in order to gain consumer loyalty. In addition to the reason why SMEs in Jordan follow social CRM methods to improve customer loyalty in SMEs [10]. Accordingly, through the current study, in the second section there will be an explanation of the methodology of the study, and then the relevant previous studies will be reviewed in the third section, and then the discussions will be reached in the fourth section based on secondary sources through comparison,. Finally, the results and recommendations are in the fifth section.

## 2 Methods

To achieve the purpose of the study on the role of social relations management on achieving loyalty and satisfaction among customers, the comparison methodology of previous studies will be adopted by reviewing the literature that researched the subject in order to reach the results and recommendations and compare them

through discussions and then recommendations. Several previous studies address some scientifically identified gaps [11]. The method of comparison of the previous literature is one of the scientific methods with the necessary contribution to reaching the previous scientific gaps that can be addressed in the future [12]. Through this gradual method, research can be allocated in the field of study on social customer relationship management, customer satisfaction and loyalty.

### **3 Theoretical Framework**

Through this section, the most important topics in the field of social customer relationship management will be addressed in achieving satisfaction and loyalty. Hence, at the outset, the importance of social customer relationship management for the small and medium-sized companies sector will be demonstrated, and then the small and medium companies sector and its economic impact and size, especially since it was greatly affected after the Corona pandemic. Finally, customer satisfaction in small and medium-sized companies will be reviewed, and the importance of reaching customer satisfaction, especially in light of the high competition and many challenges.

#### ***3.1 Importance of Customer Relationship Management (CRM) in Organization***

When a business develops strong client ties, it will be more successful. The need for IT systems that are specifically designed to deal with client issues on a daily basis is therefore expanding [13]. However, customer relationship management (CRM) is a method to learn more about customers' wants and behaviors in order to build closer relationships with them, not only a technology-based tool. A corporate mindset rather than a technical solution, it is more effective in engaging with customers. Nevertheless, the utilization of technology is critical to a successful Customer Relationship Management strategy [14]. Digital technologies are reshaping the business landscape around the world, changing the way systems and processes operate [15]. With the emergence of new technology, business models and conceptions have been reshaped [16]. Even while no company was immune to the epidemic, it was the smaller ones that took the brunt of the damage. Small and Medium Businesses began to use technology as a business enabler as a means of survival [17].

### ***3.2 Small and Medium Enterprises***

Small and medium-sized firms, or Small and Medium Enterprises, are defined differently across the globe. The country in which a business operates determines the precise dimensions of a Small and Medium Enterprises [18]. Depending on the jurisdiction, the classification of a business as a small or medium-sized enterprise (SME) can be based on a variety of factors. The characteristics include annual sales, the number of employees, the amount of assets owned by the company, and market capitalization. The majority of businesses functioning around the globe are small and medium-sized enterprises (SME). They are often small businesses with less than 50 employees. Nonetheless, the maximum number of employees varies from country to country [19]. The Jordanian economy, which is virtually entirely made up of SMEs, serves as the best example of the significant economic contribution provided by SMEs. SMEs make up around 40%. 98% of the companies functioning in the Kingdom are small businesses. Additionally, it gives 71% of workers in the private sector access to employment options. Additionally, small and medium-sized businesses have a key role in the statistics of the employment rate in Jordan, particularly those in the manufacturing sector, as they generate more job possibilities each year than large businesses operating there [20].

### ***3.3 Customers' Satisfaction in SMEs***

Today, Customer Satisfaction and Loyalty are key marketing topics. In the past fifteen years, a substantial amount of marketing research has centered on identifying, defining, and assessing both subjects [21, 22]. The high degree of consumer satisfaction provides numerous advantages for the brand, including greater consumer loyalty, a strengthened brand and reputation, decreased price elasticity, positive word-of-mouth, and decreased switching [23, 24]. As a rule of thumb, the more satisfied customers are, the more efficient the company is at making money. Customer satisfaction does not guarantee customer loyalty. However, [25] found that between 60 and 80% of customers who indicated they were satisfied or very satisfied were going to leave most businesses. The criticisms of only relying on customer satisfaction surveys have explicitly called for a paradigm shift, from the emphasis on customer satisfaction to the pursuit of loyalty as a strategic business aim, to occur [26]. Most businesses, according to [27]), saw the shift as “a good change in strategy” since they saw the value of a loyal customer base.

It was argued, therefore, that those measuring consumer happiness should not stop there. The shift towards measuring loyalty stems from a desire to better comprehend retention, a component of loyalty that has a direct correlation with a company's profit [28]. Brand loyalty may be advantageous for both consumers and businesses [29]. A consumer's loyalty to a brand might be interpreted as an indicator of expectations met [30]. Due to the familiar and positive signal that a brand sends, people purchase

the brand with greater confidence that it will satisfy their expectations [31]. This comfort would mostly stem from the brand's credibility, which has been established via previous interactions [32]. Customer loyalty improves a company's brand equity by reducing its susceptibility to competitor marketing efforts, boosting margins, enhancing the efficiency and effectiveness of marketing communications, and maybe generating more brand licensing or extension options [33].

### ***3.4 Customers' Loyalty in SMEs***

Recurring purchases, positive attitudes about the service provider, and consideration of employing the service provider when the need arises are all characteristics of customer loyalty [34, 35]. An organization's success depends on its ability to maintain a steady flow of money through recurring and rising purchases [36]. Customers that say they are happy with their purchase aren't always loyal [37]. Customers that are loyal to a brand are more likely to buy from them again, spend money to try new items from the same company, tell others about the brand, and provide honest criticism and suggestions [38]. As a result, a company's overall profitability is affected by client loyalty. However, customer pleasure is not a goal in and of itself, but rather a factor that contributes to the success of businesses. Customers' views, products and services offered, technological level, employee resources and company culture all play a role in this [39]. Customers' perceptions of service levels, product and service quality, and a company's position in the market or sector can all influence these outcomes. Customer value is based on the following factors: Those include cheap costs, the inclusion of all parts of a product or service that customers may want in it, the quality that customers get for the price they pay, and what customers get for the effort they put in. Customers' wants should be identified and products and services should be designed with the output quality and customers' perceptions in mind. Achieving these aspects has been shown to lead to increased consumer loyalty [40].

## **4 Discussions**

After what was discussed previously, the above-mentioned research opinions will be discussed by interpreting them for the purposes of reaching future recommendations on social customer relationship management and customer satisfaction and loyalty. Through the theoretical framework, the previous studies of the most important topics that revolve around the focus of the study will be systematically reviewed. According to [41], although many critics have raised concerns about the potential of social media platforms in social CRM, the distinct role of social media in creating customer loyalty and generating financial revenue cannot be denied. In same context [42] also highlighted the importance of loyalty through social customer relationship management

based on social media platforms in terms of increasing visibility and accessibility through digital platforms. These online media sites are useful resources for sharing and receiving product information and ideas, and to support consumers. However, new media technologies have dramatically changed the entire patterns of communication and interaction. With the advent of new media technologies, everyone can now share and access the information they want. In this regard, the role of social media in bringing about a revolution in reaching the desires of customers and e-commerce, which is reflected in achieving their desires and reaching the stage of loyalty. Compared to traditional methods of communication, online technologies are relatively more efficient, effective and accessible worldwide [43]. The question arises, social CRM is not attractive in improving customer loyalty while being relevant and beneficial. Thus, customer loyalty in terms of online social CRM is an important area of research. Moreover, the critical review indicated that previous studies [9, 44–48] conducted in Jordan did not succeed in identifying the factors that affect customer loyalty through social CRM via social media platforms.

## 5 Conclusions

In today's digitally connected environment, social CRM (client Relationship Management) is essential for increasing client loyalty and satisfaction. Because the social CRM system enables businesses to interact with their customers in real time through different social media platforms, it combines the principles of traditional CRM with the power of social media to build stronger relationships with customers, identify their needs, and interact with them more effectively. Customers feel valued and heard thanks to this ongoing involvement, which fosters a personal relationship and raises brand satisfaction. Additionally, it can permit prompt responses to consumer questions, concerns, and complaints on social media through the system of social customer relations tools. Quick and effective problem solving reveals a company's dedication to client pleasure and fosters loyalty. CRM also enables businesses to get insightful client feedback about their goods, services, and experiences as a whole. The utilization of this data may improve offers and raise consumer satisfaction levels. The Social CRM solution, it must be said, improves access to a variety of client data via social media profiles. Companies can customise their interactions, offers, and suggestions by utilizing this data, resulting in a more distinctive experience that encourages loyalty. As a result, happy customers are more inclined to spread the word about their positive interactions with others on social media, which promotes good word-of-mouth advertising. By encouraging customer advocacy and recommendations, which increases customer loyalty, social CRM enhances this effect. Brands can develop online communities around their goods or services using a social CRM platform. Customers can interact with each other and the company directly in these communities, which encourages a sense of belonging and loyalty. Due to the fact that it is a social CRM and allows for open contact between customers and businesses, this illustrates the brand's credibility and transparency. Customers are more satisfied



and loyal when they have encounters that are transparent and genuine. This improves small and medium businesses' ability to track and shape consumer sentiment through social customer relationship management technologies that let businesses keep tabs on client sentiment in real time. Brands can stop lead traffic and keep customers loyal by recognizing negative emotions and swiftly addressing them. Informed decisions may then be made by average businesses and zealots using social CRM systems that provide actionable insights through analytics and reporting. Businesses may improve consumer happiness, target particular demographics, and improve their marketing efforts by making data-driven decisions. Finally, Social CRM is a powerful tool for enhancing customer loyalty and satisfaction. By leveraging the capabilities of social media, companies can engage with customers more effectively, deliver personalized experiences, and address concerns promptly. Building strong customer relationships through social CRM leads to increased brand loyalty, positive word-of-mouth marketing, and sustainable business growth for small and medium-sized companies that form a large participation in the Jordanian economy, which suffers from many economic problems, which enhances the importance of this study in giving broad lines to decision-makers. In the Jordan Chamber of Commerce and the Ministry of Industry and Trade, the importance of strengthening this sector by employing technology and the most important management information systems in developing the corporate relationship with customers in light of the high competition and challenges of the business environment, especially after the Corona pandemic, which provided many lessons for the owners of small and medium companies And a new revolution was born in dealing with customers.

## **5.1 Recommendation**

This study is of more interest because of the topic, nature, and objectives of the current research. First of all, this study will guide SME owners and stakeholders to consider their policies and strategies to increase their performance and customer relationships. Which enhances the importance of doing future studies on the subject of the study so that it has broader directions and more time by relying on primary sources, not just secondary ones, as was done in the current study, which may lead to more comprehensive results so that the sector is supported by highlighting greater recommendations to decision-makers. SMEs have a great chance to succeed in today's cutthroat business environment thanks to the role that social CRM plays in boosting consumer loyalty and happiness. Based on the foregoing, certain crucial recommendations must be made in order to fully utilize the benefits of social CRM and to foster deeper relationships with clients. These recommendations are reflected in:

1. Integration of social CRM tools with current CRM systems: Make sure that social CRM technologies are seamlessly integrated with current CRM systems. Having a unified view of customer data and interactions will enable businesses to communicate with customers in a way that is more effective and tailored.

2. Maintain an active presence on the most appropriate social media sites. Engage with consumers frequently, attend to their questions and concerns immediately, and deliver helpful content. As a result of this proactive strategy, brand loyalty and consumer relationships will be strengthened.
3. Training Customer Support Teams: Educate customer support teams thoroughly on how to use social CRM technologies. Give them the abilities they need to interact with clients on social media in a professional, sympathetic, and way that increases customer happiness.
4. Utilize information from social media profile data to target and customise marketing campaigns. To improve the customer experience and foster loyalty, create offers and recommendations based on the tastes and habits of the target market.
5. Create Online Communities: Establish and support online groups devoted to your company's name or its products. Encourage customers to join, exchange stories, and engage in conversation. A strong feeling of community fosters loyalty and attachment.
6. Utilize social media listening tools: Use these tools to monitor consumer attitudes and feelings on social media. Companies may proactively address problems and keep one step ahead of the competition by understanding client preferences and vulnerabilities.
7. Offer your social media followers unique discounts, loyalty programs, or other perks only available through social media. Customers are more likely to interact with the brand and are more loyal as a result of this incentive.
8. Maintain consistency in your brand communications throughout all of your touch points, including social media. Consistency increases credibility and trust, as well as client satisfaction and loyalty.
9. Maintain consistency in your brand communications throughout all of your touch points, including social media. Consistency increases credibility and trust, as well as client satisfaction and loyalty.
10. Results are measured and analyzed. Use key performance indicators (KPIs) like customer retention rates, satisfaction scores, and social media engagement metrics to continuously assess the success of your social CRM initiatives. Make data-driven judgments after analyzing the data to find areas that need improvement.

Finally, SMEs may use social CRM to create enduring customer relationships, boost customer loyalty, and ultimately propel corporate success by implementing these suggestions. The usage of social CRM, which goes beyond traditional CRM, can fundamentally alter customer satisfaction and brand loyalty.

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# A Study on Customer's Satisfaction with Online Money Transfers Using Unified Payments Interface (UPI)



P. Kumarasamy  and V. Francy Sheeba 

**Abstract** Business and marketing development from the past to the present has taken many different turns. Barter Systems, Manufacturers' Approach to Buyers Approach, and Online Marketing (Electronic Marketing) are the phases of physical marketing, often known as offline marketing. Money transactions play a significant role in marketing at every stage. UPI is a money transaction method used in marketing by both customers and marketers. Recent online transactions facilitate transactions and benefit both buyers and sellers. Modern techniques for facilitating quick transaction completion include online money transfers (also known as electronic payment systems). Online money transfers via UPI have expanded significantly in recent days. This article seeks to learn about consumer satisfaction with online money transfers utilizing the Unified Payments Interface (UPI) in Thanjavur District.

**Keywords** E-payments · Online transactions · Safe and security customer satisfaction · Unified payments interface

## 1 Introduction

The online payment system is a method of transferring money from one account to another with the support of the Unified Interface System for the exchange of goods and services without physical currency. In the journey of technological developments, Credit and Debit cards were used mostly for payment for a few years before, and cards are also not used nowadays as a new technology of money transfer using Unified Interface Systems are introduced.

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As a result of the Popularity of internet-based banking and shopping, online transactions have developed significantly in recent decades. Technology advancement has given enormous payment processing devices in recent years worldwide. UPI has the latest technology that people use in their day-to-day activities. As it supports the mobile even for the minimum amount, it is used even by the low-income group and for transactions that are at minimum cost. In Business Life, in people's life (irrespective of the transaction and its amount, income, age, Geographical Area, and Education of buyer and seller), Money plays a vital role in human life exchange of goods and services.

Transferring money using Unified Interface System is more easiest, more convenient, fast, and safety. Somehow, Our Study tries to know the satisfaction level of customers on online money transfers using UPI. This study attempts to find the level of satisfaction of the customers on online money transfers using UPI and to give the best suggestions to the Customers, Bankers, and marketers of Goods & Services in the research area.

## 2 Review of Literature

Bhubaneswar et al. [1], in this study, entitled "A study on consumer behaviour towards UPI (Unified Payment Interface) payment application based in Nilgiris District" stated that People are not most aware about the safety, security and privacy of the usage of data, etc. customer believes that UPI payment systems are convenient and easy to transfer money without physical cash or cards. Further people handle the tool of UPI as the best option in fast money transactions.

Singh and Rana, in their study, reported that the Educational level of the customers plays a major role in selecting and using the digital payment system. Educated people are most preferably interested and familiar with the smartphone which supports the UPI application. UPI Customers and frequencies of usage increase continuously due to the development of Technologies, Smart Cities, etc.

Parmila Devi [2], "A study on Cashless Transaction: Benefits and Challenges in India" Due to fast Urbanization, Technological changes, Government involvement, and Development of Literacy, people move towards digital transactions in India. Money transfer through the tool of UPI gets positive feedback from most customers. Positive feedbacks, Ease to use, and security in data lead the customer to it frequently and attract new customers easily.

Sukanya and Subbulakshmi [3], "Unified Payment Interface Application (A Study of customer perception with Special Reference to Chennai City)" states that Customers are most satisfied with the options, security of the data of UPI application. But the application developer should improve the options and facilities to fulfill the expectation and needs of customers. Especially, in the area of security level, developers should improve and they can give more information through advertisement to attract new customers by way of giving discounts and offers.

Anjali and Suresh [4], "A Study of customer satisfaction of Bharat Interface for Money (BHIM)" in this Study stated that this research tried to find the satisfaction level of customers through frequency analysis. In the end, it found that customers have positive feedback and satisfaction in UPI usage.

Farooq [5], "Impact of Internet Banking Service Quality on Customer Satisfaction" results show Customer satisfaction in the banking industry about the quality of services, policies, and efficiency, is more. UPI application helps customers and the banking industries to develop their businesses in completing their day-to-day functions in the long run. It encourages new customers to accept and use Internet banking in their routine life.

Mohan et al. [6], Even though UPI application and internet banking provide exciting offer an easy option to use, people search for an alternative application for their transfer. Under this survey, the major issue is fear of the application regarding safety and security in the money transfer.

Abdulrahman et al. [4], "The Impact of Quality E-Payment System On Customer Satisfaction Journal of Critical Reviews" Impact of E-Payment Systems on Customer Satisfaction" Customers have dissatisfaction with the reliability of the transaction. They do have not clear information about the review and cancellation of transactions. Cancellation and modification concepts may be clear to the customers.

## ***2.1 Statement of the Problem***

When we make payments, it is apparent that UPI money payment is much easier. People in India are clearly moving towards digital internet money transmission. The administration has been attempting to rebrand the country as "Digital India." To achieve this goal, it is vital to understand customers' perceptions, awareness, and happiness with an online payment system that uses a single interface system. Many scholars have investigated the implications of digital payment. The researchers are yet to work on the impact assessment of digital payment systems on various stakeholders separately. It would be an interesting area of our research to focus on customer satisfaction on online money transfers using UPI in Thanjavur District. The study will draw attention to the knowledge gap of digital payment systems among customers in the research area.

## ***2.2 Research Methodology***

This is a descriptive and analytical study based on primary and secondary data. Quantitative and qualitative data has been used in this study. In this research, a Structured Questionnaire was prepared, Distributed, and Collected from 120 respondents in Thanjavur District under Convenient Sampling Method. The percentage Method and Chi-Square Method were used to test our hypothesis.



**2.3 Objective of the Study**

The objectives of the research study is for

- Finding the relationship between Source of Knowledge and online money transfer
- Finding the relationship between Safety and Security and online money transfer
- Finding the relationship between Regular Users and online money transfer
- Finding the relationship between User satisfaction and online money transfer

**2.4 Testing Hypothesis**

- H0—No significant association between Demographical factors and Source of Knowledge towards online money transfer using unified payments interface (UPI).
- H0—No significant association between Demographical factors and Safety and Security towards online money transfer using unified payments interface (UPI).
- H0—No significant association between Demographical factors and Regular Users towards online money transfers using unified payments interface (UPI).
- H0—No significant association between perception factors and User satisfaction towards online money transfers using unified payments interface (UPI).

**3 Analysis of Data and Interpretation**

**3.1 Frequency Analysis of Demographical Factors in Online Money Transfer Using Unified Payments Interface (UPI)**

Table 1 shows the Demographical Profile of the Customers. It includes Gender, Age, Education, Employment, and Family Income. The majority of Customers (62.5%) use the UPI money transfer. So, it is clear that the maximum number of Male customers use the UPI money transfer. Most of the customers in UPI money transfer who are the respondents of this study belong to 20–30 years and a maximum of Graduate Customers (67.50%). The majority of customers (25.80%) belong to Private employees and UPI customer’s maximum annual family income is more than 3 Lakhs.

**3.2 Frequency Analysis of Demographical Factors in Online Money Transfer Using Unified Payments Interface (UPI)**

See Table 2.

**Table 1** Demographical profile of the customers

Factor	Description	Frequency	Percentage
Gender	Male	72	60
	Female	48	40
	Total	120	100.0
Age	Below 20 years	22	18
	21–30 years	47	38
	31–40 years	40	33
	41–50 years	4	3
	Above 51 years	9	8
	Total	120	100.0
Education	H.S.C/PUC	12	10
	Degree	84	70
	Post degree	24	20
	Total	120	100.0
Employment	Students	26	21.7
	Self-employment	24	20.0
	Private	31	25.8
	Govt. Employee	15	12.5
	Others	24	20.0
	Total	120	100.0
Family Income	Below 1 Lakh	17	14.2
	1–2 Lakhs	7	5.8
	2–3 Lakhs	40	33.3
	Above 3 Lakhs	56	46.7
	Total	120	100.0

Primary data

### 3.3 *Chi-Square Test for Socio-Demographic Factors and Source of Knowledge Towards Online Money Transfer Using Unified Payments Interface (UPI)*

**Null hypothesis:** H0—No significant association between Demographical factors and Source of Knowledge towards online money transfer using *unified payments interface* (UPI).

**Alternate hypothesis:** H1—Significant association between Demographical factors and Source of Knowledge towards online money transfer using *unified payments interface* (UPI).

**Table 2** Analysis of demographical factors in online money transfer using UPI

Perception factors	Description	Frequency	Percent
Source of knowledge	Str. Agree	61	50.8
	Sl. Agree	46	38.3
	Neutral	10	8.3
	Sl. Disagree	2	1.7
	Str. Disagree	1	0.8
	Total	120	100
Security in use	Str. Agree	41	34.2
	Sl. Agree	54	45
	Neutral	15	12.5
	Sl. Disagree	8	6.7
	Str. Disagree	2	1.7
	Total	120	100
Regular user	Str. Agree	49	40.8
	Sl. Agree	48	40.0
	Neutral	18	15.0
	Sl. Disagree	2	1.7
	Str. Disagree	3	2.5
	Total	120	100.0
Satisfaction	Str. Agree	101	84.2
	Sl. Agree	14	11.7
	Neutral	4	3.3
	Sl. Disagree	1	0.8
	Str. Disagree	0	0.0
	Total	120	100.0

Primary data

As per Table 3, the demographic factors and Source of Knowledge towards online money transfer using unified payments interface (Except Education) values are less compared with the value of 0.05%. Null hypothesis has been accepted and no significant association between demographical factors and sources of Knowledge. Moreover, it concludes that the difference in the education of the respondents is a significant impact on the sources of knowledge towards online money payments using UPI.

**Table 3** Chi-square test for socio-demographic factors and source of knowledge towards online money transfer using unified payments interface (UPI)

Demographical factor	Chi. square -value	Deg. freedom	Asymp. Sig - (2-sided)
Gender	3.145 <sup>a</sup>	4	0.534
Age	9.805 <sup>a</sup>	16	0.877
Education	22.364 <sup>a</sup>	8	0.004
Occupation	14.056 <sup>a</sup>	16	0.595
Family Annual Income	7.971 <sup>a</sup>	12	0.787

Source SPSS 20

### 3.4 Chi-Square Test for Demographical Factors with Safety and Security Towards Online Money Transfer Using (UPI)

**Null hypothesis:** H0—No significant association between Demographical factors and Safety and Security towards online money transfer using *unified payments interface* (UPI).

**Alternate hypothesis:** H1—Significant association between Demographical factors and Safety and Security towards online money transfer using *unified payments interface* (UPI) (Tables 4 and 5).

As per Table 4, the demographic factors and Source of Knowledge towards online money transfer using unified payments interface values are less compared with the value at 0.05%. The null hypothesis has been accepted and no significant association between demographical factors and safety and security. Moreover, it concludes that the difference in the education of the respondents is a significant impact on the sources of knowledge towards online money payments using UPI.

**Table 4** Chi-square test for demographical factors with safety and security towards online money transfer using unified payments interface (UPI)

Demographical factor	Chi. square -value	Deg. freedom	Asymp. Sig - (2-sided)
Gender	3.203 <sup>a</sup>	4	0.524
Age	17.895 <sup>a</sup>	16	0.330
Education	7.000 <sup>a</sup>	8	0.537
Occupation	12.475 <sup>a</sup>	16	0.711
Family annual income	17.105 <sup>a</sup>	12	0.146

Source SPSS 20

**Table 5** Chi-square test for demographical factors with regular users towards online money transfer using unified payments interface (UPI)

Demographical factor	Chi. square -value	Deg. freedom	Asymp. Sig - (2-sided)
Gender	1.941 <sup>a</sup>	4	0.747
Age	19.959 <sup>a</sup>	16	0.222
Education	13.255 <sup>a</sup>	8	0.103
Occupation	14.492 <sup>a</sup>	16	0.562
Family Annual Income	15.902 <sup>a</sup>	12	0.196

Source SPSS 20

### 3.5 *Chi-Square Test for Demographical Factors with Regular Users Towards Online Money Transfer Using Unified Payments Interface (UPI).*

**Null hypothesis:** H0—No significant association between Socio-Demographic factors and Regular Users towards online money transfer using *unified payments interface* (UPI).

**Alternate hypothesis:** H1—Significant association between Socio-Demographic factors and Regular Users towards online money transfer using *unified payments interface* (UPI).

As per Table 5, the demographic factors and Regular Users towards online money transfer using unified payments interface values are less compared with the value at 0.05%. The null hypothesis has been accepted and no significant association between demographical factors and Regular Users. It concludes, since most of the respondents have Slightly/strongly satisfied with the safety & Security of the online money transfer using UPI, Demographic factors do not have any impact on their safety & Security of online money transfers using UPI.

### 3.6 *Chi-Square Test for User Perception with Satisfaction Towards Online Money Transfer Using Unified Payments Interface (UPI).*

**Null hypothesis:** H0—No significant association between perception factors and User satisfaction towards online money transfer using *unified payments interface* (UPI).

**Alternate hypothesis:** H1—Significant association between perceptions factors User's satisfaction towards online money transfer using *unified payments interface* (UPI).

**Table 6** Chi-square test for the perception factors user's satisfaction towards online money transfer using unified payments interface (UPI)

Perception factors	Chi. square –value	Deg. freedom	Asymp. Sig - (2-sided)
Regular User	63.027 <sup>a</sup>	12	0.000
Safety & Security	87.111 <sup>a</sup>	12	0.000
Sources of Knowledge	26.552 <sup>a</sup>	12	0.009

Source SPSS 20

As per Table 6, the calculated value of the perception factors and User's Satisfaction towards online money transfer using unified payments interface values is greater when comparing the value at 0.05% level of significance. So, the Null hypothesis is rejected. The alternative is accepted. So, there is a significant relationship between the Perception factors and Users Satisfaction towards online money transfers using unified payment interface.

## 4 Conclusion and Suggestions

In our research field, this study concludes that Demographical factors such as Gender, Age, Educational level, Occupational, and Income Level do not impact more on the customer's online money transfer using Unified Payments Interface (UPI) except the Education level which differentiates but very less the sources of knowledge in the online money transfer. Demographic factors and perception factors (Regular user, Security & Safety, and Sources of Knowledge) participate significantly in determining the satisfaction of the customers in online money transfers using Unified Payment Interface (UPI) in Thanjavur District, Tamil Nadu. It concludes, that most of the respondents have Slightly/strongly satisfied with safety & Security and sources of Knowledge and then people use UPI money transfer. Perception-related factors play a major role in deciding one's satisfaction level. Application is used by the public only with the perception of safety and security.

## 5 Research Gap

Research has been conducted in a particular District in the state of Tamil Nadu with limited demographical factors and taken perception factors also do not have a significant part in determining the satisfaction of customers in online money transfers using UPI. Further, the researcher can take more factors in demographical than perception-related factors such as safety, security, Sources of knowledge, frequency of usage, etc. in the same district to find the customer's satisfaction on online money transfers using a unified payment interface in the future.

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# Understanding and Addressing Oral Communication Apprehension in Jordanian Students: A Guide to Academic Success



Rashad Faleh Alhasan, Ali Ata Alkhaldi, Ibrahim Fathi Huwari, Hussein Abushaaban, and Khaleel Bader Al Bataineh

**Abstract** The ability to communicate orally in any language is the most important skill. However, many second language learners face constraints in mastering this skill in particular. This qualitative study was conducted to explore and understand the strategies Jordanian students recommended to manage and reduce their fear of speaking English inside and outside the classroom. Interviews were conducted with a sample of students from the Hashemite University (HU) in Jordan to explore their perspectives and strategies regarding their apprehensiveness over communicating in the English language. The sample was chosen from different programs where English is the Medium of Instruction. The findings revealed that the HU undergraduate students highlighted the following five main recommendations for minimising Oral Communication Apprehension (OCA) among HU undergraduates: student-centred learning, an English preparatory programme, curriculum improvement, coping intervention and building self-confidence.

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**Keywords** Oral communication apprehension · Hashemite University · English language · Undergraduate students and recommended strategies

## 1 Introduction

### 1.1 *Background of the Study*

Oral communication is a crucial language skill that foreign and second-language learners have to demonstrate at multiple aspects and levels including the personal and professional spheres [15]. Nonetheless, second language learners, especially foreign learners, are reported to have apprehensive behavior in oral communication and do not demonstrate oral communication proficiency which is not adequately representative of their actual language competence. Communication apprehension can be generally explained as a fear or anxiety that is closely connected with oral communication [20]. This type of anxiety is usually activated when language learners or university students are asked to do public speaking assignments like group discussions, presentations, or any type of oral communication in their university courses. Past research indicated that oral communication apprehension is usually due to students' lack of self-confidence and their inability to represent proper levels of English language proficiency [2, 6]. Oral communication apprehension, i.e., OCA, can occur when students are asked to express their ideas and present their arguments to classmates and their professors in their foreign language [7]. This study intends to investigate Oral Communication Apprehension among Jordanian students at Hashemite University. The Jordanian context is quite interesting because English is taught as a foreign language in Jordan and English students have to demonstrate high oral communication skills inside classrooms while they have limited communication opportunities outside. Moreover, due to the dominance of the Arabic language in the Academic environment in Jordan, it happens that learners and sometimes teachers use the Arabic language in English classrooms as code-switching or translanguaging. This, in turn, reduces the amount of exposure to the English language which is already impoverished in the foreign language context in Jordan. Therefore, Jordanian students are expected to have increased levels of fear and anxiety in oral speaking situations due to their impoverished and limited exposure to the English language not only in the outside foreign context but also inside classrooms. The purpose of this study is to investigate how undergraduate English students can deal with and overcome linguistic challenges as a result of their communication apprehensions. In other words, this study intends to examine the students' strategies, perceptions, and recommendations for coping and reducing oral communication apprehension.

## **1.2 Problem Statement**

Unlike written communication, oral communication for language learners is critically important not only for performing academic tasks but also highly significant in professional settings where freshly-graduates have to communicate their needs, express opinions, and discuss work-related issues, and problem-solving [11]. In the Jordanian context, English students and graduates are required to show high speaking ability and demonstrate high communication skills in the job market. Nevertheless, recent studies on Jordanian English students suggest despite their linguistic competence in receptive skills, i.e., grammar and comprehension, their linguistic competence fails them in productive skills like effective oral communication skills. Swain and Lapkin [18], on the other hand, argue that second language acquisition can be better accomplished through meaningful interactions where social and pragmatic context are provided for the language learners to increase their commands of the English language and boost their self-confidence. In the Jordanian context, similar to EFL settings, language learners have difficulties in improving and enhancing their communication skills in academic presentations, personal conversations, and classroom discussions and debates [5, 13, 17] despite their twelve years of exposure to the English language at schools [1, 3]. The results of these studies come in line with other communication apprehensions that were conducted in many Asian contexts [14]. Although both Asian and Arab learners of English have difficulties in delivering smooth communication performance, Jordanian learners seem to have more levels of communication apprehension that might originate from psychological variables rather than linguistic incompetence or inadequate language proficiency. The variables might comprise of low self-esteem, anxiety, and fear of negative evaluation which can increase learners' apprehensive behaviors in oral communication and feed their reluctance to communicate in English. Through the use of interviews, researchers can probe these variables in detail to understand the strategies that Jordanian students employ to enhance their communication skills and bolster their self-confidence in oral communication. There is a lack of research on oral communication apprehension in the Jordanian undergraduate context and the limited studies that were conducted among Jordanians were not enough to draw a conclusive conclusion on the complexity of oral communication skills and the communication strategies that they use.

This study explored the issue of oral communication apprehension (OCA) among Jordanian university students and proposed recommendations for universities to help alleviate this issue. Findings showed that OCA is prevalent among students and can negatively affect their academic performance and well-being. The study suggests that universities can help students overcome OCA by providing more opportunities for English speaking practice, offering communication skills training, and creating a supportive learning environment.

### **1.3 Research Questions**

The following research question was formed to explore the processes and strategies used by Jordanian undergraduate students at Hashemite University to cope with and reduce their Oral Communication Apprehension.

1. What are the recommended strategies and procedures that could help students to overcome or reduce their level of English-communication apprehension?

## **2 Literature Review**

Early studies on oral communication apprehension (OCA) viewed it as a learned behavior that could be unlearned through intervention and training. More recent studies have taken a communibiological approach to OCA, which views it as an innate trait that can be managed but not cured. The social learning perspective views OCA as a learned behavior that can be unlearned through intervention and training. The communibiological perspective views OCA as an innate trait that is influenced by both genetic and environmental factors. The implications of these two perspectives for intervention are significant. If OCA is viewed as a learned behavior, then interventions can be designed to help people unlearn the behavior. However, if OCA is viewed as an innate trait, then interventions can only be designed to help people manage the trait.

The research on oral communication apprehension (OCA) is still ongoing, and it is not yet clear whether OCA is a learned behavior or an innate trait. However, both the social learning and communibiological perspectives offer valuable insights into the nature of OCA and the potential for intervention. Since the 1970s, scholars have been studying oral communication apprehension (OCA). They have looked into the reasons for OCA, how to treat it, and its impact on students' performance and achievement. Studies have shown that OCA can have a negative impact on students' academic performance. For example, students with high levels of OCA may be less likely to participate in class discussions, ask questions, or volunteer for presentations.

Oral communication apprehension (OCA) is a common problem among learners of English as a foreign language (EFL), including Jordanian undergraduate students [16]. Arab students experience high levels of speaking anxiety when speaking English, which can negatively affect their language learning and academic performance [4]. Several strategies have been proposed to address OCA and enhance speaking fluency and confidence among EFL learners. The study by Alhasan et al. [4] provides valuable insights into the coping strategies used by EFL students to manage their anxiety during English public speaking classes. According to the findings of Alhasan et al. [4] Jordanian undergraduate students displayed seven types of apprehensive behaviors linked to speaking English, which can be categorized into two major psychological groups. These inhibitory patterns include fear of negative evaluation, reluctance to participate and complete coursework, reduced social

interactions, concerns about employability, diminished self-confidence, and disorganized thinking. These factors all have negative psychological effects on the process of English oral communication. Asassfeh et al. [8] provide valuable insights into the impact of language anxiety on students' ability to communicate effectively. The findings of this study suggest that language anxiety can impair students' ability to communicate ideas clearly, which can have a detrimental impact on their academic performance.

### **3 Methodology**

#### **3.1 Research Design**

The study was conducted to understand the experiences of HU students in Jordan about OCA and the strategies they use to cope with this challenge. The researchers interviewed English students from multiple departments and faculties at HU to gain a comprehensive understanding of their perspectives. Interviews were the primary data gathering tool, and observation was used to supplement the data. Creswell [10] "qualitative research as an approach that aims to uncover people's emotions, opinions, attitudes, and perspectives relating to a phenomenon or experience".

#### **3.2 Research Instrument**

The research team conducted voluntary interviews with Jordanian students from Hashemite University to gain insights into their mental processes involved in communicating in English and the methods they recommend to overcome or reduce their OCA when speaking in English. The interview questions were crafted to uncover the components of this apprehension and create a pedagogical plan to help students overcome it in the future.

#### **3.3 Sampling**

The study recruited nine undergraduate students from various disciplines of study at Hashemite University in Jordan through a purposive sampling process. The participants were informed of the research's purpose and assured of confidentiality and the right to withdraw at any point.

### 3.4 Data Analysis

Content analysis is a research method that systematically analyzes written or spoken language to identify patterns and themes. It is a versatile method that can be used to study a wide range of topics, including the anxious experience of speaking out loud. The [12] approach to content analysis is a grounded theory approach. This means that the researcher begins with no preconceived notions about the data and allows the data to speak for itself. The researchers identified patterns and themes in the data and then develops a theory to explain the patterns and themes.

## 4 Findings

To obtain the recommended strategies from the students, it is important to understand the methodology used in the study. In this research, a “tactic” is defined as a conscious and immediate response made by the participant about the strategies that could be used to reduce communication apprehension among Jordanian students. This helped them gain a deeper understanding of the research question. The results showed five strategies as follow:

### Student-Centred Learning

Many students believe that a student-centered teaching approach would help them to learn more effectively and to build their confidence when speaking English. A student-centered teaching approach focuses on the needs and interests of the students, and it gives them more control over their own learning. This can lead to increased motivation, engagement, and achievement.

As a student at a public university, I deeply urge the people who are making decisions to use new teaching methods that depend on the students’ participation. To do an English course for new students to improve their level in English will help (Participant 3).

Our teacher has not taught us the speaking skill at all. I don’t remember my teacher asked me to speak in front of my classmates. The most things they were asked just to answer the questions consist of few words (Participant 2).

To let the students play roles in delivering classes and push them to participations and answering questions (Participant 7).

I would recommend that to give the students the chance to be a part of instructions delivery. I mean not to keep everything on doctors. Students should be a part of lecture which will give them the chance to practise and be familiar with ardenscies. (Participant 9).

Bragg [9] defines a student-centered classroom as “one in which” the focus is on the needs of the individual student, rather than on the teacher or the curriculum. This approach recognizes that every student learns differently and has different interests and abilities. As a result, student-centered classrooms are designed to provide a personalized learning experience for each student.

## English Preparatory Programme

The students suggested that the university should offer a preparatory English language program to help students improve their English skills before they start taking classes in English. This would help students feel more confident and prepared when speaking in English.

To prepare and qualify students very well to get familiar with all situations (Participant 8).

Conducting speaking courses with cheap fees to students I think will help them in this matter. More activities in English for all students will help (Participant 2).

## Improved Curriculum

Students suggested that the university improve its curriculum by offering more communication courses, especially early on in students' academic programs. Offering more communication courses can help students develop their speaking, listening, reading, and writing skills. It can also help them learn how to communicate effectively in different contexts, such as in group settings, in presentations, and in interviews.

"To increase the communication classes, as we have only a class during the four years and most majors at university don't have communications comprehension in their studying plans" (Participant 2).

"I would like to suggest that the courses dealing with speaking comprehension are to be taken during the first two semesters" (Participant 6).

"I recommend not to limit the English language in the classes, I mean the language of study, consider it to be the general knowledge language" (Participant 8).

## Coping Intervention

Students believe that they should be motivated to participate in the class and extracurricular activities that are conducted in English. The following are excerpts from the views they expressed:

If I were a language instructor, I would force all students to use English communications during classes, otherwise, they are not welcomed to stay at the classes (Participant 6).

To motivate them to participate in classes and out of the classes by joining events or ceremonies and speeches within the universities. This will strengthen their personalities...and more activities in English for all students will help (Participant 2).

## Building Self-confidence

Participants made the suggestion that increasing self-confidence is one way to control OCA. They held that the anxiety related to OCA could be eliminated if one was at ease during communication interactions and thought the task could be completed without difficulty.. Specifically, they reported as follows:

I advise the students to be relaxed and to take things easy, as you will discover that one day. As I said before, after presenting a presentation, I said it is not a big deal (Participant 7).

Telling myself, don't afraid, will finish it.' (Participant 9).

The methods listed above are those recommended by HU students for dealing with OCA.

## 5 Discussion

Students in HU were asked to recommend strategies for minimizing Other Language Anxiety (OCA) during communication encounters. Student-centered learning is a teaching approach that focuses on the needs of the individual student. This approach can help students feel more comfortable and confident in their learning, which can reduce apprehension. The students in the study expressed that the current teacher-centred teaching method at the Hashemite University (HU) does not allow them to speak in the classroom environment or in public, which contributes to their levels of oral communication apprehension (OCA). They recommended adopting a student-centred teaching method to give them more opportunities to speak and participate in the learning process, which could help to reduce the prevalence of OCA.

An English language preparatory program can help students improve their English language skills before they start their studies. This can help them feel more prepared and confident in their ability to communicate in English. An improved curriculum can help students learn more effectively and efficiently. This can reduce stress and anxiety, and make it easier for students to succeed.

Coping interventions can help students learn how to manage their anxiety. These interventions can include relaxation techniques, cognitive-behavioral therapy, and stress management. Building self-confidence is essential for overcoming OCA. Students can build self-confidence by setting realistic goals, practicing regularly, and focusing on their strengths. The students' recommendations provide a number of strategies that can be used to minimize OCA. By implementing these strategies, HU can create a more supportive environment for students and help them to overcome their apprehension. This strategy is supported by previous studies that found that training in speaking skills can lead to a reduction in public speaking anxiety. Increasing training opportunities for students could be effective in reducing the level of OCA they experience. Previous studies, such as Saed et al. [19] and have found that training in speaking skills can lead to a reduction in public speaking anxiety. This suggests that providing students with more training could potentially reduce the level of OCA they experience.

## 6 Conclusion

The study aimed to explore the experiences of Jordanian undergraduate students at Hashemite University in overcoming their oral communication apprehension (OCA). Using qualitative research design and interviews, the study found that students recommended several strategies to reduce OCA, including improving the curriculum,

introducing an English language preparatory program, and implementing coping strategies. The study's findings have practical implications for language educators, policymakers, and stakeholders in creating effective teaching methods, improving curriculum, and policies that support the implementation of these strategies to enhance English language education in Jordanian universities.

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# Working Memory and Lexical Knowledge as Factors of Listening Comprehension Among EFL Learners in Jordan



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**Abstract** This study aims at investigating working memory and lexical knowledge as factors of listening comprehension among Jordanian EFL learners. It attempts both how working memory can affect listening comprehension and to what extent listening comprehension is enhanced by lexical knowledge. As an experimental research based on convenience sampling justified by proximity and availability, a number of 30 undergraduate EFL students at Jerash University, Jordan, enrolled in Course no. 102218 English Phonetics participated in a listening pre- and post-test on two levels: working-memory span and listening comprehension. The working memory span (WMS) is a binary test: listening span and listening comprehension as proposed by Daneman and Carpenter [1] as a dual-task test that assesses both listening-related functions storing and processing (cf. [2]). The findings of the study reveal that working memory is the most effective predictor of EFL listening comprehension and the students with larger WM capacities are more likely to be of enhanced listening skills. Regarding the lexical knowledge, it was revealed that being exposed to authentic audio materials exceeds the learners' background lexical knowledge and fosters their level of listening comprehension. Also, authentic language input that levels up the acquired background knowledge is almost to end up with proficiency, knowing that all the language skills are interrelated and necessarily affect each other.

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Lastly, the study provides some implications and recommendations for either EFL learning and teaching.

**Keywords** Working memory · Lexical knowledge · Listening comprehension · EFL learners · Jordan

## 1 Introduction

As a limited-capacity system for storing and input-processing tasks as planning and comprehension, working memory (= WM) has a various set of basic properties. It is transient, limited in capacity, dynamic and intricate [3, 4]. In actual fact, the most prominent element in the WM's hierarchy is its central control by connecting a phonological circlet, visuo-spatial sketchpad and episodic safeguard. Temporarily storing unfamiliar sound patterns is almost the main goal of that circlet while more permanent memory records are created. The same is to comprise two things: (i) a storage system for representing verbal data in phonetic forms and (ii) a rehearsal mechanism for encoding meaning materials. However, both the visual and speech-based information is to be processed by the episodic safeguard, and the visual data is methodically contained in the visuo-spatial sketchpad [5].

Based on above, listening is a considerable language skill for an Arab person or student in particular learning English as a foreign language (=EFL). Without this skill, people cannot verbally communicate. Furthermore, everyone is willing to listen to what English (or any other foreign language) speakers are saying at a natural speed and also understand the same. Actually, EFL learners wish to comprehend English films, TV programs, music, announcements... etc., so the major purpose(s) of learning in this important respect is to get connected with the real world. Anyhow, listening is still very challenging and demanding for EFL learners to acquire and master. Many learners often face problems while listening to a foreign speaker (e.g. English) even though they are doing well in the given language itself. They might even complain that they do not understand what a native speaker is saying in any real-life situations.

Approved as complementary, all the language skills affect and are affected by one another. Listening is an integral receptive language skill that should be initially mastered to be proficient in English as receiving an authentic language input articulated by native speakers ends up with a proficient English learner. Nonetheless, this basic receptive skill is observed to be still involved in our curriculum both insufficiently and inconveniently and, also, delivered by Instructors inadequately or ineffectively. Thus, this study shed light on the importance of listening by investigating and answering the following research questions:

1. To what extent does working memory affect listening comprehension among EFL learners in Jordan?

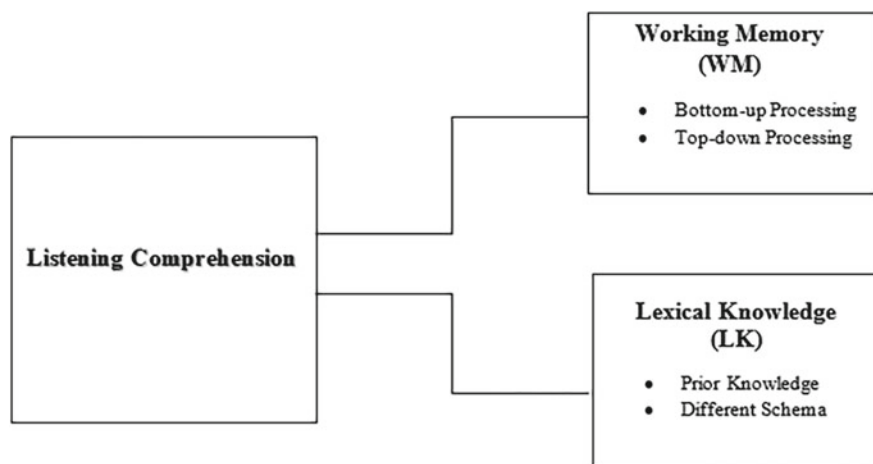
2. How largely can listening comprehension among EFL learners be affected by lexical knowledge?

## 2 Related Literature

### 2.1 Theoretical Framework

Now, listening is such a skill that represents the heaviest processing demands as EFL learners need to both: (i) store information in their short-term memories and (ii) work to understand the information itself. They can “go over the text at leisure but they generally do not have the opportunity to do so in listening” [6], p. 8). A listener actually organizes meaning(s) as he/she uses “cues from contextual information and from existing knowledge” [7]. Being highly active and conscious, the cognitive process of listening can neither be seen nor observed. To understand the listening process, on the other hand, can help revisit the teaching methods in relation to such an important skill as listening. For the same, two main things can be helpful for clarifying this receptive process: working memory (WM) and lexical knowledge (LK). Both components play a fundamental role in listening processing (see Fig. 1).

1. For the working memory (WM), listening is an active process that involves simultaneously engaging in two different forms of processing: bottom-up processing and top-down processing. This allows for the construction of a meaning(s) to take place. Both processes are intricately linked in the construction of ‘meaning’ during listening comprehension. Listeners actively reconstruct the speakers’ intended meaning and obtain meaningful information.



**Fig. 1** An illustrative model of WM and LK in listening comprehension

- (a) Utilizing the incoming data as a source of information about the meaning(s) of a message is referred to as *bottom-up processing* (cf. [8]). It is a lower-level process caused by sounds, words and phrases the listener hears while attempting to decode speech and ascribe meaning [9]. In this view, the process of comprehension begins with the reception of the message to be then dissected at escalating levels of organization.
  - (b) The term *top-down processing* refers, however, to the utilization of prior information for deciphering the meaning of a communication. It is a higher-level process that is provoked by listeners' assumptions and understandings of the context, the subject, the nature of the text, and the nature of the world as well (cf. [10]). There are a few different formats for possessing background knowledge.
2. The lexical knowledge (LK), however, can be largely related to the schema theory implying that any spoken or written language is meaningless on its own. It is a mental action is needed to make it meaningful [11], p. 350). Retrieving the receiver's background knowledge including lexical, context of situation acquired knowledge is the first listening sub-skill applied in order to comprehend any heard English talk or text [12]:
- (a) A meaningful piece of knowledge is the result of the interaction between the talk or text and the reader's or listener's *prior background* knowledge of the world. This world knowledge is taken from one's life experiences and allows people to draw conclusions and set expectations for typical circumstances. Exploring then activating EFL learners' prior knowledge should be the first step leading them to understand the authentic English audio materials [13].
  - (b) Furthermore, they claim that if the speaker and listener have *different schemata*, the listener will be unable to employ the required schemata and may therefore misinterpret the intention of the speaker. [14] also implies that our knowledge of the world is constructed based on our memories and mental images of every social interaction that happens in different places with different people in our daily lives.

## 2.2 Related Research Work

Since working memory is involved in the domain of language learning, it plays a considerable role in EFL language comprehension. According to [15], WM enables the storing/retention and processing of the input while the mind engages in such different activities as verbal reasoning or comprehension. It has been essential for explaining individual differences in how they complete a wide range of practical tasks [3]. Kim [16] examined both the WM ability and gap scores of two different tests at Seoul University with a group of 31 students, all had a fluent command of English. The WM span and test types were shown to be interrelated and the writing tests showed a considerable improvement in performance for those with short WM

spans. Without textual hints, those with stronger memories did better. The core idea, details, and inference were the three sets of questions impacted by the WM span in favour of inference.

Everyday life and academic success both benefit from WM (as well LK) for any cognitive and scholastic skills and written/spoken forms of language [17]. In this vein, a WM capacity was found to affect hearing tests without preview questions. Kim [16] permitted the same 31 test takers to read questions and response options in a multiple-choice test. A strong relationship between WM capacity and gap score was revealed and the students with disabilities could achieve much less when written clues are removed. As regards LK, on the other hand, acquiring vocabulary is essential for EFL learners as the definitions of new words are frequently emphasized [18]. Also, the instructional methodology, materials and learning environment were found to affect an EFL learners productive vocabulary use (Faraj 2015). He/she can effectively transform any receptive vocabulary into a productive one by employing acquisition strategies.

In the same respect, teaching vocabulary could be a problem as no best practices are certain and word acquisition is sometimes ill-formed (cf. [19]). For the same, [20] examined the WM function in language processing and comprehension in a L2-listening context, developing two listening-comprehension passages to apply to 220 EFL learners in English and Persian. A substantial correlation was revealed between the auditory memories in the two language as to storing not processing. Another general finding of this study is that literal listening comprehension involves several types of brain activity. It is almost the relation between WM capacities and English listening comprehension, showing a real association between the Persian and English auditory memories. Additionally, hearing comprehension that is literal versus inferential was found to use different WM processes.

Another research work examined the connection between WM, anxiety and listening comprehension for Persian-speaking students [21]. Sixty students enrolled at a private language school in Hamadan, Iran, were selected to participate in a pre-intermediate programme. For exploring any similarities, the students were given an Oxford Quick Placement Test to complete after they had taken part in two tests measuring their WM spans. Listening comprehension exams and foreign-language listening anxiety questionnaire were also considered. A significantly negative relationship between FL listening anxiety and comprehension and also a substantial proportion of the students experiencing elevated anxieties were revealed. The students were accordingly found to perform inadequately and their WMs were explored to be a powerful predictor of EFL auditory comprehension.

Eventually, learning such a foreign language as English is still important today, not only for communication across countries but also helping learn other things. Magyar et al. (2022) recently examined how the reading and listening skills for first-year full-time undergraduate EFL and their preferred learning strategies (in terms of how they learn and how they use what they learn) are largely related. The students were actually found not to do much better on the listening tasks; however, they did better at getting good pieces of information than at using them. Moreover, most of the people who took the survey said that they usually or always use learning strategies, with the control strategy being the most popular. The structural model showed that learning a

language, gaining knowledge and using that knowledge are all closely linked. Above and beyond, both memorizing and elaborating strategies have a direct effect(s) on the same.

### 3 Research Method

The working memory span (WMS) represents a binary test: a listening span test and a listening comprehension test. Both tests are dealt with together as two complementary parts of the WMS test. As an experimental research based on convenience sampling justified by proximity and availability, a number of 30 undergraduate EFL students at Jerash University, Jordan, enrolled in Course no. 102218 English Phonetics participated in a listening pre- and post-test on two levels: working-memory span and listening comprehension (see the Appendix). In this study, the WM capacity of the participating students measured using an amended version of the Listening Span Test proposed by Daneman and Carpenter [1] as a dual-task test that measures such both functions as storage and processing during listening (cf. [2]). In addition, as a test of working memory span, the Listening Span Test measures individual differences in language comprehension.

The examination consists of 38 unrelated sentences organized into three groups. Group 1 consists of three sets of two sentences each, Group 2 of three sets of three sentences each and Group 3 of four sets of sentences each. Each sentence on Daneman and Carpenter's [1] Listening Span Test contains nine to sixteen words. Since the participating students in the present study were non-native English (or EFL) speakers, as opposed to Daneman and Carpenter's [1] participants, the average number of words per sentence ranges from 9 to 12. This option replicated Shanshan and Tongshun's [2] recommendations on sentence length:

1. the syntax of the sentences is simplified relative to that of Daneman and Carpenter [1], and
2. the items are drawn from background knowledge texts and cover a variety of fields, including any formal, natural, social and human sciences.

Procedurally, the subject students listened to each set of words (or phrases) and then they determined whether the given information in each item was logical by writing (T) if the sentence was really logical and (F) if it was otherwise illogical. The participants then wrote the final word of each sentence on the answer sheet when they heard a signal from the instructor. It is important to note that the students were permitted to reorder the words, with the exception of the final word in the final sentence. The scoring method for this section of the WMS Test was the total method, or the total number of words recalled. For instance, if a participant remembered two out of four words on a given trial, he/she was awarded two points for that trial. Forty two (42) was the maximum score possible. Importantly, the subject participants would not receive credit for a recalled word if their interpretation of the sentence's logic was incorrect.

## 4 Data Analysis/Results

In listening classes, EFL learners should be taught how to listen. The listening-comprehension process should be focused on and the effective listening strategies are then a must. By means of this kind of classes, the learners can learn how to listen and, hence, what they have learned can apply to real-life instances of listening [22]. L1 is still important for EFL learners for explaining grammar, defining difficult vocabs, and checking students' comprehension (cf. [23]). It is a skill with such "competencies [as] which native listeners possess and which non-natives need to acquire in relation to the language they are learning" [24]. The present study generally revealed that the subject EFL learners' having task to record the encountered words helped master them better than to be only introduced or taught in isolation. The findings below are distributed to the two RQs as presented in the introduction of this study.

### 4.1 *WM Affecting EFL*

The issue of WM affecting EFL learners' listening comprehension in Jordan is related to storing information in short-term memories. In response to the first research question of the present study, to effectively comprehend a text or talk is a process involving decoding until the desired meaning(s)—e.g. sounds, words, phrases, clauses and sentences—is well-understood (see Table 1). In actual fact, working memory (=WM) is a crucial predictor of the EFL listening-comprehension process, considering that a larger WM capacity really helps have superior listening skills. Also, the level of use of either strategy (memorization or elaboration) directly affects both knowledge acquisition and application skills. It might be also the background knowledge about the topic discourse, the scenario or context stored in long-term memory in the form of schemata (or "script") plans about the general structure of events and the relationships between them.

The findings indicate that literal and inferential categories of listening comprehension involve distinct WM processes. In addition, keyword techniques are effective for receptive learning, whereas repetition is the best method for producing a foreign word. The nature of the keyword is crucial; while imaginable noun keywords facilitate learning, verb keywords inhibit it. The relationships between language acquisition, knowledge acquisition, and application are significant. Additionally, the individual differences in WM capacity of L2 learners are predictive of their performance on a proficiency exam. All of these rely more on top-down processes than bottom-up ones. On the other hand, the findings indicate that L2 auditory memory correlates more strongly with L2 listening comprehension than L1 auditory memory. In addition, it has been discovered that removing written cues can result in substantially lower scores of achievement for students with a short WM span.

For all and any individual differences, they almost indicate that the greater the WM storage capacity, the greater the performance on auditory comprehension tasks.



**Table 1** WM-related findings as to BuP and TdP<sup>a</sup>

Sr	WM-related findings	WM levels		Further notes
		BuP	TdP	
1	Various types of working memory processes (the top-down one in particular) were engaged by either literal or <i>liberal</i> levels of listening comprehension		☑	Literal or <i>liberal</i> levels
2	The auditory memory in English is more highly correlated with a learner's listening comprehension compared with his/her memory in Arabic	☑		Auditory memory
3	Memorizing keywords is an effective strategy for receptive learning but repetition is a superior strategy for learning to produce English words or phrases		☑	Receptive learning
4	Any verb keywords seemed to largely impede image-able nominal ones despite the fact that the nature of the keyword is crucial for promoting learning		☑	Verb keywords
5	If any written cues in the listening task are removed, lower achievement scores can be significantly shown for the test takers who have low WM spans	☑		Written cues
6	Language learning and knowledge acquisition and the application of the same are largely correlated in the listening-comprehension tasks for EFL learners		☑	Knowledge acquisition
7	The WM capacities of the EFL learners were found to individually differ, the matter which predicts their levels of performance in any proficiency English tests		☑	Levels of performance
8	The larger the WM capacity of storage—as an instance of individual differences—is, the higher the scores can be really seen in listening-comprehension tasks	☑		Capacity of storage

<sup>a</sup>BuP = Bottom-up Processing, TdP = Top-down Processing

The same pertains to the bottom-up process. Accordingly, WM relies more on top-down processes rather than bottom-up processes. The significance of the relationships between WM and listening comprehension rests not only in their influence on the body of knowledge, but also in their profound instructive implications as well as any assessment and curriculum developments. The primary implication of the present study is for concerned policymakers, curriculum designers and material developers for listening courses to recognise WM as a crucial factor in the academic and future

professional success of EFL learners. Eventually, it seems reasonable to recommend that EFL instructors implement educational practises and strategies that help students develop stronger WMs.

## **4.2 *EFL Affected by LK***

For listening comprehension among EFL learners as affected by LK, it concerns itself with working to understand the information itself. In response to the second research question of the present study, some obstacles of the notion (or process of) listening comprehension could be really elucidated if the prior knowledge of a given (non-native) listener's is not effectively activated (cf. [25]) (see Table 2). In this respect, listening plays a noteworthy role in either the educational process or daily communication and although it is a neglected skill in foreign-language learning. Also, the data analysis based on a review of the related literature is so significant for improving the listening comprehension ability of EFL students. A further basic finding of the present study is that having different social and/or cultural backgrounds possibly causes non-native speakers' inability to understand some spoken or written scripts in different languages: talks or texts.

This study shows the importance of assessing EFL learners' prior vocabulary knowledge as a powerful influencing factor. The findings suggest that vocabulary learning procedures and effective vocabulary-learning strategies have a strong impact(s) on the abilities of the EFL students. It has been found that the subject students practicing free choice of vocabulary items and MEM strategies that interest them helps them remember words very easily and use them in an efficient manner. In addition, when the students effectively learn a word(s) themselves rather than being taught receptively, their level of effective use of vocabulary seems to increase. Furthermore, learners showed a significant increase in productive vocabulary use in 35% of the post-tests. A good vocabulary-learning strategy helps to turn reception into production and increase usage of the latter. Therefore, prior/lexical knowledge plays a decisive role in listening comprehension.

According to the outcomes of any different schemas, the results also showed that schema-building activities are beneficial to enhance listening comprehension in the EFL-learning context. A significant percentage of the participants struggle with high levels of anxiety. As a result, they do poorly on listening comprehension tests. Furthermore, some individual differences in LK indicated that larger LK storage capacity was associated with higher scores on listening comprehension tasks. Finally, the students' listening comprehension may be improved by means of factors and strategies peculiar to the English language. Correspondingly, the findings suggest that lexical knowledge can help EFL learners perform better on listening comprehension tests than schema activities. Therefore, it can be broadly stated that such pedagogical implementation has a clear impact on enhancing effective and productive vocabulary acquisition and retention by EFL learners.

**Table 2** LK-related findings as to PKn and DSc<sup>a</sup>

S. No.	LK-related findings	LK levels		Further notes
		PKn	DSc	
1	A vocabulary-learning procedure and the efficient vocabulary-learning strategies have great impacts on the relevant abilities of EFL students in listening	<input checked="" type="checkbox"/>		Vocabulary-learning
2	High levels of anxiety are experienced by a significant part of the students so they performed poorly on the listening-comprehension test		<input checked="" type="checkbox"/>	Levels of anxiety
3	The students seemed to be free of choosing their interest lexical items and be helped by the MEM strategy remember words easily and use it in a productive manner	<input checked="" type="checkbox"/>		MEM strategy
4	The factors that affect English listening-comprehension and the strategies to be followed could improve the students' lexical knowledge capacities		<input checked="" type="checkbox"/>	Knowledge capacities
5	The productive level of vocabulary use was observed to progress as they had learned a single word was productively learned rather than taught receptively	<input checked="" type="checkbox"/>		Learned vs. taught
6	A significant growth was actually observed for the students' productive vocabulary-use particularly in the listening post-test with a percentage of about 35%	<input checked="" type="checkbox"/>		Vocabulary use
7	As also observed by the two relevant listening tests, a fine strategy for learning vocabulary helps turn reception into production and increase the latter's use	<input checked="" type="checkbox"/>		Reception into production
8	The individual differences in lexical knowledge show that the greater the storage LK capacity, the higher the scores on listening-comprehension tasks		<input checked="" type="checkbox"/>	Storage LK capacity

<sup>a</sup>PKn = Prior Knowledge and DSc = Different Schema

Generally speaking, EFL learners should be correctly instructed to know that “achieving skill in listening requires as much work as does becoming skilled in reading, writing and speaking [...]” [26]. In line with [14], the abilities of an EFL learner to distinguish reduced forms of words, identify word boundaries, discover key words and guess all or any lexical meanings from the contexts in which they occur are necessary sub-skills in listening comprehension. Also, such other abilities as recognizing cohesive devices and communicative functions, distinguishing major and minor constituents or literal and implied meanings are very helpful. For LK in particular, using the real world of knowledge and/or experience helps work out purposes, goals, settings, procedures... etc. His/her ability to predicting outcomes from given events and inferring links and connections between them is also essential.

## 5 Conclusions

All of the above mentioned instructional gaps in listening comprehension as observed in English classes, shortage and inappropriateness in the used listening materials and applied teaching practices and activities could be effectively bridged and appropriately filled by the use of some in-class practices. They their instructional materials and listening teaching strategies should be varied and chosen in light of the EFL learners’ levels, interests and needs. In addition, EFL teachers should try to minimize the use of L1 as they realize the effect of authentic input in fostering their student’s ability to comprehend different types of English texts. Along with such suggestions, reflective and interrelated approved level of the acquired vocabulary knowledge on the productive one should be kept in mind. Thus, teachers can try to enhance their student’s receptive lexical knowledge to effectively level up their productive one by default.

To conclude, adapting and implementing those instructional suggestions were put forth to help practitioners and stockholders successfully do their job. They can well-accomplish their goal out of this implemented research that reflects our local in-class listening comprehension practices and confronted obstacles. One more thing to add is that teachers and stakeholders should be reflective just by doing constant assessments then adjusting their practices in light of our local TEFL educational status. Also, other models can apply:

1. [27] model of working memory (as referring to a limited-capacity system that temporarily stores input required for such a complex task as comprehension) as an inferential model (cf. [2]) and
2. Krashen’s [28] input hypothesis classifying schemata into:
  - (a) content (as relating to one’s background knowledge and expectations) and
  - (b) formal (relating to one’s knowledge of rhetorical and discursive structures) (cf. [29]).

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# A Study Impact of Demographical Factors on Consumer's Preference Towards Branded Clothing of Men



P. Kumarasamy and V. Francy Sheeba

**Abstract** Continual changes in the designs, patterns, colors, and materials in the products attract the purchasing decisions of clients who desire to move towards fashion. A variety of factors influence purchasing decisions such as age, education, area, occupation, etc. In this context, our country is evolving into one with a sizable middle-income population and increased demand for locally branded goods such as clothing, food, and consumables. Many Aspects influence purchasing decisions, including price, quality, availability, quantity, durability, and so on. Choice of brand selection may depend on the customer's age, education and income, etc. This research attempts to deduce the factors influencing behavior in the studied domain. The current study focuses on the elements that influence men's preference in purchasing of branded clothing in Thanjavur city.

**Keywords** Product design · Product price · Products durability · Product quantity · And product style

## 1 Introduction

In current marketing, fabric brands play an essential role in influencing purchasing decisions. In our country, dhoti was the ancient men's dress code that gradually gave way to various styles. The concept of globalization was adopted a few decades later. People turned to ready-made clothes, particularly those from international corporations. The business of readymade men's dresses in India was slow until the 1980s. Following that, it gradually climbed due to the lack of tailors' design and sewing prices, among other factors.

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On the other hand, national-level brands are being diminished. The decision to urbanize was made. Additionally, socioeconomic status and habits were altered. Like many businesses in our country, the shift toward 'branding' in production and marketing has been slow. There are a few listed and unlisted players in the market, such as Peter England, Reymonds, Engfiled, Allen Solly, Arrow, Louis Phillippe, Wrangler, and so on. Price is a main factor that influences the buying decisions of the people. Further quality and design too play a major role in many situations. In this study, an attempt was made to discover the customer's purchasing behavior toward branded men's clothing in the research region.

### ***1.1 Research Objectives***

- Investigating the economic and respondents 'demographic profile in Thanjavur who wear branded clothing.
- Investigating the factors that influence the purchase of branded clothing in Thanjavur.
- Analyzing customer attitudes regarding branded clothing in Thanjavur.

### ***1.2 Statement of the Problem***

The most significant assertion is identifying men's clothes users' consumer purchasing behavior. Customers, tell us what kind of branded clothing you like to buy and use also market segmentation is an important tactic that is followed by marketers to find the target clients. In corporations, segmentation has become an important responsibility of management in creating marketing strategies. In the research sector, companies must evaluate the aspects that influence men's purchasing decisions for branded clothing.

### ***1.3 Limitations of the Study***

Despite careful planning, the research project is subject to the following limitations.

1. Because the study is limited to Thanjavur, the findings cannot be generalized.
2. Due to scheduling constraints, the study was limited to 150 participants.
3. The respondent's thoughts and opinions may be current but may change in the future.



## 2 Review of Literature

Dulal and Monirul Islam [1] “Brand Preferences and Frequency of Buying Branded Clothes: A Research on Dhaka City, Bangladesh” concludes that selections of cloth design, quality, and being ready to pay more do not depend on the occupation of consumer respondents. The selection of clothing depends on the knowledge about the brand.

Dulal and Islam [2] The research found that Attraction to purchasing clothes depends on social media such as Print, and electronic media. Social media participation plays a major role in the selection of branded clothing by men.

Lakshminarayana and Sreenivas [3] conducted that from the consumer side, most of them visit the showrooms with not having the mindset of buying clothes. But the way in which they have given information related to the promotion makes the consumer buy and use.

Kumar et al. [4] conducted a study that is mostly to know about the perception of the consumer regarding lifestyle, selecting major facto, etc.

Saluja [5] concludes that they are attracted by their interest in friends etc. The impact on their behaviour is the Quality and Quantity of the consumer. It shows that consumers have the positive.

## 3 Research Methodology

### 3.1 Research – Sampling and Data Collection

This research study used both primary and secondary data. The structured online Google questionnaire was utilized to collect data from 120 respondents from the Thanjavur city which is the research region. For data gathering, the random sample strategy was adopted. Analytical tools of the percentage method and ANOVA in SPSS Package 20 were used. To analyze the data received from the respondents, statistical research tools such as percentage methods and ANOVA were employed. A total of 120 respondents were chosen from the research area.

### 3.2 Research Hypothesis

- **H0:-** No significant relationship between Consumer's age and preference towards branded clothing of men in Thanjavur City
- **H0:-** No significant relationship between Consumer's education and preference towards branded clothing of men in Thanjavur City
- **H0:-** No significant relationship between Consumer's occupation and preference towards branded clothing of men in Thanjavur City

- **H0:-** No significant relationship between Consumer's family income and preference towards branded clothing of men in Thanjavur City

## 4 Analysis and Interpretation of Data

### 4.1 Frequency Analysis of Socio-Demographic Factors in Consumer's Preference Towards Branded Clothing of Men in Thanjavur City

Table 1 Most of the respondents belongs to the age group of 31–40 (49%) years old. Education wise, most of the respondents comes under the group of Graduate (63.3%) and Employment wise, maximum of the respondents belong to Private (25.8%). Family income of the respondents is above 3 lakhs mostly.

**Table 1** Demographic profile of the respondents towards branded clothing of men

Factors		Freq	Percentage	Valid. percentage
Age wise	Below—20 years	22	18.3	18.3
	Between 21 and 30 years	54	45.0	45.0
	Between 31 and 40 years	36	30.0	30.0
	Between 40 and 50 years	2	1.7	1.7
	Above 50 years	6	5.0	5.0
	Total	120	100.0	100.0
Education wise	H.S.C/PUC	18	15.0	15.0
	Graduate	76	63.3	63.3
	Post graduate	26	21.7	21.7
	Total	120	100.0	100.0
Employment wise	Students	29	24.2	24.2
	Self-employment	27	22.5	22.5
	Private	31	25.8	25.8
	Govt. Employee	13	10.8	10.8
	Others	20	16.7	16.7
	Total	120	100.0	100.0
Family income wise	Below 1 Lakh	14	11.7	11.7
	1–2 Lakhs	12	10.0	10.0
	2–3 Lakhs	31	25.8	25.8
	Above 3 Lakhs	63	52.5	52.5
	Total	120	100.0	100.0

Primary data

**Table 2** Age and consumer's preference towards branded clothing

Chi. Sqre - Age and Consumer's preference			
Details	Cal. Value	Deg. freedom	Sig. (2-sided)
Chi-Square	2.517 <sup>a</sup>	4	0.642
Likelihood Ratio	3.047	4	0.550
Linear-by-Association	0.361	1	0.548
N. of Valid Cases	120		

Source SPSS 20

## 4.2 Chi-Square Test

Demographic factors of age and Consumer's preference towards branded clothing of men in Thanjavur City.

**Null Hypothesis**—H0: No significant relationship between Consumer's age and preference towards branded clothing of men in Thanjavur City.

**Alternative Hypothesis**—H1: Significant relationship between Consumer's age and preference towards branded clothing of men in Thanjavur City.

**Results:** From Table 2, the calculated value (2.517) is less than the table value at 0.05% (9.49). The null hypothesis is accepted. Hence we conclude that no significant relationship between Demographic factors of age and consumers' preference towards branded clothing of men in the research area was there. From the above result, we conclude that the demographic factor of age does not have any implication on the preference of branded clothing of men in the area of research.

## 4.3 Chi-Square Test

Significance impact of Demographic factors of Education on the Consumer's preference towards branded clothing of men in Thanjavur City.

**Null Hypothesis**—H0: No significant relationship between Consumer's education and preference towards branded clothing of men in Thanjavur City.

**Alternative Hypothesis**—H1: Significant relationship between Consumer's education and preference towards branded clothing of men in Thanjavur City.

**Results:** From Table 3, the calculated value (1.396) is less than the table value at 0.05% (5.99). The null hypothesis is accepted. Hence, no significant relationship between Demographic factors of Education and Consumer's preference towards branded clothing of men in the research area. From the above result, we conclude that the demographic factor of Education does not have any implication on the preference for branded clothing of men in the area of research.

**Table 3** Education and consumer's preference towards branded clothing

Chi. Sqre—education and consumer's preference			
Details	Cal. Value	Deg. freedom	Sig. (2-sided)
Chi-square	1.396 <sup>a</sup>	2	0.498
Likelihood ratio	1.447	2	0.485
Linear-by-association	0.001	1	0.981
N. of valid cases	120		

Source SPSS 20

**Table 4** Occupation and consumer's preference towards branded clothing

Chi. Sqre—occupation and consumer's preference			
Details	Cal. Value	Deg. freedom	Sig. (2-sided)
Chi-Square	8.436 <sup>a</sup>	4	0.077
Likelihood ratio	9.102	4	0.059
Linear-by-association	3.580	1	0.058
N. of valid cases	120		

Source SPSS 20

#### 4.4 Chi-Square Test

Significance impact of Demographic factors of Occupation on the Consumer's preference towards branded clothing of men in Thanjavur City.

**Null Hypothesis**—H<sub>0</sub>: No significant relationship between Consumer's occupation and preference towards branded clothing of men in Thanjavur City.

**Alternative Hypothesis**—H<sub>1</sub>: Significant relationship between Consumer's occupation and preference towards branded clothing of men in Thanjavur City.

**Results:** From Table 4, the calculated value (8.8436) is less than the table value at 0.05% (9.49). So, the Null hypothesis is accepted, and no significant relationship between Demographic factors of Employment and Consumer's preference towards branded clothing of men in the research area. From the above result, we conclude that the demographic factor of Employment does not have any implication on the preference of branded clothing of men in the area of research.

#### 4.5 Chi-Square Test

Demographic factors of Family Income and Consumer's preference towards branded clothing of men in Thanjavur City.

**Table 5** Family income and consumer's preference towards branded clothing

Chi. Sqre—family income and consumer's preference			
Details	Cal. Value	Deg. freedom	Sig. (2-sided)
Chi Sqre	5.461 <sup>a</sup>	3	0.141
Likelihood ratio	4.862	3	0.182
Linear-by-association	2.442	1	0.118
N. of Valid Cases	120		

Source SPSS 20

**Null Hypothesis**—H0: No significant relationship between Consumer's income and preference towards branded clothing of men in Thanjavur City.

**Alternative Hypothesis**—H1: Significant relationship between Consumer's income and preference towards branded clothing of men in Thanjavur City.

**Results:** From Table 5, the calculated value (5.461) is less than the table value at 0.05% (7.81). So, the Null hypothesis was accepted. Hence, no significant relationship between Demographic factors of Income and Consumer's preference towards branded clothing of men in the research area was there. From the above result, we conclude that the demographic factor of Income does not have any implication on the preference of branded clothing of men in the area of research.

### Suggestion and Conclusion

As per the interpretation, the Significant values of Age, Education, Employment, and Income are less than the table value), Demographical factors do not impact the preference for branded clothing of men, whereas other factors of Price, Quality, Design, Pattern, and media for the sale promotion, are easily available, maybe the factors that impact demographical factors on consumer's preference towards branded clothing of men-with special reference to Thanjavur city".

### Scope of the Future Study

We encourage further research into different connections between Employment and income, age and employment, and other attributes like Quality, Design, and Pattern. Also, as our study refers only to identifying factors that impact on the customer's preference, it represents a good starting point for other investigations into the other remaining attributes too.

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# Career Involvement for Employees in the Kuwait Banking Sector



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**Abstract** This study aims to examine factors that impact career involvement including career opportunities, promotion, recruitment and selection, compensation, training, and development in the Kuwait banking sector. The survey questionnaire was established to examine factors that impact career involvement. Data for this study has been collected from employees working in the local banks. A total of 371 questionnaires were distributed to employees on the front line. Convenience sampling has been used as a key technique for collecting data. Totally, 328 questionnaires were received at the end of the data collection process. Thus, the response rate was 88.4%. The results indicated that career opportunities, promotion, recruitment & selection, compensation, training, and development have a positive effect on career involvement in the Kuwait banking sector. Career involvement is vital for personal growth, achieving goals, enhancing job performance, advancing in your career, building networks, boosting job satisfaction, staying adaptable, gaining confidence, maintaining work-life balance, and finding personal fulfillment in your professional journey. Therefore, this study recommends that managers and decision-makers schedule regular one-on-one meetings with team members to discuss their career aspirations, progress, and any challenges they might be facing.

**Keywords** Career involvement · Employees · Kuwait · Banking sector

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## 1 Introduction

The banking sector in Kuwait was a significant part of the country's economy, and it played a crucial role in the financial landscape of the nation. The banking sector is a significant contributor to Kuwait's economy. It provides financing for various sectors, including real estate, construction, trade, and infrastructure development. The sector also facilitates international trade and foreign investments [1]. The Central Bank of Kuwait is the country's central monetary authority responsible for regulating and overseeing the banking and financial system. It formulates and implements monetary policies and ensures the stability and growth of the financial sector [2]. Kuwait has several commercial banks, both local and international, that provide a wide range of banking services to individuals, businesses, and institutions. Some of the prominent local banks include the National Bank of Kuwait (NBK), Kuwait Finance House (KFH), Gulf Bank, Commercial Bank of Kuwait, and Al Ahli Bank of Kuwait, among others. Islamic finance is an essential part of Kuwait's banking sector, with several Islamic banks operating in the country [3]. Islamic banks offer Sharia-compliant financial products and services, adhering to Islamic principles. Kuwait allows foreign banks to operate within its borders. Many international banks have a presence in Kuwait, providing services to multinational corporations, expatriates, and high-net-worth individuals [4].

Most of the banks in Kuwait face behavioral problems among their employees especially those who have low-level career involvement [5]. Previous studies highlighted that employee engagement at work was recognized as a concept of work attitude and employees were strongly stressed about key factors that would motivate them including putting more effort and time into their work [6–8]. It is also believed that employees will show high career engagement if they are satisfied and satisfied with their work environment. Moreover, employees with high work engagement often tend to use more mental and physical effort during working hours [9]. Similarly, employees with high career engagement usually reach satisfaction with their work accomplishments because of their positive feeling about work, and willingness to commit and focus more on the company; they are expected to stay longer in the company [10]. Thus, this study aims to examine factors that impact career involvement including career opportunities, promotion, recruitment & selection, compensation, training, and development. The structure of this study includes an introduction, literature review, methodology, data analysis, discussion, and conclusion.

## 2 Literature Review

Career involvement refers to the level of commitment, dedication, and active participation an individual has in their professional pursuits. It encompasses how deeply someone engages with their career, career goals, and the overall work environment



[11]. Having a high level of career involvement is often beneficial for both the individual and the organization. Employees who are deeply engaged in their careers tend to be more productive, creative, and resilient. They are also more likely to stay with their employers for more extended periods, reducing turnover rates [12]. For individuals seeking to increase their career involvement, it's essential to align their interests and values with their chosen profession, set clear career goals, and continuously seek opportunities for growth and advancement [13]. Additionally, finding meaning and purpose in their work can contribute to a higher level of career involvement and career satisfaction [14].

Employees with high career involvement often demonstrate the following characteristics: (1) Commitment: They are dedicated to their career and the organization they work for. They take their responsibilities seriously and strive to achieve their goals. (2) Motivation: They have a strong internal drive to succeed and are self-motivated to improve their skills and performance. (3) Initiative: They take the initiative to go above and beyond their regular duties, seeking opportunities to make a positive impact and contribute to the organization's success. (4) Continuous Learning: They are proactive in acquiring new knowledge and skills relevant to their profession, staying up-to-date with industry trends and advancements. (5) Work Ethic: They exhibit a strong work ethic, often putting in extra effort and time to complete tasks and meet deadlines. (6) Career Development: They actively pursue opportunities for growth within their career, whether through promotions, lateral moves, or professional development programs. (7) Career Satisfaction: They derive a sense of fulfillment and satisfaction from their work, leading to higher levels of career satisfaction and overall well-being. (8) Leadership: They may show leadership qualities, taking charge in their roles and inspiring others to perform at their best [15].

In the banking sector in Kuwait, career involvement plays a crucial role in determining overall productivity, career satisfaction, and organizational success. The culture of a bank can significantly impact career involvement [16]. A positive and supportive culture encourages employees to feel a sense of ownership and commitment to their work, leading to higher career involvement [17]. The design of career roles and responsibilities can influence employees' level of engagement. Careers that are challenging, meaningful, and allow for skill utilization tend to foster higher career involvement [18]. Effective leadership and management practices play a vital role in enhancing career involvement. Supportive and inspiring leaders who provide clear direction and recognition for employees' efforts can boost their commitment to their roles [19].

Offering opportunities for professional growth and skill development helps employees feel valued and invested in their careers, increasing their career involvement [20]. A healthy work-life balance is crucial for maintaining high levels of career involvement [21]. When employees manage their personal and professional lives effectively, they are more likely to be engaged and motivated at work. Recognizing and rewarding employees' achievements and contributions can have a positive impact on their career involvement and overall career satisfaction [22]. Encouraging employee feedback and involving them in decision-making processes can make them feel valued and connected to the organization, leading to higher career involvement.

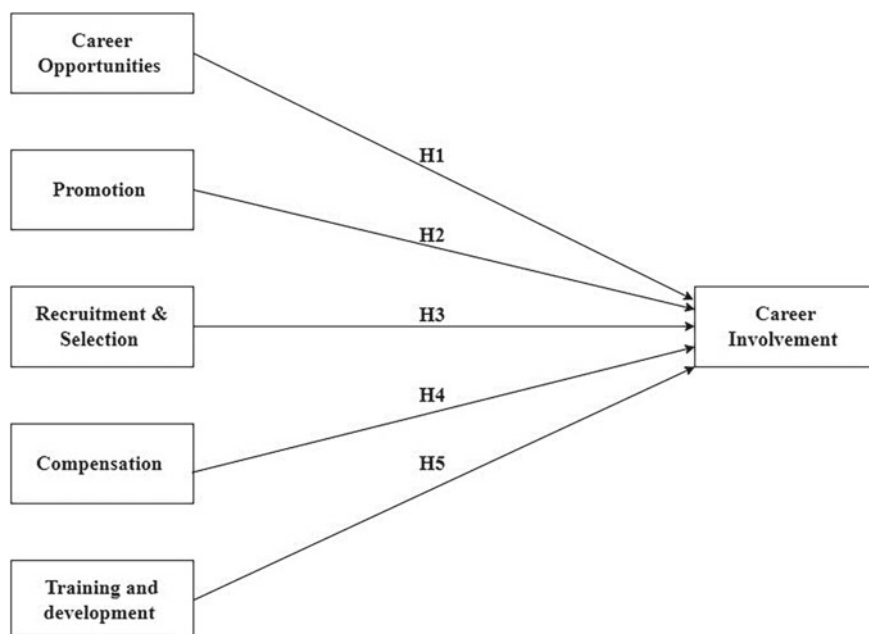
A sense of career security and competitive compensation packages can contribute to higher career involvement and reduce turnover rates [23]. A comfortable and conducive work environment can enhance employees' emotional attachment to their careers and the organization. It's important to note that career involvement can vary among individuals and may be influenced by various personal and organizational factors [24]. Therefore, it's essential for banking institutions in Kuwait to continuously assess and improve the work environment and career-related factors to ensure a highly engaged and productive workforce [25]. Figure 1 shows the theoretical framework of this study. Therefore, the following hypotheses are drawn from the above discussion:

**Hypothesis 1** Career opportunities have a positive effect on career involvement in the Kuwait banking sector.

**Hypothesis 2** Promotion has a positive effect on career involvement in the Kuwait banking sector.

**Hypothesis 3** Recruitment and selection have a positive effect on career involvement in the Kuwait banking sector.

**Hypothesis 4** Compensation has a positive effect on career involvement in the Kuwait banking sector.



**Fig. 1** Theoretical framework

**Hypothesis 5** Training and development have a positive effect on career involvement in the Kuwait banking sector.

### 3 Methodology

The survey questionnaire was established to examine factors that impact career involvement including career opportunities, promotion, recruitment and selection, compensation, training, and development for employees in the Kuwait banking sector from February 2023 to April 2023. Data for this study has been collected from employees working in the local banks including the National Bank of Kuwait, Commercial Bank of Kuwait, Gulf Bank, Al Ahli Bank of Kuwait, Burgan Bank, Al Ahli United Bank, Kuwait International Bank, Kuwait Finance House, Boubayan Bank, Warba Bank, The Industrial Bank of Kuwait. A total of 371 questionnaires were distributed to employees on the front line. Two assistants administered the questionnaire and assisted the respondents during the data collection procedure. Convenience sampling has been used as a key technique for collecting data. Totally, 328 questionnaires were received at the end of the data collection process. Thus, the response rate was 88.4%.

Career opportunities have been measured through four items [26] “e.g., My organization has satisfactory internal career opportunities for employees”. Promotion has been measured through four items [26] “e.g., Qualified employees have the opportunity to be promoted to higher positions within my organization”. Recruitment and selection have been measured through four items [26] “e.g., My organization use valid and standardized tests in recruitment and selection process of employees”. Compensation has been measured through four items [26] “e.g., Compensation system at my organization really recognizes employees who contribute it the work”. Recruitment and selection have been measured through four items [26] “e.g., Training and development programs involve teaching employees the skills they need to perform their duties”. Career involvement has been measured through eight items [27] “e.g., Most of my interests are centered around my job”.

### 4 Data Analysis

SmartPLS has been used in order to data analysis and hypotheses testing formulated from the theoretical framework. Table 1 shows the internal consistency reliability and convergent validity of constructs including factor loading, Cronbach's Alpha composite reliability (CR), and average variance extracted (AVE). The items of data achieved loadings more than 0.7. Meanwhile, all constructs achieved values greater than 0.70 for Cronbach's alpha and composite reliability. Simultaneously, all

constructs achieved values greater than 0.5 for AVE. Consequently, all constructs have values greater than the limit suggested by [28, 29].

HTMT correlations have been used to assess discriminant validity. Researchers suggest the HTMT correlations to be smaller than 0.85 for each latent variable [28, 29]. Table 2 demonstrates that the HTMT Correlations values were all smaller than 0.85 for each construct and within the range of 0.114–0.713.

Hypotheses testing was carried out based on bootstrapping techniques of [30] embedded with SmartPLS as shown in Table 3. The results indicated that career

**Table 1** Internal consistency reliability and convergent validity

Construct	Items	Loadings	Cronbach's alpha	CR	AVE
Career opportunities	CO1	0.701	0.853	0.896	0.614
	CO2	0.889			
	CO3	0.923			
	CO4	0.706			
Promotion	Promotion1	0.869	0.881	0.914	0.652
	Promotion2	0.892			
	Promotion3	0.922			
	Promotion4	0.821			
Recruitment and selection	R&S1	0.876	0.850	0.898	0.689
	R&S2	0.908			
	R&S3	0.870			
	R&S4	0.742			
Compensation	Compensation1	0.786	0.931	0.946	0.743
	Compensation2	0.893			
	Compensation3	0.711			
	Compensation4	0.837			
Training and development	T&D1	0.781	0.940	0.949	0.787
	T&D2	0.827			
	T&D3	0.922			
	T&D4	0.713			
Career involvement	CI1	0.861	0.850	0.898	0.689
	CI2	0.859			
	CI3	0.901			
	CI4	0.799			
	CI5	0.811			
	CI6	0.706			
	CI7	0.869			
	CI8	0.821			

**Table 2** HTMT correlations

Construct	COP	PR	R&S	COM	T&D	CI
COP						
PR	0.236					
R&S	0.621	0.369				
COM	0.336	0.466	0.458			
T&D	0.114	0.471	0.625	0.124		
CI	0.713	0.268	0.684	0.254	0.365	

**Table 3** Hypotheses testing

H	Independent variable	Dependent variable	Path coefficient	T-value	P-value	Result
H1	COP	CI	0.295	4.395	0.000**	Accepted
H2	PR	CI	0.256	4.064	0.000**	Accepted
H3	R&S	CI	0.114	2.511	0.004*	Accepted
H4	COM	CI	0.159	2.987	0.009*	Accepted
H5	T&D	CI	0.288	4.251	0.000**	Accepted

Note \*  $p < 0.05$ ; \*\*  $p < 0.001$

opportunities had a positive significant effect on career involvement in the Kuwait banking sector (Path coefficient = 0.295; P-Value = 0.000). Thence, hypothesis 1 has been accepted. Moreover, the results indicated that promotion had a positive significant effect on career involvement in the Kuwait banking sector (Path coefficient = 0.256; P-Value = 0.000). Thence, hypothesis 2 has been accepted. In addition, the results indicated that recruitment and selection had a positive significant effect on career involvement in the Kuwait banking sector (Path coefficient = 0.114; P-Value = 0.004). Thence, hypothesis 3 has been accepted. Meanwhile, the results indicated that compensation had a positive significant effect on career involvement in the Kuwait banking sector (Path coefficient = 0.159; P-Value = 0.009). Thence, hypothesis 4 has been accepted. Finally, the results indicated that training and development had a positive significant effect on career involvement in the Kuwait banking sector (Path coefficient = 0.288; P-Value = 0.000). Thence, hypothesis 5 has been accepted.

## 5 Discussion and Conclusion

This study aims to examine factors that impact career involvement including career opportunities, promotion, recruitment and selection, compensation, training, and development in the Kuwait banking sector. The results indicated that career opportunities had a positive significant effect on career involvement in the Kuwait banking

sector. This result is consistent with that reported by [27, 31]. Organizations that prioritize providing meaningful career opportunities and development options for their employees are more likely to have a highly engaged and motivated workforce, leading to better retention, productivity, and overall success. On the other hand, employees who actively involve themselves in their work and display dedication are more likely to be recognized and offered additional career opportunities by their employers. The results indicated that promotion had a positive significant effect on career involvement in the Kuwait banking sector. This result is consistent with that reported by [25, 32]. Promotions can further enhance an individual's career involvement and motivation to excel in their professional journey. Organizations that recognize and foster career involvement are more likely to have a motivated and successful workforce.

The results indicated that recruitment and selection had a positive significant effect on career involvement in the Kuwait banking sector. This result is consistent with that reported by [33, 34]. Effective talent acquisition processes can lead to improved job fit, job satisfaction, engagement, and opportunities for growth, all of which contribute to higher levels of career involvement and commitment from employees within the organization. The results indicated that compensation had a positive significant effect on career involvement in the Kuwait banking sector. This result is consistent with that reported by [13, 21, 35]. The level of compensation an individual receives can influence their perception of the value their organization places on their contributions. If an employee believes they are adequately compensated, they are more likely to feel valued and engaged in their career. The results indicated that training and development had a positive significant effect on career involvement in the Kuwait banking sector. This result is consistent with that reported by [36–38]. Training and development initiatives create a positive impact on employees' skills, motivation, and sense of value, leading to higher levels of career involvement and commitment. As employees become more involved in their careers, they are likely to seek out and embrace further opportunities for training and development to continue their professional growth.

Career involvement is vital for personal growth, achieving goals, enhancing job performance, advancing in your career, building networks, boosting job satisfaction, staying adaptable, gaining confidence, maintaining work-life balance, and finding personal fulfillment in your professional journey. Moreover, career involvement is crucial for several reasons as it significantly impacts employees' career growth and overall satisfaction. Therefore, this study recommends that managers and decision-makers schedule regular one-on-one meetings with team members to discuss their career aspirations, progress, and any challenges they might be facing. Provide employees with autonomy to make decisions and take ownership of their work. This sense of empowerment can boost their engagement and willingness to invest in their careers. Offer workshops, training programs, conferences, and other skill development opportunities. This not only helps employees grow but also shows that value their career advancement.

Regarding limitations, the scope of the study was limited to the banking sector, thus we recommend further studies in other scopes such as the education sector and healthcare sector. This study used a cross-sectional approach, thus we recommend further studies using a longitudinal approach. Finally, we recommend further studies using other factors such as HR planning and career planning that may impact career involvement.

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# Adoption of Fintech Among Rural Communities: Challenges and Solutions



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**Abstract** This paper examines the challenges and solutions for the adoption of fintech in rural communities. Fintech has the potential to increase financial inclusion and open up access to financial services, but adoption in rural areas is hampered by particular issues. The lack of financial awareness, restricted access to technology, and trust issues are some of these difficulties. The study evaluates the research on the difficulties rural communities have adopting fintech and examines alternative strategies that can be used to overcome these difficulties. This study summarises the results of interviews with rural residents about the obstacles to and potential solutions for the adoption of fintech in rural areas. Using the Focus Group Discussion (FGD) method, data was collected. The Nominal Group Technique (NGT), which can reveal difficulties, problems, or solutions among the rural populations involved, was used to analyse the study's findings. 10 informants in total participated in this investigation. Among the suggested remedies include enhancing digital infrastructure, offering financial education, and fostering trust through collaborations with regional institutions. In order to ensure the relevance and uptake of fintech solutions, the report also emphasises the significance of incorporating the rural population in their design and implementation. The use of fintech can assist rural populations in accessing financial services, promote financial inclusion, and support economic growth by overcoming these obstacles and putting in place the necessary solutions. Policymakers, financial service providers, and researchers who want to encourage the adoption of fintech in rural regions can learn a lot from this study.

**Keywords** Fintech · Rural

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# 1 Introduction

The financial industry is changing as a result of the financial technology (fintech) boom in recent years [1]. United Nations Environment Programme [2] defines fintech as the use of technology to deliver financial services, including lending, investment, insurance, and payment systems. People who are underserved or excluded from the traditional financial system, particularly those in rural areas, may be able to access financial services through fintech. It is now well acknowledged that financial inclusion is a key factor in both economic progress and the eradication of poverty [3, 4]. But, particularly in developing nations, financial exclusion continues to be a major problem in many rural communities.

According to [9], a lack of access to financial services restricts rural populations' capacity to engage in the formal economy, save money, make investments, and manage risks. By offering affordable, accessible, and convenient financial services [7, 16], fintech has the ability to address some of these issues.

Fintech adoption in rural areas faces particular difficulties because of insufficient infrastructure, limited financial literacy, and mistrust of technology [22]. Collaboration among stakeholders, including the government, financial institutions, and technology suppliers, is necessary to address these issues. Fintech adoption and impact in rural communities, particularly in developing nations, are the subject of a growing body of research. The goal of this study is to comprehend the potential and difficulties of fintech adoption and to offer suggestions for fostering financial inclusion in rural areas.

## 1.1 Problems Statement

Rural areas typically have limited access to financial services and products because they are not typically included in the official financial system [5]. However, the fintech's emergence, has the power to alter this by enhancing rural areas' access to financial services and boosting their level of financial inclusion. Asif [5] noted that the fintech industry provides a variety of digital financial goods and services that can assist rural populations in overcoming conventional hurdles to financial inclusion, such as a lack of physical banking infrastructure and high transaction costs. By facilitating access to loans and other financial services, fintech can also enhance financial literacy and foster economic growth.

Despite the potential advantages of fintech for rural communities, adoption still faces considerable obstacles. The lack of infrastructure in rural areas is one of the main problems. Digital banking services are challenging to use in many rural regions because they lack reliable electricity and internet access. The creation of fintech products and services that are specifically suited to the special requirements of rural areas may also be hampered by this lack of infrastructure [15]. For instance, many

rural communities could need specialised lending and payment products that are not currently offered by conventional fintech solutions.

According to [6], rural communities have very low levels of digital literacy and awareness. There's a chance that many rural communities don't know much about digital financial services or have little access to the training and assistance they need to use them effectively. A broad mistrust of technology and a reluctance to use digital financial services can result from this lack of knowledge and education. Alonso [3] also pointed out that many rural populations would favour cash-based systems and might not perceive the benefit of embracing digital financial services.

When it comes to fintech solutions, there is also a lack of study and comprehension of the particular requirements and preferences of rural populations [7]. Financial institutions might find it difficult to create goods and services that are suited to the requirements of rural areas without this insight. For instance, according to [22], due to variations in population density, economic activity, and cultural norms, fintech solutions that are effective in urban areas may not be appropriate for rural ones. As a result, there can be a lack of particular fintech goods and services that are useful to and available in rural areas.

To overcome these obstacles, further research is required to comprehend the unique difficulties rural communities have in adopting fintech and to identify successful strategies to accomplish this situation. The development of unique fintech solutions that cater to rural people's particular requirements and preferences should be the main focus of research.

## 2 Literature Review

Due to its potential to increase financial inclusion and economic prosperity, fintech adoption in rural regions has grown in significance [8]. Fintech has been generally embraced in metropolitan regions, but is still not widely used in rural ones.

The adoption of fintech in rural communities has been addressed in a number of earlier research. The primary obstacles preventing the adoption of fintech in rural areas, according to a report by [9], are a lack of infrastructure, a lack of financial literacy, and the expensive cost of technology. The study also discovered the potential for mobile money to broaden financial inclusion in rural areas.

Similar to this, Simatele et al.'s study from 2022 discovered that the main obstacles to the adoption of fintech in rural regions include a lack of infrastructure, restricted access to technology, and low levels of digital literacy. The study also discovered that the usage of mobile banking and electronic payment systems can contribute to greater financial inclusion in rural areas.

Furthermore, a study by [10] discovered that the biggest obstacles to the adoption of fintech in rural areas are a lack of trust and faith in fintech services as well as limited access to technology. According to the study, increasing trust and educating people about fintech services can boost their use in rural areas.

Additionally, a study by [4] discovered a positive relationship between financial inclusion and economic growth and the uptake of fintech in rural regions. According to the study, in order to increase the acceptance of fintech in rural areas, policymakers should concentrate on enhancing infrastructure, offering financial education, and encouraging digital entrepreneurship.

### 3 Methodology

In accordance with [8], this study's methodology uses a qualitative approach, which places an emphasis on exploring individuals or groups in order to acquire a thorough insight of their lives. This strategy is consistent with Kothari's recommendation from 2009 to observe attitudes, opinions, and behaviours based on the situations of the informants. This survey is appropriate for obtaining comments and viewpoints from Malaysian rural residents regarding the problems as well as solutions to financial technology.

Ten informants for each three groups participated in semi-structured interviews that were performed using a focus group discussion (FGD) methodology as the data gathering strategy for this study. Data analysis was done using the Nominal Group Technique (NGT). The NGT method may be useful for eliciting opinions on topics brought up in face-to-face dialogues, according to [20]. The NGT method, which enables informants to present their ideas in a prioritised order, is a fair and well-liked strategy in investigations that demand quick results [13].

### 4 Findings and Discussion

The delivery of financial services to underserved and excluded people, particularly those in rural areas, has the potential to undergo a revolution with the advent of financial technology (fintech). Rural areas can engage in the formal financial system and enhance their prospects for economic growth by using fintech to provide them with affordable, accessible, and convenient banking services. Fintech adoption in rural areas has been hindered by a number of issues, including poor infrastructure, a lack of financial literacy, mistrust about technology, a lack of access to financial services, high costs, a restrictive regulatory environment, and limitations based on language and culture. In order to encourage the adoption of fintech in rural communities, this study will explore these issues and offer solutions.

## **4.1 Challenges**

The lack of digital infrastructure is one of the main problems that rural areas encounter. Rural communities still have limited access to digital infrastructure even though the world is transitioning to a digital economy. For instance, it is frequently difficult to acquire energy in rural locations, and cell network coverage and internet availability are frequently unstable. Because customers need reliable internet connectivity and electricity to access and use fintech services, these factors greatly restrict their adoption. Rural communities cannot use online banking services, mobile payment platforms, or other fintech services without this digital infrastructure. Their inability to participate in the digital economy and restricts their financial inclusion are both caused by a lack of digital infrastructure.

Another key obstacle to rural populations adopting fintech is a lack of financial knowledge. Many residents in rural areas lack the knowledge and abilities required to successfully grasp and utilise fintech products and services. Programmes that promote financial literacy can aid in resolving this issue by equipping rural populations with the information and abilities necessary to use fintech services efficiently. To ensure that they reach as many individuals as possible, financial literacy programmes might be provided through community education initiatives, social media, or other digital platforms.

The distrust of technology-based financial services is another issue preventing the development of fintech in rural areas. To form relationships and foster trust, many rural populations prefer face-to-face encounters with financial institutions. Fintech services may not be as trusted as conventional financial services that involve human interactions and rely on technology and automation. Due to a lack of trust, people in rural areas may choose to stick with tried-and-true traditional financial services rather than adopting fintech services. Fintech companies can collaborate with established banking institutions to develop trust and confidence among rural areas as a solution to this problem.

Rural areas have additional difficulties due to limited access to formal banking services. Lack of access to banks and other financial institutions can restrict the availability of financial services in many rural regions. Because of this, it may be challenging for rural areas to save, invest, or obtain loans when necessary. By expanding access to financial services in these places, fintech services that may offer financial services to rural communities can assist in addressing this difficulty. However, when developing their products and services, fintech companies must take into consideration the particular difficulties and requirements of rural populations.

Another key obstacle to rural communities utilising fintech services is affordability. Users of many fintech services need smartphones, internet access, and other digital devices. Many rural populations might not be able to purchase these costly gadgets. A lot of rural populations may find various fintech services to be costly due to fees or minimum balance requirements. Innovative approaches, such collaborations with mobile network operators or government subsidies for digital gadgets, are needed to address the affordability issue.

## 4.2 Solutions

The way of people controls and manage their finances has been revolutionised by financial technology (fintech). Due to the convenience that provided by fintech facilities, fintech solutions are being used more and more frequently in urban areas. Rural areas still struggle to adopt fintech, which makes it more difficult for these communities to become financially inclusive. The obstacles to fintech adoption in rural areas can be overcome in several ways.

The absence of infrastructure to support the adoption of fintech is one of the major issues in rural areas. Access to fintech solutions is frequently made difficult by the lack of reliable electricity and internet connectivity in rural locations. Governments and financial organisations can address this problem by funding the construction of infrastructure in these regions. Creating a reliable internet and electrical infrastructure in rural areas will enable fintech solutions to operate without any issues, making it easier for rural people to adopt fintech.

The lack of knowledge and education regarding fintech solutions is also a key barrier to fintech adoption in rural areas. Many residents in rural areas are unaware of the advantages of fintech or are unsure of how to use its products. Programmes on financial literacy can be offered by financial institutions to inform residents of rural areas about the advantages of fintech and how to use it. Additionally, through awareness campaigns and financial education initiatives, governmental entities can encourage the adoption of fintech in rural areas.

Due to the differences in lifestyles and financial requirements, fintech solutions developed for urban areas may not be viable for rural locations. Fintech solutions has to be created with a localization strategy, taking into consideration the particular requirements of rural areas. For instance, agent banking, in which agents assist customers with financial transactions, may be more effective in rural areas than mobile banking services. Adoption will be aided by fintech solutions made specifically for rural areas' unique demands.

A comprehensive approach involving governments, financial institutions, fintech providers, and other stakeholders is needed to solve the difficulties associated with the adoption of fintech in rural regions. By addressing these issues and putting the above-discussed solutions into practise, we can build a more accessible and inclusive financial system that benefits everyone, including rural communities.

## 5 Conclusion

In conclusion, the adoption of fintech in rural areas offers significant opportunities for economic development and financial inclusion. To ensure that rural areas can use and profit from fintech services, a number of issues must be resolved. A variety of approaches involving governments, financial institutions, fintech providers, and other stakeholders is needed to address the difficulties. To guarantee that rural areas

have dependable internet connectivity and access to electricity, governments must invest in digital infrastructure. Financial institutions should provide financial literacy programmes to assist rural people in comprehending and efficiently utilising fintech offerings. By collaborating with established financial institutions providing economical solutions that cater to the particular needs of rural communities, fintech firms must gain the trust and confidence of these communities. In order to encourage the expansion of fintech services in rural areas, regulators must provide clear and predictable regulatory frameworks.

In general, overcoming these obstacles requires the cooperation and involvement from all parties. Overcoming these obstacles will support financial inclusion and regional economic growth while maximising the benefits of fintech adoption in rural communities. Governments, financial institutions, fintech companies, and regulators may work together to build a more accessible and inclusive financial system that benefits all parties.

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# The Effect of Fintech on Indonesian Banking Business Model



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**Abstract** In order to achieve competitive fintech product innovations, banks seek a deeper understanding of their customers. In the short term, banks are imitating fintech product services by providing multifunctional mobile banking applications. Banking business actors respond to the challenge by adopting a customer-centric paradigm and perceiving fintech as an opportunity for innovation, investment, partnerships, and independent platform development. Therefore, this study aims to investigate the impact of fintech on the banking business model in Indonesia using a qualitative research approach. Thematic analysis is guided by the concepts of sensing and response. Researchers utilized NVivo 11 software to identify themes. In order to obtain the data, a literature review including corporate reports, articles in newspapers, corporate websites, and press releases was conducted. To improve validity, interviews and observations were also made. The results show that Indonesian banks view fintech as a competitive force that may provide distinctive client experiences and pose a threat to their established business models.

**Keywords** Fintech · Banking business · Business model

## 1 Introduction

Technology is an inseparable part of human life. Technology is able to change patterns of relationships and patterns of interaction between humans. These changes will change the culture and behavior of the community [1]. It has been noted that there have been several radical changes that have occurred to date, affecting the development of technology, culture and human behavior [1]. The changes were industrial

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revolution 1.0, industrial revolution 2.0, industrial revolution 3.0 and industrial revolution 4.0 towards industrial revolution 5.0. This change causes a spike or jump that takes human life in a more advanced or modern direction which makes it easier to live life. This change also brings socio-cultural conditions to become an important element that influences revolutionary creativity. Fundamental changes in the way of work. Disruption as a result of technological developments is very common in today's business world [2]. Changes in 4.0 or the digital era have changed business fundamentals today, including the banking financial industry sector. The presence and development of technology has given rise to new business models that are more effective and efficient. Collaboration and innovation are business keywords in the digital era, therefore knowledge is the main resource. In the digital era, knowledge has become a determining factor of production. In addition, an innovative, proactive, risk-averse, aggressive, autonomous and competitive attitude is what entrepreneurs in the digital era must have. Banking is a sector of the financial industry that has an important role in the economy of a country. In addition, banking is a very dynamic business and is flexible in dealing with technological developments. An adaptive form of banking business that responds to change with innovation which then creates new business models.

Based on Indonesian banking laws, the role of banks is to carry out the functions of depository, lending and providing financial services. Fintech is replacing the role and function of banking. Fintech is changing the future of banking by replacing the role of banks. The presence of fintech influences bank revenue globally by up to 20% [3]. This situation brought fintech into open competition with the financial industry, including the banking sector. Based on research results from [4] and [5], the service solution for conventional banks to create creative and innovative products by cooperating with technology companies and cellular companies. The importance of conducting research on new ecosystems because new systems are not always compatible with the business model and processes [6].

## ***1.1 Objective***

The objective of this study is to determine the effect of fintech on the banking business model.

## 2 Literature Review

### 2.1 Modeling Business

In recent years, business models have attracted great attention from various circles, both academics and practitioners. Since 1995, more than 1177 journals and scientific articles with the main focus on discussing various ideas and ideas about business models have been published and to date we can find articles related to business models in the millions. Business model research will always be a necessity as human life develops. To clearly understand the definition of a business model, the researcher uses terminology from previous researchers who developed business model research as shown in Table 1.

The evolution of business models in the digital era demonstrates that the future bank, in all of its forms, will be a direct outcome of the modification of the current banking business model. There have been many scientific investigations into the uniqueness of this business model, but less so is its ever-changing nature. Table 1 illustrates how these business models disintermediate the role of traditional banking and match earners and savers. Business is a process of creating value and winning

**Table 1** Definition of business model

Literature	Definition
[4]	Defines that business model as a source of all competitive advantages possessed by an organization that differentiates it from the company's positioning of products in the same industry
[5]	Defining a business model is a tool that regulates each element so that it can work in a systematic way
[7]	A business model is a coherent framework that transforms the traits and possibilities of technology into economic inputs
[8]	An overview of how a set of interconnected decision variables in the domains of business strategy, architecture, and economics work together to create a long-term competitive edge in the marketplace
[9]	The manner in which a corporation establishes its competitive strategy through the design of the products and services it offers to the market
[10]	A business model is an illustration of the business elements that interrelate to create value
[11]	Model is a way of defining a company's offering to other economic actors
[12]	The business model is the conceptual framework modeling the company as a system of interdependent activities to create value and also to derive value from it
[13]	The business model is how the organization creates, delivers and captures value
[14]	A business model is a description of an organization and how it operates to accomplish its objectives
[15]	A business model explains the framework for how a company develops and provides value to consumers as well as the methods used to take a cut of that value

back that value and a model is simply a representation of reality [16]. However, the business model that is designed must be able to generate money or value and be sustainable.

## ***2.2 Digital Technology Changing Banking Business Models***

The business model design will provide an overview or roadmap for change [17, 18] and will provide an overview of the status of the direction of business management towards what the company aspires to be. The emerging business model is the result of technology-influenced innovation that disrupts conventional business models [19]. Business model innovation is a corporate approach for value creation. Business the innovation model is the latest development model over the previous business model. Talking about technological developments such as the internet which is associated with business innovation causes changes in the business model.

New business model innovation must be based on customer needs by incorporating technology as a service tool that will provide customer experience. Innovation business models at the level of technology implementation require quite a long time, because business models tend to be more contextual and not fixated on technology. On the other hand, businesses in the digital era are required to make changes quickly if they want to exist and be able to compete.

Conventional business transformation into a digital-based business cannot be carried out spontaneously, because changes influenced by technology affect all lines of business. The changes in the business model construct are categorized in automation, extension and transformation (AET) [20]. Furthermore, the automation is the use of digital technology to automate business activities and processes. Extension is the condition when a business uses digital technology to but not to replace activities and processes. Transformation is when digital technology is used to run a business that previously ran traditionally.

## ***2.3 Fintech***

Fintech is an abbreviation of Financial Technology. Technology is a key element of the term FinTech has become key in dealing with financial processes [21]. Fintech is an innovation in the field of technology and finance that aims to create efficiency in the financial world. The integration between technology and finance has created an innovative product called FinTech. Fintech is a financial service that uses technology to increase the efficiency of the financial system through the medium of mobile phones/smartphones [22]. Fintech service companies or IT backed financial platforms [23]. Fintech utilizes technology to provide financial solutions [24]. Is a technology application that aims as a financial intermediary. Financial Technology is a financial technology that provides solutions for the financial industry in the

technological era, for example innovation in the development of applications, products or business models in the financial services industry that uses technology [25]. Blockchain is one of the technologies in the financial sector that is trusted because of its security and will change the model of the global financial industry [26]. Fintech is an innovative product of the financial system and technology. The purpose of the birth of Fintech is to create efficiency in the financial world. For example, mobile payment is the largest type of fintech in Indonesia, which is 39% [27]. Some scholars define fintech comprehensively, namely financial technology innovation that creates business models, applications, business processes and products that affect business activities related to financial services.

Organizations that are included in the Fintech ecosystem will be good business drivers. According to [21] organizations that are part of the ecosystem and are involved in the first fintech business, The external organizations that act as regulators for examples, Financial Services Authority and Government Organizations. Second, Internal Organizations are organizations or companies that use Fintech services in their business transactions. Third, Network Organizations, namely organizations that are directly involved in the Fintech business network for example, Startups, Fintech Companies, IT Companies, Telecommunications Companies. While driving FinTech Financial Institutions, Regulators, IT Companies, Startups, Accelerators, consulting firms, government organizations and Telecommunications companies [23]. Figure 1 has shown the Indonesia’s fintech ecosystem.

Indonesia is ranked the third largest in fintech users after India, Brazil, Indonesia, America and Russia. The rapid development of fintech service users in Indonesia is a challenge for business people and regulators, in this case the Financial Services Authority (OJK) and Bank Indonesia (BI), to develop the fintech market. Indonesia as a country with the third largest population in the world makes Indonesia a big market in the fintech industry.

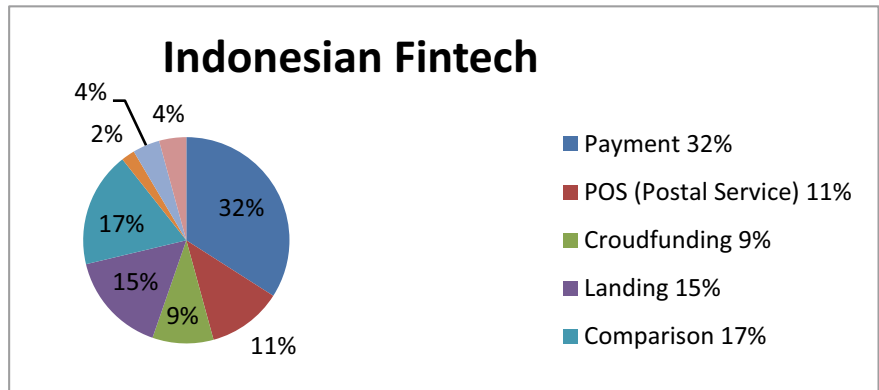


Fig. 1 Indonesia’s fintech ecosystem

### **3 Methodology**

#### ***3.1 Research Models***

Indonesia is one of the countries with the third largest population in the world with a Muslim majority. In Indonesia there are several groups of banks called commercial banks, people's credit banks, regional development banks called BPD. Of the 3 major groups consisting of foreign banks and local banks. For this research, we will only discuss 3 commercial banks which are considered to be in the category of banks capable of carrying out technological innovations and providing comprehensive services. With a wide variety of service variants. Then the literature serves as a basis for analyzing content, interviews are used to strengthen the data obtained from the bank. Then non-participant observation becomes a complement to strengthen the validity of qualitative research data. An investigation was conducted to examine the differences and similarities between how Fintech influences banking business models, as well as how companies address the challenges presented by the increasing fintech industry [28].

#### ***3.2 Research Mechanism***

The research mechanism is used as a guide in research implementation. In this case, we used organizational reports, media articles, organizational web pages, and press releases to conduct a practitioner's literature evaluation. We restricted our search to these sources since published information is assumed to have been subjected to some level of information verification prior to publication. Furthermore, interview and observation data are used to confirm each other to produce better validity.

#### ***3.3 Data Collection and Data Analysis***

Data in the form of documents, is an important source of data collection in this study, including photos, videos and pictures. Interviews are the second method of data collection efforts, in this case, 3 representatives from commercial banks in Indonesia. Our literature uses Google Scholar and other web journals from Scopus journals and others. In terms of data analysis stages, we use the notions of sensing and responding to guide theme analysis. To help us detect themes, we employ the NVivo 11 program. Ideas stated in different ways but referring to similar endeavors are put together under the general category [29]. The outcomes of the analysis are highlighted in the next section.

**Table 2** Results of banks' initiatives

Dimensions	Initiatives	Description of Initiatives
FinTech sensing initiatives	Deep engagement with customers	Identify and recognizing customers desires
	Technology scanning	Seeking knowledge on technology innovation
	Crowdsourcing of FinTech Ideas	Obtaining FinTech related ideas from various internal and external sources
	Channels for inbound FinTech knowledge	Obtaining knowledge from external specialists
	Actively monitors activities of FinTech players	Attempt to understand the characteristics of other FinTech firms
FinTech responding initiatives	Settings up innovation labs	Banks have setup innovation labs for inhouse innovation development
	Investments	Banks provide venture capital and invest in FinTech start-ups
	Partnerships	Working together with other banks and FinTech start-ups
	Platform design and development	Banks actions relating to buildings, designing and redevelopment of digital platforms

## 4 Results and Discussion

### 4.1 Results

The results from the studies found that some have been optimized in response to the rapid growth of the business Fintech (Table 2).

### 4.2 Discussion

The bank is currently drafting strategies and steps to ensure it is able to compete with fintech, in this case we have identified five areas of bank focus in responding to fintech dynamics.

- (a) **Fintech innovation departs from the paradigm of customer needs which then gives birth to technology-based financial service innovation products**



[30, 31]. Fintech provides fast and cheaper services compared to conventional banks. Based on the data obtained from Table 3, it shows that the paradigm of the banking industry has shifted from being product centric to consumer centric. This is in line with interview data with three banks which in service have utilized social media and other digital devices to interact.

- (b) **Technology Scanning:** Based on the data in Table 3 it shows that 3 banks have initiatives to provide digital services by providing a form of service similar to fintech. This shows that banks realize that they have the trust capital to make their customers and the public use their digital services rather than fintech which does not have a physical service office. It doesn't stop there, based on data and interview results, 3 banks are currently reviewing blockchain technology for adoption in innovating digital services.
- (c) **Crowdsourcing of FinTech ideas:** Banks carry out strategies to find ideas by investing in start-up businesses, research collaborations with academics. Then for the short-term strategy the bank imitates the technology-based service model provided by fintech.
- (d) **Channels for inbound FinTech knowledge:** Banks actively seek to draw knowledge from external sources. Drawing on external knowledge is a common practice with banks and other organizations to prescribe knowledge and directions in certain situations that are not familiar to the company.
- (e) **Actively monitoring FinTech players:** The data shows that there are efforts by banks to always monitor and study the characteristics and nature of fintech services. It cannot be denied that fintech services are better in terms of reach, speed, efficiency and cost. FinTech carries innovative service products that are better than banks [32]. Therefore, the development of mobile banking services that carry mobile application can provide a variety of services similar to fintech.

## 5 Conclusion

Banks in Indonesia have realized that fintech is a competitor that can provide a different experience than conventional banks. Banks in Indonesia have also realized the paradigm shift from product centric to customer centric which requires banking services anytime and anywhere. The banks respond to fintech as a challenge and opportunity which then sets up innovation, investment, partnership and design laboratories and towards the development of an independent platform. Banks in Indonesia seek to understand customers to find competitive fintech product innovations. In the short term, the bank carries out a strategy of imitation of fintech product services through a mobile banking application. The initiatives carried out by this bank have created new business models for the banking industry in the digital era.

**Table 3** Result of second level initiatives

Initiative	Sub-category	Bank 1	Bank2	Bank3
<i>Deep engagement with customers</i>	Interact with customers	/	/	/
	Use live chat on mobile devices	/		
	Obtain customers insights	/		/
	Monitors customers desires with mobile devices	/	/	/
	Explore ways for better customers services			/
<i>Technology scanning</i>	Explore the use of voice biometrics	/	/	
	Trials emerging technologies		/	/
	Test Blockchains and cryptocurrencies	/	/	/
	Realizing the benefits of big data	/		
	Recognize sentiment to digital assets		/	/
	Recognition sentiment towards cryptocurrencies	/	/	/
	Participate in novel technology events		/	
<i>Crowdsourcing of FinTech Ideas</i>	Attract ideas across the firm			/
	Harvest ideas from society		/	
	Participate in Hackathons		/	
<i>Channels inbound FinTech knowledge for</i>	Settings up advisory panels	/	/	
	Engage consultancy service	/		/
	Consult on modular finance			/
	Organize training course	/		
	Recruits staff with FinTech insights	/	/	
	Integrated promising FinTech ideas	/	/	/
<i>Actively monitors activities of FinTech players</i>	Learn FinTech culture	/		
	Looking for firms with specific business focus			/
	Observe evolved FinTech Scopes	/	/	/
	Identify ecosystem leaders			/
	Monitors threats posed by Fintech		/	
	Abreast of developments			
	Monitors FinTech from inception			
<i>Setting up innovation labs</i>	Launch innovation lab	/	/	/
	Innovations lab to develop and test		/	/
	Innovations lab to foster investment			/
	Innovations lab to foster partnerships		/	/

(continued)

**Table 3** (continued)

Initiative	Sub-category	Bank 1	Bank2	Bank3
<i>Investments</i>	Acquire emerging FinTech	/		/
	Launch venture funds	/		/
	Replicable test investment		/	
	Finance rivals for innovative solutions			
<i>Partnerships</i>	Partners with incubators/accelerators	/	/	/
	Foreign collaboration		/	
	Collaborate with start-up	/		/
	Partners with promising FinTech	/	/	
	Collaborate with tech firm	/		
	Collaborative sharing of data	/	/	/
	Partners to improve in-house capabilities	/		/
	Partners to enable innovation	/		
	Partnerships to share experience	/		
	Partners analytic firm	/	/	/
	Partners with other banks	/	/	/
	Trials partnerships			
	Consortium to cryptocurrencies test blockchains and	/	/	/
<i>Platform design and development</i>	Release regular platforms updates	/		
	Builds open FIRE	/		
	Launch new digital channels for service application			/
	Improve platforms appearance/ functionality	/		
	Builds feature on modern digital technology	/		
	Adopt cloud platforms	/		
	Develop new platforms	/	/	/
	In-house solution development		/	/
	Overhauls cores system		/	
	Builds blockchains	/	/	/

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# Maqashid Sharia and Harmonizing Law in Indonesia: Impact for SDGs Global Context



Isman, Muntaha Artalim Zaim, and Aisha Baha Eldeen

**Abstract** This research delves into the Maqashid Sharia legal reasoning model and its profound impact on the indigenization of law in Indonesia, analyzed within a global context. The study explores the practical application of Maqashid Sharia principles and their influence on the adaptation and contextualization of Islamic law in Indonesia's legal system. The research delves into various normative legal issues using a philosophical analysis in addition to interpretative and holistic methodologies. The findings underscore the pivotal role of the Maqashid Sharia legal reasoning model in promoting an inclusive and contextually relevant legal system that accommodates both local and global perspectives. This approach enhances the harmonization of Islamic legal principles with changing societal norms and international standards. Moreover, it enables the preservation of cultural identity and values while adhering to the broader framework of human rights and global legal norms. Ultimately, the research provides valuable insights for policymakers, scholars, and stakeholders seeking to advance a progressive yet culturally sensitive legal framework in Indonesia and contribute to the broader discourse on the harmonization of law within a global context.

**Keywords** Maqashid sharia · Legal reasoning · Harmonizing law · Global context

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## 1 Introduction

The Maqashid Sharia legal reasoning model and its implications for the indigenization of law in Indonesia have become a significant area of research within a global context [1]. This phenomenon revolves around the practical application of Maqashid Sharia principles in shaping Indonesia's legal system while considering both local cultural identity and global legal norms [2]. The application of Maqashid Sharia legal reasoning principles as a means of human rights protection for the Muslim Rohingya minority and ASEAN's regional efforts are explored in this study. The research reveals the alignment of Maqashid Sharia principles with international human rights norms, as outlined in the Universal Declaration of Human Rights of 1948 and the ASEAN Charter. Moreover, it highlights the responsibility of ASEAN member states, including Indonesia and Malaysia, in safeguarding the rights of the Rohingya community [3].

The significance of this research is rooted in the urgent necessity to reconcile Islamic legal principles with the modern legal framework in Indonesia [4]. Given the nation's diverse cultural and religious milieu, there is a crucial demand for a legal system that upholds cultural identity while ensuring the protection of universal human rights and adhering to legal standards [5]. The Maqashid Sharia legal reasoning model presents a promising approach to address this complexity and establish a well-balanced legal system [6].

To explore the implications of the Maqashid Sharia legal reasoning model, this study will employ a comprehensive philosophical analysis, complemented by interpretative and holistic methodologies [7]. Scholars have emphasized the significance of understanding the broader objectives (maqasid) of Islamic law to ensure its relevance in modern societies [8]. By analyzing the practical application of Maqashid Sharia principles in Indonesia, this research aims to shed light on how these objectives can be effectively integrated into the country's legal system [9].

Prior research on the topic may have highlighted the challenges of harmonizing Islamic principles with modern legal systems, as well as the need for practical solutions that resonate with Indonesia's unique context [10]. Scholars have discussed the importance of embracing local cultural values while ensuring compatibility with global human rights standards [11]. Additionally, some studies may have identified the challenges and shortcomings faced in the process of indigenizing Islamic law in Indonesia [12].

This research aims to respond to these challenges by exploring the potential of the Maqashid Sharia legal reasoning model to foster an inclusive and contextually relevant legal system in Indonesia and its impact on the global context [13]. By critically analyzing the model's impact on the indigenization of law, this study seeks to propose practical solutions for harmonizing Islamic legal principles within Indonesia's legal framework [14].

The specific objectives of this research are threefold: Firstly, to analyze the practical application of Maqashid Sharia principles in Indonesia's legal context, identifying the areas where the model has been effectively incorporated and its impact on

the legal system's development [15]. Secondly, to assess the model's role in accommodating cultural identity while adhering to global legal standards, explore how the Maqashid Sharia approach strikes a balance between preserving local traditions and ensuring compliance with international human rights norms [16]. Finally, to propose practical solutions for harmonizing Islamic legal principles within Indonesia's legal system [17], identify best practices and policy recommendations that can enhance the effectiveness of the Maqashid Sharia legal reasoning model in achieving inclusive and just legal outcomes [18].

The Maqashid Sharia legal reasoning model presents a promising approach to address the challenges of indigenizing Islamic law in Indonesia while considering the global perspective of human rights and legal standards [19]. By exploring its practical application and impact on Indonesia's legal system, this research aims to provide valuable insights that contribute to the ongoing discourse on fostering a just and culturally sensitive legal system in Indonesia and beyond [20]. The findings of this study can contribute to the broader understanding of the Maqashid Sharia legal reasoning model and its potential for enhancing legal systems in diverse societies [21].

## 2 Literatur Review

This research investigates the crucial concepts in addressing global poverty and the contribution of Maqashid Sharia [22]. It focuses on the principles of Maqashid Sharia, encompassing *maslahah*, justice, and humanitarianism. Law indigenization is vital to adapting Maqashid Sharia to local contexts [23]. The literature review includes the successes and challenges of poverty alleviation programs. The implementation and impact of Maqashid Sharia law are also examined. Critical perspectives and their relevance to economics and politics need attention. Through a holistic literature review, we can comprehend how Maqashid Sharia can effectively contribute to achieving the SDGs and alleviating global poverty [15].

### 2.1 *Maqashid Sharia Legal Reasoning Model*

The origin of the Maqashid Sharia theory can be traced back to the 11th century with Imam al-Haramain al-Juwaini [24], and it was further developed by Imam al-Ghazali [25], who categorized it into three levels: *Dlaruriyat* (primary needs), *Hajaiyyat* (secondary needs), and *Tahsiniyyat* (tertiary needs). Later, other scholars like Izzudin bin Abdussalam [26], Syihab al-Din al-Qarafi, and Ibnu Taimiyah contributed to the evolution of the theory [27].



However, it was Imam al-Syatibi who played a crucial role in elevating the Maqashid theory to a standalone subject. He introduced significant changes, considering Maqashid as part of *ushul al-syar'iyyah*, a fundamental aspect of Islamic teachings and laws [28]. He emphasized using Maqashid as a basis for legal judgments, rather than merely analyzing texts [29].

Imam al-Syatibi's approach focused on the collective interpretation of various evidence, leading to five main objectives of Islamic law: preserving religion, life, progeny, wealth, and intellect [30]. His contributions aimed to complement the literal linguistic-theological paradigm with an anthropocentric perspective, allowing for a more comprehensive understanding of divine commands in the context of human experience and social life [31].

Maqashid Sharia is applied in diverse contexts, guiding Islamic finance, governance, human rights, family law, education, health, and environmental protection. It ensures compliance with Islamic principles while addressing contemporary challenges, promoting social justice, and preserving human dignity and well-being [32].

## 2.2 *Maqashid Sharia and Global Issues*

Maqashid Sharia's conceptual contribution lies in reconciling Islamic legal principles with a country's diverse cultural identity and existing legal framework [33]. In Indonesia, Maqashid Sharia enables the integration of Islamic economic principles with local wisdom, evaluating indigenous economic systems within Islamic norms. Islamic perspectives on environmentalism are explored, emphasizing ethical principles guiding Muslim commitments to the environment, moving beyond crisis frameworks [34].

For Muslim minorities in western countries, Maqashid al-Shariah fiqh reconsideration plays a vital role. It allows a contextual approach that considers social, cultural, and political factors while adhering to Islamic principles, addressing legal issues specific to Muslim minorities.

Furthermore, in decision-making processes among Indigenous communities, Maqashid Sharia informs socio-environmental justice by integrating intrinsic, relational, and instrumental values [35]. In the conservation context, it emphasizes the importance of securing land-tenure rights for Indigenous communities to effectively conserve forests. Overall, Maqashid Sharia's adaptability fosters harmony, promoting sustainable development while preserving Islamic legal principles, demonstrating its relevance in diverse contexts [36].

The Maqashid Sharia concept offers valuable contributions to international conventions and declarations that uphold human rights principles and standards [37]. It provides a comprehensive ethical framework that can be applied in different countries' legal systems to address human rights issues while respecting cultural diversity. Maqashid Sharia's influence on the development and implementation of legal systems

in different countries is evident in its emphasis on promoting welfare, justice, and equality for all, regardless of their religious or cultural backgrounds [38].

Maqashid Sharia contributes significantly to bridging the gap between Islamic law and universal human rights standards [39]. It addresses areas of tension and convergence between these legal frameworks, offering potential solutions for ensuring compatibility. One of the highlighted areas of tension is the application of *Jizyah* in an Islamic government, which might be seen as contradictory to human rights principles of equality and non-discrimination due to its imposition only on non-Muslims [40]. Maqashid Sharia's method of *Instinbath* Law provides a response that ensures justice for all individuals, irrespective of their religious background, promoting non-discriminatory practices [41]. Moreover, in the context of globalization, Maqashid Sharia serves as a valuable tool to interpret sacred writings from various religious traditions, fostering interfaith dialogue and understanding the underlying reasons and purposes of religious laws [42]. By taking a comprehensive approach and considering the higher objectives of Islamic law, compatibility with human rights standards can be achieved without compromising religious values. Additionally, Maqashid-based approaches allow for the reinterpretation of Islamic law to address contemporary social complexities, such as environmental preservation, tolerance, and human rights. These perspectives enable Islamic social finance models to align with Sustainable Development Goals, promoting gender equality and empowering women in education, entrepreneurship, and life skills. Overall, Maqashid Sharia's integration into legal systems promotes an inclusive and rights-respecting environment that ensures harmony between Islamic principles and universal human rights [43].

### 3 Method

This research adopts a philosophical analysis with interpretative and holistic methodologies to investigate the Maqashid Sharia legal reasoning model and its impact on the indigenization of law in Indonesia within a global context [44]. The study explores the practical application of Maqashid Sharia principles and their influence on the contextualization of Islamic law in Indonesia's legal system. Through a comprehensive examination of normative legal issues, the research highlights the crucial role of the Maqashid Sharia model in creating an inclusive and contextually relevant legal system that integrates local and global perspectives [45].

This approach facilitates the harmonization of Islamic legal principles with evolving societal norms and international standards, while preserving cultural identity and values. The findings contribute valuable insights for policymakers, scholars, and stakeholders seeking to develop a progressive yet culturally sensitive legal framework in Indonesia and promote the broader discourse on law harmonization in a global context [46].

## 4 Result and Discussion

This academic paper delves into the Maqashid al-Sharia Reasoning Model and its profound impact on the indigenization and contextualization of Islamic law, specifically focusing on the Indonesian experience through the perspectives of Hazairin [47] and Hasbi Ash Shiddiqiey [48]. The research methodologically explores the comprehensive application of Maqashid al-Sharia principles and their influence on Indonesia's legal system [49]. The study aims to shed light on how the Maqashid al-Sharia legal reasoning model fosters inclusivity and contextually relevant legal practices, accommodating both local and global perspectives [50]. By conducting an in-depth analysis of Hazairin and Hasbi Ash Shiddiqiey's thoughts, this paper provides valuable insights to the result and discussion, further enriching the discourse on harmonizing law within a global context [51].

### 4.1 *Ijtihad Maqashidi as a Legal Reasoning Model*

Maqashid reasoning is a method based on coherent analysis of texts to address human issues [52]. Asy Syatibi formulated three reasons for maqashid reasoning: it analyzes the relationship between specific texts (Quran and Hadith) and Islam's universal objectives, connects specific worship to broader Islamic themes, and uses inductive reasoning to establish legal concepts through dialogue between text and context [53]. Asy Syatibi emphasized the integration of text and context to formulate axiomatic legal principles rooted in universal values. His reasoning model consists of five stages: collecting necessary topics, elaborating selected texts, linking objectives comprehensively, examining data for similarities in efficient causes, and summarizing rules for specific cases [52].

Maslahah, defined by Asy Syatibi, is a legal objective paradigm based on welfare and preservation of human dignity [52]. Asy Syatibi's reasoning also introduced *istiqra al-manawi*, shifting legal orientation towards public prosperity<sup>5</sup>. His holistic model involves top-down and bottom-up abstractions to conclude legal concepts and confirm them with universal and specific rules [54]. These stages in thematic induction are crucial for restructuring the major premise and applying it to facts (Asy syatibi, n.d.).

### 4.2 *Maqashid Sharia Legal Reasoning Model: Evidence from Indonesia*

The idea of Islamic law in Indonesia cannot be separated from its socio-cultural context. This factor stimulates the indigenization and contextualization of legal (Islamic) thought [55]. The presence of Indonesian *fiqh*, as expressed in the ideas

of Hazairin (1906–1975) and Hasbi ash-Shiddiqi (1904–1975), was one response to this awareness. Thoughts on forming Indonesian fiqh as a form of indigenization and contextualization of Islamic law. It is clear from looking at the meta-logic principles that the application of Istiqra al-ma'nawiy Asy Syatibi has a significant impact on both [56].

Asy Syatibi's reasoning has an impact on three basic models of reasoning: the interpretation model, the idealization model, and the holistic model [57]. In the Indonesian cultural context, Hazairin's (1982) concept of a substitute heir (*māwali*) provides a middle ground that adheres to a bilateral inheritance system in a patrilineal inheritance model that is applied deductively to the concept of Islamic *Mawāris* in the Qur'an. Hazairin has been relatively successful in thoughtfully implementing *maslahah*-based interpretations by discussing many universal formulations about equal rights and equal status, which have been the spirit of Q.S. Al-Baqarah: 180, in the cultural context of the bilateral kinship system used in those Indonesian regions [58].

Authenticity is the principle of legal idealization to be achieved through Hazairin's thought. Hazairin's concept of authenticity refers to the collection of legal arguments related to specific topics that are semantically (*lughāwiy*) and historically connected (*asbāb al-nuzul*) to be deduced in concrete cases in Indonesia. According to Hazairin, the idealization of law through the authenticity of the proposition is an attempt to avoid partial interpretation. As a result, Hazairin encourages the reinterpretation of inheritance verses that are linked to the cultural context [59].

Inductive *qiyas* (analogy), also known as *qiyas ushul*, is the holistic principle of Hazairin's National Fiqh Thought [53]. This method is used for concrete cases that are intended to broaden the scope of Islamic Law, such as determining successor heirs (*mawālī*) (Isman 2019). Meanwhile, deductive *qiyas* (analogy) is applied to concrete cases where there are clear texts and is not intended to broaden the scope of the Islamic law, such as in formal worship (*ibadah mahdah*), where it is not intended to renew and modify [60].

Based on the three principles stated above, it is evident that Asy Syatibi's reasoning had a significant influence on Hazairin's thoughts. Both of them reject the legislation's implementation, particularly because it is inconsistent with Islam's principles of authenticity and universality. The difference seems to be that, Hazairin's reasoning, abandons it to the *ulil amri*, or legitimate government. Meanwhile, Asy Syatibi says that legislation can only be done by *mujtahids* because they understand the nuances of Islamic laws [61].

The same way of building reasoning can be seen in its holistic principle, which is to use induction *qiyas* to look into the structure of specific cases that are related to legal ideas from the Qur'an and Hadith. This demonstrates that Hazairin complies with Asy Syatibi's *burhani* knowledge system [62], even with operational differences in the scope and technical mechanism of interpretation. Hazairin has used the legal anthropology method of analysis to disprove Snouck Horgrounje's theory of customary law reception [63]. This becomes his intellectual capital to operationalize inductive logic in Islamic Law so that the process of indigenization is truly in harmony with the Indonesian cultural context [53].

Hazairin rejects Horgrounje's view that Islamic and customary law are diametrically opposed. The ideal relationship between the two, according to him, is analytic synthesis, in which the texts of the Qur'an and Sunnah are collected collectively according to relevant topics and then interpreted using an analytical synthetic approach because they will be in dialogue with the structure of facts or social reality [64]. In this approach, the analytical term means that Islam regards Revelation as a transcendental perspective, making it a source of a priori knowledge. As a result, "revelation" is positioned as a constructive element (former) of knowledge about reality. Revelation, in other words, provides guidelines or preliminary information that serves as the foundation for people's thoughts and actions [65].

In line with Hazairin, Hasbi ash-shiddiqi proposes a harmonization of Islamic and customary law by focusing on customary law ('urf) and maslahah as the primary axes for reconciling text and context [66]. According to Hasbi's interpretation above, this demonstrates the profound influence of Asy Syatibi's. A number of Hasbi's works on Islamic law, particularly those discussing Shari'a objectives, are heavily based on Al-Muwafaqat [67]. Collaboration between two sources of law is evidence of what Azra refers to as the process of indigenization and contextualization of Islam [68].

Ash-shiddiqi differs from fiqh conventions (al-qawā'id) that al-aḥkām tadūru ma'a maṣāliḥ al-'ibād fa ḥaitu ma wujidat al-maṣlaḥah fa thamma ḥukm Allāh. Thus, where there is maslahah, there is God's law. Ash-shiddiqi, on the other hand, maintained his puritanical viewpoint, declaring that legal decisions based on 'urf and maslahah considerations only apply to mu'āmalah and does not apply to 'ibādah (formal worship) [69].

This is reflected in Ash-Shid [70] diqi's ideas about breastfeeding banks (Bank ASI) and interfaith marriages. Ash-Shiddiqi appears very puritanical in these two products by opposing Muslim men marrying Musyrikah women who do not have a holy book (Ash Shiddiqiey 2001). Similarly, Ash-Shiddiqi has been relatively successful in maintaining his puritanical thought with the ASI Bank by arguing that mixing breast milk from different mothers is not lawful because the legal implications will create legal confusion as to who the breastfeeding mother is [70].

Indonesian fiqh, as defined by Ash-shiddiqi, not only brings Islamic law into harmony with the local traditions but also reconstructs Islamic legal reasoning [71]. He demonstrated this effort by applying methodical principles to Asy Syatibi's reasoning, particularly when studying the principle of ahkam [72].

### **4.3 Maqashid Sharia Legal Reasoning Model for SDGs *Implementation***

In achieving the Sustainable Development Goals (SDGs), particularly in eradicating poverty, global legal harmonization becomes an urgent necessity [73]. However, there are several gaps that need to be addressed for successful harmonization to take place [74]. Firstly, differences in priorities and objectives among nations present a major

challenge. Each country faces distinct poverty-related challenges and needs, making the alignment of common goals complex [75]. Secondly, variations in development levels and capacities between countries also impact the harmonization process. More developed nations have better access to financial and technological resources, while less developed countries encounter limitations in tackling poverty-related issues [76]. Thirdly, environmental issues and climate change pose additional obstacles to achieving the SDGs. Global warming and environmental degradation directly affect poverty, demanding solid international cooperation to tackle these challenges [77].

Moreover, inconsistencies in policies and regulations across different countries complicate legal harmonization efforts. Diverse approaches and strategies for addressing poverty influence the effectiveness of global harmonization [78]. Conflict and political tensions also hinder the attainment of harmonization agreements. Strained relations and differing development priorities between countries can slow down the legal harmonization process [40].

Lastly, weak monitoring and evaluation systems are problematic in measuring progress and shortcomings towards the SDGs [79]. Without robust systems, identifying challenges and implementing necessary changes becomes difficult [80]. Hence, it is crucial for all nations to actively collaborate in addressing these existing gaps and achieving effective legal harmonization for the SDGs, especially in eradicating poverty. Only through strong global cooperation and consensus can we overcome these barriers and achieve inclusive and resilient sustainable development [81].

The urgency to address global poverty necessitates the harmonization of legal systems, and in this endeavor, the contributions of Maqashid Sharia legal reasoning, as exemplified by the thoughts of Hazairin and Ash Shiddiqi, hold significance. Poverty remains one of the most pressing challenges faced by the world today, affecting billions of people and hindering progress towards achieving sustainable development goals. To effectively combat poverty on a global scale, it is essential to develop a cohesive and comprehensive legal framework that addresses the root causes of poverty and fosters inclusive economic growth [74].

Indigenization and contextualization, as advocated by Hazairin and Ash Shiddiqi, offer valuable insights for adapting Islamic law to diverse cultural and societal contexts worldwide, addressing the specific challenges of poverty in different regions. By acknowledging the socio-cultural context in which Islamic law is applied, these scholars emphasize the need to consider local customs, traditions, and values when formulating legal solutions. This approach allows for the creation of laws that are not only relevant but also resonate with the communities they are intended to serve. In the fight against poverty, this harmonization strategy becomes particularly crucial as it ensures that legal measures are tailored to the unique circumstances of each region, maximizing their potential for poverty alleviation [73].

Moreover, prioritizing *Maslahah*, the principle of public interest, can guide the formulation of laws aimed at achieving common welfare and tackling poverty-related issues effectively. By focusing on the greater good of society, policymakers can design legal frameworks that address the underlying causes of poverty and promote socio-economic development. The principles of justice and fairness are also paramount in Maqashid Sharia legal reasoning, aligning with the imperative to

address inequality and foster equitable resource distribution in poverty alleviation initiatives. By upholding these principles, the legal framework can ensure that vulnerable populations have access to essential resources, social services, and opportunities, thereby breaking the cycle of poverty [82].

This approach to harmonizing legal systems also emphasizes collaboration across sectors. As both Hazairin and Ash Shiddiqi emphasize, poverty cannot be addressed solely by one entity or sector. Engaging governments, private sectors, and civil society allows for holistic and sustainable policy development [83]. Governments can provide regulatory frameworks and incentives, businesses can contribute to economic growth and job creation, and civil society can advocate for the rights and welfare of marginalized communities. By working together, these stakeholders can develop comprehensive strategies that have a lasting impact on poverty reduction [84].

Achieving a harmonious legal framework, integrating insights from Hazairin and Ash Shiddiqi's perspectives based on Maqashid Sharia principles, can lead to more effective and targeted poverty reduction efforts that respond to the unique needs and realities of diverse communities worldwide. The Maqashid Sharia principles of justice, balance, and public interest provide a solid foundation for shaping laws that prioritize poverty eradication and sustainable development. By adapting Islamic law to contemporary global challenges, harmonization can bridge the gap between legal theory and practice, fostering meaningful change in the fight against poverty. As the world continues its efforts to address poverty, integrating Maqashid Sharia legal reasoning into legal systems can contribute significantly to achieving a more equitable and prosperous future for all [85].

## 5 Conclusion

Maqashid Sharia reasoning is a method of Islamic legal reasoning that focuses on a coherent analysis of texts and contexts to achieve universal Islamic objectives. This model has been implemented in Indonesia by Hazairin and Ash Shiddiqi to formulate laws that are relevant to the cultural and social context. By prioritizing *maslahah* (public interest) and principles of justice, this reasoning model can be adapted to achieve the Sustainable Development Goals (SDGs). In the global context, legal harmonization is an urgent necessity to address differences in priorities and objectives among nations. The Maqashid Sharia reasoning allows for the development of legal frameworks that prioritize public welfare, tackle poverty, and address environmental challenges. Collaborative efforts across sectors and nations are crucial to achieving the SDGs, while the application of Maqashid Sharia principles ensures that laws can be adapted relevantly and have a tangible impact on achieving inclusive and sustainable development goals.

The Maqashid Sharia reasoning framework offers an approach to interpreting Islamic law that prioritizes the systematic analysis of texts and contexts in order to attain overarching Islamic goals that are applicable universally. The implementation of this approach in Indonesia, spearheaded by Hazairin and Ash Shiddiqi, serves to



facilitate the development of culturally appropriate legislation through the prioritization of *maslahah* (public interest) and principles of justice. The adaptability of this model has the potential to contribute to the global advancement of the Sustainable Development Goals (SDGs). Nevertheless, limitations arise from interpretational variability among scholars, compatibility with diverse cultures, challenges in practical implementation, and potential conflicts with existing laws. Potential areas of future research may encompass comparative analyses, cross-cultural applications, impact assessments, the development of practical frameworks, exploration of stakeholder engagement, ethical and philosophical investigations, as well as examination of the long-term societal implications. In general, the utilization of Maqashid Sharia reasoning presents a potentially fruitful approach for the establishment of comprehensive and enduring legal structures. However, in order to fully harness its potential benefits for societal progress, it is imperative to undertake additional research to comprehend its intricacies and enhance its efficacy.

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# A Study on the Sustainability Approach of ESAF Small Finance Bank-Loan Effectiveness for Restoration During and Post COVID



S. Gokilavani , S. Deepa , Diya Ann Philip , and Gladly Agnes

**Abstract** This research examines the effectiveness of loan programs in aiding the recovery of customers' financial status during and post-COVID-19 crisis, with a particular emphasis on ESAF Small Finance Bank's initiatives. Specifically, it investigates the impact of microfinance provided to women in need, especially for their respective businesses. For the purposes of this research, we have conducted field visits with a total of 100 clients. The COVID-19 pandemic resulted in severe financial losses for many of these customers. In response, ESAF offered support in the form of loans, notably a loan package called the "COVID CARE Loan". This loan was designed to help these individuals recover from the financial difficulties faced during and in the aftermath of the COVID-19 pandemic. While the loan program has benefited some clients, enabling them to regain or even surpass their previous financial status, others continue to struggle and have yet to achieve full financial recovery. This study aims to provide insights into the varying degrees of effectiveness of these loan programs, with a special focus on the COVID CARE Loan availed by the clients. It offers a nuanced view of how such initiatives have worked in practice, shedding light on both their successes and the areas where they fall short.

**Keywords** Loan · Loss · Post covid · Clients

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# 1 Introduction

The COVID-19 pandemic, which began in late 2019 and continued to affect nations globally well into 2021, brought with it unprecedented challenges. These ranged from health crises to economic downturns, impacting industries, sectors, and economies worldwide. Financial institutions, especially those in the microfinance sector, found themselves at the crossroads of these challenges. They not only had to ensure their own stability but also provide adequate support to their customers, many of whom faced significant financial hardships during the pandemic.

In this milieu, ESAF Small Finance Bank (ESAF SFB) emerged as a beacon for many of its customers. As a prominent player in the microfinance sector in India, ESAF SFB's role during and post the pandemic remains an intriguing area of investigation. A significant aspect of its operations lies in its sustainability approach, emphasizing a balanced integration of economic, social, and environmental concerns. This approach, during tumultuous times, is not just a corporate responsibility mandate but also a survival strategy.

This study seeks to delve into ESAF Small Finance Bank's sustainability approach, with a keen focus on its loan effectiveness for restoration during and post the COVID-19 pandemic. By assessing the bank's loan disbursement strategies, its adaptability to the changing economic landscape, and the impact of its financial products on its customers, this study aims to provide a comprehensive overview of ESAF SFB's role in mitigating the effects of the pandemic.

The results and insights from this study can be instrumental for policymakers, financial institutions, and stakeholders to understand the power of sustainable finance in combating global crises. Moreover, it provides a roadmap for other institutions seeking to embed sustainability into their core operations, ensuring resilience and continuity in the face of unforeseen challenges.

## 1.1 *Structure of a Research Paper*

- 1.1.1 Review of literature
- 1.1.2 Objectives
- 1.1.3 Statement of the Problem
- 1.1.4 Data analysis and Interpretation
- 1.1.5 Findings and Conclusion.

## 1.2 *Objectives of the Study*

To explore the degree of effectiveness of various loan (especially COVID CARE loan) availed by the clients.

To specify the extent of monetary loss suffered by the customers.

To determine the current status of their business, if they have.

To know how the customers have diversified the usage of their respective loan.

Lastly, to find out if the customers are satisfied with the services provided by the bank.

### ***1.3 About the Company***

The RBI, after a lengthy process concluded the significance and nationwide necessity of ESAF small finance bank and the bank officially entered the banking arena on 10th March 2017. The bank is strongly standing with their prime objective “Fighting the partiality of prosperity”. Their main focus is on the rural or the underbanked areas in the country with customers of 5.6 million managed by 4100 employees. As on March 31st, the bank has 575 banking outlets spread across 21 states and 2 union territories. They provide various modern banking facilities like ATMs, Debit card, internet banking, mobile banking, agent banking, SMS banking, RTGS, NEFT, CTS etc. One of the many specialities of this bank is that they provide door-to-door services which is extremely helpful to such customers. Their aim is to provide customer centric products, high quality services and innovative technology.

The bank’s sustainability approach is one of the main highlights of the bank. They follow a triple line approach that is surrounding the themes of People, Planet and Prosperity. They believe in transforming into a sustainable economy. Therefore, the bank has made all their sustainable initiatives public that provides insights into the bank’s performance in the economic, social and environmental aspects and impacts.

One of the most successful pillars of ESAF small finance bank that follows this sustainability approach is the Micro-Banking arena. ESAF was already an established name in microfinance, having launched Micro Enterprises Development (MED) program in 1995. The bank provides major priority for women and has over 1.20 million women enjoying the benefits of the bank. The bank recently commenced mobility banking in order to serve the customers better and faster, giving more emphasis on the convenience of the customers. Another interesting fact is that the bank provides loan without collateral up to RS.100,000.

This research solely focuses on the women who have availed for loans through the micro banking department of ESAF. Their opinions and experience with ESAF are recorded in this research.

### ***1.4 Review of Literature***

#### **1.4.1 Background on ESAF Small Finance Bank (SFB)**

Nath [1] provided an overview of ESAF’s transition from an NGO in the 1990s to a prominent Small Finance Bank by 2017. His study underscores ESAF’s commitment

to sustainable and inclusive development, emphasizing the organization's focus on social, economic, and environmental factors in its operational strategy.

Kumar and Roy [2] discussed the Small Finance Bank model in India, emphasizing the regulatory environment, challenges, and opportunities. ESAF SFB, in their study, stood out as an institution balancing profitability with social responsibility.

#### **1.4.2 Role of Microfinance During Crises**

Morduch [3] explored the impact of microfinance during financial crises in various countries. His insights, while not specific to the COVID-19 scenario, provide a backdrop for understanding the role such institutions can play in financial restoration.

Banerjee et al. [4] studied the long-term impact of microfinance, suggesting that while it might not transform lives overnight, it provides an essential safety net during challenging times.

#### **1.4.3 Financial Sustainability During Pandemics**

Huang et al. [5] looked at the effect of pandemics on financial institutions, emphasizing the need for sustainability approaches to ensure institutional and customer resilience. While their study was global, the implications resonate with the Indian context.

#### **1.4.4 Post-COVID Financial Strategies**

Singh and Kumar [6] delved into the financial strategies adopted by Indian banks post-COVID, highlighting the growing emphasis on sustainable and inclusive finance. They mention ESAF as one of the institutions leading this change.

Patel and Shah [7] focused on the post-COVID recovery of the Indian microfinance sector. They emphasized the need for adaptive loan products, restructuring, and moratoriums—a framework within which ESAF's approach can be evaluated.

### ***1.5 Sustainability in Banking***

Wójcik [8] discussed the importance of sustainable banking, emphasizing the triple bottom line—economic, social, and environmental dimensions. His insights provide a theoretical foundation to understand ESAF's sustainability approach.

Dahlsrud [9] parsed the different understandings of Corporate Social Responsibility (CSR) across literature, underscoring the importance of a holistic view of sustainability. Given ESAF SFB's strong emphasis on CSR, this offers a lens for evaluation.



## ***1.6 Statement of the Problem***

The COVID-19 pandemic presented an unparalleled disruption to the global economic landscape. This disruption manifested particularly strongly in the financial sector, where institutions grappled with unexpected challenges including an unpredictable financial environment, increasing defaults, and a substantial rise in the demand for financial support from impacted individuals and businesses.

Microfinance institutions, given their target demographics of economically vulnerable individuals and micro-enterprises, were at the forefront of this challenge. These institutions often cater to those without the safety nets that larger enterprises might possess, making the importance of their response to the crisis even more crucial.

ESAF Small Finance Bank (SFB), a pivotal player in the microfinance arena in India, prides itself on a sustainability approach grounded in an intricate balance of economic, social, and environmental considerations. However, during a crisis of the magnitude of the COVID-19 pandemic, questions arise.

How effective was the bank's sustainability approach in ensuring the continuity of its operations while also ensuring the economic well-being of its clients?

Was the bank's loan strategy and its adaptive financial products effective in aiding the restoration of its clientele's financial health during and post the pandemic?

Given the bank's emphasis on sustainable growth and support, to what extent did this philosophy translate into tangible support mechanisms for its clientele amidst the pandemic?

Understanding the effectiveness of ESAF SFB's loan strategies and sustainability approach in these unprecedented times provides not just an assessment of the bank's operations but also valuable insights for the broader financial sector. Such insights are particularly pertinent as they can guide policy-making, operational strategies, and stakeholder involvement in preparing for, and managing, future crises.

Thus, the problem statement can be encapsulated as.

"How effective was ESAF Small Finance Bank's sustainability approach, particularly its loan strategies, in aiding the restoration of its clientele's economic health during and post the COVID-19 pandemic, and what implications does this hold for sustainable banking practices in times of crisis".

## **2 Methodology**

The research methodology involved conducting surveys through personal interviews with customers. The specific questionnaire used for these surveys is appended at the conclusion of this report. Over a week, we conducted interviews with 100 customers, with 50 participants from the Aluva branch in Kerala, and 50 from the Thevara branch in Kerala.

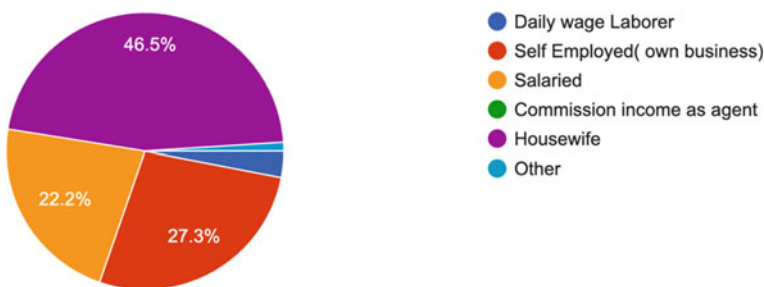
These interviews took place during Sangam visits to the customers' residences. Sangam refers to groups of women assembled based on their geographical proximity. Each of these visits allowed us to gain a more in-depth understanding of their experiences and challenges.

### 3 Findings and Result of the Survey

The data for this research paper was acquired using a dual methodology approach, involving both questionnaire surveys and personal interviews. To analyze the collected data, a percentage-based analysis methodology was employed, coupled with the utilization of charts to visually depict the results. This methodology was chosen to effectively convey the research findings and facilitate comprehension for the readers.

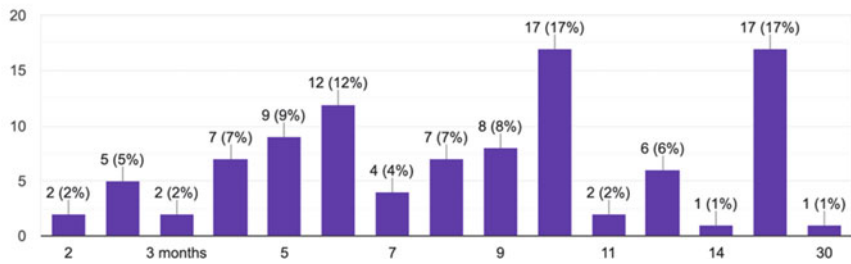
In addition to percentage-based insights, the findings were translated into graphical representations. The integration of charts into the research paper not only enhances the clarity of the analysis but also provides an expedient way to grasp the overarching outcomes. The combination of percentage analysis and chart visualization offers a comprehensive means to interpret the data.

- (1) From the chart shows that data reveals that a significant proportion 46.5% of respondents are homemakers, reliant on their husbands or family heads for financial stability. About 22% of those surveyed hold salaried jobs, while nearly 27% operate their own businesses. Among the self-employed segment, the predominant professions include tailoring and running small retail shops (Chart 1).
- (2) Although over 50% of respondents contribute to their family's income, they are not the primary earners. The husbands of these respondents, who mostly earn daily wages, represent nearly 40% of the total income providers. The remainder are self-employed, operating auto-rickshaws, or hold salaried positions in companies, serving in roles such as security personnel or laboratory attendants.



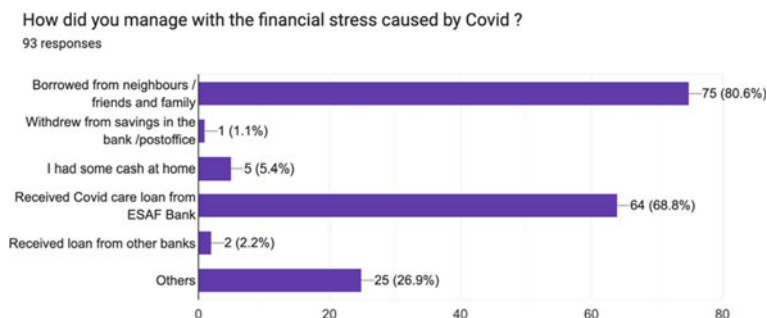
**Chart 1** Occupation of the respondents. *Source* Primary data

No. of years of association with ESAF  
100 responses



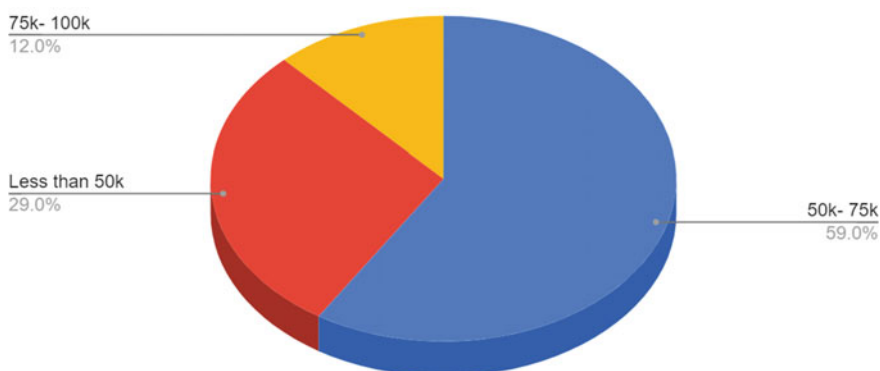
**Chart 2** Duration of association with ESAF. *Source* Primary data

- (3) The family size of the customers varies between 2 to 8 members, with 4 being the most common, indicating that most respondents are part of nuclear families.
- (4) The below chart shows that the duration of association with ESAF among the respondents ranges from as little as 3 months to as long as 15 years. The most frequent durations reported were 10 and 15 years, suggesting long-standing relationships between the customers and the company. This could be interpreted as an indication of customer satisfaction with the services provided by the company (Chart 2).
- (5) The impact of COVID-19 was severe for many of the respondents. A majority suffered loss of livelihood, and numerous respondents contracted the virus, further exacerbating their financial difficulties. The implementation of comprehensive lockdowns in many localities impeded the respondents' ability to work outside their homes, adding to their financial distress.
- (6) The below charts exhibit that to manage these challenges, most respondents sought financial assistance from friends and relatives. They also received support from community social groups and political parties. Some respondents leveraged their assets as collateral to secure loans, while others relied on their existing resources. Notably, the COVID CARE loan offered by the bank emerged as a crucial financial lifeline during this time, with approximately 67% of customers availing of it. The loan provided up to Rs.30,000, which customers could use to settle pre-existing loans or cover personal expenses (Chart 3).
- (7) The respondents availed of multiple loans from the bank. The most common types of loans were the Income Generation Loan (IGL), availed by approximately 50% of customers, and the Prateeksha Kiran Loan (PKL), taken up by around 35% of customers.
- (8) The below chart indicates that most customers availed of loans amounting to Rs.50,000 to Rs.75,000 during and in the aftermath of the COVID-19 pandemic (Chart 4).



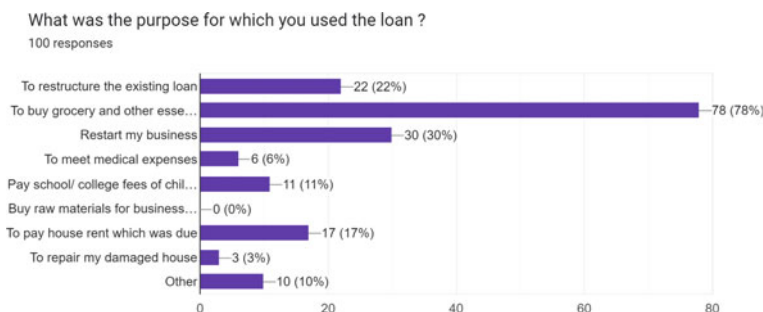
**Chart 3** Respondents manage with the financial stress caused by Covid. *Source* Primary data

### Count of What was the loan amount?



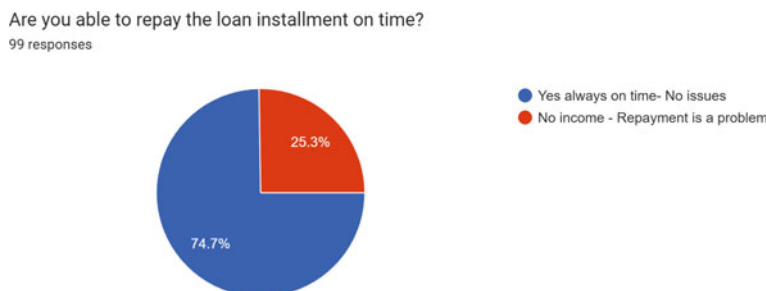
**Chart 4** Loan amount availed from bank. *Source* Primary data

- (9) Many respondents reported using the loan amount for household expenses and to start or restart their businesses. A portion of respondents also utilized the funds to cover rent payments, medical expenses, and school or college fees.
- (10) The above charts shows that most of them have not faced any difficulty while availing for the loan from the bank. However, there were some who mentioned that they had to wait for quite some time to get their loans approved.
- (11) The survey says that almost 91% of the customers found the loan particularly useful to them.
- (12) Regarding with how the loan benefited them, most of them 78% of the responded that it helped them to meet household expenses and to meet medical expenses. And 30% of the respondents responded that need to restart their own business to enhance their business into profit maximisation (Chart 5).
- (13) Few of them mentioned that the loan amount did not work in the business as they had expected, and it led to low performance of their businesses.



**Chart 5** Purpose and utilisation of loan amount. *Source* Primary data

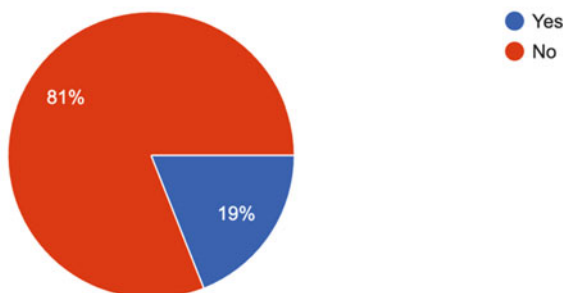
- (14) For the women who still own their businesses, their businesses were doing comparatively well and for some, even better than good. But still there were people whose businesses are not so good even now.
- (15) Charts shows that almost 75% of the customers can pay the loan on time now because their financial status is comparatively better, and they are determined to pay off their loan instalments. But still there are again 25.3% who are not able to do so as they are still recovering from COVID (Chart 6).
- (16) People did not receive any help when they were not able to pay the loan except when the government had declared moratorium to which the bank responded by not sending their employees to collect the loan until the declaration was lifted.
- (17) Customers have found that the loans are processed really fast, and the loan amount was apt for the situation they were in.
- (18) Most of the customers 81% have not availed for any government schemes except for a few who are part of a social group called Ayalkuttam. Many customers have mentioned that it is not easy for them to avail any government schemes. But even if they do, it has not helped them in repaying the loans that they have taken (Chart 7).
- (19) Most of them have taken loans in other banks/ institutions as well.



**Chart 6** Repayment of loan amount. *Source* Primary data

### Have you ever availed for any govt. schemes during the pandemic?

100 responses



**Chart 7** Awareness and availed for government schemes. *Source* Primary data

- (20) When asked about the staff, most of them were happy with their interaction. But there were a few who complained about how the staff behaves when the customers enter the bank for any enquiries.
- (21) Some mentioned that the interest rates are too high for them, and they are barely able to afford any loan or even pay off their weekly instalments.
- (22) Lastly, most of the customers seemed satisfied with the services and help provided by the bank and they showed their interest in continuing with ESAF.

## 4 Discussion

- 4.1 A request put forward by most of the customers was to reduce the interest rates for the loan. They are concerned about the fact that they will not be able to pay it off.
- 4.2 The waiting period for a few were long and they could not receive it when they needed it the most. So, another suggestion would be to reduce the approval period for such customers.
- 4.3 There were some serious complaints of mishandling from the staff's side during loan collection and some of the customers were upset about the money they have lost.
- 4.4 Many have not availed for any government schemes. Hence the suggestion for the bank is to try and expose the customers to government schemes they are eligible for. This may help the customers in paying off their loan instalments which will in turn help the bank.
- 4.5 Another suggestion is that an SMS can be sent to the customers whenever they pay the loan instalments so that the customers can handle the receipts easily.

- 4.6 Lastly, for those women who are doing their own business, bank can try advising them on how to diversify their loan amount and how they can perform better in their business which will in turn help the bank. With the help of such advice, the customers can improve their business and will be able to pay off their loans faster.

## **5 Limitations of the Study**

- 5.1 Temporal Scope: This study focuses on the time frame of the COVID-19 pandemic and its immediate aftermath. While this provides a detailed snapshot, it may not account for longer-term impacts or strategies that manifest beyond this period.
- 5.2 Geographical Constraints: ESAF Small Finance Bank operates in specific regions within India. Findings from this study might not be generalizable to institutions in other geographical areas with different socio-economic dynamics.
- 5.3 Data Availability: There may be limitations regarding the availability of comprehensive, up-to-date, and detailed data, especially if the bank and its clients wish to maintain certain confidentiality about their operations and finances.
- 5.4 Subjectivity in Assessment: The effectiveness of loan strategies can be somewhat subjective, based on whether one prioritizes short-term recovery or long-term sustainability. The study's conclusions may vary depending on the chosen evaluative criteria.
- 5.5 External Factors: Numerous external variables, such as government policies, other relief measures, and variations in local COVID-19 impacts, can influence loan effectiveness. Isolating the impact of ESAF SFB's loan strategies from these variables may present challenges.

## **6 Conclusion**

In conclusion, the customers express overall satisfaction with ESAF Small Finance Bank, and they anticipate maintaining positive relations with the bank in the future. According to our research, the loans provided by the bank have significantly assisted customers in their recovery from the financial damages incurred during the COVID-19 pandemic. As a result, many are regaining stable financial statuses. The bank has provided much-needed support during these challenging times, and the majority of customers report a high level of contentment with their association with ESAF.

## 7 Future Research Recommendations

Considering the findings from the study on ESAF Small Finance Bank's sustainability approach and loan effectiveness during and post-COVID, there emerges a distinct avenue for future research. Future studies could delve deeper into the long-term impacts of the bank's loan strategies on client resilience and economic stability, extending beyond the immediate aftermath of the pandemic. Comparing ESAF SFB's practices with other microfinance institutions both within and outside India can also offer valuable insights into best practices in sustainable finance during crises. Additionally, as the global community continues to grapple with issues like climate change and economic disparities, it would be pertinent to investigate how ESAF SFB's sustainability model evolves in response to these challenges, thus offering a blueprint for sustainable banking in a rapidly changing world.

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# The Study on the Impact of a Sense of Community and Personality Traits Towards Orang Asli Entrepreneurs to Eradicate Poverty Through Tourism Industry-Related Businesses



Derweanna Bah Simpong , Wan Ahmad Amir Zal Wan Ismail, Tengku Fauzan Tengku Anuar, Azwan Abdullah, Siti Asma Md Rasdi, Hafizi Mat Salleh, and Nur Azimah Othman

**Abstract** This present study aims to examine the impact of personality traits and the sense of community on the propensity of Orang Asli entrepreneurs to engage in the mainstream tourist business. The research is conducted using empirical approaches. The study used a causal research technique, using quantitative methodology. Data was collected from individual Orang Asli entrepreneurs engaged in small-scale tourism businesses using a self-reported and self-administered questionnaire. A total of 285 questionnaires were gathered and were suitable for analysis. The use of AMOS software for Structural Equation Modeling (SEM) facilitates the attainment of significant findings. The findings indicate a significant correlation between the sense of community and its significance, not only for Orang Asli individuals who are not directly involved in business activities but also for those who are actively participating in the management of small enterprises, as it provides an opportunity for achievement and development.

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**Keywords** Indigenous entrepreneurs · Sense of community · Personality traits  
tourism industry · Poverty

## 1 Introduction

Indigenous peoples are often considered one of the most disadvantaged and marginalized segments within a population, typically distinct from the dominant groups in their national societies [1]. They are associated with lower economic status [2], endemic poverty [3], and experience social deprivation, such as limited access to education, poor health, and higher rates of unemployment [4]. As a result, numerous studies have been conducted to comprehend the underlying issues and themes related to indigenous peoples' societal rebuilding and economic development. One of the crucial and increasingly researched topics is the role and involvement of indigenous entrepreneurship in both general businesses and the tourism industry [5].

Among other benefits, the involvement of Indigenous communities in tourism entrepreneurship can lead to various economic and social advantages. According to [6], tourism entrepreneurship can help Indigenous groups transition from self-sufficiency to a more economically diverse and growth-oriented approach. Among the many Indigenous groups worldwide, the Māori, as the indigenous people of New Zealand, have demonstrated remarkable activity in tourism entrepreneurship. They have effectively marketed and gained international recognition for their heritage, history, handicrafts, and wood carvings. Beyond economic prosperity, the Māori community actively pursues sustainability goals, especially regarding environmental stewardship, through rigorous assessment, monitoring, and active participation. Their approach to sustainability is rooted in a holistic worldview that transcends mere economic perspectives on development.

The Malaysian government has been consistently making efforts to empower the Orang Asli, one of the significant indigenous groups in the country, to thrive in the business sector, considering their positive impact on themselves, their communities, and the national economy. Alongside initiatives to improve education, socio-economic conditions, poverty alleviation, infrastructure, and political processes, the government has strongly emphasized developing entrepreneurship, particularly in the tourism industry. Through financial and non-financial support and rigorous monitoring, the government has facilitated the establishment of various tourism-related businesses, resulting in hundreds of Orang Asli entrepreneurs venturing into this sector [7]. The government's goal goes beyond merely increasing the Orang Asli's involvement in tourism-related enterprises; it aspires to integrate them into mainstream businesses. This includes enhancing the appeal and acceptance of their products and services among the public and ensuring they can compete effectively with products from other dominant groups.

Building on previous research, scholars such as [8] have emphasized that entrepreneurial characteristics revolve around distinct criteria, including knowledge,

skills, and socio-cultural elements. Additionally, personality traits and active participation in the community not only foster a sense of togetherness but also play a role in shaping individuals' entrepreneurial actions [9]. A recent study on indigenous entrepreneurs revealed that socio-cultural factors significantly influence their inclination to venture into mainstream tourism-related businesses. This impact arises from attitudes, values, and role models in their socio-cultural environment, providing advantages for starting small-scale tourism enterprises and eventually acting as a driving force or catalyst for further advancements into more challenging tourism business domains [10]. To gain a deeper understanding of this issue, the current study aims to empirically investigate the influence of personality traits and the sense of community on Orang Asli entrepreneurs' intentions to enter mainstream tourism industry-related businesses.

## 2 Literature Review

### 2.1 *Sense of Community*

The sense of community refers to the inherent sense of belonging experienced by people inside a particular group, fostering interactions and connections among community members. This attitude is seen in several contexts, including residential areas, educational institutions, religious communities, and other social environments characterized by shared objectives, obligations, and interpersonal interactions. The term "sense of community" refers to the inherent nature of interpersonal connections that promotes well-being and enduring cohabitation, empowering individuals within a specific locality to engage in developmental endeavors actively. On the contrary, [11] may be described as the perception of duty and dedication that a person cultivates towards other community members as time progresses. Despite favorable attributes, some studies and practices within psychology and other academic domains have a pessimistic perspective towards a sense of community. These perspectives see it as nothing more than a marketing catchphrase or, in more extreme cases, a manipulative instrument used by politicians to foster hostility among diverse factions [12].

Among various definitions, [13] are the most influential scholars who have laid a robust foundation for much of the research on the psychological sense of community. They proposed four key elements that constitute a sense of community, namely membership, influence, integration, and fulfilment of needs, along with shared emotional connections. The first element, membership, refers to belonging and having a sense of personal relatedness within the community. The second element, influence, involves understanding the importance and impact on the group, where individuals feel that their contributions matter and are valued by the members. The third element, integration, revolves around fulfilling one's needs through active participation and involvement within the group.

Moreover, a shared emotional connection is evident in the community's dedication to collective ideas, shared experiences, historical narratives, common physical spaces, and the duration of time spent in each other's company. These components combined provide the basis for comprehending the psychological concept of community. In business and entrepreneurship, community pertains to the interconnected relationship between an individual and a collective group. Consequently, it fosters a sense of belonging among its members and provides individuals with opportunities to enhance their personal endeavors [14]. The achievement of the minority community and individual participation and involvement in tourist company growth, as stated by reference [9], is hindered by the lack of engagement within the community. Participation in a community is widely seen as crucial, not just for fostering social cohesion and a sense of unity, but also for facilitating the pursuit of other endeavors, such as entrepreneurial ventures. One positive argument is that when individuals actively participate, fulfil their obligations, and demonstrate dedication to their community and fellow members, they are more likely to engage in the sharing of a common set of values, beliefs, and interests, which may include other aspects such as commercial and entrepreneurial affairs [11].

In connection with this, community participation represents a democratic system and process that empowers community members and individuals to take responsibility for community development and personal growth. Engaging in community participation increases the sense of control, self-confidence, and self-awareness [15], and it also supports better business and entrepreneurial decision-making for individuals. Furthermore, community participation provides valuable knowledge, skills, insights into local culture, traditions, and a sense of pride in community heritage, all essential for entrepreneurial endeavors. In the case of indigenous entrepreneurs, [16] suggests that they are inherently connected to their community context, and their entrepreneurial activity is shaped by the historical and social circumstances in which it occurs [16]. Indigenous entrepreneurs have inherent connections and a sincere commitment to the community in which they operate. As stated in the source [15], indigenous entrepreneurship functions at the convergence of social and economic entrepreneurship. The concept incorporates social and commercial entrepreneurial efforts while expressly recognizing the distinctive historical and cultural environment from which these initiatives originate.

However, it is important to note that government interference has resulted in several cases in which more dominant cultures have assimilated indigenous entrepreneurial cultures. In this setting, some elements of the indigenous entrepreneurial hybrid culture have shown their ability to promote growth and integration within the indigenous community. Consequently, these elements have been widely accepted and adopted by many indigenous community members [17]. This underscores the importance of fostering a feeling of community in facilitating the advancement of tourism and economic growth for the collective community and individual stakeholders. Indigenous entrepreneurs' establishment, development, and longevity are underpinned by a strong feeling of community among indigenous entrepreneurs [18].

## **2.2 *Making Way to Mainstream Businesses***

The proposition advocating the anticipation of future behaviors based on intentions is substantiated by a multitude of theoretical scholars [19]. It is argued that the selection of intentions may function as reasonably reliable behavior indicators. This assertion is supported by the findings of [20], who contend that well-recorded comparable intents have the ability to predict a wide range of social behaviors effectively. In conventional understanding, intention is often seen as an individual's subjective perspective throughout the process of contemplating an action or the probability of participating in a specific behavior. Within the framework of this research, it pertains to the goal of Orang Asli entrepreneurs to engage in commercial activities connected to the mainstream tourism sector.

The intention to enter mainstream businesses is closely linked to expansion, which involves reaching new markets and potential customers and increasing sales. This expansion can elevate the company's visibility and prominence in the minds of numerous customers [21]. Additionally, business and entrepreneurial growth may offer opportunities for relocating the business within the local vicinity or across state or international borders. It also provides enhanced access to suppliers and logistics partners, which can be crucial for the business's survival. Considering these advantages, many small business owners and indigenous entrepreneurs strive to break into the mainstream market, despite the challenges they may encounter. The intention to expand and reach the mainstream market is a common aspiration among entrepreneurs of all sizes, including those operating small businesses [21]. According to [21], this entrepreneurial intention to progress further is influenced by perceptions of feasibility, desirability, and the inclination to act.

## **3 Methodology**

### **Sampling and Instrument**

The research methodology used in this study is a quantitative technique using a causal investigation design. Specifically, a cross-sectional study design is utilized, whereby data is collected via a self-reported and self-administered survey questionnaire. The study focused on the population of individual Orang Asli entrepreneurs engaged in small tourism-related businesses. The unit of analysis and the sample were selected from this population. These individuals are often regarded as possessing a high level of expertise and extensive experience, which enables them to provide pertinent and valuable insights on a particular topic. According to data from the Malaysia Department of Orang Asli (JAKOA), around 500 Orang Asli entrepreneurs are actively engaged in tourism-related enterprises in nine out of the eleven states in Peninsular Malaysia [7].

## Research Instrument

This research examines the relationship between personality qualities and a feeling of community as the independent variables and the desire to enter mainstream tourist industry-related firms as the dependent variable. The survey instrument has four parts, with Section A designed to gather information on the demographic profile of the respondents. Section B of the survey is specifically developed to assess the perspective of Orang Asli entrepreneurs about personality qualities. On the other hand, section C focuses on gauging their feeling of community. Section D of the study primarily focuses on the core analysis of the underlying motives behind the endeavor to penetrate mainstream firms. Participants must express their perspective using a Likert scale of seven response options, ranging from 1, which denotes “strongly disagree”, to 7, representing “strongly agree.” Most of the items used in this study were derived from previous relevant studies, with some adjustments made to the language to specifically meet the aims and objectives of the current research [11] and [18]. Due to variations in educational attainment among Orang Asli entrepreneurs, a questionnaire survey was conducted using a Bahasa Malaysia version. This version was created by translating the original English form with the assistance of a language specialist. Before finalizing the version, pilot research was undertaken to ascertain and validate the reliability and validity of the used items.

## 4 Analysis and Results

### 4.1 Respondents Profile

According to the frequency test results, the most significant percentage of Orang Asli entrepreneurs fell within the age range of 30 to 39 years, accounting for 33.6% ( $n = 84$ ). This was followed by individuals aged 25 to 29 years, representing approximately 23.2% ( $n = 58$ ). Those aged 40 to 49 years and 50 to 59 years constituted roughly 20.8% ( $n = 52$ ) and 14.4% ( $n = 36$ ), respectively. Lastly, individuals aged 60 years and above accounted for 8.0% ( $n = 20$ ) of the total sample. A total of 195 individuals reported being married, accounting for 78.0% of the sample. In contrast, 40 individuals, representing 16.0% of the sample, reported being single. The remaining 15 individuals, constituting 6.0% of the sample, fell into the category of “others.” The data indicates that 54.8% of the sample population, represented by  $n = 137$ , falls into the specified category. A total of 63 individuals, constituting 25.2% of the sample, reported having finished postsecondary education. In contrast, 50 individuals, accounting for 20.0% of the sample, indicated having elementary education. A total of 104 individuals, accounting for 41.6% of the sample, reported being engaged in the company for 3–5 years. Similarly, 93 individuals, constituting 37.2% of the sample, indicated a business tenure of 6–10 years. Additionally, 31 individuals, representing 12.4% of the sample, reported being in the business for 11–15 years. Lastly,

22 individuals, comprising 8.8% of the sample, reported a business tenure above 15 years.

The findings indicate that a significant proportion of Orang Asli entrepreneurs operate as independent sole owners, accounting for around 65.2% ( $n = 163$ ) of the sample. Partnership arrangements were seen among approximately 24.0% ( $n = 60$ ) of the entrepreneurs, while 10.8% ( $n = 27$ ) were affiliated with either governmental or non-governmental organizations. Most respondents, namely 55.6% ( $n = 139$ ), were involved in the trade of traditional cultural items such as handicrafts, crafts, and ethnic products. This category accounted for the most significant proportion of participants. The remaining 44.4% ( $n = 111$ ) were engaged in other tourism-related activities. Most of the sample, including 42.0% ( $n = 105$ ), reported an average monthly income ranging from RM2001 to RM3000. Approximately 28.0% ( $n = 71$ ) of the respondents reported an income between RM1000 and RM2000, while 18.4% ( $n = 46$ ) reported an income between RM3001 and RM4000. A smaller proportion, 7.2% ( $n = 18$ ), reported an income between RM4001 and RM5000. Lastly, only 4.0% ( $n = 10$ ) of the respondents reported a monthly income beyond RM5000.

## 4.2 SEM Evaluation/Analysis

Before reporting the proposed hypotheses' outcome, a multivariate analysis process using Structural Equation Modelling (SEM) with AMOS software was applied.

### 4.2.1 Measurement Models Evaluation

The evaluation of the model's adequacy, including assessing the measures' quality, validity, and reliability for the research constructs (endogenous and exogenous variables), was conducted via confirmatory factor analysis (CFA). The measure contained six proposed items on personality qualities. The measurement model demonstrated statistical significance, as shown by a p-value of less than 0.001. Convergent validity was achieved by factor loadings over 0.60 for all tested items. The t-values (critical Ratio) corresponding to each measured item on the scale exhibited statistical significance, surpassing the thresholds of  $\pm 1.96$  at the 0.05 or 0.01 significance levels, respectively. The Cronbach's  $\alpha$  coefficient exceeds 0.92, indicating that it is above the predetermined threshold for acceptable dependability as outlined by Nunnally (1978). The study findings indicated that the AVE values above the threshold of 0.5 (precisely, 0.689), providing strong evidence of convergent validity [22].

The instrument comprised eight recommended components on the concept of feeling of community. The measurement model demonstrated statistical significance, as shown by a p-value of less than 0.001. Factor loadings over 0.70 for all assessed items indicate the successful attainment of convergent validity. The t-values (critical Ratio) corresponding to each estimated item on the scale exhibited significant deviations from  $\pm 1.96$  at both the 0.05 and 0.01 significance levels. Regarding

dependability, this construct demonstrates reliability as shown by its composite reliability score of 0.915, which is above the minimum acceptable threshold of 0.60. The average values for this component were found to be more than 0.5 (specifically, 0.689), indicating the presence of convergent validity [22].

A comparable procedure was used to refine the measuring model for intention within the context of mainstream firms. The measurement model has statistical significance, as shown by a p-value of less than 0.001. The crucial ratios of the measurement model, which serve as indicators of the construct's uni-dimensionality, exceed 1.96 at a significance level of 0.01. The factor loading and critical ratio assessments provide evidence for the scale's unidimensionality, hence establishing convergent validity [22]. The manually determined composite reliability of 0.905 and average variance extracted (AVE) of 0.660 demonstrate satisfactory reliability and convergent validity [22].

In conclusion, the results obtained from the analysis of the 10 Goodness-of-Fit Indices indicate that the data adequately conform to the measurement models. The findings of this study provide excellent evidence supporting the unidimensionality, convergent validity, and reliability of the assessment model used to assess personality characteristics, the sense of community construct, and intention within the mainstream corporate context. The measuring properties of this variable are sufficient, making it suitable for use in the second phase of the analytical process, namely in route analysis.

#### 4.2.2 Path Analysis

To evaluate the many hypotheses that examine a direct link between independent variables and a dependent variable, route analysis using structural equation modelling (SEM) was conducted. A standardized parameter was employed using the maximum likelihood estimation method to calculate the route coefficients. The maximum likelihood approach has been widely used as the primary estimate technique in modern structural equation approaches since its inception in the mid-1960s. Table 2 presents the findings of the route analysis.

Table 1 Summarized path analysis results.

The result shows a strong link between personality traits and the intention of making its way into mainstream business. This is evident when the analysis produced a significant relationship between both variables ( $\beta$ : 0.047, t-value: 6.633,  $p < 0.001$ ). Thus, hypothesis H1 is supported. This finding suggests that a subset of Orang Asli individuals engaged in small companies have opportunistic-driven personality traits and motivation, as shown by the descriptive analysis. In addition to other factors, personality qualities play a significant role in the entrepreneurial pursuits of individual Orang Asli. The lack of surprise about this conclusion may be attributed to the consistent findings of several prior investigations. The author in reference [10] proposed that the choice to become an entrepreneur and the subsequent entrepreneurial process are influenced by personal qualities or personality traits. According to the scholarly argument put out by ref. [23], the personality attribute



**Table 1** Summarized path analysis results

1. Path analysis		Standardized estimates	Critical ratio (t-value)	P	Result
H1	There is a significant relationship between personality traits and the intention of making way into mainstream business	0.047	6.633	***	Supported
H2	There is a significant relationship between a sense of community and the intention of making way into mainstream business	0.050	2.477	***	Supported

*Note* \* Significant at  $p < 0.0$

in question is considered a crucial factor in achieving the aspiration to advance in entrepreneurship. In the context of Malaysia, a study conducted by ref. [24] revealed a noteworthy correlation between personality qualities and people's capacity to get a competitive advantage within the Small and Medium Enterprises (SMEs) sector.

The findings of the second hypothesis indicate a significant positive association between the feeling of community and the desire to enter mainstream companies. The strength of this link is represented by a beta coefficient of 0.050 and a t-value of 2.477, with a p-value of less than 0.001. Therefore, corroborate the idea. This finding aligns with the research conducted by ref. [9], which shows that the feeling of community significantly impacts the growth of individual businesses. According to a study conducted by ref. [8], it has been shown that the sense of community has a significant role in shaping social behaviors and performance, particularly in developing economies. In the framework of this research, it is evident that the feeling of community is deemed significant not only for Orang Asli persons who are not directly involved in commercial activities but also for those presently engaged in modest business ventures, to progress further.

## 5 Conclusion and Implications

This empirical research has effectively accomplished its overarching objective by providing insight into the causal relationship between personality qualities, a feeling of community, and the inclination to enter mainstream industries. This work provides a clear and valuable contribution to the existing body of indigenous research literature by offering new insights that broaden and reinforce current perspectives and empirical findings. Furthermore, this research endeavor not only establishes a trajectory for future scholars to explore and extend the field of indigenous studies but

also provides a platform for their academic pursuits on a more expansive scale. In addition to the points mentioned above, it is crucial to highlight that the findings of this research have significantly contributed to the existing body of knowledge on the Orang Asli community, which has significant importance as one of Malaysia's indigenous populations.

In the present context, the research highlights the significance of recognizing the contributions made by indigenous or minority communities within a nation, hence emphasizing the need not to see them as retrograde entities. Despite being a tiny group, if this minority is provided with proper nurturing, information, and ongoing support, they have the potential to thrive in several domains, including the field of entrepreneurship, if they are prepared to embrace change and development. This notion posits that the sense of community among indigenous or minority groups should not solely be seen as a means of social bonding and harmony. Instead, it should be recognized that incorporating elements such as knowledge and personality traits can offer a pathway towards understanding entrepreneurial business. This perspective holds significant relevance for these groups, as it can facilitate their further progress and development. In essence, it is evident that the feeling of community and individual characteristics not only impact the initiation of small tourist enterprises among the Orang Asli but also enhance their inclination to go into other sectors of the mainstream tourism industry. In conjunction with different variables, the personality traits and sense of community among Orang Asli entrepreneurs may not be optimal. However, these individuals have the potential to utilize this information to cultivate and actualize their entrepreneurial capabilities. By harnessing these elements, they can effectively propel their aspirations towards success.

Another significant aspect is the relevant authority, namely the Department of Orang Asli Development (JAKOA). This agency serves as a governing body responsible for maintaining comprehensive policies and programs to promote the development and well-being of the Orang Asli community. The advice and information acquired will enhance the ability of this government agency to manage, elevate, and improve the socio-economic conditions of the minority indigenous population inside the nation effectively and sensitively. The absence of a reciprocal relationship between Orang Asli entrepreneurs and the Department of Orang Asli Development (JAKOA) would have significant negative consequences for both parties. The direct involvement of both parties is crucial for fostering harmonious and prosperous entrepreneurship and promoting the future development of indigenous tourism.

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# Customary Leaders' Perception of Indigenous Tenure in Indonesia's New Capital City: A Quantitative Review



Isman , Syamsul Hidayat, and Yuli Setyowati

**Abstract** This study explores the interplay of environmental sustainability, tenurial conflict, sustainable economic growth, and urban development, focusing on the establishment of a new capital city. Amid global concerns for the environment, land rights, and balanced growth, investigating these relationships is crucial. Environmental sustainability is central to responsible development, necessitating the coexistence of urbanization and ecology. Tenurial conflicts, arising from competing land interests, can hinder development and exacerbate tensions. Balancing economic growth with ecological preservation is vital. Developing a new capital city involves complex factors that require a comprehensive understanding of their interactions. This study employs empirical analysis to unravel causal links, offering insights into responsible urban development regulation, indigenous rights protection, and the balance between progress and preservation. It informs legal policy and planning for a sustainable and inclusive future.

**Keywords** Environmental sustainability · Urban development · Tenurial conflicts · Sustainable economic growth · New capital city

## 1 Introduction

The dynamic interplay between environmental sustainability, tenurial conflict, sustainable economic growth, and urban development has gained significant attention in recent scholarly discourse [1]. This study delves into the intricate web of causal relationships that connect these pivotal factors, with a specific focus on the establishment of a new capital city [2]. In an era marked by heightened global concerns over

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environmental degradation, equitable land rights, and balanced economic progress, investigating these interactions holds profound significance [3].

Environmental sustainability stands as a cornerstone in the contemporary understanding of responsible development [4]. The pressing need to preserve natural resources, mitigate climate change, and ensure a harmonious coexistence between urbanization and ecology has led to a growing exploration of sustainable practices [5]. This study recognizes the critical role environmental sustainability plays in shaping the trajectory of urban expansion, particularly in the context of a new capital city. Tenurial conflict emerges as a consequential element, often arising due to competing interests over land ownership, usage, and access rights. Such conflicts, if unresolved, can impede development initiatives and exacerbate social tensions. Understanding the intricate linkages between tenurial conflict and urban growth is vital for formulating effective policies that ensure equitable development and safeguard indigenous rights, especially in the context of establishing a new capital city [6]. Sustainable economic growth, as a crucial driver of societal progress, must be harnessed in a manner that aligns with environmental preservation and social equity. The intricate interdependence between economic advancement and ecological equilibrium requires thorough examination [7]. This study recognizes the significance of striking a delicate balance between economic aspirations and sustainable urban development, particularly in the unique context of a new capital city. The decision to develop a new capital city is a multifaceted process influenced by a complex interplay of factors. The location, design, and execution of such an endeavor necessitate a comprehensive understanding of how environmental sustainability, tenurial conflict, and sustainable economic growth interact and potentially influence the development trajectory.

The establishment of a new capital city presents a unique opportunity to integrate sustainable practices and innovative urban planning, ensuring that the urban landscape is not only functional and aesthetically pleasing but also environmentally conscious and socially inclusive [7]. In light of these considerations, this study employs a rigorous empirical analysis to unravel the causal links between environmental sustainability, tenurial conflict, sustainable economic growth, and the development of a new capital city [8]. By doing so, it aims to contribute valuable insights to the ongoing discourse surrounding responsible and holistic urban development, indigenous land rights, and the intricate balance between economic progress and environmental preservation. Through a meticulous examination of these intricate relationships, this research endeavors to provide a nuanced understanding that can inform policy decisions and urban planning practices, ultimately fostering a more sustainable and inclusive future [9].

## 2 Method

This research employs a mixed-methods approach to comprehensively investigate the interrelationships between environmental sustainability, tenure conflict, sustainable economic growth, and urban development, focusing on the establishment of a new

capital city [10]. To analyze the quantitative aspects of the study, a regression analysis will be conducted. Data will be collected on various variables, including indicators of environmental sustainability, economic growth, and tenure conflict. Statistical software will be utilized to perform regression models, exploring the causal links between these variables. This quantitative analysis will provide numerical insights into the extent and direction of relationships, offering empirical evidence for discussions [11].

Incorporating a qualitative dimension, thematic analysis will be employed to delve into the nuanced aspects of the studied factors. Qualitative data will be gathered through interviews, surveys, and document analysis. These methods will capture perspectives of stakeholders, experts, and affected communities, shedding light on the intricate socio-economic and environmental dynamics. Thematic analysis will uncover patterns, enabling a deeper understanding of the qualitative aspects of the studied phenomena [12].

The findings from both quantitative regression analysis and qualitative thematic analysis will be integrated to triangulate the results, enhancing the overall validity and reliability of the study [13]. This integration will provide a holistic view of the complex interplay between environmental sustainability, tenurial conflict, sustainable economic growth, and urban development in the context of a new capital city. Throughout the research, ethical considerations will be prioritized. Informed consent will be obtained from participants, ensuring their rights and confidentiality. Ethical guidelines for research involving human subjects will be strictly adhered to, contributing to the credibility of the study's outcomes.

While this research strives for comprehensiveness, limitations include potential biases in data collection and constraints in the scope of the study. Interpretations of qualitative data could also introduce subjectivity. These limitations will be openly acknowledged and discussed in the final analysis.

The utilization of a mixed-methods approach encompassing quantitative regression analysis and qualitative thematic analysis ensures a robust and multifaceted exploration of the causal relationships between environmental sustainability, tenurial conflict, sustainable economic growth, and urban development in the context of a new capital city. This methodological framework enhances the depth and breadth of insights, contributing to a more holistic understanding of the complex dynamics at play [14].

### 3 Literatur Review

The literature review delves into the intricate interplay between indigenous land rights, sustainable development, and legal frameworks. This exploration highlights the crucial need for effective policies that safeguard the land tenure of indigenous communities while promoting ecological integrity. It also unravels the challenges inherent in balancing economic interests, cultural preservation, and historical injustices within the realm of land rights protection.

### ***3.1 Environmental Sustainability and Indigenous Land Rights***

Global efforts to conserve natural resources, combat environmental degradation, and promote sustainability are evident in a range of research studies. Firstly, the implementation of equitable and sustainable land-use policies holds paramount importance, particularly concerning indigenous communities. These communities often resist the adverse impacts of resource exploitation. Empirical research illustrates that safeguarding the traditional rights of indigenous groups can effectively preserve natural resources and mitigate the negative consequences of activities such as mining [15].

Secondly, the synergistic collaboration between indigenous traditional ecological knowledge and contemporary scientific approaches emerges as a robust foundation for effective resource management. By amalgamating local wisdom with academic scholarship, sustainable management practices can be holistically integrated, thereby enhancing the preservation of natural resources and the ecosystems they support [16].

Furthermore, research focusing on aspects such as land tenure rights and jurisdictional approaches, such as the Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative, reflects global endeavors within the realm of sustainable resource management. These research areas shed light on the importance of policies that recognize and uphold community rights in resource management, fostering community participation in environmental decision-making processes [17].

The global pursuit of conserving natural resources, countering environmental degradation, and advancing sustainable practices necessitates the harmonious integration of diverse scientific approaches and cross-sectoral collaborations. By acknowledging and respecting indigenous rights, incorporating traditional knowledge, and formulating inclusive policies, the international community can make substantial strides toward more sustainable and forward-thinking natural resource management practices [18].

### ***3.2 Tenurial Conflict and Indigenous Communities***

Numerous interrelated factors highlight the significance of sustainable land-use policies, particularly in the context of indigenous communities. Equitable land-use policies play a crucial role in addressing disparities and ensuring the preservation of natural resources. Indigenous communities often resist the negative impacts of resource exploitation, making the safeguarding of their traditional rights essential. Empirical research illustrates that such protection can effectively mitigate the adverse consequences of mining activities [19].

Indigenous communities hold profound ecological knowledge and have a vested interest in maintaining their land's integrity. Thus, safeguarding their rights can lead to sustainable resource management. Additionally, land reform rationalities



and governance effects further emphasize the need for equitable policies. Rival reform ideas often struggle to counter adverse formalization, where state control over public lands negatively affects local populations. Sustainable land-use policies can rectify this by prioritizing fair governance and acknowledging the traditional rights of indigenous communities [20].

In summary, the crucial role of sustainable land-use policies is evident in their potential to address disparities, promote equitable resource management, and protect the environment. By recognizing and safeguarding the traditional rights of indigenous communities, these policies can effectively counter the negative consequences of mining exploitation and contribute to sustainable development [21].

### ***3.3 Sustainable Economic Growth and Indigenous Livelihoods***

The economic empowerment and sustainability of indigenous communities are heavily influenced by various factors, including their access to economic resources and opportunities as well as the acknowledgment of their rights within policies and practices. The initial factor that significantly influences the capacity of indigenous communities to develop sustainable livelihoods is their direct access to economic resources, including land, forests, and other natural resources. The engagement of individuals in the management of resources forms the basis for their attainment of economic empowerment [22].

Furthermore, the recognition and endorsement of traditional knowledge and practices are intricately connected to the potential for indigenous communities to achieve economic empowerment. The foundation for sustainable practices that ensure the longevity of livelihoods is derived from the knowledge and proficiency of individuals within the local community in areas such as ecosystems, agriculture, and craftsmanship. The endorsement of endeavors such as culturally-based enterprise development and ecotourism has the potential to generate fresh income opportunities and foster economic empowerment [23].

The acknowledgment of the rights of indigenous communities within policies and laws is of utmost significance. The preservation of land ownership rights and traditional resources is crucial for sustaining the livelihoods of individuals and preventing harmful exploitation. The legal and practical framework that supports the economic sustainability of indigenous communities is established through the recognition of traditional governance systems and the inclusion of these communities in decision-making processes related to resource management. In order to promote economic empowerment and ensure the long-term viability of indigenous livelihoods, it is imperative to duly consider and acknowledge these factors during policy formulation and the execution of development initiatives [24].

### ***3.4 Urban Development and Indigenous Land Use***

Previous research indicates several critical factors influencing changes in land use from the perspectives of environmental sustainability and indigenous rights. Due to rapid urban growth and insufficient regulation, urbanization and real estate development frequently encroach upon indigenous lands, resulting in deforestation, habitat loss, and disputes over land rights. Resource extraction and industrialization, such as mining and logging, contribute to environmental degradation and disrupt indigenous communities' traditional livelihoods, underscoring the complex interplay between economic interests and sustainable land use [25].

The recognition of indigenous rights emerges as a pivotal determinant. Failing to acknowledge these rights not only undermines the cultural heritage of indigenous peoples but also jeopardizes effective environmental conservation. Sustainable land use requires integrating indigenous knowledge and perspectives into decision-making processes to ensure the preservation of both ecosystems and cultural traditions. Moreover, the alteration of land use can impact biodiversity and ecosystem services, affecting the resilience of local ecosystems and their ability to provide essential resources. Indigenous communities often possess intricate knowledge of local ecosystems, offering valuable insights for biodiversity conservation and sustainable resource management [25].

Balancing urbanization, economic activities, and indigenous rights necessitates comprehensive and inclusive land use planning. Prioritizing sustainable land use demands the recognition of indigenous land rights, active participation of indigenous communities in decision-making processes, and the integration of traditional ecological knowledge with modern scientific approaches. By addressing these interconnected factors, societies can strive for equitable and environmentally responsible land use practices that respect both the integrity of ecosystems and the rights of indigenous peoples [26].

### ***3.5 Policy and Legal Framework for Indigenous Rights Protection***

An effective framework for protecting the land rights of indigenous communities involves a combination of legal and policy measures. Firstly, clear and comprehensive legal recognition of indigenous land tenure rights is essential. This recognition should encompass not only the ownership and use of ancestral lands but also the preservation of cultural and ecological values. Additionally, the framework should incorporate mechanisms for the meaningful participation of indigenous communities in decision-making processes that affect their lands. This includes consultation, free, prior, and informed consent (FPIC), and the establishment of co-management agreements where indigenous peoples have a direct role in land management and conservation [27].

However, implementing such a framework faces significant challenges. One major obstacle is the resistance from powerful economic interests, often linked to industries such as agribusiness and mining, that seek to exploit indigenous lands for profit. These interests can exert pressure on governments to undermine indigenous rights or weaken environmental regulations. The lack of political will to enforce and uphold indigenous land rights is another critical challenge. In some cases, governments may prioritize economic development over the rights and well-being of indigenous communities, leading to conflicts and legal battles [28].

The complex interplay between traditional indigenous knowledge and Western scientific approaches to land management can pose challenges. Integrating indigenous knowledge systems into formal legal and policy frameworks requires careful consideration and respect for cultural differences. Finally, addressing historical injustices and providing reparations for past land dispossession is a crucial aspect of any effective framework for indigenous land rights protection.

An effective legal and policy framework for protecting the land rights of indigenous communities involves clear legal recognition, meaningful participation, and respect for indigenous knowledge. Overcoming challenges posed by economic interests, political will, cultural differences, and historical injustices is essential for the successful implementation of such a framework [29].

## 4 Result and Discussion

In this subsection of the results and discussion, we examined the influence of three variables—environmental sustainability, tenurial conflict, and sustainable economic growth—on the protection of indigenous customary land rights. This study involved 80 respondents identified as indigenous community leaders from two districts, namely Sepaku and Samboja. The results of the regression analysis indicate that the variables of environmental sustainability, tenurial conflict, and sustainable economic growth do not have a significant impact on the protection of indigenous customary land rights.

The influence of each variable has been explained based on the significance values obtained. The odds ratio values have also been interpreted for each variable, illustrating the effect of a one-unit change in the variable on the protection of indigenous customary land rights. Although no significant impact is evident within the scope of this testing, it should be noted that these interpretations depict direct relationships between the variables.

In more complex situations this conclusion underscores the need for further in-depth analysis to comprehend other factors that could influence the protection of indigenous customary land rights within the Sepaku and Samboja regions.

### Variables in the Equation

		B	S.E	Wald	df	Sig	Exp(B)
Step 1 <sup>a</sup>	KL	– 0.038	0.385	0.010	1	0.921	0.963
	KT	– 0.021	0.595	0.001	1	0.972	0.979
	PEB	– 0.102	0.431	0.056	1	0.813	0.903
	Constant	0.111	0.992	0.013	1	0.911	1.118

– Variable(s) entered on step 1: KL (Environment Sustainability, KT (Tenurial Conflict, PEB (Economic Growth)

Based on the table above, the influence of each variable can be explained as follows: Influence of Environmental Sustainability on the Protection of Indigenous Customary Land Rights: Based on the aforementioned table, the significance value of the environmental sustainability variable is 0.921, which is greater than the  $\alpha$  value of 0.05. Therefore, it can be inferred that the environmental sustainability variable does not have a significant impact on the protection of indigenous customary land rights.

Influence of Tenurial Conflict on the Protection of Indigenous Customary Land Rights: Based on the provided table, the significance value of the tenurial conflict variable is 0.972, which is greater than the  $\alpha$  value of 0.05. Consequently, it can be concluded that the tenurial conflict variable does not significantly affect the protection of indigenous customary land rights.

Influence of Sustainable Economic Growth on the Protection of Indigenous Customary Land Rights: According to the table above, the significance value of the sustainable economic growth variable is 0.813, exceeding the  $\alpha$  value of 0.05. Therefore, it can be deduced that the variable of sustainable economic growth does not exert a significant influence on the protection of indigenous customary land rights.

Subsequent to understanding the impact of each variable, the discussion proceeds with an explanation of the coefficient parameters along with the obtained odds ratio values as follows: Odds Ratio of Environmental Sustainability on the Protection of Indigenous Customary Land Rights.

The provided table yields an odds ratio value of 0.963 for the environmental sustainability variable. This implies that a one-unit increase in the environmental sustainability variable results in a 0.963-fold decrease in the protection of indigenous customary land rights.

Odds Ratio of Tenurial Conflict on the Protection of Indigenous Customary Land Rights: Based on the presented table, the odds ratio value of the tenurial conflict variable is 0.979. This indicates that a one-unit increase in the tenurial conflict variable leads to a 0.979-fold decrease in the protection of indigenous customary land rights.

Odds Ratio of Sustainable Economic Growth on the Protection of Indigenous Customary Land Rights: As indicated by the aforementioned table, the odds ratio value of the sustainable economic growth variable is 0.903. This signifies that a one-unit increase in the sustainable economic growth variable results in a 0.903-fold decrease in the protection of indigenous customary land rights.

The limited influence of environmental sustainability: The regression analysis indicates that the variable “environmental sustainability” does not significantly

affect the protection of indigenous land rights. This finding suggests that efforts solely focused on environmental sustainability may not directly contribute to the enhancement of indigenous livelihoods. Therefore, while environmental conservation remains a critical goal, additional strategies and interventions may be necessary to ensure sustainable economic growth for indigenous communities [30].

**The negligible impact of tenurial conflict:** The analysis reveals that “tenurial conflict” does not exert a substantial influence on the protection of indigenous land rights. This outcome implies that the prevalence of conflicts over land tenure may not inherently hinder or enhance the sustainable economic growth of indigenous populations. Hence, addressing tenurial conflicts alone may not be sufficient to drive significant changes in the economic well-being of indigenous communities [31].

**The inconclusive relationship with Sustainable Economic Growth:** The variable “Sustainable Economic Growth” does not display a statistically significant association with the protection of indigenous land rights in the regression analysis. This suggests that while economic growth is a crucial aspect of improving indigenous livelihoods, its direct relationship with the protection of land rights may be complex and influenced by other factors beyond the scope of this analysis [32].

The regression analysis suggests that the examined variables may have limited direct impacts on the sustainable economic growth and livelihoods of indigenous communities. While environmental sustainability, tenurial conflict, and economic growth are all important considerations, their direct relationships with the protection of indigenous land rights may require more comprehensive and context-specific approaches to ensure tangible positive effects on indigenous livelihoods. Further research and multifaceted interventions may be needed to fully address the complex interplay between these variables and indigenous economic well-being.

The conclusions drawn from the regression analysis outlined above contribute to our understanding of the role of technology in poverty eradication and sustainable economic growth. Aligned with the proposed theme, the findings suggest that while technology has the potential to play a critical role in overcoming poverty, its direct impact on indigenous livelihoods and land rights may be limited. The analysis highlights that variables such as environmental sustainability, tenurial conflict, and sustainable economic growth do not exhibit significant correlations with the protection of indigenous land rights and their economic well-being [33].

Drawing parallels, technology's potential to alleviate poverty is analogous to its impact on indigenous communities. Just as the regression analysis reveals complex relationships between variables, the utilization of technology for poverty reduction requires a multifaceted approach. Technology can empower entrepreneurs by providing tools and platforms to create innovative solutions and enhance economic opportunities. This mirrors the empowerment of indigenous communities through sustainable economic growth. Mobile applications, e-commerce platforms, and online marketplaces, akin to sustainable land-use policies, serve as avenues for income generation and job creation [33].

Nonetheless, similar to the recommended supportive ecosystem for technology's effective integration, addressing the unique challenges faced by indigenous communities demands comprehensive measures. The success of technology in poverty eradication, like its impact on indigenous rights, hinges on policies promoting equitable access, digital literacy, and inclusive infrastructure. Collaboration among various stakeholders, as urged for the technology-poverty relationship, remains crucial to creating an environment where indigenous rights, economic growth, and sustainable land use are harmonized. The regression analysis underscores the intricate interplay of variables, echoing the intricacies involved in leveraging technology for both poverty reduction and the preservation of indigenous rights [34].

## 5 Conclusion

The quantitative review on Customary Leaders' Perception of Indigenous Tenure in Indonesia's New Capital City yields several key conclusions with implications for policy and future research. Firstly, the analysis indicates that the variables of "Environmental Sustainability," "Tenurial Conflict," and "Sustainable Economic Growth" do not exhibit statistically significant associations with the protection of indigenous land rights. While these variables play nuanced roles, their direct impacts on indigenous land rights are limited. This underscores the complexity of the interplay between environmental conservation, land conflicts, economic growth, and indigenous rights.

The implications of these findings are significant. Policymakers and stakeholders must recognize that enhancing indigenous land rights protection requires a holistic approach that considers diverse cultural, social, and economic factors. Rather than relying solely on isolated strategies, a comprehensive framework that engages indigenous communities, fosters collaboration, and aligns with cultural norms is imperative. Such an approach can safeguard indigenous tenure while promoting sustainable urban development.

However, it is crucial to acknowledge the study's limitations. The focus on Customary Leaders' perceptions provides valuable insights but may not capture the entirety of indigenous perspectives. Moreover, unexplored variables or contextual nuances may influence the relationships examined. Future research should consider a broader spectrum of indigenous voices and incorporate additional variables to provide a more comprehensive understanding.

In conclusion, this study sheds light on the intricate dynamics between environmental sustainability, tenurial conflict, sustainable economic growth, and indigenous land rights in the context of Indonesia's new capital city. While direct correlations are limited, the findings emphasize the need for holistic and culturally sensitive approaches to protect and promote indigenous tenure. By acknowledging these conclusions and their implications, policymakers and researchers can contribute to a more equitable and sustainable future for both indigenous communities and urban development in Indonesia.

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# The Relevance of Ar-Rahnu for MSME (Micro, Small, and Medium-Sized Enterprises) Community in Assuring Financial Well-Being



Nusaibah Hilaluddin and Azwan Abdullah

**Abstract** Ar-Rahnu are becoming more and more well-liked by Malaysia's Micro, Small and Medium Enterprises (MSMEs) as well as the general public. Ar-Rahnu are provided by a number of institutions to help people fulfill their needs and aspirations. The Ar-Rahnu system of Islamic pawnshops is distinct in that it provides quick, simple, and Shariah-compliant access to instant funds. In order to make it easier for MSMEs to use Ar-Rahnu's services, this article will concentrate on the necessity of incorporating the MSME community in improving Ar-Rahnu's reputation and expanding the company's presence throughout Malaysia. To understand how the MSME community promotes Ar-Rahnu, this study uses a qualitative technique to examine publications from journals and academic books. In parallel, the researcher examines the distribution of Ar-Rahnu locations in Malaysia based on each organization's website. The study comes to the conclusion that a friendly Ar-Rahnu by MSME community needs to be promoted in order to strengthen the Malaysian economic system and the Islamic pawnshop system. Ar-Rahnu can assist MSMEs by providing microfinancing promptly. Additionally, the Muslim community is essential in coordinating efforts to help businesses use Ar-Rahnu as a source of funding, assuring their financial well-being.

**Keywords** Ar-Rahnu · MSME community · Finance well-being

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## 1 Introduction

The three main economic sectors of the Islamic economy are the political (public or government), the commercial (trade or profit-based), and the social (non-profit or social). The distinctions between these three areas relate to the pursuit of socioeconomic harmony and success (al-Falah) both in this life and afterward. In order to receive divine blessings, the Islamic economy is built on the principles of Tawhid (acknowledging Allah SWT) and submission to Allah SWT, which are then followed by national unity and a spirit of brotherhood [1]. Islamic social financial products are thus complementary to the Islamic economic system's concept. However, the majority of discussions limit themselves to Waqf and Zakat—Islamic forms of social finance—in the social sector. There is a need for Islamic social financial products in the commercial sector to promote economic growth and development and not solely focus on poverty eradication [2].

In keeping with this, both banking and non-banking institutions, including governmental organizations (NGOs) and government-owned businesses, are now providing Islamic social financial products. Commercial banks like Alliance Bank, Maybank, Bank Islam, Bank Muamalat, and CIMB Bank, as well as financial development organizations like Agro Bank, Bank Rakyat, and Bank Simpanan Nasional (BSN), offer Islamic microfinance services. Tekun Nasional, Amanah Ikhtiar Malaysia (AIM), Majlis Amanah Rakyat (MARA), National Entrepreneurship Corporation (PNS), and National Entrepreneur Development Corporation (PUNB) are non-banking organizations that also provide microfinancing services [3]. Financial illiteracy is frequently associated with an increase in bankruptcies and occurrences of lending money to people who are not authorised by the government [4]. According to the principles of Qard al-Hasan (charitable lending) and Ar-Rahnu (Islamic pawnshop), these financial institutions and cooperatives in Malaysia provide Islamic social finance through microfinancing [2]. The ability of the government to control the financial resources, development opportunities, and running costs of its separate Muslim communities is frequently considered a necessary condition for the ummah to see meaningful economic progress [5].

In this context, the growth of the Ar-Rahnu industry has demonstrated favorable results and increased financial institutions' awareness of the need to introduce this product [6]. Ar-Rahnu is a financing option with a short application period, quick and simple procedures, and no riba (usury) components. According to [7–9], and [10], Ar-Rahnu products are Shariah-compliant, preventing riba and gharar (uncertainty), and provide social welfare. It is made available to the general public as loan collateral [11] through gold or jewelry pawnbroking.

Ar-Rahnu is also acknowledged as a type of microloan that can assist low-income people in accessing basic requirements and funding for their companies. According to [12] the main goal of creating Ar-Rahnu is to offer financing to support low-income people and small business owners in their entrepreneurial endeavors. Productive commercial operations can aid in the economic development of a nation and the

eradication of poverty [13, 14]. As a result, Ar-Rahnu may be used as an alternative for raising money through commercial ventures [15].

However, compared to other traditional financing options like personal loans, credit cards, short-term loans, and others, Ar-Rahnu financing still receives less attention [16]. As some people utilize Ar-Rahnu products for personal rather than business goals, the adoption of these products among MSMEs is therefore not very promising [17]. MSMEs have chosen Ar-Rahnu as a method of providing financial help for their activities as a result of the difficulty in acquiring business finance [12, 18]. In order to build a community, cooperation between MSMEs and Ar-Rahnu institutions is crucial. A community inside MSMEs that is Ar-Rahnu-focused may entice further MSMEs to join it.

While a community is made up of small groups of neighbors that help and support one another. Ibn Khaldun put out the idea of a sense of togetherness as the cornerstone for creating a community, which is connected to unity and ultimately results in the process of civilization [19]. Folk society and folk culture were first defined by Robert Redfield in 1967. In his research, he strove to establish a connection between the science of community and the emergence of civilization, and he used historical dimensions as a framework. Ultimately, civilisation starts with unity, and he linked humanity to culture and community development as the center of civilization building [20].

The Ar-Rahnu industry has a problem as a result of the lack of knowledge and awareness in society [21, 22]. Researchers are seeking to create a specialized community for Ar-Rahnu users, including a sizable number of MSMEs, in order to implement the special value of Ar-Rahnu to MSMEs. This allows for the quick and widespread dissemination of information. A study will gather information that will enable us to see how quickly the Ar-Rahnu premises are expanding. This underscores the need for the continuous relevance of Ar-Rahnu services.

## **2 The Development History of Ar-Rahnu (Islamic Pawnshop)**

Pawnshops, often known as collateral-based loan companies, were once used by their clients as their primary financial hubs. In order to make money, the majority of pawnshops were privately owned and run [23]. Pawnbroking was a common activity in ancient Greece and Rome [24, 25]. Through Chinese Hakka traders who arrived to trade during the Malacca Sultanate era and continued to grow throughout British rule, the pawnshop system started to take root in Malaya in the early fifteenth century [26, 27]. For the Hakka Chinese descendants, the pawnbroking industry was seen as a traditional enterprise [28].

The pawnshop industry in Malaya was formally founded in 1871, the year the Pawnbrokers Ordinance of 1871 was first put into effect in the Straits Settlements. Pawnbroking was once prohibited by 13 laws that were implemented by state

governments. However, the laws governing pawnshops in Malaysia were founded on colonial-era British laws and regulations that were influenced by European pawnbroking customs. As a result, the major legislative reference pertaining to the pawnshop industry in Malaysia is the Pawnbrokers Act 1972 (Act 81) [29]. The Ministry of Local Government and Housing was given control over 194 traditional pawnshops in Malaysia as of 1991 [30]. Until now, conventional pawnshops and Islamic pawnshops in Malaysia are regulated separately under the Pawnbrokers Act 1972 to ensure smooth and healthy operations in the collateral industry.

The Pawnbrokers Act of 1972 (Act 81) is not based on Shariah principles; rather, it is based on traditional pawnbroking practices. Usual practices still exist, like *gharar* (uncertainty) and *riba* (usury). In order to replace traditional pawnbroking, *Ar-Rahnu*, or Islamic pawnbroking, was developed. Islamic pawnshops are governed by specific legislation based on the institutions supplying *Ar-Rahnu* items, whilst conventional pawnshops are managed by the Pawnbrokers Act 1972 (Act 81) [27].

The emergence of Islamic pawnshop schemes (*Ar-Rahnu*) was well embraced by Malaysian society, particularly among the less fortunate. Using *Ar-Rahnu* items has the goal of safeguarding the Muslim community against *gharar* and *riba*-related transactions. The implementation of *Ar-Rahnu* products entails offering rapid, open, equitable, and Shariah-based cash loans. Despite the fact that traditional pawnbroking systems have long controlled a sizable piece of this market, the emergence of Islamic pawnshops has garnered favor with the local populace [31, 32]. *Ar-Rahnu*'s growth in Malaysia has generated a favorable phenomenon that has drawn the interest of other parties in banking and non-banking institutions to launch this product. Islamic pawnshops, also known as *Ar-Rahnu*, act as a stimulus for the economy by enabling small-scale business owners to get access to quick money. This is in line with the goal of financial inclusion, which is to eliminate poverty and close the wealth-poverty gap in addition to accelerating the nation's economic growth [33].

The Islamic Religious and Malay Customs Council of Terengganu (MAIDAM), also known as Muassasah Gadaian Islam Terengganu (MGIT), developed the first pawnshop program in Malaysia on January 23, 1992, based on the ideas of *al-Rahn* and *Qard al-Hassan* [34]. After that, on March 12, 1992, the State Economic Development Corporation of Kelantan (PKINK) launched *Ar-Rahnu* stores, which pioneered the idea of a deposit charge [35]. The Malaysian Islamic Economic Development Foundation (YaPEIM) and Bank Kerjasama Rakyat Malaysia (Bank Rakyat) collaborated to provide *Ar-Rahnu* goods to the general public on August 21, 1993, after the Finance Minister saw the potential in this development. Banks, in particular, started getting involved with *Ar-Rahnu* products at this point.

Through partnerships with Bank Islam Malaysia Berhad (BIMB) in November 1997 and Bank Pertanian Malaysia Berhad (Agro Bank) in August 2002, YaPEIM subsequently increased the range of *Ar-Rahnu* products it offered. On October 2, 2000, YaPEIM also makes *Ar-Rahnu* items available through its business. Since financial institutions were involved in this product offering, additional financial institutions have been encouraged to do the same [27]. *Ar-Rahnu* institutions have grown quickly, and it is necessary to look into how they operate to make sure that Islamic

pawnshop practices are compliant with Islamic law and do not conflict with Allah SWT's will.

The current pawnshop systems in Malaysia are the traditional pawnshop system and the Ar-Rahnu (Islamic pawnshop) system. The conventional system, where pawnbroking services are provided by licensed private businesses and governed by the Ministry of Housing and Local Government (KPKT), provides evidence of this. In the meanwhile, a number of organizations that offer ar-Rahnu services, including cooperatives, state and federal governments, and registered private firms, make up the Islamic pawnshop system [36].

Under the Islamic Financial Services Act 2013, service providers such Islamic financial institutions, such as Bank Islam Malaysia Berhad (BIMB), Bank Muamalat Malaysia Berhad (BMMB), CIMB Bank, and RHB Bank, are governed by Bank Negara Malaysia (BNM). Development financial institutions like Bank Kerjasama Rakyat Malaysia Berhad (Bank Rakyat) and Bank Pertanian Malaysia Berhad (Agro Bank) are governed by BNM in accordance with the Development Financial Institutions Act 2002. The Cooperative Commission of Malaysia (SKM) regulates cooperative service providers. For instance, [32] cite Pos Malaysia, the National Cooperative Movement of Malaysia Berhad (ANGKASA), and Koperasi Tentera.

Additionally, businesses affiliated with the government, including Muassasah Gadaian Islam Terengganu and Permodalan Kelantan Berhad, also offer Ar-Rahnu products under the authority of the state statutory organization. YaPEIM is one of the federal government's Ar-Rahnu service providers, adhering to both the small cooperative regulations and the Guidelines for Islamic Pawnshop Ar-Rahn. In order to receive an Islamic pawnshop license, private businesses can also register with the Ministry of Housing and Local Government (KPKT), like Ar-Rahnu Express from the Habib Group [37]. The majority of Ar-Rahnu service providers are now beginning to provide their services to MSMEs to help their enterprises.

### 3 Research Methodology

The goal of this study was to assist MSME in ensuring their financial security. Qualitative data were gathered through an exploratory and used in this study. This was done by browsing through or evaluating research-related documents. Research is also conducted on articles from journals and academic books to improve engagement between the Ar-Rahnu user and MSMEs community. The researcher came to the conclusion that many of the premises of Arahnu were being fulfilled in Malaysia and that they still hold true for the general public based on the data collection methods that have been provided. When necessary, it is aware of the advantages of arrahnu, especially for MSME.

## 4 Ar-Rahnu in MSME Community

Expanding social networks is critical for Ar-Rahnu, and community involvement is essential for this. One of the techniques used by various marketing strategies is community. It is the most effective approach to publicize and grow the business being conducted. A community might include individuals with the same or different interests as well as people from separate communities with various goals [38]. A group of people are considered to form a community when they interact with one another based on common interests and live in the same location. On the other hand, people can come together in the virtual world regardless of their location if they share comparable social, economic, political, religious, or other interests [39]. Despite having a variety of interests, needs, and ambitions, these groups nevertheless have common values and aspirations that are crucial for creating an effective community [40]. It takes coordinated efforts in the areas of community growth modification to a harmonization of economic, environmental, and social demands to ensure sustainable community development [41]. Therefore, community participation in the Islamic social finance sector is essential to elevate and guarantee the wider public usage of a particular instrument.

### 4.1 *Ar-Rahnu's Benefits for the MSME Community*

To protect the community from unemployment and poverty, which could lead to lost income during the COVID-19 pandemic crisis, Islamic social finance must function as a stabilizer between the economy and society [42]. Islamic social finance is therefore crucial in promoting economic activities including consumption, investment, and government spending in order to encourage the nation's economic growth [43–45]. Islamic and Sharia-compliant financial institutions can be integrated thanks to the Islamic social finance ecosystem. Its capabilities and workings are more adaptable in supporting entrepreneurs. Microfinance institutions, zakat, waqf, baytulmal, and charitable organizations like Ar-Rahnu are all part of the Islamic social finance industry. These instruments have been employed by microbusiness owners to keep up their operations throughout the COVID-19 epidemic [46].

Whether they hail from low-, medium-, or high-income categories, those in need can access short-term finance through Ar-Rahnu, an Islamic micro-credit institution. Micro-entrepreneurs employ Ar-Rahnu's products, according to [17], because of the company's quick rapid cash service and straightforward procedures [10, 24]. Because of its Sharia-compliant approach, the majority of them like Ar-Rahnu's products [18]. One of the key draws for clients to pick Ar-Rahnu for financing is the distinctiveness and effectiveness of the company's services [46]. The simplicity of borrowing money or instant cash for individuals in need also implies expanded business in Malaysia, as evidenced by the demand for pawnshop services. Recently, the pawn sector has experienced remarkable expansion. This is because obtaining finance is simple and

**Fig. 1** Ar-Rahnu in assuring financial well-being of MSME community

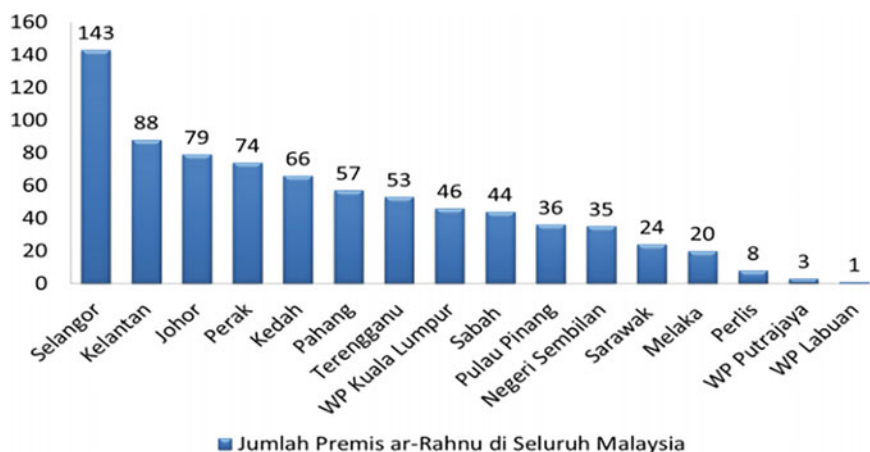


easy, and no further paperwork or proof of income is required. Customers need merely provide precious goods like gold to the pawnshop as collateral or security [32].

Furthermore, [46] investigated the connection between customers' financial security and their adoption of Ar-Rahnu items. The COVID-19 pandemic issue had a significant impact on MSME business owners. In order to help them maintain their enterprises, [46] offered the Ar-Rahnu strategy. Salimah [15] even suggested Ar-Rahnu products as a substitute for small business owners looking to get financing without incurring long-term debt. Ar-Rahnu goods are said to have the potential to offer MSME entrepreneurs a halal alternative financing source and help them grow their companies [47, 48]. The illustration in Fig. 2 demonstrates how Ar-Rahnu can assist the MSME community in guaranteeing a company's financial stability. It is anticipated that the benefits and distinctiveness provided by Ar-Rahnu institutions will increase awareness and comprehension among the MSME community and the general public (Fig. 1).

#### **4.2 Statistics of Ar-Rahnu Premises in Malaysia by State**

Ar-Rahnu services began to be actively given by various parties after noticing the growth of the Ar-Rahnu sector in Malaysia. There are Ar-Rahnu locations all around



**Fig. 2** The graph shows the number of Ar-Rahnu premises throughout Malaysia

Malaysia. According to statistics from the Ministry of Housing and Local Government (KPKT) [28] it is also clear that the number of pawnshops is rising. The expansion of Ar-Rahnu coincides with the expansion of pawn shops, proving that the Ar-Rahnu product has had a considerable impact on society in this nation. Ar-Rahnu, a Muslim alternative, is beginning to make itself known to the general population [36]. Table 1 lists the total number of Ar-Rahnu locations in each state and area of Malaysia. Since there was a shortage of centralized data on official data portals, the researchers gathered information on the number of premises by study of each organization's official website. There were no specific statistics on Ar-Rahnu; only KPKT and cooperatives published official statistics on pawnbrokers throughout Malaysia. Following their investigation, the researchers came to the conclusion that there are 777 Ar-Rahnu locations throughout Malaysia. The number of Ar-Rahnu premises in each state is illustrated in Fig. 2, and the details are provided in Table 1 as follows:

The study came to the conclusion that the demand for Ar-Rahnu is rising as a result of the country's less stable economy, which encourages both the general public and MSMEs to choose to store gold and jewelry for a long time. They accomplished this by tracking the expansion of Ar-Rahnu facilities across each state. In the future, the researchers advise conducting a more in-depth analysis into how directly Ar-Rahnu is used by the MSME community, perhaps by conducting direct interviews and obtaining informants' experiences with the service. For MSMEs to ensure the sustainability and financial well-being of their businesses, the Ar-Rahnu system is regarded as a different kind of financial resource.



**Table 1** Number of Ar-Rahnu premises in each state throughout Malaysia

No	The Ar-Rahnu service provider	Name of State									
		Johor	Melaka	Kedah	Kelantan	Negeri Sembilan	Pahang	Perak	Perlis	Pulau Pinang	Sabah
1	Bank Islam	–	–	2	5	–	1	–	–	–	–
2	Bank Muamalat	11	2	4	6	3	4	4	1	3	3
3	Bank Rakyat (Ar-Rahnu X'Change)	11	2	7	6	6	3	11	–	2	4
4	Agro Bank	11	2	12	12	5	11	15	1	6	6
5	Co-op Bank Pertama	2	1	2	2	2	2	3	1	4	1
6	MGIT (MAIDAM)	–	–	–	–	–	–	–	–	–	–
7	PKB (ar-rahnu)	2	–	1	15	–	4	–	1	–	9
8	YaPEIM	16	6	23	21	10	15	25	3	14	9
9	Ar-Rahnu Express (Habib Group)	1	–	–	–	–	1	–	–	1	–
10	Ar-Rahnu Cahaya	–	–	–	–	–	1	–	–	–	–
11	Pos Malaysia	9	5	5	8	3	5	8	1	3	4
12	Koperasi Tentera (KT)	1	1	1	–	1	–	–	–	–	1
13	Koperasi Kakitangan Kumpulan BMB Holdings (KOBIMBING)	–	–	–	3	–	–	–	–	–	–
14	Koperasi Pegawai-Pegawai Tadbir Negeri Kedah Darul Aman Berhad (KCS)	–	–	1	–	–	–	–	–	–	–
15	Koperasi Pelaburan Kakitangan Bank Muamalat Malaysia Berhad (KOPUTRA)	–	–	–	–	–	–	–	–	–	–

(continued)

**Table 1** (continued)

No	The Ar-Rahnu service provider	Name of State									
		Johor	Melaka	Kedah	Kelantan	Negeri Sembilan	Pahang	Perak	Perlis	Pulau Pinang	Sabah
16	Koperasi Anggota Kerajaan Ipoh Berhad (KAKIB)	—	—	—	—	—	—	1	—	—	—
—17	Koperasi Kakitangan Kerajaan Terengganu Berhad (KOKITAB)	—	—	—	—	—	—	—	—	—	—
18	Koperasi Pekerja-Pekerja Kerajaan Sabah Berhad (KOPEKS)	—	—	—	—	—	—	—	—	—	1
19	Koperasi Unikeb Berhad	—	—	—	—	—	—	—	—	—	—
20	Koperasi Permodalan Felda Malaysia Berhad (KPF)	5	—	2	2	4	6	5	—	2	—
21	Koperasi Permodalan Melayu Negeri Johor (KPMNJ)	6	—	—	—	—	—	—	—	—	—
22	Koperasi Sahabat Amanah Ikhtiar Malaysia Berhad (KOOP SAHABAT)	2	1	3	2	1	2	2	—	1	—
23	Koperasi Pos Nasional Berhad (KOPONAS)	—	—	—	—	—	—	—	—	—	—
24	Ar-Rahnu TEKUN	1	—	1	2	—	—	—	—	—	1
25	Koperasi Guru Melayu Kelantan Berhad (KOOP GURU)	—	—	—	3	—	—	—	—	—	—
(continued)											

(continued)

**Table 1** (continued)

No	The Ar-Rahnu service provider	Name of State									
		Johor	Melaka	Kedah	Kelantan	Negeri Sembilan	Pahang	Perak	Perlis	Pulau Pinang	Sabah
26	Koperasi Tanjong Keramat Kota Kinabalu Berhad (KOOP TK)	-	-	-	-	-	-	-	-	-	1
27	Koperasi Rakyat Kelantan Berhad (KRKB)	-	-	-	1	-	-	-	-	-	-
28	Koperasi Kakitangan UiTM Berhad (UiTMKoop)	-	-	-	-	-	-	-	-	-	-
29	Koperasi Pegawai-Pegawai Kerajaan Negeri Kedah Darul Aman Berhad (KOPKEDAH)	-	-	2	-	-	-	-	-	-	-
30	Koperasi Anggota-Anggota Kerajaan Batu Pahat Berhad (KAAKBPB)	1	-	-	-	-	-	-	-	-	-
31	Koperasi Pengguna Pahang Berhad (KPPB)	-	-	-	-	-	2	-	-	-	-
32	Koperasi Anak-Anak Tempatan Pantai Barat Sabah Berhad (KOPAAS)	-	-	-	-	-	-	-	-	-	3
33	Koperasi Perniagaan Sabah Berhad (KOEMAS)	-	-	-	-	-	-	-	-	-	1
	JUMLAH	79	20	66	88	35	57	74	8	36	44

(continued)

**Table 1** (continued)

No	The Ar-Rahnu service provider	Name of State					W.P Kuala Lumpur	W.P Putrajaya	W.P Labuan	Total
		Sarawak	Terengganu	Selangor						
1	Bank Islam	-	1	-			-	-	-	9
2	Bank Muamalat	3	3	13			5	1	1	67
3	Bank Rakyat (Ar-Rahnu X'Change)	1	5	48			12	-	-	118
4	Agro Bank	9	7	15			4	-	-	116
5	Co-op Bank Pertama	1	2	2			2	1	-	28
6	MGIT (MAIDAM)	-	10	-			-	-	-	10
7	PKB (ar-rah)	-	-	1			1	-	-	34
8	YaPEIM	10	11	30			9	1	-	203
9	Ar-Rahnu Express (Habib Group)	-	-	5			-	-	-	8
10	Ar-Rahnu Cahaya	-	-	-			3	-	-	4
11	Pos Malaysia	-	6	11			2	-	-	70
12	Koperasi Tentera (KT)	-	-	1			2	-	-	8
13	Koperasi Kakitangan Kumpulan BMB Holdings (KOBIMBING)	-	-	-			1	-	-	4
14	Koperasi Pegawai-Pegawai Tadbir Negeri Kedah Darul Aman Berhad (KCS)	-	-	-			-	-	-	1
15	Koperasi Pelaburan Kakitangan Bank Muamalat Malaysia Berhad (KOPUTRA)	-	-	3			-	-	-	3
16	Koperasi Anggota Kerajaan Ipoh Berhad (KAKIB)	-	-	-			-	-	-	1

(continued)

**Table 1** (continued)

No	The Ar-Rahnu service provider	Name of State						Total
		Sarawak	Terengganu	Selangor	W.P Kuala Lumpur	W.P Putrajaya	W.P Labuan	
-17	Koperasi Kakitangan Kerajaan Terengganu Berhad (KOKITAB)	-	1	-	-	-	-	1
18	Koperasi Pekerja-Pekerja Kerajaan Sabah Berhad (KOEKS)	-	-	-	-	-	-	1
19	Koperasi Unikeb Berhad	-	-	1	-	-	-	1
20	Koperasi Permodalan Felda Malaysia Berhad (KPF)	-	3	4	1	-	-	34
21	Koperasi Permodalan Melayu Negeri Johor (KPMNJ)	-	-	-	-	-	-	6
22	Koperasi Sahabat Amanah Ikhtiar Malaysia Berhad (KOOP SAHABAT)	-	4	5	1	-	-	24
23	Koperasi Pos Nasional Berhad (KOPONAS)	-	-	1	-	-	-	1
24	Ar-Rahnu TEKUN	-	-	2	3	-	-	10
25	Koperasi Guru Melayu Kelantan Berhad (KOOP GURU)	-	-	-	-	-	-	3
26	Koperasi Tanjong Keramat Kota Kinabalu Berhad (KOOP TK)	-	-	-	-	-	-	1
27	Koperasi Rakyat Kelantan Berhad (KRKB)	-	-	-	-	-	-	1

(continued)

**Table 1** (continued)

No	The Ar-Rahnu service provider	Name of State					
		Sarawak	Terengganu	Selangor	W.P Kuala Lumpur	W.P Putrajaya	W.P Labuan
28	Koperasi Kakitangan UiTM Berhad (UiTMKkoop)	-	-	1	-	-	-
29	Koperasi Pegawai-Pegawai Kerajaan Negeri Kedah Darul Aman Berhad (KOPKEDAH)	-	-	-	-	-	-
30	Koperasi Anggota-Anggota Kerajaan Batu Pahat Berhad (KAAKBPB)	-	-	-	-	-	-
31	Koperasi Pengguna Pahang Berhad (KPPB)	-	-	-	-	-	-
32	Koperasi Anak-Anak Tempatan Pantai Barat Sabah Berhad (KOPAAS)	-	-	-	-	-	-
33	Koperasi Perniagaan Sabah Berhad (KOEMAS)	-	-	-	-	-	-
	JUMLAH	24	53	143	46	3	1
							777

\*\*\* The number of Ar-Rahnu X' Change outlets, including cooperation with cooperatives such as Koperasi Pegawai-Pegawai Melayu Malaysia Berhad (MOCCIS), Koperasi Ukhwah Malaysia Berhad (UKHWAH), Koperasi Wawasan Pekerja-Pekerja Berhad (KOWAJA), Koperasi UTM Berhad (KUTMB), Koperasi Wawasan Malaysia Berhad (KOWAMAS), Koperasi Serbaguna Anak-anak Selangor Berhad (KOSAS)

Source Official websites of each organization (data up to May 2022)

## 5 Conclusion

Ar-Rahnu needs an accepting society to improve the Islamic social financial system. Users need constant reassurance from Ar-Rahnu that their pawnbroking service is of the most excellent grade and complies with Sharia rules. Ar-Rahnu can contribute to the eradication of poverty in society and ensure the long-term viability of these firms by enabling Micro, Small, and Medium-Sized Enterprises (MSMEs) to use Ar-Rahnu as an alternative source of financial support. The Sustainable Development Goal (SDG) 1—to end poverty—is in line with this. According to SDG 8, which emphasizes decent labor and economic progress, the Ar-Rahnu product is considered as a motivator for the commercial economy and contributes to the general economic development of the country. The research's implication is that MSMEs should use Ar-Rahnu as one of their sources of business capital to ensure the sustainability of their operations. Ar-Rahnu might further strengthen its position as one of the Islamic social financial instruments by raising the caliber of its services.

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# The Readiness of KAFA Arabic Teachers Towards Utilizing Augmented Reality in Teaching Arabic Vocabularies



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**Abstract** The utilization of augmented reality as a multimedia platform in language learning, especially Arabic language has become a very positive trend in this digital era. The potentials and advantages of this platform has created an enormous impact mainly on students' vocabulary learning. However, there is scarcity of studies on the overall readiness aspect in terms of skills, knowledge and attitudes among teachers towards utilizing multimedia platforms in teaching and learning activities. Therefore, this quantitative study aims at identifying the readiness of 285 KAFA Arabic teachers towards the utilization of augmented reality in teaching Arabic vocabulary. The results show that the readiness aspect of attitude is the highest among KAFA Arabic teachers, while knowledge and skills towards utilizing augmented reality in teaching Arabic vocabulary are still at the moderate level. Therefore, this study suggests that those KAFA Arabic teachers need a proper training of exposing and utilizing augmented reality platforms to be used in their current teaching and learning process.

**Keywords** Arabic language · Augmented reality · KAFA · Multimedia · Vocabulary

## 1 Introduction

KAFA or also known as Quranic and Fardhu Ain Class is an institution under the Department of Islamic Development of Malaysia (JAKIM) which was established since 1990. The objective of this KAFA institution is to empower the fundamental

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Islamic education including mastering AlQuran and Fardhu Ain. KAFA has its own syllabus and curriculum and they are different from the conventional counterpart under the Ministry of Education. Arabic language subject or Lughatul Quran (Quranic language) is one of the compulsory subjects taught at KAFA institutions at all states in Malaysia.

Recent studies have vigorously highlighted the advantages and potentials of multimedia for better students' learning experiences. Multimedia acts as a tool to improve vocabulary acquisition, including meaning recognition, meaning recall, vocabulary use, form recognition, and form recall [1] especially when students are exposed to the sound or voice as one of the effective multimedia elements in learning [2]. Multimedia digital learning materials facilitate dynamic and interactive learning experiences, assisting students in imitation-based learning [3], as well as enhancing students' learning performance across various media elements such as text, video [4]. For second language learning, multimedia technology also becomes an important platform in improving students' second language skills together with the integrated guidance from the teacher or facilitator [5, 6].

Augmented reality (AR) shows significant potential to be utilized in many fields [7]. In the era of technology-enhanced learning, AR has emerged as an educational tool, encouraging innovation among students and engaging educators in pedagogical and content-based elements during the design of instructional materials. AR enables active participation and immersive experience among users through virtual content within the real world through 3D animations, images, and audio [8]. Another function of AR is to superimpose virtual objects and information onto the visual field within the real environment and real time [9]. AR in education has developed significantly in recent years, with interactive content which has been frequently delivered through mobile applications platforms and at the same time enhancing the learning experience among students [10].

The features of AR discussed in previous studies are mainly focusing on textual explanations, visualizations, and animations, stimulating students' learning as well as motivation while elevating positive emotions [11] and works as a support tool for disabled students, especially those with the difficulty of reading and spelling [12], assisting in the understanding of complex words and improving cognitive abilities [13]. In addition, AR-based mobile applications have proven its ability to enhance language proficiency and nurture positive attitudes from users towards learning in a better way [14]. AR proves to be particularly suitable as an educational tool mainly for young learners [15]. The diverse usability of augmented reality platforms highlighted its potential in transforming various educational domains.

In mastering language skills especially Arabic language, vocabulary plays a crucial role as this component becomes a critical challenge encountered by students [16]. To address these problems, augmented reality (AR) serves as a promising solution specifically designed and developed for Arabic vocabulary acquisition. By utilizing AR into the vocabulary learning process, teachers are able to optimize the overall Arabic language learning experience among students therefore bridging the gap that students often face issues in knowing and remembering Arabic vocabulary. AR has become instrumental in vocabulary learning in order to create interactive

learning experiences, empowering word retention, and increasing student motivation and satisfaction [17].

There are several important considerations that arise with respect to the integration of AR in education. Tobar-Munoz et al. emphasized on the need for teachers as facilitators to be actively involved in the design process, recognizing their abilities and knowledge in both educational materials and their experiences with students. Augmented reality offers the teachers an opportunity to be actively contributing to students' language learning process [14]. However, educational reforms through the utilization of AR face bigger challenges.

Nikou et al. [18] highlight the issue of teachers' competency incorporating multimedia-based platforms like AR during the teaching and learning process. This incompetency is pronounced among primary-level teachers who may have issues and problems with designing, developing, and adapting AR resources in their current practice of teaching and learning. Belda-Medina and Calvo Ferrer [15] added that there is a major scarcity of research that has focused on assessing teachers' readiness and preparation as content creators and users within the AR context. The integration of augmented reality into education bridges these incompetency issues and enhances teachers' effort to become effective facilitators and content creators.

## 2 Methodology

This quantitative study employs a set of questionnaires as the research instrument which was delivered to 285 KAFA Arabic teachers randomly participating from the total population of 1100 teachers. The data gained from these 10 points-likert scale questionnaires was analyzed using descriptive analysis to obtain the frequency (N), percentage (%) and mean of the items. The questionnaire items for this study were adapted from the research conducted by Che [19] dan Nordin [20].

## 3 Findings and Discussion

The results for this study are as follows:

Table 1 above shows the information of the respondents for this study. There are 75 KAFA Arabic male teachers and 210 KAFA Arabic female teachers participating in this questionnaire. The majority of the respondents are among those above 40 years-old followed by the middle-aged teachers ranging from 26 to 39 years-old. The rest of the respondents are below the age of 25 yearsold. This shows that KAFA Arabic teachers are young educators who are expected to be familiar with current technological advancement in this modern era.

Table 2 above shows the knowledge of KAFA Arabic teachers towards the use of multimedia platforms in teaching and learning. The majority of KAFA Arabic teachers (116 teachers) have the shortest period of experience in teaching Arabic

**Table 1** Demographic information of KAFA Arabic teachers

No.	Item	Indicator	Frequency	Percentage (%)
1	Sex	Male	75	26
		Female	210	74
2	Age	< 25	30	10.9
		26–30	62	21.8
		31–35	64	22.5
		36–39	44	15.4
		> 40	85	29.8

language (1–4 years) followed by 5 to 10 years of experience (113 teachers) and lastly 56 teachers with the experience of more than 11 years in teaching Arabic language. The results also show that the majority of them (69.5%) have the knowledge and experience in using multimedia platforms through mobile devices. However, in terms of their experience in using multimedia elements such as text, audio and images as teaching aids, only 34.4% (98 teachers) have the experience of utilizing multimedia elements in their current teaching. This proves that those KAFA Arabic teachers are still lacking in utilizing and maximizing multimedia-based teaching materials during the T&L process.

Table 3 above shows the knowledge of KAFA Arabic teachers towards the use of augmented reality platforms in teaching and learning. Only a small number of them, about 33.8% have the knowledge of augmented reality as multimedia platforms and about 32.8% of them have seen in particular the use of augmented reality platforms. These results again prove that the majority of KAFA Arabic teachers are not having the knowledge of multimedia, especially augmented reality.

Table 4 above shows the skills of KAFA Arabic teachers towards the use of augmented reality. 52.1% of the teachers have the skill of preparing teaching aids through the use of mobile devices for T&L Arabic vocabulary at KAFA classes and 53.4% of them have the experience in specific of T&L Arabic vocabulary using

**Table 2** Knowledge of KAFA Arabic teachers towards the use of multimedia platforms

No.	Item	Indicator	Frequency	Percentage (%)
1	Experience in teaching Arabic language	1–4 years	116	40.7
		5–10 years	113	39.6
		> 11 years	56	19.6
2	I have the experience in using multimedia platforms through mobile devices	Yes	198	69.5
		No	87	30.5
3	I have the experience in using multimedia elements such as text, audio, images as teaching aids	Yes	98	34.4
		No	187	65.6

**Table 3** Knowledge of KAFA Arabic teachers towards the use of augmented reality platforms

No.	Item	Percentage (%)	
		Yes	No
4	I know about augmented reality multimedia technology	33.8	66.2
5	I have seen the use of augmented reality multimedia	32.8	67.2

**Table 4** Skills of KAFA Arabic teachers towards utilizing augmented reality

No.	Item	Percentage (%)	
		Yes	No
1	I used to prepare teaching aids for Arabic vocabulary T&L using mobile devices	52.1	47.9
2	I have experience in using multimedia as a teaching aid for Arabic vocabulary T&L	46.6	53.4
3	I have experience in using augmented reality	11	89
4	I have experience in using augmented reality multimedia during Arabic T&L	6.6	93.4

multimedia as a teaching aid. In terms of utilization of augmented reality, a small number of teachers (11%) have the skill of utilizing and running augmented reality and 6.6% of them have the experience in particular in using augmented reality in T&L Arabic language. These results have concretely proven that the majority of KAFA Arabic teachers are not skilled enough in utilizing multimedia, especially augmented reality.

### ***3.1 Attitude of KAFA Arabic Teachers Towards Utilizing Augmented Reality***

Table 5 above shows the attitude of KAFA Arabic teachers towards utilizing augmented reality in T&L KAFA Arabic vocabulary. This part in the questionnaire is using the mean aspect to get the average of response from the 10 points-Likert scale in order to obtain the detailed data of KAFA Arabic teachers attitude towards augmented reality. The results show that the majority of them (mean score above 8 points) show their positive attitude towards utilizing augmented reality in T&L Arabic vocabulary, where they like to use augmented reality to teach Arabic vocabulary in order to increase their students' motivation and attention in class. In addition, they conveniently use augmented reality multimedia to encourage their students' interactive learning and they have no problem initiating the use of augmented reality and integrating it during their current T&L of Arabic vocabulary in class as part of class activity.

**Table 5** Attitude of KAFA Arabic teachers towards utilizing augmented reality

No	Item	Mean
1	I like to use augmented reality for T&L Arabic language to increase students' motivation to learn Arabic language	8.40
2	I like to use augmented reality for T&L Arabic language to increase students' attention in class	8.43
3	I am convenient to use multimedia to encourage my students to learn Arabic interactively	8.35
4	I have no problem to integrate my current T&L with the use of multimedia platform	8.22
5	I have no problem to use augmented reality as an additional activity for my current T&L in class	8.17
6	I believe T&L Arabic vocabulary through the use of augmented reality will enhance my T&L interactively	8.20

## 4 Conclusion

This study on readiness of KAFA Arabic teachers towards utilizing augmented reality platforms in teaching Arabic vocabulary has identified that those KAFA Arabic teachers are having high readiness in terms of their attitude with a moderate level of readiness in terms of knowledge and skills in utilizing augmented reality in their current T&L process. This result is in line with the result by Isa and Nordin [20] on teachers' readiness in teaching special education among autistic students. Therefore, this study suggests that KAFA Arabic teachers need training and exposure to multimedia utilization, especially augmented reality platforms for them to utilize this platform in the future in order to align with the needs of current alpha generation in this digital era.

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# **Implementation of AI and Technology and Education for Social Responsibility**

# Habituation of Religiosity: Theoretical Exploration in Understanding Children's Politeness Through Civic Education



Sukron Djazilan, Pance Mariati, Afib Rulyansah, Nafiah, and Sri Hartatik

**Abstract** Violations of the etiquette of manners that occur today are seen as a manifestation of the low manners of students. This is important because Indonesia is famous for its polite culture. Furthermore, how religiosity negotiating with habituation occurs to provide an understanding of manners to students. Therefore, this study wants to conduct a theoretical exploratory study of the civics teacher strategy. This research approach uses multi-site qualitative methods, combining content analysis with case study concepts. This approach is used to deepen the theoretical context of the research, which is discussed in a case study with interviews with three civil teachers in elementary schools. Furthermore, the data were analyzed with Pierre Bourdieu's habitus, contextualized to students' manners. The results show that character development in children occurs through a process that begins at birth and continues into adulthood. Individual morality develops slowly and through several stages of moral reasoning (the ability to understand why something is considered right and wrong) towards an individual with total moral capacity. The more children use their thinking skills to deal with problems in their daily lives. The more children master these stages of development. This will make it easier for children to move up to the next stage of moral development. Habituation will occur and continue through the character development of early learners in interpersonal conformity. Students at this stage try to please others by being good people and trying to meet the expectations of others. So, personal relationships become an essential part. So, courtesy must be a habit while instilling religious and habituation aspects in Civic at school.

**Keywords** Children politeness · Civic education · Habituation · Religiosity · Theoretical exploration

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# 1 Introduction

Along with the times, it is undeniable that the development of technology and communication and socio-cultural changes play a significant role in life. Without exception, the Indonesian people are also affected. There is no limit between space and time to communicate with each other, know each other's socio-cultural culture, and make it easier for students to obtain the information they need and want [1]. However, this harmed students, including making students influenced by other cultures. In addition, it makes students forget about their time, duties, and obligations as students, and many of them even show something unethical [2]. Ethics are moral values and norms that guide a person or a group in regulating their behavior [3]. In other words, ethics is a tool to regulate the behavior of a person or a group in the form of values and norms. Every person or group must comply with the values and norms that apply as a regulator of behavior so that the person or group of people is said to have ethics [4, 5]. So it can be understood that ethics regulate behavior individually and in groups. In addition, almost all aspects of life have their ethics because these ethics have been used as a reference that must be fulfilled as a guide in good deeds so that there will be no more actions or activities that are considered unethical and lacking manners.

Reading the facts of the current morality crisis as described, we should be aware that Indonesia is in a transitional period of decency. A nation is headed for the brink of collapse if it has ten signs [4–7] such as: (1) increased violence among teenagers, (2) a culture of dishonesty, (3) extreme attitudes towards groups (4) low respect for parents (5) increasingly blurred morals of good and evil (6) worsened use of language (7) increased self-destructive behavior, such as the use of drugs, alcohol, and promiscuity (8) common sense of responsibility as individuals and as citizens country (9) a decrease in work ethic (10) a sense of mutual suspicion and lack of concern among others. Furthermore, another factor is the lack of good manners, including the lack of attention from parents to children, especially in moral development. Humans without morals will lose their humanity as natural noble beings who have a role as servants and caliphs of God on earth. Moral development here can also be in the form of habituation [8, 9]. Habituation is an activity carried out repeatedly with the hope that the activity can become the identity of the person who carries out the activity [9, 10]. Habituations carried out since childhood or early will bring these hobbies and habits into a kind of custom so that they become an inseparable part of their personality [11, 12]. Students need to be introduced to an activity, rule, attitude, or behavior from an early age so it becomes a hobby. It cannot be separated from their personality, so students recognize this as their identity because it is done repeatedly; it will become a habit and part of the student's self, especially if the habituation is in the form of religious values to increase the provision of his faith [13, 14].

Students are intended to actively develop their potential to have religious and spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation, and state [15]. Therefore, civic education, which includes religious and ethical aspects, is a conscious and planned effort to create a learning atmosphere and learning process. By the embodiment of the existing

law, the teacher's strategy in carrying out the learning process is essential, especially the strategy of instilling polite behavior. Polite behavior is a rule of life that arises from the association of a group of people in society and is considered a guide for people's daily interactions [16, 17].

In citizenship learning, habituating religious values from an early age is a practical activity to instill religious values because children up to the age of three years have a golden period where children can digest all understandings perfectly [18, 19]. However, at this time also, parents must be careful in providing understanding for children because all the understandings received by children during the golden age will be ideally stored in the memory of the child's brain [20]. Children over three can also get used to it, but it takes a longer time and process than children at the golden age. However, by applying the proverb "*can be because it is normal*," where teachers or parents as much as possible provide and get used to activities, especially those related to religious values. Therefore, this study wants to conduct a theoretical exploratory study of the civics teacher strategy and how religiosity negotiating with habituation occur to provide an understanding of manners to students.

## 2 Method

This research approach uses multi-site qualitative methods, combining content analysis with case study concepts [21–24]. This approach is used to deepen the theoretical context of the research, which is discussed in a case study with interviews with three civil teachers in elementary schools. Furthermore, the data were analyzed with Pierre Bourdieu's habitus, contextualized to students' manners [9–11, 25]. The theoretical exploration is continued by discussing politeness as individual behavior that upholds the values of respect, respect, and ethics and is not arrogant toward others. The embodiment of courtesy can be seen in aspects such as speaking, dressing, and socializing. Therefore, this method is considered appropriate to discuss the question of religious habitus in students' understanding of manners.

## 3 Result and Discussion

Habituation is the process of forming attitudes and behavior through predetermined activities, which are carried out repeatedly to form character and character [9–11]. Habituation is the process of creating various present-life situations that contain various reinforcements that allow students in their academic units, homes, environment, and community to get used to behaving according to values [26]. Furthermore, it becomes a set of values that have been internalized and personalized through the process of cultivating the heart, thinking, exercising, and cultivating the feeling and intention as character or character. In the context of this research, the habituation process can also be carried out in various ways. For example, they give awards

to achievers and punishments for those who violate and foster good values and, conversely, criticize and prevent implementing wrong values.

Exploration of habituation is fascinating when the point of view of cultural studies is centered. With habituation explored with religious values, religious values are not only at the cognitive level but comprehensive in internalization and authentic experiences in students' daily lives, not only at school but also at home and in the community [27, 28]. There are three pillars or dimensions of character [29–31], namely: (1) having moral knowing, (2) having a moral feeling, and (3) having moral action. The principle of the three pillars or dimensions of exemplary character contains five ranges [32–34], namely: (1) attitudes and behavior in a vertical relationship with God, (2) attitudes and behavior in a horizontal relationship with oneself, (3) with family, (4) with the community and nation, and (5) with the environment or the natural surroundings. Furthermore, theoretical exploration of this negotiation arises based on the view that human existence must be interpreted in terms of noble character that must be preserved and maintained in forming characters who can judge what is good, sincerely maintain what is said to be good, and realize what is good; what is believed to be good, even in a stressful situation and full of temptation that is a temptation from within.

In this regard, the term polite includes respect and reverence or order according to good customs [35]. Polite is gentle and kind (both manners and demeanor) or patient and calm. So courtesy means an act of respect and order to good customs, which is subtly realized in terms of culture and behavior in treating others around him. Courtesy in society is regulated by the norms of politeness, which are rules of life that arise and develop based on the results of the activities of a group of people, which are considered guidelines for carrying out daily activities [36, 37]. However, politeness norms are generally relative, meaning that what is considered the norm varies in different places, environments, or times. Manners include not only basic etiquette but also conversational models and intellectual skills [25, 38].

The theoretical exploration also found that habituation is not only in the form of a series of activities involving only one party with a general approach but habituation. Religious values can be pursued through an exemplary approach, (1) The teacher provides an example wherever the teacher is, both in and outside the classroom; (2) Creating environmental care, how the school environment always reflects a good environment so that students grow into good characters; (3) Turning on control over students' behavior in everyday life at school; (4) Provide benefits to the surrounding environment so that students are also responsible for how their behavior can benefit the environment; (5) The practice of character values through various school activities; (6) They are instilling a tradition of cooperation in building character; (7) Awareness of character values is not only knowing but also awareness to practice these values; (8) Familiarize students with self-introspection; (9) Involve parents or guardians of students and the surrounding community.

Strategies to improve student etiquette must start with the teacher, where the teacher must be a "*role model*." The teacher must be an example for students in matters relating to etiquette, not forgetting that the teacher must be good at inserting and reminding students of the importance of ethical manners [39, 40]. By having

good etiquette, students will get many benefits. Applying the character of courtesy will foster obedience, foster the authority of teachers and students to be motivated, teach noble traits, respect each other and teach to be polite and obedient. Although sometimes the implementation is tricky to improve the ethics of politeness, teachers must be creative, innovative, and have high patience so that the strategies that will be carried out run well, and the teacher must be rational [41].

In the context of Civic learning design and the concept of *Merdeka Belajar*, it has met the standard criteria when developing learning tools. However, unfortunately, teachers rarely analyze in advance the implied values and behaviors that will be fostered in the curriculum. This causes the development of polite behavior not to be formulated in learning. The implicit behavior and or values of politeness should be able to be captured and interpreted by the teacher, formulating it in indicators and learning objectives [27, 42]. The teacher realizes that in learning, it is mandatory to foster behaviors per the values in the Pancasila formulation through the material presented. The teacher understands the importance of fostering values and polite behavior as an incidental activity, so it does not need to be included in learning tools.

The impact of formulating indicators and objectives without analyzing the points of courtesy in society is on the development of the material. This happens and is also influenced by the teacher's habit of making learning designs only to move the syllabus that is already in the curriculum book—then making the learning tools also do not do it personally, meaning that the teacher copies the existing learning tools first without developing them again with adjustments to the needs of the class and students, which of course are different for each generation. This means that the learning materials designed by poor teachers contain contextual values and behavior. Also, lack of loading of values expected by the vision and mission of Civic learning.

The material should contain information about knowledge of etiquette in society which is entered by the teacher so that students do something based on actual knowledge. For a behavior to be carried out by someone, he must know what he should do, why he should do it, and how to do it. The above causes the Civic learning that students from Elementary School have studied to College does not necessarily make an impression on Indonesian citizens with personalities by the content of religious values and Pancasila as the philosophy of life, ideology, and the basis of the state.

In developing Civic learning materials, teachers should pay attention to three aspects: formal content, informal content, and student responses to formal and informal content. Teachers can develop formal content from many sources that can support the achievement of learning objectives. To fulfill the informal content of teachers in entering information from the environment of students, both the socio-cultural environment and the natural environment. The environment chosen should be the student's everyday environment [43]. Furthermore, the teacher must also see the student's response to the two treatments as a reference in developing the following learning material.

Before starting, the learning activities are preceded by physical and psychological preparation of students, first using teachers and students praying. During learning activities, the dominance of the teacher decreases. The implementation of learning is not the same as in learning tools, especially in learning activities. It seems that

students learn actively both during group discussions, in group presentation activities, and during question and answer sessions. Like a lesson, it must activate students because learning by providing the right experience will make meaningful learning for students [44, 45].

The teacher starts the lesson by doing enough perception to motivate and explore students' background experience and knowledge about the learning they will receive. This means that the teacher understands that he must create a conducive atmosphere at the beginning of learning so that further activities can run effectively. Information about the goals to achieve is essential and a polite stimulus. That is because someone doing something must have a purpose. When he does not understand what the goal is to achieve with what he is doing, it is suspected that the activity will be unfocused and can run in an uncertain direction. In the core activity, the teacher begins with the exploration, elaboration, and confirmation stages. In this implementation, the teacher uses a constructivist learning approach that varies from an inquiry approach. The media is quite interesting because it presents images that match the material.

In addition to using media in the form of pictures or objects, teachers also make themselves media. This is very appropriate to do, especially to display students' good behavior, actions, and values. They utilize varied learning methods: questions and answers, group discussions, lectures, and assignments. Elaboration activities are also carried out by motivating students to come up with new ideas both verbally and in writing, such as about things that students have not known before, providing cooperative and collaborative experiences for students, and providing opportunities to present the results of group work [30, 46].

In between activities, the teacher did not forget to guide and remind the students to behave politely in discussions and presentations and question and answer. The teacher will immediately reprimand and correct behaviors that do not support learning activities. If, after that, students show behavior that is in line with expectations, the teacher will give reinforcement in the form of a thumbs up or words of praise, such as; sound or intelligent. In confirmation activities, students look for the right solution for the material that has not yet been completed. At the end of the lesson, the teacher reflects on the learning activities that have been undertaken. The closing activity was a question-and-answer session regarding the material that had been presented. The final learning activity should be interpreted by the teacher not only as an activity to close learning but also as an activity for assessing learning outcomes and follow-up activities. When the teacher makes conclusions, it is not only focused on learning materials or aspects of knowledge but also needs to give conclusions about how to behave well, behave politely in life together, obey the rules, and the agreements that have been made [29, 47, 48].

Respectful behavior, tolerance as implied in learning, using criteria assessment, sometimes and not yet visible, the technique used is observed during the learning process. The results of theoretical exploration and interviews are not recorded directly, meaning that when the teacher observes student behavior, he does not use notes. It turns out that he only records when extreme behaviors occur. This means that the teacher does not have a formal document about the behavior of students who fight with friends, mock and so on. Teachers should understand that the vision and

mission of Civic learning are to develop the personality of students. Therefore the most critical evaluation in learning is the evaluation of affective, behavior, or attitude.

Besides that, the teacher also gives real examples of how polite he is both in class and outside of class, as it is known that individuals at elementary school age easily imitate any behavior that he sees and feels comfortable doing it. Thus, the example shown by the figure he respects will be imitated. Through this imitation, individuals adopt values, morals, or behavior to be internalized in their personality system. In addition to providing examples and examples, motivation, and providing experience to perform an action that the teacher expects in students also reinforce the desired behavior shown by students, like giving praise and appreciation to students [49, 50]. All of this will strengthen the motivation of students to repeat the commendable behavior over and over again so that the behavior is personalized to students over time.

The above is called the pre-conventional moral development stage, where educators should be able to present a classroom climate that will make students experience the process of adopting values and morals so that students undergo stages of development to behave well and pleasantly without feeling pressured and intimidated by the teacher's power. If the teacher provides a positive and pleasant stimulus, the students will respond positively to the stimulus as well. Through the stimulus in the form of stories about the daily activities experienced by students about the benefits of behaving politely and the bad, if they do not behave politely, there will be a clarification of values (clarity of values) which he will adopt in himself [4, 9].

Stimulus is needed because children learn behavior through observation and direct relationships with other people. The child then forms ideas about the observed behavior, which on the next occasion, serves as a guide for the child to take action. Furthermore, the stimulus continues to the role of parents in the family, friends in play groups, teachers at school, and other people around the child play an essential role in developing the child's character. Family plays a vital role in shaping the quality of an individual [51]. Families must be able to prepare adolescents for their roles and responsibilities as part of society. A family filled with love can develop a child's self-esteem because the child feels accepted, valued, and loved as a human being, so the child will also respect others. Socialization of values and culture in the family is essential because positive ethnic identity and adherence to the values of cultural, ethnic, or racial groups are found to affect the development of students. The most significant factor that influences the formation of the polite character of students is the method of value socialization carried out by the entire environment around students [52]. The value socialization carried out is an indicator that significantly affects positive values and social competence in students. The forms of social behavior of students, such as attitudes towards other people and groups, and character of manners, mostly come from what is learned at home through value socialization carried out by the environment around students [53].

Negotiations that occur to realize habituation is from the parental socialization method, which shows that the socialization method is quite good. Habituation and self-control have a significant positive direct effect on the character of students' manners. When habituation has been established, students' self-control shows that



teenagers already have good manners. Thus, applying better socialization and self-control methods can improve students' character of good manners.

## 4 Conclusion

Character development in children occurs through a process that begins at birth and continues into adulthood. Individual morality develops slowly and through several stages of moral reasoning (the ability to understand why something is considered right and wrong) towards an individual with total moral capacity. The more children use their thinking skills to deal with problems in their daily lives. The more children master these stages of development. This will make it easier for children to move up to the next stage of moral development. Habituation will occur and continue through the character development of early learners in interpersonal conformity. Students at this stage try to please others by being good people and trying to meet the expectations of others. So, personal relationships become an essential part. So, courtesy must be a habit while instilling religious and habituation aspects in Civic subjects at school.

Self-control is the primary function of self that allows a person to withstand a negative response and direct it to a more positive response in terms of self-discipline, non-impulsive actions, healthy living habits, work ethics, and reliability. Because in this digital era that provides high psychological challenges for young people, it is imperative for students to be able to have the ability to control behavioral factors according to situations and conditions. This is to prevent students from wanting to do something considered suitable with the excuse of getting recognition from others. Self-control can also influence a person's behavioral outcomes, starting from religious negotiations in Civic lessons and teacher control, which is oriented towards habituation.

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# Integrating the Concept of Maqām in Arabic Grammar According to Al-Qushayri in “Naḥw Al-Qulūb Al-Kabīr”



Shahrizal Mahpol, Mohd Baharim Mayidin, and Mohd Zuhdi Ismail

**Abstract** Maqām is one of the important topics discussed in the discipline of sufism. It means several levels of manners that must be practised by every Muslim to reach the level of ma’rifah of Allah. The concept of maqām is one of the important elements that needs to be integrated into grammar discipline to ensure a balanced integration of linguistic and spiritual aspects. This study attempts to present the new approach of a Sufi scholar named al-Qushayri (d. 465H) who has applied some maqām concepts in grammar topics through his book “Naḥw al-Qulūb al-Kabīr”. The study applies a qualitative approach using the method of content analysis and making the text of the book as a premier source. It is found that al-Qushayri has applied the three main maqāms in sufism, namely the maqāms of taubat (repentance), zuhud (asceticism) and tawakal (reliance on Allah) in some grammar topics. The integration is based on the comparative method that focusses on the similarities between the two disciplines. The first aspect refers to the similarity of the use of terms; while the second aspect looks at the similarity of the meaning of the maqāms which can be compared with the implied ideas found in grammar topics. The findings of this study are expected to provide a meaningful contribution to certain parties in the effort to design an integrated curriculum that includes spiritual and linguistic aspects in the subject of Arabic grammar.

**Keywords** Maqām · Sufism · Grammar · Al-Qushayri · Naḥw al-Qulūb al-Kabīr

## 1 Introduction

In Islamic studies, the study that focusses on spiritual aspects is known as sufism. It is a discipline that is obligatory for every Muslim to learn al-Suyuti [1]. Sufism deals with the process of cleansing the soul and the morals; and physical and spiritual practice. Zakaria al-Ansari [2]. According to Ibn [3], the ultimate goal of learning

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sufism is to reach the level of ma'rifah of Allah. One of the main topics discussed in the field of sufism is the concept of maqām that refers to the levels of manners that must be earnestly practiced by every Muslim in order to purify the soul al-Qushayri [4]. Some of the levels of maqām are the maqām of repentance and asceticism al-Tusi [5]. This paper attempts to discuss the implementation of the concept of maqām in grammar as introduced by al-Qushayri (w. 465H) in his book, “Naḥw al-Qulūb al-Kabīr”. The author’s full name is Abdul Karim bin Hawazin bin Abdul Malik bin Talhah bin Muhammad but popularly known as al-Qushayri Abdul Ghafir al-Farisi [6]. In the field of tasawwuf, he is also a prominent sufi scholar who integrates the discipline of shari’ah with haqīqah (al-jāmi ‘bayna al-syarī’ah wa al-haqīqah) (Ibn [7]). “Naḥw al-Qulūb al-Kabīr” is his book about grammar that integrates the elements of sufism in the discussions.

## 2 The Statement of Problems

In the effort to produce excellent students, they must be instilled with moral values as stated in the National Education Philosophy. According to [8], moral values in spiritual aspects are the foundation of intellectual, emotional and physical development. One of the disciplines that is integrated with these elements is grammar. According to Ibrahim Bisayuni and al-Jundi [9], in the past, the studies of Arabic grammar were separated from the spiritual aspects that focusses on moral values. Moreover, the discussions only centered around the topic of syntactic errors; and the studies done were only for language acquisition per se. Due to these facts, this paper attempts to discover the contribution of al-Qushayri in his book, “Naḥw al-Qulūb al-Kabīr”, in implementing moral values from the perspective of sufism discipline, that relates to the concept of maqām. The discussion of this paper only focusses on the concept of maqām as it is the foundation of every Muslim’s spiritual practice to reach the ma'rifah of Allah.

## 3 Literature Review

The integration of sufism in grammar was pioneered by al-Qushayri in his two books, “Naḥw al-Qulūb al-Kabīr” and “Naḥw al-Qulūb al-Saghīr” Ibrahim Bisayuni and al-Jundi [9]. According to Zaiton [10], and Zakiah [11], the integration of spiritual and moral values could form a more integrated discipline. This would ensure that the integration of moral values in the curriculum and the national education system is a success and applied in the teaching and learning activities.

Ahmad Qasim Kassar [12] also agrees that there is a significant relationship between grammar and sufism. Both disciplines have similar functions. Grammar concerns with the syntactic errors whereas sufism focusses on protecting oneself

from committing physical or spiritual sins. Thus, both grammar and sufism protect someone from making errors or mistakes.

The significant relation between these two fields has also been symbolically discussed by al-Ghazali [13] in his book “Minhāj al-Ārifīn”. According to him, human’s heart will go through many changes, similar to the changes of i’rāb in grammar. The comparison between the human’s heart and i’rāb was made based on the similarity of the terms used in sufism and grammar such as the term *raf’* that was used in both fields. From the perspective of sufism, once a human is free from sins, his heart is ascended (*raf’*) to the higher level. Similar to grammar, every word is *raf’* once they are free from any ‘*awamil* (inflectional modifier).

Al-Ghazali also states that the effort for the integration in the field of grammar has been initiated by al-Qushayri since the fifth century of Hijri. This integration has led to a new perspective in grammar discipline known as “sufism grammar” that does not only emphasise on language acquisition and linguistics per se but also spiritual aspects Ibrahim Bisuyuni and al-Jundi [9]. This paper hopes to elaborate the integration of sufism values related to maqām, that has yet to be discussed previously.

## 4 Research Objectives

The main objective of this paper is to investigate one of sufism values, maqām, that is integrated in several grammar topics in “*Naḥw al-Qulūb al-Kabīr*”. This study aims to investigate the values of sufism related to the concept of maqām which is integrated in several grammar topics in the book “*Naḥw al-Qulūb al-Kabīr*”. It also aims to analyse the aspects of similarity that are used as a basis for comparison in integrating those values in the grammar topics. Based on these objectives, this paper two research questions are constructed: (1) to what extent do the values of sufism that relates to the concept of maqām are integrated by al-Qushayri in Arabic grammar? (2) how are the values highlighted in the book?.

## 5 Research Methodology

This qualitative study applied content analysis method on the text of “*Naḥw al-Qulūb al-Kabīr*” by al-Qushayri as the premier source. This paper investigated the spiritual values related to the concept of maqām integrated in grammar topics. After obtaining the data, it was categorised according to thematic techniques involving the listing of several levels of maqām found in the discipline of sufism such as the maqām of repentance, asceticism and tawakal (reliance on Allah). The data was then analysed using inductive and comparative methods. The inductive method was used to analyse information continuously to describe the problems being studied. The comparative method was used to investigate the forms of similarities and relationships between the facts found in the disciplines of sufism and grammar. Next, the data was further

strengthened with some evidence from the Quran and Hadith as sources of support to be used as an arbitrator for certain issues.

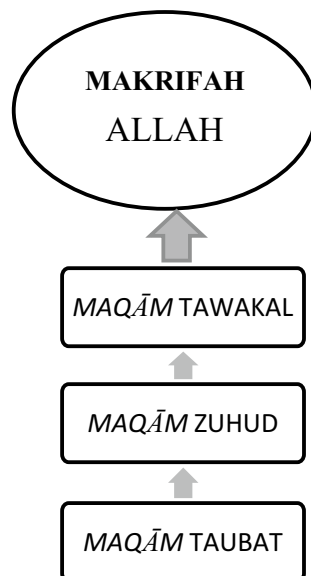
## 6 Analysis and Discussion

In this study, some facts related to the concept of maqām, the core for every Muslim in spiritual practice to achieve the maʿrifah of Allah, will be presented. Al-Qushayri has applied three maqām namely taubat (repentance), zuhud (asceticism) and tawakal (reliance on Allah) in “*Naḥw al-Qulūb al-Kabīr*”. However, the three maqāms are not arranged according to the order of maqām as found in other sufism (sufism) books. It is done to preserve the sequence of topics found in grammar disciplines. Thus, the researcher has rearranged the maqām by referring to his main book “*al-Risālah*”. Next, the researcher will explain how they are applied in grammar topics. The levels of the maqām be seen in Fig. 1.

### 6.1 Integration of Maqām Taubat in Arabic Grammar

Taubat or repentance means return to Allah, stop committing sins and perform good deeds as commanded by Islam al-Jurjani [14]. It is the basic and the first maqām that must first be perfected by every Muslim al-Qushayri [4]. This maqām is like the

**Fig. 1** The level of *Maqām* in “*Naḥw al-Qulūb al-Kabīr*”





foundation of a building al-Kurdi [15]. Individuals who do not meet the requirement of maqam taubat are not able to level up to maqam zuhud and tawakal al-Qushayri [4].

## 6.2 The Value of Freedom from Sins

The aspect of sufism in maqām taubat applied by al-Qushayri [16] in grammar aspects is the value of freedom of a person who repents from any form of sin. He has applied the value in the topic of muḥtadā' (subject) by highlighting some facts related to the grammar aspect first. He explains that every muḥtadā' noun must be independent and not preceded by any awāmil (inflectional modifier). Some examples of the 'awāmil are inna wa akhawātuhā (inna's family) and kāna wa akhawātuhā (kāna's family) and etc. If the noun is preceded by one of the 'awāmil above, then it is no longer known as muḥtadā'. It is, however, becomes ma'mul to the 'awāmil that precedes it. The ma'mul is called as either ism inna or ism kāna.

From the point of view of sufism, the meaning of freedom can be understood symbolically through al-Qushayri's explanation regarding the main purpose of maqām taubat. He emphasizes that the goal of the maqām is to free the sinner from all forms of sins that have been committed. This freedom can be achieved through three steps. First, a person should immediately stop committing the sins. The second step is that he should regret his actions. As for the third step, he must be determined not to repeat the same act of sin al-Qushayri [4]. This means that every sinner who claims to have repented but still has not freed himself from sins and has not stopped committing them, then his repentance (taubat) does not meet the conditions for the sins to be forgiven by Allah. This has been explained in the Quran that goes:

وَالَّذِينَ إِذَا فَعَلُوا فَاجِشَةً أَوْ ظَلَمُوا أَنْفُسَهُمْ ذَكَرُوا اللَّهَ فَاسْتَغْفَرُوا لِذُنُوبِهِمْ وَمَنْ يَغْفِرَ الذُّنُوبَ إِلَّا اللَّهُ وَلَمْ يُصِرُّوا عَلَىٰ مَا فَعَلُوا وَهُمْ يَعْلَمُونَ

...and those who, when they happen to commit a shameful act or wrong themselves, remember Allah, then, seek forgiveness for their sins—and who is there to forgive sins except Allah?—and they do not persist in what they have done, knowingly. (al-'Imran 3:135)

Based on the discussion above, it is clear that the integration of the values of freedom from sins in the topic of muḥtadā' by al-Qushayri is based on the similarity of the meaning of freedom as explained in the discussion of the two disciplines. When discussing the topic of muḥtadā' that is independent (free) of any 'awamil, the value of self-freedom from any sins in the perspective of sufism should be integrated. This process of comparison could instill pure values in individuals who study Arabic knowledge, thus free and clean themselves from any sins that can keep them away from Allah's guidance.

### 6.3 The Value of Self-Identity of Those Who Repented

Another topic discussed under maqām taubat is the value of self-identity of the people who have repented. The value is integrated in i ‘rāb muḥtada’ and explained from the perspective of grammar as the following:

“i‘rab muḥtada’ is specialised for raf’ (nominative) that is the strongest diacritic as compared to the other i ‘rāb because it functions as the start of a sentence” al-Qushayri [16].

Based on the explanation above, it can be concluded that i‘rab muḥtada’ is raf’. This particular i‘rab is considered strong in terms of its position due to two factors: the position of muḥtada’ as the beginning of a verse; and the use of ḍammah. According to al-Zajjaji [17] ḍammah is considered heavy compared to other diacritics since it requires more movement when being said. This can be seen through the movement of the lower jaw to the upper jaw and lip puckering compared to the kasrah and fathah that can be recited by just moving the lower jaw. Thus, this i‘rab is considered heavier since it requires the movement of more muscles to pronounce the word.

From the perspective of sufism, self-identity is symbolically reflected in al-Qushayri’s words “قوي في حاله فخص بأقوى الأتقال ...” (people who repent have strong self-identity so, they are given heavy responsibilities) al-Qushayri [16]. This phrase means that a person who has fulfilled maqām taubat will have firmness and strength of self-identity and will be able to take the responsibilities placed on his shoulders. He will also be able to implement all the demands of the next maqām such as zuḥud and tawakal due to the strong and solid foundation. In this matter, al-Qushayri made himself the Prophet Muhammad (pbuh) as a role model in carrying out his heavy responsibilities as the messenger of Allah. Prophet Muhammad (pbuh) is an individual who always repents and has been able to carry out the difficult task of delivering the message of Islam to the whole world. Such a thing has been described by Allah in the following verse:

إِنَّا سَنُلْقِي عَلَيْكَ قَوْلًا ثَقِيلًا

“For We will soon send upon you a weighty revelation” (al-Muzzammil:5)

According to al-Maraghi [18], the verse above means that Allah reveals to Prophet Muhammad the Quran, which contains orders and prohibitions that are heavy to bear. Nevertheless, the task was able to be carried out by Prophet Muhammad because his heart is clean from all forms of sin and immorality because he has repented to Allah.

Based on the findings above, it is clear that al-Qushayri integrates strong self-identity values of those who have repented in discussing the topic of i‘rab muḥtada’. The integration is due to the similar meaning the values that both disciplines hold. When discussing the issue of i‘rab raf’ in muḥtada’ which is considered to be the strongest i‘rab, it should be integrated with the sufism aspect, that is, the strength of self-identity of the people who have repented. By doing so, the value of steadfastness can be instilled in every individual so that they are not easily shaken when faced with tests and are able to carry out all responsibilities as Muslims with full of sincerity.

## 6.4 Visible and Hidden Factors that Lead to Repentance

According to al-Qushayri [16], there are two factors that encourage a person to easily repent to Allah. Both factors are integrated into the topics of “‘awāmil lafziyyah wa ‘awāmil ma ‘nawiyyah” (inflectional modifiers in the form of words and meanings). From the perspective of grammar, the ‘awāmil that causes muḥtadā’ to be read as marfū (nominative), is divided into two parts. The first one is called ‘awāmil lafziyyah, (inflectional modifier for words) that can explicitly be seen in the sentence structure. According to al-Anbari [19], this ‘awāmil refers to the opinion of Kufah’s scholars. They believe that the ‘awāmil that causes muḥtadā’ to be read as marfū’ is the existence of khabar itself. The second part is ‘awāmil ma ‘nawiyyah, an implicit inflectional modifier, that can only be seen from the point of view of meaning only. This type of ‘awāmil is the view of Basrah’s scholars. They argue that ‘awāmil that causes muḥtadā’ to be marfu’ is due the meaning of ibtidā’ (beginning of verse) and not due to the existence of the khabar itself [19]. Referring to these two school of thoughts, the study found that al-Qushayri is inclined to the opinion of the scholars from Basrah. This means that muḥtadā’ according to him, is marfū’ as it contains the meaning of ibtidā’ al-Qushayri [16].

From the perspective of sufism, al-Qushayri [16] explains that there are also two factors that influence someone to repent. The first factor is the one that is visible to the human senses. The second factor is the hidden one that cannot be seen with the naked eyes. The visible factors refer to the efforts taken by someone to perform khalwat (self-isolation), meditation and yaqzāh al-qalb (consciousness of the heart) regarding the sins committed. This would help the sinners to observe themselves and evaluate all the sinful acts that have been committed whether they are minor or major sins thus, encouraging them to repent to Allah. On the other hand, the second factor can be comprehended in terms of its meaning. In other words, al-Qushayri means to say that it is a gift from Allah, His grace and guidance towards His chosen servants that cannot be seen with the naked eyes or acquired by anyone. The gift, grace and guidance from Allah would encourage the servants to repent to Him.

قُلْ إِنَّ الْفَضْلَ بِيَدِ اللَّهِ يُؤْتِيهِ مَنْ يَشَاءُ وَاللَّهُ وَاسِعٌ عَلِيمٌ

Say, “Indeed, [all] bounty is in the hand of Allah—He grants it to whom He wills. And Allah is all-Encompassing and Wise.” (al ‘Imran 3:73)

Based on the above findings, the study found that the integration made by al-Qushayri is based on the term ‘awāmil. In elaborating ‘awāmil lafziyyah and ‘awāmil ma ‘nawiyyah from linguistic perspective, the explicit and implicit ‘awāmil should also be integrated as to encourage people to repent. Thus, the integration process could inspire them to strive to reach the maqām of taubat either through their efforts or Allah’s grace.

In summary, the maqām of taubat (repentance) is the foundation for every Muslim to implement the other maqāms. The values found in maqam taubat have been integrated in several grammar topics based on the similarities of both disciplines as explained in the above paragraphs.

## 6.5 Integration of Maqām Zuhud in Arabic Grammar

The second maqām discussed by al-Qushayri is the maqām of zuhud (asceticism). There are many views of sufism scholars regarding the definition of asceticism. All of these definitions have similar meaning, that emphasize on the concept of abandoning the luxury of the world and prioritizing the concentration of the heart on Allah al-Qushayri [4].

In “Naḥw al-Qulūb al-Kabīr”, al-Qushayri [16] has integrated maqām zuhud in wujūh al-i’rāb (inflectional forms) with regard to raf’ (nominative). From the perspective of grammar, i’rab is the change of the diacritics in the last word due to the different ‘awāmil. There are four types of i’rab namely raf’ (nominative), nasb (accusative), khafd/jarr (genitive) and jazm (jussive). The discussion related to zuhud only focusses on i’rāb raf’ only. Raf’ literally means lifting (Ibn Manzur). In grammar, on the other hand, it is defined as a condition found in singular nouns or verbs that are originally read with a dammah at the end of the word [20].

The term raf’ in the perspective of sufism refers to its literal meaning, to lift something al-Qushayri [16]. This term implicitly means raf’ al-qulūb, which means lifting the heart from being influenced by the deception of this world. This situation occurs when a Muslim turns his heart away from being dominated by worldly luxury. At the same time, he should give full concentration towards Allah. This is the main characteristic of a zuhhād (ascetic person). It is also an important maqām after maqām taubat which is the motivation to perform the next maqāms. According to Zakaria al-Ansari [2], zuhud can naturally be a motivating factor to a person to obey Allah. This is so because the maqāms can eliminate the nature of ḥubb al-dunyā (love of the world) which is the main stimulus for committing various forms of immorality and sin.

Based on the above explanation, it can be said that the concept of zuhud, as highlighted by al-Qushayri, refers to the constancy of a servant prioritise Allah above everything else. It does not imply that one should just focus on hereafter matters because the fundamental message of this maqām is to give up worldly comforts. The Prophet actually gave a detailed explanation of zuhud when he said:

الزهادة في الدنيا ليست بتحريم الحلال ولا إضاعة المال ولكن الزهادة في الدنيا أن لا تكون  
بما في يدك أوثق مما في يدي الله

Indifference towards this world does not mean forbidding what is permitted, or squandering wealth, rather indifference towards this world means not thinking that what you have in your hand is more reliable than what is in Allah’s Hand. (al-Tirmizi [2340] Kitab al-Zuhd 1962)

The integration made by al-Qushayri is based on the similarity of the use of the term raf’ as described in the discussion of the two disciplines. When discussing the subject of raf’ from the standpoint of grammar, it is appropriate to use the idea of raf’ al-qulb, which is the primary attribute of maqām zuhud as described in sufism discipline. Hence, by using this strategy, people can learn to prioritise the afterlife and submit to all of Allah’s wills.

In summary, the integration of the values of *zuhud* in grammar is only centred on the topic of *raf*"; and no other significant similarities have been found in other topics. As a result, the link between *zuhud* and the prior *maqāms* is like a pillar built on the *maqām* of *taubat*. Having atoned for his sins via *taubat*, every Muslim is required to practice *zuhud* and turn his heart away from all worldly luxury and deception. At this point, his heart will then be filled with the exact certainty and faith in Allah.

## 6.6 The Integration of Maqām Tawakal in Arabic Grammar

Tawakal (reliance on Allah) is the next *maqām* covered by al-Qushayri in "Naw al-Qulb al-Kabr". It is described as the reliance of the servant on the will of Allah Taala al-Qushayri [4]. A person who has faith will firmly think that everything that happens is in accordance with Allah's plans and will. As a result, he will always attribute all of his efforts to Allah Ta'ala, The Almighty and has the power to determine on every issue.

Al-Qushayri [16] has extended the principles of *maqām tawakal* in the topic of *ism mawṣūl* (linking noun) by connecting the concept of effort with the will of Allah. From the perspective of grammar, *ism mawṣūl* requires a *ṣilah* (linking clause) to construct a complete sentence. An example can be seen in the following verse from Quran: *الْحَمْدُ لِلَّهِ الَّذِي أَنزَلَ عَلَىٰ عَبْدِهِ الْكِتَابَ*. If *ism mawṣūl* (الذي) in this verse is not linked with the following *ṣilah* (أَنزَلَ عَلَىٰ عَبْدِهِ الْكِتَابَ), the sentence would be incomplete and incomprehensible. Hence, the purpose of *ṣilah* in the verse is to ensure that the meaning is comprehensible. Some other examples of *ism mawṣūl* in Arabic language are "al-ladhī, al-latī, man, ma ..." and etc.

The symbolic meaning of "linking" from the perspective of sufism can symbolically be seen in al-Qushayri's words:

... there are some people who cannot work alone and need to link with other people to get help. Everything is according to Allah's will and if something good has been destined for those people, nothing will be able to stop Him. al-Qushayri [16]

According to al-Qushayri's explanation above, the study found that the value integrated in the topic of *ism mawṣūl* is the importance of linking every effort committed by a person to Allah's provisions without denying the fact that he should also seek help from other people to get he wants. In other words, al-Qushayri does not negate a person's dependency on others in his daily life. Ibn Khaldun [3] refers to this as "madaniy" which implies that Allah has predetermined that it is a basic nature of every person to seek assistance from others in order to achieve perfection in life. However, all the efforts made must be linked to the will of Allah the Almighty. Humans can only try but God is the one who decides.

Al-Qushayri concludes that any effort made to achieve a specific goal does not actually deny the concept of *tawakal* (reliance) on Allah. Thus, there is no contradiction between *tawakal* and effort because they are inextricably linked. *Tawakal* is a practise attributed to the acts of the heart while efforts are the acts of the body.

This idea corresponds to the Prophet's advice to a man to tie his camel first and then rely (tawakal) upon Allah (al-Tirmizi [2517] 1962). Therefore, tawakal that is not preceded by effort is equivalent to the concept of silah that is not preceded by ism mawṣūl in the study of grammar which results in incomprehensible sentences.

It is also found that the integration of the concept of tawakal in ism mawṣūl is based on the similar concept of linking two aspects as discussed in the perspective of both disciplines. In explaining ism mawṣūl, it is important to apply the concept of linking or connecting all the efforts done to the will of Allah. Therefore, every provision destined by Him should be accepted with full contentment and an open heart.

Al-Qushayri further states that tawakal must be preceded by the will to achieve the goals and at the same time, should be linked to what has been destined by Allah. Maqām tawakal is also seen to be closely tied to the concept of faith towards the qada (decree) and qadar (predestination). Besides that, there are seven verses in the Quran that relate the concept of tawakal to faith hence, the more tawakal a person is, the higher his level of faith towards the qada and qadar of Allah.

## 7 The Al-Qushayri's Sufism Arabic Grammar Model

Based on the analysis done previously, it is found that al-Qushayri has integrated the spiritual (sufism/sufi) values related to maqām into grammar (nahu) discipline. The integration is based on two main similarities. First similarity is the use of the same terminologies in both sufism and grammar disciplines despite the differences in their meanings. As for example, the term “āmil” that is used in both disciplines.

The second similarity found is the meaning of some concepts used in sufism that can also be applied implicitly in grammar discipline. A clear example to explain this similarity is the meaning of freedom of a person who has repented from sins with the meaning of mubtada' that is independent from any form of 'awāmil. The complete process of the integration of maqām in sufism values with grammar topics can be seen in the following value chain analysis (Fig. 2).

Referring to the above figure, there are two main elements that need to be observed in developing. The al-Qushayri's Sufism Grammar Model. The first element is known as the primary activities that can be found in the integration of spiritual values relating to the maqām of taubat, zuhud and tawakal in three grammar topics; mubtada', raf' and ism mawṣūl. Primary activities need to be strengthened by support activities that can be seen in the aspects of similarity in the use of terminologies and their meanings. The implementation of both elements is a value chain to form the al-Qushayri's Sufism Grammar Model (QSGM).

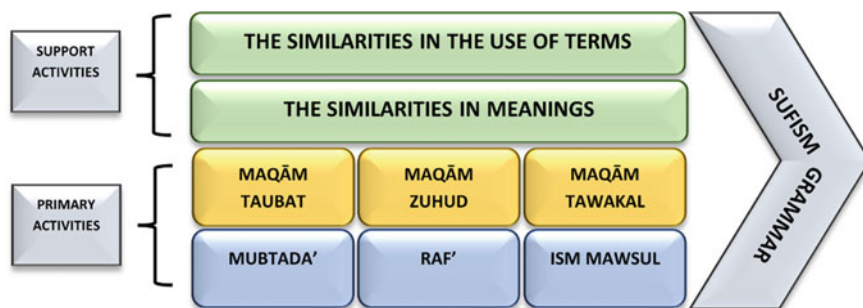


Fig. 2 The al-Qushayri's Sufism Grammar Model (QSGM)

## 8 Conclusion

In conclusion, it is found that al-Qushayri has put forward a new approach in grammar discipline. He is the first sufi scholar who integrates the sufism values like maqām taubat, zuhud and tawakal in grammar topics that have similar aspects. The integration is based on the comparative method that looks at two main aspects, namely the similarity of the use of terms and the similarity of the meaning. This approach has further strengthened his reputation that he is known as a scholar who combines the sharī'a and ḥaqīqa. The findings of this study are also expected to provide a meaningful contribution to certain parties in an effort to form an integrated curriculum for the subject of Arabic grammar that includes linguistic aspects and spiritual aspects.

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# Anime Negotiations in Public Pedagogy During the Pandemic for Elementary School Students



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**Abstract** The purpose of this study is to examine how anime was negotiated in public pedagogy during the Covid-19 pandemic for elementary school students. Digital immigrants are challenging the debates surrounding the use of animation as a public pedagogy medium. The paradigm shift in digital immigrants' responses to anime as public pedagogy from the perspective of teachers and digital natives' responses from the perspective of elementary school students is also identified and analyzed in this study. The data for this study were collected from various sources, and the results of a questionnaire distributed to teachers throughout Indonesia, to see how digital immigrants reacted. for anime opportunities as a pedagogical public during the pandemic for elementary school students. The findings of the study reveal that digital immigrants are still unable to envision how future education will be affected by the pandemic, which fully explores the use of digital technology. Digital natives, on the other hand, are ready to collaborate with IoT as a learning medium. Digital natives see anime as a form of public pedagogy with an educational component. Through its audio-visual, design, and popular appeal, anime also facilitates the attraction of creative, imaginative, and story-telling learning for elementary school students.

**Keywords** Anime negotiations · Public pedagogy · Elementary school students

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## 1 Introduction

Creativity as knowledge in art learning for elementary school students has been treated as complementary learning to core learning. Art learning for elementary school students can be a representative medium that supports the material in the core lessons [1]. The erroneous paradigms and habits began with the tendency to learn art in elementary schools. The tendency lies in the dominance of practical methods over theoretical methods when art learning takes place. The development of art learning in elementary schools is better understood as a subject to increase students' talents and creativity [2]. This research was initiated by conducting an online survey of randomly selected elementary school students. This is an irony because Indonesia is known as a country with a wealth of arts, culture, and traditions [3–5]. Likewise, varieties that can be developed in art learning utilize one of the art genres, namely illustration in the form of animation that is close to the world of children as public pedagogy [6–8]. Public pedagogy is how education responds to the tendency of cultural commodification, which in this sense is no longer only placed in the realm of education but also the realm of culture as a whole [9, 10]. Popular culture, which often appears in the public media, is seen as a means of entertainment and an educational tool. Various information and knowledge are disseminated to the community to help live.

Several studies on learning creativity for elementary school students based on animation tend to confirm the existence of a close relationship between learning, student interest, and creativity. Animation enhances learning through visualization, experience, and creativity [11–13]. Animation innovation in elementary school students' learning helps solve students' problems [14, 15]. When children are encouraged to learn based on animation close to the child's world, decisions to solve their problems become more creative and fun [16]. Students' learning through animation made them interested in imagination and stories so that they experienced an increase in their ability to solve problems through creative ways [2, 17]. Several studies that have been mentioned provide an initial overview of animation and its relation to creativity. On the other hand, research and development of learning for elementary school students in Indonesia into animation have not yet been explored.

Although primary school student learning has now entered the contemporary realm, contemporary education in Indonesia is still relatively early because it is in transition from the Discipline-Based Education (DBE) model to Visual Culture Education (VCE) [18], or more precisely. Are in adaptation to collaborative learning and the use of technology in learning. On the other hand, the education of elementary school students in Indonesia is still trying to touch on issues related to the constructivist paradigm, which believes that the locus of knowledge does not lie in the individual, but the combination of the individual and the social and cultural context [19, 20]. Meanwhile, within the scope of worldview education, scientific discussions on social constructivism have focused and developed on the primary school learning environment [21–23].

Based on this issue, teachers and academics related to primary school student learning need to take advantage of the essential basic elements of social constructivism when they create active, engaging, and meaningful learning experiences for both teachers and students [24, 25]. The primary aspect of this type of experience is the exploration of creativity and imagination. Furthermore, both of these things are maximized with effective teacher learning models and styles that combine animation as an educational entertainment medium close to elementary school students. This involves animation as public pedagogy in active, creative, imaginative learning through storytelling directly related to the creative development they experience [26, 27].

Therefore, this study discusses the negotiations in animation (anime) in public pedagogy during the pandemic for elementary school students. On the other hand, discourses related to the exploration of animation as a medium of public pedagogy for elementary school students face challenges from digital immigrants. This study also identifies and analyzes the paradigm shift in digital immigrants' responses to anime as public pedagogy from the perspective of teachers and digital natives' responses from the perspective of elementary school students. In the end, this research is expected to provide a new perspective in positioning anime as a public pedagogy about creativity, imagination, and storytelling for elementary school students.

## 2 Method

This study uses a qualitative approach centered on a holistic approach and is generally characterized by an inductive approach to building knowledge that aims to generate meaning [28, 29]. This approach allows researchers to build an understanding of a topic and how it processes meaning. Research with a qualitative model will produce qualitative data from interviews with informants. The use of a qualitative approach is expected to explore and explain the phenomenon of anime negotiation and public pedagogy during the pandemic for elementary school students as digital natives and their interrelation with digital immigrants.

The limitation of this research is anime which is an animation term from Japan. The research data was taken from various sources, including the results of interviews with informants as primary data and the results of a popularity survey conducted by the official publisher of Weekly Shōnen Jump magazine as secondary data, to see how digital immigrants responded in responding to anime opportunities as public pedagogy during the pandemic for elementary school students [30, 31].

Questions in qualitative research are generally inductive or open-ended and made in non-directing language [28, 32]. Types of open-ended questions will encourage informants to answer questions freely without being limited to a predetermined series of possible responses. The questions asked are general; the researcher does not direct the answers from the informants and, before starting the interview, already has a knowledge base with the theory used in this study to collect data accurately [33, 34]. The list of questions considers the order of questions, starting from general questions

to more specific questions. In this way, researchers can see how the perception of digital immigrants and digital natives in responding to anime opportunities and the negotiations in it towards public pedagogy for elementary school students. As for the questions asked, such as: Are there elements in anime that make it worthy of being public pedagogy for elementary school students during a pandemic? What type of anime catches the audience's eye? How would the development rate of anime in the sphere of education and entertainment?

Participants from the study were recruited according to the objectives and research questions that relied on purposive sampling techniques or sampling with a purpose. The procedure used in this research is snowball sampling. Snowball sampling is the process of each participant leading to the selection of another participant [34, 35]. Researchers can ask participants directly to be able to suggest who can be appropriate informants.

Transcription of the interview was conducted after the informant's interview was completed and the interview data was collected. Data analysis and interpretation as "inferring and organizing data" and "finding or making meaning" made the data analysis and interpretation process flow, starting from the preparation and organization of the data, initial immersion, coding, categorizing, and creating themes and interpretations [33]. The general process of relevant interview results will be translated and analyzed using a public pedagogy approach.

### 3 Results and Discussion

A thorough review of public pedagogy literature reveals a concept that has been applied in a variety of breathtaking and dispersed ways. Giroux's public pedagogy depicts the mechanism by which neoliberalism and corporatism become a "all-encompassing cultural horizon for producing market identities, values, and mega-corporate conglomerates, as well as for atomizing social practices," by theorizing the educative force of media, popular culture, and society, including anime [36]. These forces are threatening public life by using the cultural educational force to negate the basic conditions for critical agency. Public pedagogy is defined as "a powerful ensemble of ideological and institutional forces whose goal is to produce competitive, self-interested individuals vying for their own material and ideological gain" in this dystopian story [36, 37].

Teaching experience, training, facilities and infrastructure, self-efficacy, and teacher motivation are very influential on teacher TPACK. TPACK tends to be low if the teaching experience, training, facilities and infrastructure, self-efficacy and teacher motivation are at a low level [38]. As examples of public pedagogic sites, they cite museums, zoos, and libraries. The similarities between these spaces and those frequently associated with further, adult, and community education are difficult to miss. In their study of the future of lifelong education, the workplace (on or off the job), the family, cultural or community settings, libraries, museums, theaters, and galleries as places and spaces where learning can take place, as well as social media

and anime films [39–42]. Individuals are constantly striving to adapt to the rapidly changing environment in which they find themselves in the Covid-19 pandemic, and these spaces are implicated in the ubiquity of learning. Lifelong education through anime as the new normal is argued to be linked to the self as a project in this tradition; professional or personal identities, rather than being coherently defined and stable, are in a state of crisis, requiring reflexive re-construction of elementary education on a regular basis [43].

The effectiveness of learning for elementary school students must have a fun aspect. This is supported by Herbert Read's concept, which said that education must consider the fun aspect [44]. The fun in question is very complex, namely for teachers, students, and academic nuances in the study room, even online or with digital technology. One of the teachers who was the respondent said the impact of online learning during the pandemic was:

"It's very uncomfortable..because they don't know the character of the students...even students tend to play more in the village...the character education of children is not very good" (R172012).

Blended learning is developed into IoT-based learning that puts forward technology, including social media and animated films. Animation is included in blended learning, which combines or combines various web-based technologies to achieve educational goals. *Blended learning* as a mixture of e-learning and multimedia technologies, such as video streaming, virtual classes, online animation [45, 46]. Although blended learning appears in the simplest form, it still provides an attraction for students in the learning process (Table 1). By utilizing popular culture such as animation, students can think creatively both individually and collectively. This is a more significant source of creativity than the classical learning model [47].

An animation is a form of entertainment that is no longer foreign. Animation is the art of making static objects look like they are moving [48]. The animation itself comes from the word *animate*, which means bring to life or turn on. Animation is currently widely used in video, user interfaces, video games, films and reaches various industry segments that can be explored as a medium for public education and entertainment. In particular, the animation industry in the education segment is going through a long journey over the decades. Animation entered its golden age from 1928 to 1951, with Disney dominating the animated film industry [1, 48].

Before entering anime, it is necessary to see how manga as the origin of anime has been popularized as a learning medium for elementary school students [13, 30]. This is based on the imaginative element that appears when elementary school students read the manga. When manga transforms into anime, the learning aspect has an advantage that manga does not offer, namely animation. Furthermore, public pedagogy in anime is more explored with its broad reach to elementary school students. They can find it on YouTube, television, and other digital platforms. Back to the issue of anime and manga as public pedagogy. When reading manga, readers must use their imagination to feel the atmosphere of the scene being drawn [13, 48]. Scenes that were initially static become moving and assisted by audio and background music that can create the intensity of a scene that will make elementary school students as spectators plunge into the fictional world deeper. Elementary school students will

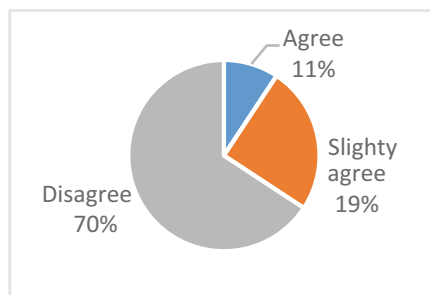
also feel the two characters alive because they have been animated and voiced by voice actors. Anime has had a significant influence on the world of education with its entirely different characteristics and deserves to be studied, especially for creativity, imagination, and the flow of thinking through storytelling [50, 51].

Anime is famous for its dynamic storyline, themes, and characters. Elementary school students who are used to watching animated films like Disney can be surprised when watching anime; how the Japanese anime industry in story-making, narrative style, imagery, humor, and the development of the emotional and psychological side is much more complex than western animation. Most western animations such as Disney are more welcoming to the public and with a more predictable storyline. At the same time, anime often offers a more diverse and more exciting story development to be elaborated on and explored to enhance the creativity and imagination of elementary school students. The essential thing why anime can become a public pedagogy is flexibility, creativity, imagination, storytelling elements, and freedom in it, all of which support the process of honing critical thinking [51, 52]. Animated spaces have the potential to be context-free and drawn entirely with the animator's imagination anime; in other words, they can also be described as 'another world'. The distinctive aspects of anime, such as the freedom of narration, style of images, and characters, have attracted the attention of educators to make it a public pedagogy.

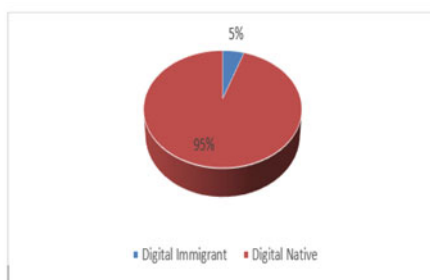
The point of view of digital immigrants in dealing with anime is not yet open to its potentials (Fig. 1). This is a natural thing because the digital immigrant generation has difficulty adapting to new popular media, primarily when used as learning media. It is related to cognitive theory in reception, where cognitive approaches can provide very different descriptions of complex processes of understanding phenomena compared to phenomenological psychology or structuralist theory. Digital immigrants still see anime as a mimetic that sees characters as humans in general, not fundamental but recognized as individuals, while structuralists see characters as only textual objects and literary artifacts [53, 54].

The respondents of this study were 229 primary school teachers spread all over the world. The following is the classification of respondents based on internet users (Fig. 2). The difficulty of digital immigrants in understanding cognitive narratology in exploring the problem of reception and the role of their minds in understanding anime as a new medium of learning for elementary school students during the pandemic also

**Fig. 1** Survey of 229 primary school teacher respondents



**Fig. 2** The classification of respondents based on internet users



occurs in various media such as text, radio, or film. Cognitive narratology borrows principles and methods from cognitive psychology [55, 56]. Cognitive psychology encompasses a wide variety of cognitive activities that viewers develop and the mental representations they create. This is different from digital natives who are open to new media. Anime as a learning media also considers mental models resulting from the interaction of textual information processing and knowledge possessed by elementary school students as spectators. The audience interprets the textual information given in anime with the help of their pre-existing knowledge, where several aspects affect attention in viewing anime (Fig. 3). For example, students will imagine the character in their mind as a living human complete with sound; students can also imagine the accent that the character has. Students will create mental models that will help students understand the character's essence so that assumptions and expectations about the character can be built. In the case of students, the model made is based on the written narrative of the story, while in the case of other moviegoers who see anime as entertainment, they will build it through a combination of images and sound. In moviegoers, the audience's mental model will depend on the information received; this information can be in the form of film dialogue, sound, and images [20]. In other words, under any circumstances, anime has positioned itself as a public medium of pedagogy, especially during a pandemic where people spend more time at home and in front of gadgets.

Concerning public pedagogy, all kinds of information they get will be included in the mental model of the characters built by the anime. Elementary school students explain how their process of assessing a character and the education implied in it.

"The types of anime that students really like are characters such as animals, superheroes, folklore, funny cartoons" (R175.015)

Public pedagogy in anime is shown when elementary school students get textual information that they get while watching. Some of the information they get is in terms of design, expression, and emotional dimensions of the characters, personality, goals, and intellectual qualities shown by the characters. This information is essential in the process of understanding elementary school students about character, for example. Furthermore, students can like their favorite characters more due to the hidden charm possessed by these characters and the supporting audio-visual aspects. The students'

most significant charm was the mysterious character supported by a back sound that further supported the character.

students really like pictures, it is proven that students often make pictures of the characters they like in their respective books. (R175.017)

The 'design/audio-visual' category of anime contributes to public pedagogy. This category is a category for how students assess the design aspect of the character. Students reveal that the attractiveness of their favorite character is an unusual depiction. Design/audio-visuals also influence public pedagogy for elementary school students in understanding emotions.

In this regard, we need to remember that the functions of education are: (1) Development: education functions to make students behave well and have an attitude of national character; (2) Improvements: the potential of students to become more responsible and dignified; (3) Filter: serves as a filter when there is a discrepancy between cultural values and good national character [51, 58, 59]. Anime has a characteristic that a character value is raised and used as a moral message contained in it. Usually, anime has its characteristics. The value is not doctrinal but rather the value that is in everyday life. So the audience unconsciously realizes that anime has value. Although not shown dominantly in the story. For example, anime about sports usually show the value of struggle, hard work, discipline, striving to achieve dreams.

## 4 Conclusion

In general, the process is used flexibly to understand or explore problems and solutions. This indirectly provides evidence of the complexity of learning art and culture in paper mask material. Furthermore, the model also pays attention to the interdisciplinary nature of borrowing concepts from the creative economy, one of which considers the recycling power of new media. The concept of contemporary art education should consider its complexity by carrying out collaborative work broadly interpreted, including by utilizing anime as public pedagogy. The meaning of collaboration is in the collaboration of individual work and collaboration between fields of science, which stimulates the emergence of multi modalities in anime as a form of popular culture. Public pedagogy in anime supports a learner-centered approach as creative individuals. Through anime, learning for elementary school students explores multimodal in global education, which has previously become popular in the twenty-first century, and its use is becoming more common in learning at the elementary level. Public pedagogy in anime provides stimulation in student activity and provides a supportive, connected environment.

The long-term outcomes or achievements of learning with anime during the pandemic are identified as provisions for creating essential mindsets or creative ways of thinking and behaving. Creativity emerges as a mindset that can provide active stimulation for other patterns. This is an effort to establish creativity as the center of creative learning in public pedagogy. Furthermore, dynamic abilities also emerge to



provide educational outcomes or achievements proper for elementary school students to live life, with the categories of information in the reception of elementary school students, namely personality, character development, goals, design/audio–video, and emotions. From the results of interviews, these six categories of information are the most common information sources for education in anime as public pedagogy. The process of constructing a mental model of this character will be understood by the theory of ‘categorization and personalization’ in which students actively categorize or personalize characters. The mental model of the character that fans make based on the information they get can help them make conclusions about the character, stimulating the critical thinking process. Especially during this Covid-19 pandemic, students spend much time at home, so learning exploration through popular culture must be done.

The limitation of this research lies in the scope of the animation taken, namely anime. This research needs to be continued by considering other animations. Furthermore, it is necessary to develop students’ reception of characters who explore more; some dimensions cannot be fully explained in detail, namely categorizing character types to understand better character education issues that have not been explored from this research. This study also does not examine in more detail the types of anime that exist and only become general types that can be used as public pedagogy. According to researchers, the categorization of anime types from a psychological perspective can help define anime types more accurately concerning public pedagogy. Therefore, the researcher provides recommendations regarding the type of anime from a psychological perspective for further research.

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# Teaching Malay Language Communication Among International Students: Challenges During the Pandemic



Tuan Rusmawati bt Raja Hassan, Khuzaiton bt Zakaria,  
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**Abstract** The Covid-19 pandemic is not over yet, but surely all life activities continue with the new norm. Undoubtedly, this epidemic left a big impact on various fields, including education. To curb the spread of this epidemic, educational institutions change the teaching and learning methods from face-to-face to online. This study aims to identify the challenges faced by lecturers as well as the use of the Malay language in the teaching and learning of international students. This qualitative study uses a case study design. The case study is the teaching and learning process of Malay Communication II at the Faculty of Language Studies and Human Development, Universiti Malaysia Kelantan. A total of five participants who are Bahasa Melayu students were selected through purposive sampling. Data was collected through online interviews and analysed using a thematic approach. For validity and reliability of the study, it is done based on the researcher's verification method (Audit Trail). The results of the study show that there are three main challenges in the teaching and learning process of Malay. Nevertheless, to give more understanding to international students, especially during the COVID-19 pandemic, lecturers take advantage of the chat box available in the Google Meet application. This study has implications for the selection of lecturers' teaching approaches and methods in improving the mastery of Malay among international students. In addition, the skill of using the Malay language in teaching and learning can also be used as an element in measuring the competence of Malay language lecturers who teach international students. This strategy can indirectly help lecturers to improve the proficiency of international students in Malay subjects.

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**Keywords** Pandemic · Malay language teaching · International students · Audit trail · Chat box

## 1 Introduction

It is well known that in January 2020, the World Health Organization (WHO) declared the global spread of the COVID-19 epidemic. This phenomenon is said to originate in the city of Wuhan, China, and spread to all corners of the world. COVID-19, among others, is a dangerous infectious disease that spreads through liquid droplets from the nose and mouth, for example through coughing and sneezing. This disease spreads easily due to the situation of people who live in large groups, resulting in the virus becoming more sequential and mutating. The surge in the statistics of COVID-19 infection cases from all hospitals as well as the number of deaths recorded every day is very impressive to the emotions of the population, especially in Malaysia. This misery produces the expression “the most worrying year for the whole country” [9].

In line with the government’s aspirations to break the chain of the Coronavirus, efforts to prevent the spread include travel restrictions, quarantines, confinements, postponement events as well as the closure of all sectors such as tourism, agriculture, industry, manufacturing, and education. In addition, the government has launched various types of prevention campaigns to control this infection, for example, the “Avoid 3C, Practice 3W” campaign. People are advised to stay away from crowded and confined places and talk at close range. In addition, the practice of washing hands frequently, wearing a face mask and warning policies should be the responsibility of each individual. Vaccines are also given to help stimulate the body’s natural immune system to reduce the risk of getting a viral infection.

Today, the COVID-19 pandemic has not yet ended, but it has certainly created a new landscape in human activity and life. Undoubtedly, this epidemic left a big impact on various fields, including education. It indirectly demands Public Higher Education Institutions (*Institusi Pendidikan Tinggi Awam, IPTA*) and Private Higher Education Institutions (*Institusi Pendidikan Tinggi Swasta, IPTS*) act to empower the learning system in dealing with the challenges of the COVID-19 crisis. For example, as soon as the Malaysian Government declared the Movement Control Order (MCO) beginning March 18, 2020, the Ministry of Higher Education (*KPT*) asked every university to activate the Teaching and Learning (*Pengajaran dan Pembelajaran, PdP*) mode online. Universiti Malaysia Kelantan is one of the educational institutions today that still carries out online teaching and learning methods.

However, not all faculties are inclined to this teaching method, some have already restarted conventional teaching methods based on the suitability of the program, especially for activities involving laboratories. Unlike the Third Language Unit (Malay) at the Faculty of Language Studies and Human Development, this entity is still familiar with virtual teaching methods. Inevitably, the dependence of teaching and learning methods on gadgets and broadband still leads to problems and challenges, whether for lecturers or international students.

Dr Maszlee Malik, former Minister of Education who is also a Member of Parliament for Simpang Renggam, believes that Malaysians need a holistic and comprehensive post-pandemic education system. It should take into account the need to set the best “great reset” in the field of education and curriculum to face the more challenging world of IR (Industrial Revolution) 4.0.

## 2 Literature Review

A study entitled “Challenges of Online Learning and Teaching (*Cabaran Pembelajaran dan Pengajaran Dalam Talian, PdPDT*): A Systematic Literature Highlight Review” by Abdul Fatah Hamden in 2021 shows that the new norm of online learning and teaching is a method that can help instructors to implement the learning process during a pandemic. The study found that, despite certain constraints, online teaching and learning methods are seen to be able to achieve high effectiveness and provide opportunities for the new generation with technology-based learning and communication activities. Commitment and cooperation from all parties including the organization’s management, instructors, and students are essential to ensure the effectiveness of online learning and teaching.

Mokhtar and Ali [2] in “Teaching and Learning Success Factors (PdP) During the COVID-19 Pandemic: A Survey of Special Education Teachers in Selangor” reviewed PdP success factors online using quantitative methods. A total of 322 special education teacher respondents serving in the state of Selangor were randomly selected. An online questionnaire was used as a research instrument. The data obtained were analysed using the mean value and standard deviation. The results of the study found that the success factor of special education teachers implementing PdP during the pandemic is high. However, information technology knowledge among special education teachers is still at a moderate level, especially related applications in PdP.

Through “The Pandemic of COVID-19: Challenges of Teaching and Learning (PdP) of Islamic Education in Special Education for Students with Disabilities (Orang Kurang Upaya, OKU) with Learning Disabilities (*Masalah Pembelajaran, MP*) in Malaysia”, a study conducted by Rahman et al. [5], it was conducted to identify the PdP method used by Islamic Education teachers in Special Education and the challenges faced when carrying out PdP with OKU MP students during COVID-19. This study uses a qualitative method by using a questionnaire and documentation approach in collecting data to achieve the objectives of the study. The study found that the method of identifying specific and suitable techniques before starting PdP with OKU MP is the main method in the PdP of Islamic Education during COVID-19. The main challenges in the PdP of Islamic Education for OKU MP students are issues related to technological facilities in addition to issues of student and parent commitment, teacher skills and expertise as well as the lack of Teaching Aids (BBM) throughout continuing the PdP online due to the implementation of the Movement Control Order (MCO) implemented by the Malaysian government.

Omar [7] through “E-Learning and Job Satisfaction Post COVID-19 Pandemic Among University Lecturers” focuses on e-learning and job satisfaction among lecturers. A quantitative study using questionnaires was measured to test the level of understanding of respondents towards e-learning. Meanwhile, the Minnesota Satisfaction Questionnaire (MSQ) (1967) was translated into Malay by Duin (2001). The respondents consisted of 87 lecturers (38 men and 49 women). The findings of the study show that the highest mean value for the dimension of “uploading lecture notes to e-learning websites from time to time” is 4.22 and is followed by the need to connect with colleagues and student overload as the second highest mean value which is 4.15 and the lowest is instruction and encouragement from the study centre with a mean of 3.63. Next, the results of the study show that the level of job satisfaction for the determining factor according to the mean value of the lecturer’s score is at a moderate level.

### 3 Methodology

Research design is an action plan that shows how a study is conducted. The research design serves as a guide for the researcher to collect and analyse data for the research being conducted. The research design used is based on a qualitative approach. This study is a qualitative study that uses interview and documentation methods to obtain primary and secondary data related to the objectives of the study. Primary data was obtained from a questionnaire conducted online with 5 international students of the Malay Language Communication course. This method was adopted to obtain data related to the challenges faced as well as the use of the Malay language in the teaching and learning of international students during COVID-19. Secondary data was obtained by using documentation methods involving content analysis studies of printed materials such as books, journals, proceedings, and so on. This method is used to get a more in-depth picture of the research to be carried out.

### 4 Instrument

This is a qualitative study. Data were collected using an interview instrument. The selection of respondents is purposive sampling. The selection of respondents in qualitative studies is usually focused. Purposive sampling also called judgment sampling involves individual consideration to select respondents based on the researcher’s knowledge and the specific purpose of the study. The selection of an interview instrument was used in this study due to the small number of respondents which were 5 students of Bahasa Melayu Komunikasi. Data from the interview instrument will be verbatim transcribed. This study utilizes purposeful respondents. Next, the Audit Trail method (data validation) is used for data validity.



## 5 Challenges and Experiences

Since the beginning of the nineteenth century, Malay has been taught to foreign speakers in Europe. Thus, teaching Malay to foreign speakers is not something new. Winstedt [8] in his writing, “The Teaching of Malay in Europe” discusses the need to teach the Malay language in Europe to facilitate British administration and trade in the Malay Islands. The outside world accepted the use of the Malay language so much that Western and Eastern scholars were interested in producing a bilingual dictionary. The first Malay language dictionary containing 482-word lists was produced in Chinese writing in 1403. It was followed by the Malay-Italian Dictionary containing 425-word lists created by Antonio Figafetta in 1521. The rapid development in learning the Malay language proves that it has been used by foreign speakers since the days before independence.

According to the present context, which is after 65 years of national independence, Malay, which is the official language of Malaysia, is also taught to all international students studying at Public Higher Education Institutions (IPTA) and Private Higher Education Institutions (IPTS) in Malaysia. According to the Education Act 1996 and the Private Higher Education Institutions Act 1996, all foreign students studying in Malaysia are required to attend Malay language courses at their respective institutions of higher learning within the period and time frame set by the Malaysian Qualifications Agency (MQA). These two acts have been further strengthened with the launch of the Action Plan to Dignify the Malay Language as the Language of Knowledge at the Institutes of Higher Education (IPT) in Malaysia on 27 October 2011.

Universiti Malaysia Kelantan (UMK) is the 19th university and began operating with the first batch of students in 2007. To realize the agenda of honouring the Malay language at IPT, the Center for Language Studies and Human Development (*Pusat Pengajian Bahasa dan Pembangunan Insaniah, PBI*) has been responsible for conducting Malay Language Courses for students international at this university. In the study session of the February 2012/2012 semester, the Malay Language Course was offered for the first time to international students and foreign lecturers.

To meet the policy requirements set by the KPT, PBI which is now known as the Faculty of Language Studies and Human Development (*Fakulti Pengajian Bahasa dan Pembangunan Insan, FBI*) has developed a scale of Malay Language Courses. It is aimed at the scope of using the Malay language in daily life and at work. This course focuses on a general understanding of the Malay language and its importance in the Malaysian context. The students will be guided in speaking and writing Malay in formal and informal situations. The Malay Communication course is divided into three, namely: Malay Language Level One (UBY 2012), Malay Language Communication Level Two (UBY 20,502), and Malay Language Level Three (UBY 2023). The teaching hours for this course are two hours per class. It covers one hour of teaching and one hour of online training during the COVID-19 pandemic.

The comprehensive measure has outlined several group learning outcomes for the Malay language course that students need to master, which is to enable international students to communicate using basic Malay, read and understand simple Malay sentences and be able to write short essays related to daily life. However, the pandemic that hit Malaysia has undermined the goal of learning Malay among international students. Therefore, this study was conducted to identify the challenges faced by lecturers and the use of the Malay language in the teaching and learning of international students during the pandemic.

Based on the results of this study, there are three main challenges in teaching Malay to international students, namely the environment, the influence of the national language, and student attitudes. Learning a foreign language is not an easy task, especially for a language that is rarely used internationally. The lack of knowledge of the Malay language makes it difficult for international students to learn the language. This must be a challenge for teachers to create new language knowledge for foreign students. Before the pandemic, lecturers took the initiative to create a “real atmosphere” in the teaching process. This includes taking students to the fields such as markets, restaurants, and so on. This method allows students to get a real picture of what they are learning and then practice the use of Malay with the community. Winstedt [8] once stated that “the best place to learn a language is where it is spoken”.

In contrast to the current situation, international students who have just registered for the Communication Malay Language course, it is quite difficult for them to practice using the Malay language because they are in their own country and the teaching and learning of the Malay language are conducted online using the e-Campus medium provided by UMK. This situation also applies to international students who return to their respective countries and no longer speak Malay and only socialise in the community groups there. This situation results in them easily forgetting and not being fluent in Malay upon returning to Malaysia.

Teaching Malay to international students from the Republic of China is quite difficult, as shown in Table 1 on page 9. This has been said by Awang [4], that this problem exists because students from China are influenced by their national language, which is Mandarin. Therefore, students experience difficulties due to the difference between their mother tongue and the target language. Mandarin is different in many aspects such as phonology and grammar. Awang [3] also stated that Chinese students have great difficulty in pronouncing the vibration sound (r) because that sound is very minimal in their language and even that minimal feature is different from the phonetic feature of the vibration sound in the Malay language. Similarly, the difference between /d/ and /t/, between /b/ and /p/, and between /c/ and /j/ and /z/ , in the context of certain word constructions creates difficulties for them. This kind of environment makes the Malay language just learned and not mastered well.

In addition, some international students take the Malay Language Course offered at FBI lightly. This is because they consider the course to be unimportant compared to the core courses taught in English. This stereotype indirectly gives the perception of the lack of need to master the Malay language and the lack of initiative from students to learn this language. It was found that the attitude of international students

**Table 1** Interview questions with Malay communication students (UBY20502)

Questions	FSB student 1 person Indonesia	FPV student 1 person Maldives	FTKW student 1 person Nigeria	FHPK student 2 persons China
1. Are you interested in learning a Malay language course?	Yes. Malay is more or less the same as Indonesian	Yes. I need to learn Malay because I want to talk to my friends	Yes. I like learning Malay because many of my friends are Malay. I want to speak Malay with them	I study Malay because Malay is one of the subjects I must study and pass
2. Is learning Malay difficult?	It's not difficult because I can understand and speak Indonesian at UMK but I try to speak the way Malays speak Malay	It's not that difficult even if I only speak in English with the lecturer and friends. I only speak Malay when talking to food sellers in restaurants or markets	It's not that difficult because I always read the notes and complete the exercises given to me by my teacher	Malay is quite difficult because I have to memorise a lot of words to understand Malay. It is very different from Mandarin. I also do not speak Malay with lecturers or friends
3. Do you understand the lessons taught using Goggle Meet in the eCampus platform?	Yes. I understand. My teacher first explained the lesson that week before I completed the exercises based on the topic	Yes, I understand. The teacher uses simple Malay and if I don't understand, my teacher will explain in English	Yes, I understand. The teacher uses simple Malay and if I don't understand, my teacher will explain in English. Sometimes I use Google Translate	Yes, I understand. The teacher uses simple Malay and if I don't understand, my teacher will explain in English. I also use Google Translate if I don't understand
4. Does the activity in the chat box every week help you to write well?	Yes. Activities in the chat box help me write words and sentences correctly	Yes. I learned to write correctly in the chat box	Yes. I learned to write correctly in the chat box	Yes. I learned to write correctly in the chat box. I can write a particular word correctly

(continued)

**Table 1** (continued)

Questions	FSB student 1 person Indonesia	FPV student 1 person Maldives	FTKW student 1 person Nigeria	FHPK student 2 persons China
5. What did you learn in the chat box?	<p>Teachers always start the conversation with something like a greeting. Good morning greeting</p> <p>How are you?</p> <p>Already eaten?</p> <p>So I can write in the Malay way. Then the teacher will ask questions about the topic taught in Google Meet</p>	<p>The teacher always asks with simple sentences such as Good afternoon</p> <p>How are you?</p> <p>Already eaten?</p> <p>what did you eat today?</p> <p>What class do you have today?</p> <p>What time is your class?</p> <p>The teacher asks questions about the topic learned in the Google Meet before the chat activity. I wrote the answers that the teacher asked for</p>	<p>Every time we chat, the teacher writes a question with a simple sentence like Good afternoon</p> <p>How are you?</p> <p>Already eaten?</p> <p>What are you eating?</p> <p>Do you have many classes today?</p> <p>Do you still have class after the Malay language class?</p> <p>The teacher asks questions about the topic learned in the Google Meet before the chat activity</p>	<p>The teacher writes questions with simple sentences such as Good afternoon</p> <p>How are you?</p> <p>Already eaten?</p> <p>What are you eating?</p> <p>Do you have many classes today?</p> <p>You still have class after the Malay class</p> <p>I study the topics taught in Google Meet</p>

(continued)

Table 1 (continued)

Questions	FSB student 1 person Indonesia	FPV student 1 person Maldives	FTKW student 1 person Nigeria	FHPK student 2 persons China
6. Does the chat box help you write words correctly?	Yes. I learned to write properly I spell the word “ <i>khabar</i> ” correctly. Before this, I wrote news. The chat box makes me spell and write simple sentences correctly	Yes. I learned to write properly. For example, I can understand and write well if the teacher writes, How are you? I can write properly, Good news or I am healthy Good news or I am well I can also write simple sentences correctly like: I like to eat white rice and fried chicken	Yes. I learned to write simple sentences correctly. For example, I can understand and write well if the teacher writes, How are you? I can write correctly, Good news is written “ <i>khabar baik</i> ” and not “ <i>khbar baik</i> ” or I am healthy not I doubt I can also write simple sentences correctly like: I like to eat fried rice and drink orange juice	Yes. I learned to write simple sentences correctly. For example, I can understand and write well if the teacher writes, How are you? I can write correctly, Good news is “ <i>khabar baik</i> ” and not “ <i>khbar baik</i> ” or I’m healthy is “ <i>Saya sihat</i> ” and not “ <i>Sayya sihat</i> ” I can also write simple sentences correctly like: I like to eat <i>kampung</i> fried rice and bread

(continued)

Table 1 (continued)

Questions	FSB student 1 person Indonesia	FPV student 1 person Maldives	FTKW student 1 person Nigeria	FHPK student 2 persons China
7. What does the teacher do if your spelling or sentence is wrong in the chat?	<p>The teacher will tell and correct spelling and simple sentences correctly. The teacher rewrote the sentences I had written because I used Indonesian</p> <p>For example: My sentence: When (<i>kapan</i>) do the teachers want to come to Jeli campus?</p> <p>Sentence correction by the teacher: When (<i>bilakah</i>) do teachers want to come to Jeli Campus?</p>	<p>The teacher will tell and correct spelling and simple sentences correctly. The teacher rewrote the sentences I had written because I used incorrect spellings or sentences</p> <p>Example: My sentence: I have a yellow house with my mother's live (tinga)</p> <p>Sentence correction by the teacher: Nama has a yellow house and I live (<i>tinggal</i>) with my mother</p>	<p>The teacher will tell and correct spelling and simple sentences correctly. The teacher rewrote the sentences I had written because I used incorrect spellings or sentences</p> <p>Example: My sentence: <i>Saya name John</i></p> <p>Sentence correction by the teacher: <i>Nama saya John</i></p> <p>My name is John</p>	<p>The teacher will tell and correct spelling and simple sentences correctly. The teacher rewrote the sentences I had written because I used incorrect spellings or sentences</p> <p>Example: My sentence: <i>Saya name John</i></p> <p>Sentence correction by the teacher: <i>Nama saya John</i></p> <p>My name is John</p>

(continued)

**Table 1** (continued)

Questions	FSB student 1 person Indonesia	FPV student 1 person Maldives	FTKW student 1 person Nigeria	FHPK student 2 persons China
8. Do you like the teacher using chat to help you write correctly?	Yes. I like learning to use chat because I can learn to write properly. I also understand what the teacher writes in the chat because the teacher writes simple and short sentences	Yes. I like learning to use chat because I can learn to write properly. I also understand what the teacher writes in the chat because the teacher writes simple and short sentences. The teacher also writes the meaning of words in English if there are difficult words	Yes. I like learning to use chat because I can learn to write properly. I also understand what the teacher writes in the chat because the teacher writes simple and short sentences. The teacher also writes the meaning of words in English if there are difficult words. Sometimes I use Google Translate to write answers to the teacher if I don't know the meaning in Malay	Yes. I like learning to use chat because I can learn to write properly. I also understand what the teacher writes in the chat because the teacher writes simple and short sentences. The teacher also writes the meaning of words in English if there are difficult words. Sometimes I use Google Translate in Mandarin if I don't understand the meaning of a word in English written by the teacher. This takes some time to write the answer to the teacher

who do not want to mix with local students also causes them to lack exposure to the Malaysian language and culture throughout their studies at UMK.

Unlike international students from Indonesia, they do not experience significant problems due to the cognate language factor. On the other hand, the main challenges in teaching and learning the subject of Islamic Education for Persons with Disabilities (OKU) are technological facilities, the commitment of students and parents, lack of teacher expertise, and limited teaching aids.

However, the positive aspects behind the challenges faced by both students and lecturers are more in the form of benefits to the teaching and learning process itself. The limited situation of online teaching and learning is seen as still capable of achieving high potential, especially through exposure to technology in teaching and learning [1]. In the twenty-first century, the education sector is seen to be undergoing a paradigm shift in producing a generation that is literate in information technology. The new norm demands the commitment of students to adapt new learning methods in line with current technological developments. Special education teachers have also successfully implemented teaching and learning during the pandemic [2].

The availability of technology successfully combines learning in a variety of formats, such as text, audio, video, and multimedia. During the pandemic until now, channels such as Google Classroom, Microsoft Teams, YouTube, Zoom Cloud Meeting, and Cisco Webex are used to connect students with lecturers through online platforms. Mariani [7] stated, through technology in teaching and learning, makes it easier for lecturers to upload lecture notes and connect with colleagues. Pandemic-era learning is considered a method to produce creative and innovative teachers and students. This is in line with the emphasis on the concept of lifelong learning. Competence in the use of technology is very important in preparing students to face the challenges of Industrial Revolution 4.0. It can indirectly increase the marketability of students in line with current industry needs.

On the other hand, Malay language lecturers at the Faculty of Language Studies and Human Development make use of the comment section (chat box) in the Google Meet application. This inclination is driven by the strengthening factor in the aspect of writing, in addition to listening, seeing, and speaking in class. This section is filled with a session of saying hello and questions related to the previous learning topic. Through the use of this comment angle, it was found that students were able to write words and sentences better. This is because the lecturer will continue to correct the use of ungrammatical sentences, punctuation errors, spelling, and so on. This is one way for students to practice the use of Malay words for knowledge, understanding, and communication.

These teaching and learning techniques are also called question-and-answer techniques. The selection of questions and answers can create effective interaction between lecturers and international students. The questions presented require students to think in addition to being able to test students understanding. The main purpose of the question-and-answer technique is to detect students' language knowledge and encourage students to think creatively, innovatively, and critically.

Regarding the teaching method, lecturers are observed using the eclectic method, which means "mixed". This method is a combination of inductive and deductive



approaches [6]. The eclectic method uses teacher-, student-, material-, or task-centred strategies. Usually, it is applied in reinforcement activities in class. The purpose of the eclectic method is to produce a more balanced teaching and learning strategy. Among the characteristics of the eclectic approach are using various teaching methods, encouraging lecturers' effort and creativity, using training in teaching, emphasizing the active involvement of international students, and emphasizing cognitive skills. It was found that this eclectic method launched teaching activities, especially in terms of presenting examples and explanations. This can directly improve student understanding.

The skill of using the Malay language in teaching and learning can also be used as an element in measuring the competence of Malay language lecturers who teach international students. This is because the percentage of the use of Malay in the teaching and learning process is only 10%, compared to English which is 90%. If the use of the Malay language is fully maintained, this strategy can indirectly help lecturers improve the mastery of international students in Malay subjects.

## 6 Conclusion

The spread of the COVID-19 pandemic has taken over normal life around the world. Society is forced to go about its days with new norms. This threat leaves a huge impact on various fields, including education. Starting the change from face-to-face teaching methods to online also invites various other challenges. The environment where the students are, the strong influence of the national language, and the negative attitude of the students greatly hinder the understanding and practice of the Malay language. This requires the creativity and innovation of lecturers to create a good teaching atmosphere, as there are limitations in space and time for learning. Techniques and teaching methods are adjusted according to the student's level of thinking, and most importantly the continuous use of Malay in class can increase the mastery of international students. Therefore, all parties should join hands in promoting the Malay language in IPT as a "language of knowledge". Teaching Malay does not mean taking the function of English as an international language, but rather the spirit of nationalism in defending one's language and culture. It is hoped that offering Malay language courses to international students can restore the lost identity of the Malay race.

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# “Navigating Remote Interpreting: Insights from Jordanian Remote Simultaneous Interpreters Post Covid-19”



Majid Tarawneh and Taroub Khayyat

**Abstract** Although regular face-to-face interpreting is the norm in all traditional meetings, the repercussions of the Covid-19 pandemic mandate the use of Remote Simultaneous Interpreting (RSI) as a viable alternative. This article is concerned with examining how Remote Simultaneous Interpreters in Jordan (JRSIs) strongly voiced their perspectives regarding the pros and cons of this approach and focused on the interpreting process in online settings in the post-Covid-19 era. The methodology proposed draws on a quantitative analysis method in which a questionnaire was conducted on a representative sample of 30 JRSIs. The results further confirmed via an interview with 15 JRSIs. The analysis of the respondents' responses revealed a high level of awareness among the JRSIs with respect to the difficulties and challenges encountered by remote simultaneous interpreters in Jordan in the post-covid-19 era. The results also identified ways in which using technological applications such as ZOOM, Google MEET, and KUDO might contribute to either facilitating or impeding the interpreting task. Moreover, the results suggested that further research is needed to fully understand the opportunities and challenges of remote interpreting in Jordan, including identifying the specific needs and preferences of different stakeholder groups.

**Keywords** Remote interpreting · Simultaneous interpreting · Multimodal analysis

## 1 Introduction

The Covid-19 pandemic has catalyzed a paradigm shift in the field of interpreting, necessitating a transition from traditional face-to-face interpreting to remote interpreting. This shift has led to a host of challenges and opportunities for interpreters,

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particularly those accustomed to working in conventional settings. Against this backdrop, the present study aims to contribute to a deeper understanding of the experiences and perspectives of remote simultaneous interpreters (RSIs) in Jordan post Covid-19, with a view to informing the development of best practices for remote interpreting in the country and beyond.

## **2 Methodology**

This study utilized a mixed-methods approach to investigate the experiences and perspectives of JRSIs in Jordan in the post-Covid-19 era. The study employed a purposive sampling technique to recruit a representative sample of 30 JRSIs) for survey and 15 for interviews. The respondents were chosen based on their years of experience, professionalism, and willingness to participate. Data was collected through an online survey of yes–no statements followed by in-depth interviews with a subset of survey respondents. The quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS) to generate descriptive and inferential statistics, while the qualitative data were analyzed using a thematic analysis approach. This research design allows for a deeper understanding of the experiences and perspectives of JRSIs in Jordan, providing insights that can inform the development of policies and practices to support the professionalization of the interpreting profession in the post-Covid-19 era.

### ***2.1 Research Questions***

1. What are the perspectives of interpreters regarding Remote Simultaneous Interpreting (RSI) as an alternative to regular face-to-face interpreting in the post Covid-19 pandemic context?
2. What are the pros and cons that the remote simultaneous interpreters in Jordan encountered when using technological applications such as ZOOM, Google Meet, KUDO. for interpreting in the post-Covid-19 era?
3. To what extent are remote simultaneous interpreters in Jordan aware of the challenges and difficulties encountered in online settings in the post-covid-19 era?
4. What are the suggested solutions for improving the effectiveness and efficiency of remote simultaneous interpreting in Jordan, based on the empirical data collected through the survey and interviews conducted with the representative sample of remote interpreters?

## 3 Findings

### 3.1 *Questionnaire-Based Results*

#### 3.1.1 **Results related to the first question: 1.What are the perspectives of Jordanian interpreters (JTSIs) regarding RSI as an alternative to regular face-to-face interpreting in the post Covid-19 pandemic context?**

Based on the analysis of the results, it appears that the average mean for the degree of the JRSIs perspectives as an alternative to regular face-to-face interpreting in the post Covid-19 pandemic context was (4.25). The average means for agreement with all the statements was (High) and ranging between 3.88 and 4.57. The respondents' showed the highest level of agreement with the statement that 'RSI is a viable alternative to face-to-face interpreting in the post-Covid-19 pandemic context?', which was ranked first, compared to other items, with an average mean of 4.57. Although the statement that "RSI has reduced the professional status of interpreters in Jordan" came last in ranking, with the lowest average mean (4.40) this is still a High ranking in statistical terms. Based on this analysis, the responses of JRSIs reflected their high level of awareness that RSI is an alternative to regular face-to-face interpreting in the post Covid-19 pandemic context. On the other hand, the responses showed varying (although High) degrees of awareness regarding the related issues that were investigated, such as, first, whether RSI has made interpreting more accessible to a wider range of clients by eliminating the need for interpreters to be physically present. Additionally, the respondents agreed that RSI can reduce the workload and stress associated with face-to-face interpreting by eliminating the need for interpreters to travel to and from assignments (Table 1).

#### 3.1.2 **Results related to the Question 2: What are the pros and cons that JSIs encountered when using technological applications such as ZOOM, Google Meet, and KUDO for interpreting in the post-Covid-19 era?**

As is evident from the analysis, the interpreters had opposing views regarding the pros and cons of Remote Simultaneous Interpreting (RSI). Their answers indicated that while RSI has increased accessibility and flexibility for clients and interpreters alike, it has also introduced new challenges such as technical issues, reduced communication effectiveness, and increased workload and stress (Table 2).

**Table 1** Means, standard deviations and degree of the JRSIs perspectives of RSI as an alternative to regular face-to-face interpreting in the post Covid-19 pandemic context

No.	Rank	Item	Mean	Std. deviation	Degree
1	1	To what extent do you agree that RSI is a viable alternative to face-to-face interpreting in the post-Covid-19 pandemic context?	4.57	0.796	High
2	2	To what extent do you agree that RSI has made interpreting more accessible to a wider range of clients?	4.53	0.763	High
3	3	To what extent do you agree that RSI has reduced the workload and stress associated with face-to-face interpreting?	4.50	0.792	High
4	4	To what extent do you agree that RSI has reduced the quality of interpreting services compared to face-to-face interpreting?	4.47	0.759	High
5	5	To what extent do you agree that RSI has reduced the effectiveness of communication between interpreters and clients?	4.42	0.823	High
6	6	To what extent do you agree that RSI has reduced the level of satisfaction among clients with interpreting services?	4.41	0.944	High
7	7	To what extent do you agree that RSI has reduced the professional status of interpreters in Jordan?	4.40	0.842	High
		<b>Mean score of perspectives of JRSIs regarding RSI as an alternative to regular face-to-face interpreting in the post Covid-19 pandemic context</b>	<b>4.25</b>	<b>0.527</b>	<b>High</b>

### 3.1.3 Results Related to Question 3: To What Extent Are JSIs Aware of the Challenges and Difficulties Encountered in Online Settings in the Post-Covid-19 Era?

Table 3 shows the average mean for agreement with the degree of the challenges and difficulties encountered by JSIs in online settings in the post-covid-19 era. The average was Moderate: (3.21), while the average means of levels of agreement for items ranged between moderate (3.45) and high ranks (4.23). Agreement that “remote interpreters in Jordan are aware of the technical challenges of remote interpreting” was ranked first, with an average mean of 4.32, ranked as a High. The statement that “remote interpreters in Jordan are aware of the potential impact of cultural differences on remote interpreting” evoked the lowest level of agreement, with the lowest average mean of (3.45, ranked Moderate).

The three most important challenges facing JRSIs appeared to be related to their inability to handle technological matters. Items 3, 4, and 6 address this issue clearly. The interpreters reported that when they are handling technological issues they have

**Table 2** Means and Std. deviation and level of agreement with the pros and cons that encountered when using technological applications for interpreting

No.	Rank	Item	Mean	Std. deviation	Degree
8	1	To what extent do you agree that technological applications have made remote interpreting more accessible to a wider range of clients? To what extent do you agree that technological applications have reduced the travel time and expenses associated with face-to-face interpreting	4.66	0.680	High
9	2	To what extent do you agree that technological applications have improved the quality of audio and video equipment used for remote interpreting?	4.59	0.811	High
10	3	To what extent do you agree that technological applications have improved the overall efficiency of remote interpreting?	4.45	0.847	High
11	4	To what extent do you agree that technological applications have increased the workload and stress associated with remote interpreting	4.43	0.884	High
12	5	To what extent do you agree that technological applications have reduced the effectiveness of communication between interpreters and clients?	4.38	0.938	High
13	6	To what extent do you agree that technological applications have reduced the level of satisfaction among clients with interpreting services?	4.35	0.931	High
14	7	To what extent do you agree that technological applications have reduced the job opportunities for interpreters in Jordan?	4.34	0.830	High
15	8	To what extent do you agree that technological applications have increased the demand for specialized technical skills among remote interpreters in Jordan?	4.30	0.960	High
		<b>Mean score of the degree of the pros and cons that the JRSIs encountered when using technological applications such as ZOOM, Google Meet, KUDO, etc. for interpreting in the post-Covid-19 era</b>	<b>4.43</b>	<b>0.555</b>	<b>High</b>

difficulty accommodating to lapses in audio and visual signals. These challenges ranked high in the responses of the interpreters. The rest of the challenges were ranked as moderate and varied in nature.

**Table 3** Means and Std. deviation and degree of the challenges and difficulties encountered by JSIs in online settings in the post-covid-19 era

No.	Rank	Item	Mean	Std. deviation	Degree
16	1	To what extent do you agree that remote interpreters in Jordan are aware of the technical challenges of remote interpreting?	4.23	1.062	High
17	2	To what extent do you agree that remote interpreters in Jordan are aware of the potential impact of poor audio and video quality on interpreting?	4.07	1.084	High
18	3	To what extent do you agree that remote interpreters in Jordan are aware of the potential impact of internet connectivity on remote interpreting?	3.69	1.328	High
19	4	To what extent do you agree that remote interpreters in Jordan are aware of the potential difficulties of interpreting in different time zones?	3.64	1.334	Moderate
20	5	To what extent do you agree that remote interpreters in Jordan are aware of the potential impact of audio and video lag on remote interpreting?	3.63	1.233	Moderate
21	6	To what extent do you agree that remote interpreters in Jordan are aware of the potential impact of cultural differences on remote interpreting?	3.45	1.294	Moderate
		<b>Means and Std. deviation and degree of the challenges and difficulties (JRSIs) encountered in online settings in the post-covid-19 era</b>	<b>3.21</b>	<b>0.685</b>	Moderate

### 3.1.4 Results related to the fourth question: What are the suggested solutions for improving the effectiveness and efficiency of remote simultaneous interpreting in Jordan, based on the empirical data collected through the survey and interviews conducted with the representative sample of JRSIs?

The analysis of the responses shows that, overall, remote interpreters in Jordan are willing to adopt new solutions and strategies and believe provision of more training and support can improve their effectiveness and efficiency and that upgrading the technological infrastructure and software used for RSI can also improve the quality of services. They also agreed that creating more opportunities for remote interpreters and increasing the number of available languages can enhance the accessibility and efficiency of RSI services. They also agreed that improve communication channels and incorporate client could identify areas for improvement and thus enhance client



satisfaction. They agreed that the use of RSI as a viable alternative to face-to-face interpreting should be promoted (Table 4).

Table 5 reveals statistically significant differences in the four domains of the subjects for their perspectives regarding insights from JRSIs Post Covid-19 that can be attributed to the informants.

### 3.2 *Interview Based Results*

The interview results revealed that remote interpreters in Jordan share this perspective, but also highlighted the potential challenges associated with RSI. For instance, interpreters pointed out the technical issues and glitches that can impact the quality and effectiveness of RSI services, as well as the potential for reduced communication effectiveness in RSI due to the lack of non-verbal cues [12]. However, the interview results also showed that remote interpreters in Jordan have adapted well to RSI and have found it to be an opportunity for professional development and training. These findings are consistent with previous research that suggests that interpreters who adapt to new technologies can increase their job opportunities and professional development [2, 14].

The interview results also provided insights into the pros and cons of using technological applications such as ZOOM, Google Meet, and KUDO for interpreting in the post-Covid-19 era. The interviewees noted that while these applications have improved accessibility and convenience, they also have limitations that impact the quality of RSI services. For example, some interpreters reported issues with internet connectivity, audio and video quality, and software compatibility, which can impact the effectiveness of RSI services [6]. Additionally, the interviewees mentioned that the lack of non-verbal cues in RSI can make it difficult to interpret accurately and effectively and may require additional training and adaptation on the part of the interpreter. These findings are consistent with previous research that has highlighted the potential challenges associated with the use of technology in interpreting, and the need for ongoing efforts to address these challenges [19]. Overall, the interview results suggest that while RSI has the potential to offer a viable alternative to face-to-face interpreting in the post-Covid-19 era, there are also challenges that need to be addressed in order to ensure the quality and effectiveness of RSI services.

## 4 Discussion

Based on the analysis of these questions, it can be concluded that Remote Simultaneous Interpreting (RSI) is now considered as an alternative to face-to-face interpreting in the post-Covid-19 era, and remote interpreters in Jordan have encountered both benefits and challenges when using technological applications. Remote interpreters are aware of the challenges and difficulties encountered in online settings,

**Table 4** Means and Std. deviation and degree of suggested solutions for improving the effectiveness and efficiency of the JRSIs, based on the empirical data collected through the survey and interviews conducted with the representative sample of remote interpreters

No	Rank	Item	Mean	Std. deviation	Degree
22	1	Providing more training and support to remote interpreters in Jordan can improve the effectiveness and efficiency of remote simultaneous interpreting	4.23	1.062	High
23	2	Upgrading the technological infrastructure and software used for remote simultaneous interpreting can improve the effectiveness and efficiency of remote interpreting	4.12	1.084	High
24	3	Creating more opportunities for remote interpreters in Jordan can improve the effectiveness and efficiency of remote simultaneous interpreting	4.01	1.328	High
25	4	Increasing the number of available languages for remote simultaneous interpreting can improve the effectiveness and efficiency of remote interpreting	3.98	1.350	High
26	5	Improving communication channels between remote interpreters and clients can improve the effectiveness and efficiency of remote interpreting	3.87	1.444	High
27	6	Improving the quality of audio and video equipment used for remote interpreting can improve the effectiveness and efficiency of remote interpreting	3.76	1.320	High
28	7	Promoting remote simultaneous interpreting as a viable alternative to face-to-face interpreting can improve the effectiveness and efficiency of remote interpreting	3.65	1.312	Moderate
29	8	Remote interpreters in Jordan are generally receptive to adopting new solutions and strategies to improve the effectiveness and efficiency of remote interpreting	3.64	1.334	Moderate
30	9	Providing more training and support to remote interpreters in Jordan can improve the effectiveness and efficiency of remote simultaneous interpreting	3.63	1.233	Moderate
31	10	Incorporating feedback from clients and end-users of remote interpreting services can improve the effectiveness and efficiency of remote simultaneous interpreting, by identifying areas for improvement and enhancing client satisfaction	3.45	1.294	Moderate
		<b>Means and Std. deviation and degree of suggested solutions for improving the effectiveness and efficiency of remote simultaneous interpreting in Jordan, based on the empirical data collected through the survey and interviews conducted with the representative sample of remote JRSIs</b>	<b>3.83</b>	<b>0.685</b>	Moderate

**Table 5** Multivariate test in the four domains of the subjects for their perspectives regarding Insights from JRSIs Post Covid-19 that can be attributed to the informants

Variables	Wilks' Lambda Value	F	Sig
JRSIs	0.946	3.864	0.001*

and perceive a need for ongoing efforts to improve the effectiveness and efficiency of remote interpreting services in Jordan. The suggested solutions include providing more training and support to remote interpreters, upgrading the technological infrastructure and software used for RSI, increasing the number of available languages, improving communication channels, and incorporating feedback from clients and end-users. These findings highlight the need for policymakers and interpreters to carefully consider the benefits and drawbacks of RSI, and to take appropriate measures to maintain quality and effective communication in the post-Covid-19 era.

These findings can be interpreted as follows: firstly, in line with the expectations, JRSIs appeared aware of the positive consequences which resulted from their experience during the outbreak of Covid-19. The justification behind this finding stems from the fact that the participants themselves are the ones who are truly involved in the interpreting process. The high level of awareness appeared based on the positive feedback and benefits they gained based on their previous experience. Moreover, their responses to the questionnaire and the interviews showed clearly that they themselves tend adapt and become knowledgeable and experienced in dealing with the mishaps and challenges of working in online environment. In fact, they have regarded it as an opportunity to train themselves and become professionals in this field. In addition, it appears that working in the post-covid-19 era has enabled them to reduce stress and a chance to release themselves from the strictures of the usual Face-to-Face interpreting. The present findings are consistent with those from various studies on the impact of Remote Simultaneous Interpreting (RSI) during the Covid-19 pandemic. These studies have found that RSI has had a positive impact on the interpreting profession, increasing accessibility and flexibility for interpreters and clients alike [8, 12]. They also suggest that interpreters who adapt to new technologies can increase their job opportunities and professional development, while reducing the stress associated with face-to-face interpreting and increasing job satisfaction [2, 6, 14, 19].

In terms of the limitations of this study, the following points appear to be of significance: first, it appears that there is a potential for response bias, as the perspectives and experiences of remote interpreters in Jordan may not necessarily generalize to other contexts or populations. Another limitation is the potential for self-report bias, as participants may not accurately report their experiences or may provide socially desirable responses. Additionally, the sample size (30) and representativeness of the participants may impact the generalizability of the findings. The use of surveys and interviews as data collection methods may also limit the depth and richness of the data collected, as these methods may not capture the full range of experiences and perspectives of remote interpreters. Finally, the specific technological applications used for RSI in Jordan may differ from those used in other contexts, which may limit

the generalizability of the findings to other settings. These limitations highlight the need for careful consideration of the study design and data collection methods, as well as the need to interpret the findings in the context of the specific population and settings studied.

## 5 Conclusion

In conclusion, this study has shed light on the perspectives of remote interpreters in Jordan regarding the use of Remote Simultaneous Interpreting (RSI) as an alternative to face-to-face interpreting in the post-Covid-19 era. The study has revealed that RSI is considered a viable option for remote interpreting services, but also highlighted the potential benefits and drawbacks associated with the use of technological applications such as ZOOM, Google Meet, and KUDO. Furthermore, the study has shown that remote interpreters in Jordan are aware of the challenges and difficulties associated with working in an online environment but have also found opportunities for professional development and training. The suggested solutions for improving the effectiveness and efficiency of RSI services in Jordan include enhancing training and support for interpreters, improving technological infrastructure and software, increasing the availability of languages, improving communication channels, and taking into account feedback from clients and end-users. These findings provide valuable insights to inform policy and practice related to remote interpreting services and can be used to promote the adoption and utilization of RSI services in the post-Covid-19 era. However, it is important to acknowledge the limitations of the study, including the potential for response and self-report bias, as well as the specific context and circumstances of the sample population. Thus, future research is needed to further investigate the effectiveness and outcomes of RSI services in different contexts and populations.

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# The Translation of President Mahmoud Abbas's Speeches: A Conceptual Metaphor Approach



Bashar Almaani and Khuzami Arrdaini

**Abstract** This study examines metaphor conceptualization and translation in political speeches. Data for this study is derived from the Arabic speeches of Mahmoud Abbas, President of the State of Palestine. These speeches are retrieved from the United Nations digital library. The study aims at identifying conceptual metaphors in the two languages, in order to achieve this aim, the study adopts Lakoff and Johnson's Conceptual Metaphor Theory as its main theoretical framework (2008). Additionally, the study will examine the transferability of conceptual metaphors between Arabic and English. We examine whether metaphorical expressions are retained, modified, or deleted in the target text. The study shows that political texts are characterized by dense metaphorical expressions. Also, many social problems and political matters are mapped into different domains. In regard to the translation of metaphors, it has been found that there is no single strategy to deal with these metaphors; instead, the translation is heavily affected by the translators' expertise.

**Keywords** Conceptual metaphor · Political speeches · Translation · Mahmoud Abbas · Palestine

## 1 Introduction

Metaphors have traditionally been regarded as linguistic and rhetorical devices. Lakoff and Johnson have introduced a conceptual approach in contrast to this traditional viewpoint.

According to the authors, metaphors are not only linguistic or rhetorical devices, but also mappings from one domain to another. The cognitive linguistics theory of

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metaphor suggests that we understand and reason about abstract or complex concepts by using more concrete or familiar concepts. In this theory, we structure our understanding of one concept (the target domain) in relation to a more concrete or familiar concept (the source domain).

Among the most common metaphors in the English language is “LOVE IS A JOURNEY”. Through the use of this metaphor, the abstract concept of love is explained and discussed through the concrete concept of journey. It is possible to use this metaphorical understanding to understand terms related to love, such as “look how far we have come” or “our relationship has come to a dead end.” In cognitive linguistics, a metaphor describes a conceptual mapping, for example, (DEMOCRACY IS A BUILDING), while a metaphorical expression expresses a linguistic manifestation derived from this conceptualization, such as “our parliament is the cornerstone of our political life”.

Metaphor encompasses more than just words or phrases and extends to all aspects of our lives, including our language, thoughts, and actions. They influence our understanding of a variety of aspects of human experience, including emotions, relationships, ideas, among others. The use of conceptual metaphors allows us to relate abstract or complex ideas to more concrete or familiar concepts, providing us with a deeper understanding of the world around us. Consequently, metaphors are conceptual rather than linguistic, with linguistic expressions merely expressing conceptual metaphors.

The use of metaphors in political speeches is common as they are powerful tools for conveying complex ideas, creating emotional appeal, and shaping public opinion. A metaphor provides speakers with a new perspective on a topic by comparing two seemingly different things, which aids the audience in understanding the underlying message. In the context of politics, the “War on Terror” metaphor has had a lasting impact on public discourse. After 9/11, George W. Bush coined the metaphor to facilitate understanding and support of government policies regarding the fight against terrorism. With this metaphor depicting terrorism as an enemy that must be defeated, a sense of urgency and increased patriotism led to the government enacting controversial policies such as the Patriot Act.

Using Mahmoud Abbas as an example, this study will investigate the conceptual and linguistic metaphors that he utilizes in political speeches. The study will also compare the Arabic metaphors with their English translation. Thus, the following research questions will be addressed:

1. Which source domains and conceptual metaphors are used in the source texts? How are source domains and/or conceptual mappings realized using linguistic metaphors?
2. How do these conceptual metaphors function cognitively and pragmatically?
3. How did the translators render these metaphors from English to Arabic? Were the linguistic metaphors maintained when translated into English? Do they still belong to the same English conceptual metaphor?

## 2 Literature Review

### 2.1 *Metaphor in Politics*

Several scholars have studied metaphors in politics in a considerable corpus of literature. According to Lakoff and Johnson [6], metaphors play a central role in constructing social and political reality. Seth Thompson argues in his article "Politics without metaphor is like a fish without water" that humans need metaphors to engage in and think about politics. Kovecses ([8]: 62) notes that politics is awash in conceptual metaphors.

In addition, Wei [15] argues that Taiwanese political discourse is inherently metaphorical. Wei [15] examined metaphorical expressions used in news coverage of Taiwanese political discourse and concluded that metaphors were used to highlight diverse aspects of Taiwanese elections.

There is no doubt that metaphor plays a crucial role in political discourse since politicians rely on it to simplify, persuade, motivate, and influence the thoughts and perceptions of people. Cameron [4] emphasized the importance of metaphor in revealing an individual's attitudes and thinking patterns. Thus, analyzing metaphors used in political discourse provides insight into the underlying ideologies, attitudes, and beliefs of political figures. Almaani [2] investigated the conceptual metaphors used in King Abdullah II's political speeches. In this study, conceptual metaphors were found to be plentiful and varied in politics. In addition, Almaani argued that political ideologies and thoughts could be conceptualized in many ways. This was demonstrated by showing considerable occurrence of metaphors within the speeches. [2] identified several types of conceptual domain that were used frequently in the data selected.

Penninck [12] examined thirty-five political speeches delivered by US and British politicians during 1929 and 2008 financial crises. According to the study, metaphors are frequently used in political speeches during financial crises. According to [13], Donald Trump has used conceptual metaphor in three of his political speeches. According to the study, objects, space, motion, journey, buildings, and animals are the most frequent source domains. Moreover, immigration is the most dominant theme, which is depicted by the following conceptual metaphors: immigrants are animals and immigrants are floods. In addition, the study revealed that Trump metaphorically conceptualized his political persona as a repairman, a builder, a healer, and a warrior. As [10] investigated the way nation identity is conceptualized and whether metaphors are universal in nature, he concluded that there are some pragmatic cultural aspects to metaphor interpretation.



## 2.2 *The Translation of Metaphor*

In the area of Translation Studies, there has been extensive research on metaphor translation. In spite of this, metaphor translatability and translation methods have received the majority of attention. Mason [9] argues that the translation of metaphors can be challenging on the one hand, and extremely easy on the other. There are, however, some scholars who believe metaphors can be translated, including [5, 11, 14]. Several scholars have explored metaphor translation from the perspective of cognitive theory in order to contribute to the study of translation.

Almaani [2] investigated the challenges translators face when translating conceptual metaphors used in the speeches of King Abdullah II of Jordan. According to the results, several strategies have been employed. The researcher concluded that the translation is greatly influenced by the translator's competence as well as by the ST and TT contexts. AlHarrasi [1] investigated the ways in which translators deal with ideological metaphors. In his view, translators use translation techniques that filter out metaphor ideological meaning. His view is that translators are more than just conveyers of ideas, but they are also ideology experts, which means they are familiar with the ideologies underlying the source texts as well as motivated to portray the source culture in a positive image in the target language.

In this review, it was demonstrated that metaphors play an important role in shaping public discourse, conveying complex ideas, and influencing public opinion. This review also highlighted several functions of metaphor. The use of metaphors by politicians is one of the most effective ways of persuading their audience. Furthermore, metaphors convey the idea of social unity. Additionally, metaphors reflect a politician's vision and objectives, as well as their strategies. Metaphors are also used in politics to invoke negative connotations about political rivals or groups of people, such as terrorists and extremists. Metaphors can also communicate empathy and address social and political issues.

## 3 *Methodology*

### 3.1 *Research Questions*

The study aims to answer the following research questions:

1. Which source domains and conceptual metaphors are used in the source texts? How are source domains and/or conceptual mappings realized using linguistic metaphors?
2. How do these conceptual metaphors function cognitively and pragmatically?
3. How did the translators render these metaphors from English to Arabic? Were the linguistic metaphors maintained when translated into English? Do they still belong to the same English conceptual metaphor?

### **3.2 Data Collection Procedure and Analysis**

Ten political speeches delivered by Mahmoud Abbas, President of the State of Palestine, have been selected and downloaded from the UN Digital library website on March 3, 2022. The political speeches were delivered in Arabic before the plenary sessions of the United Nations General Assembly and the meetings of the United Nations Security Council between 2020 and 2022. These speeches were translated by UN translators. The metaphorical expressions were identified manually by four Arabic professors. Second, we categorize the linguistic metaphors in the STs according to their conceptual sources, such as Plants, and PERSONIFICATION. Based on the semantic field theory of metaphor [7], linguistic metaphors can be classified according to their semantic fields. As defined by [7], a semantic field is composed of lexical units covering a particular conceptual domain. For example, expressions like 'foundation', 'pillar', 'construct', and 'build' are all lexicons of the semantic field of the building domain. Conceptual metaphors will be developed based on the identified items. The next step will be to examine the similarities and differences between the translated metaphors and their source language, specifically whether metaphors have been preserved, altered, or omitted. Our analysis of the translated metaphors will involve a triangulation of the typology of translation procedures described by scholars from a variety of disciplines.

## **4 Data Analysis and Findings**

This section analyzes the most prominent conceptual metaphors encountered in the source texts. Metaphors are classified according to their source domains.

### **4.1 The Conceptual Metaphor 'PALESTINIANS ARE PLANTS ROOTED IN THEIR LAND'**

In cognitive linguistics, metaphor is defined as the mapping of correspondences between two experiential domains, i.e. the source domain and the target domain (Barcelona [3]: 3). By virtue of this projection, the target domain is partially comprehended in terms of the source domain. In the conceptual metaphor PEOPLE ARE PLANTS for example, a plant in the source domain is mapped onto a person in the target domain. In expressions such as "They withered away" and "She's a late bloomer", the metaphor PEOPLE ARE PLANTS is used unconsciously. Through this metaphor, people can be viewed as plants with respect to the life cycle. At this point, we can assume that the following lexical realizations identified in our data belong to this conceptual metaphor:

- أقتلع أكثر من نصف الشعب الفلسطيني من ارضه وحرّم من ممتلكاته في ذلك الوقت .
- هل تعتقد سلطة الاحتلال الإسرائيلية أنها تستطيع أن تنهرب من مسؤوليتها عن جريمة اقتلاع أكثر من نصف الشعب الفلسطيني من ارضه.
- وفي ظل عدم حل مشكلة 7ملايين لاجي فلسطيني اقتلعوا من ارضهم في العام1948.

The metaphors in these examples were identified by the key word “أقتلع” (to uproot) we can argue that this word belong to the domain of plants as its first meaning in the dictionary collocates with trees. According to these metaphorical expressions, we can suggest the conceptual metaphor PALESTINIANS ARE PLANTS ROOTED IN THEIR LAND. In this metaphor, Palestinians are depicted as plants, plants which reached a critical point in their life cycle, uprooting! The phrase “uprooting the Palestinians” can be seen as evoking a metaphorical image of forcibly removing Palestinians from their land, highlighting the experience of displacement and the disruption of communities. By using this metaphor, President Abbas is aiming to invoke negative association on the uprooter, and a sympathetic one on the Palestinians.

#### 4.2 The Conceptual Metaphor ‘ISRAEL IS A THUG’

Lakoff and Johnson argue that personification can be considered as a metaphor, as this ‘allows us to comprehend a wide variety of experiences with nonhuman entities in terms of human motivations, characteristics, and activities’ ([6]: 33). One of the widely used metaphors in politics is A NATION IS A PERSON. The nation/state as a person metaphor, is a conceptual metaphor that likens a nation/state to an individual person. A NATION IS A PERSON is a conceptual metaphor in which the actions of nations can be described as either the actions of heroes or villains, whereas the actions of other passive nations can be portrayed as being the actions of victims.

A NATION IS A PERSON metaphor evokes our attitudes, feelings and beliefs about people and applies them to our attitudes, feelings and beliefs about abstract political entities. Personification usually serves an ideological purpose. For instance, it can arouse empathy towards an entity/country, or arouse opposition towards a social group, or arouse belief evaluations that are villainous. Using these traits, we associate positively evaluated ideologies and beliefs with heroic human attributes—such as courage and determination—and negatively evaluated beliefs and ideas with villainous attributes. A typical example of negative evaluation appears in our data is when ‘israel’ is described as a thug, pirate, and thief as can be seen in the following examples:

- وعلى إسرائيل ان تتحمل النتائج. هذه البلطجة يجب ان تتوقف، لأنه لا يجوز كل يوم إصدار قرار ...
- ان هذا القانون العنصري يشكل وصمة عار أخرى في جبين دولة إسرائيل وفي جبين كل من يسكت عنه، وكذلك القوانين الإسرائيلية الأخرى التي شرعت للقرصنة وسرقة ارض وأموال الشعب الفلسطيني .

The metaphors in these examples were identified by the key words “البلطجة، القرصنة، سرقة” (theft, piracy, thuggery). The metaphors indicate the concepts: ISRAEL IS A THUG and Palestine is a victim. As a result, Abbas’ rhetoric succeeded in portraying his country as a victim and Israel as a thief. Using this metaphor, President Abbas attempts to convey a negative attitude toward Israel and a sympathetic attitude toward

Palestinians. Using this metaphor, Abbas is achieving an ideological purpose, that is casting a negative representation on Israel, according to van Dijk “the ideological nature of rhetoric seems implausible: the left and the right, racists and anti-racists, ... they probably all use all forms of rhetoric”. In this example above, Abbas employed van Dijk’s ideological square of ‘positive-representation’ of the *self* and ‘negative-representation’ of the *other*; whereby he supports his argument regarding the theft of Palestinian land compared to the Palestinian owners and victims of this theft. This example also meant to show the occupying power of the Israeli’s towards Palestinians and to reflect the negative-representation of the other to contribute to the ideology of resistance against the occupiers. According to Almaani, et al. the self and ‘negative-representation’ of the other, is widely used in politics to achieve several ideological aims.

### 4.3 Data Analysis of the Target Texts

This table illustrates the sources for the conceptual metaphor ‘PALESTINIANS ARE PLANTS ROOTED IN THEIR LAND’ as well as their English translations.

Source texts	<p>1 - وعلى إسرائيل ان تتحمل النتائج. هذه الباطجة يجب ان تتوقف، لأنه لا يجوز كل يوم إصدار قرار</p> <p>2 - ان هذا القانون العنصري يشكل وصمة عار أخرى في جبين دولة إسرائيل وفي جبين كل من يسكت عنه، وكذلك القوانين الإسرائيلية الأخرى التي شرعت للفرصنة وسرقة ارض وأموال الشعب الفلسطيني .</p>
Target text	<p>1. “Israel should bear the brunt. <i>Its senseless thuggery</i> must come to an end. Every day there is a new decision taken as though we do not exist”</p> <p>2. “That racist law constitutes another stigma for the State of israel and for anyone who keeps silent about it, as well as about other <i>israeli laws that legitimize piracy, the confiscation of land and the seizure of the funds of the Palestinian people</i>”</p>

We argued before that these linguistic metaphors belong to ISRAEL IS A THUG conceptual metaphor. Based on the TT of the first example, we can argue it still belongs to the same conceptual metaphor. However, there is an addition in the translation, the word ‘senseless.’ This addition is probably an ideological addition by the translator intended to cast or increase negative images towards Israel.

In the second example the TT, part of the linguistic metaphors *وسرقة ارض وأموال الشعب الفلسطيني* has been shifted in (the confiscation of land and the seizure of the funds). We can argue that this linguistic metaphor does not anymore belong to the conceptual metaphor “ISRAEL IS A THUG”. In light of the translation, which contains the nouns “confiscation” and “seizure”, it is possible to interpret that Israel is viewed as a landlord or even a government entity with the ability to seize assets for legal reasons. The shift in translation is probably a matter of ideology, with the intention of casting or increasing a positive picture of Israel in the minds of the people. i.e., to legitimize its actions.

The table below illustrates the sources for the conceptual metaphor ISRAEL IS A THUG, as well as their English translations. According to these examples, the

'ISRAEL IS A THUG' metaphor is translated literally into Arabic by an equivalent metaphor. The translated metaphor can be identified by the key words: 'uprooting'. This literal translation has produced an equivalent metaphor at both conceptual and linguistic levels. The translated metaphor does not show any cases of elaboration, explication, or shifting to different TT metaphorical expressions.

Source texts	<ul style="list-style-type: none"> <li>- أقتلع أكثر من نصف الشعب الفلسطيني من ارضه وحرّم من ممتلكاته في ذلك الوقت .</li> <li>- هل تعتقد سلطة الاحتلال الإسرائيلية أنها تستطيع أن تتهرب من مسؤوليتها عن جريمة اقتلاع أكثر من نصف الشعب الفلسطيني من ارضه.</li> <li>- وفي ظل عدم حل مشكلة 7ملايين لاجي فلسطيني اقتلعوا من ارضهم في العام1948.</li> </ul>
Target text	<ul style="list-style-type: none"> <li>• "More than half the Palestinian people were uprooted from their land and deprived of their property in that time"</li> <li>• "Does the Israeli occupying Power believe that it can elude its responsibility for the crime of uprooting more than half of the Palestinian people from their land"</li> <li>• "The absence of a just solution for the plight of 7 million Palestine refugees uprooted from their land in 1948"</li> </ul>

## 5 Conclusion

Among the main objectives of this study were to investigate the use of linguistic and conceptual metaphors used by President Mahmoud Abbas in political speeches and to investigate their translation between English and Arabic. The research aimed to answer the research questions outlined in the introduction.

The study confirms previous findings and provides additional evidence that metaphor translation needs to be handled carefully and accurately in order to avoid cultural misunderstandings. According to this study, metaphors shape the structure of political discourse, and are used by politicians to persuade their audience about different political issues by using an influential device. Metaphors in politics can also be used to suggest negative associations about political rivals or even a group of people. Metaphors can also communicate empathy.

When it came to the translation of metaphors, it is revealed that, despite the differences between the two languages, points of similarity outweighed those of difference mainly in terms of the number of conceptual domains that corresponded. However, very few metaphors were transferred to other domains despite some differences among domains in terms of linguistic metaphors. I argued that the translators' decisions to shift, omit, or add words between the ST and TT were motivated by their own preferences, or for ideological purposes.

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# Toni Morrison's *God Help the Child* and Sue Monk Kidd's *the Secret Life of Bees*: A Critical Study of Subalternity



Baker M. Bani-Khair and Yazeed A. Al Awaysheh

**Abstract** The present paper is an attempt to shed more light on the different paradigms of subalternity, the postcolonial impact of marginalizing and shaping the subalterns' identity, and the theme of child abuse in Toni Morrison's *God Help the Child* (2015) and Sue Monk Kidd's *The Secret Life of Bees* (2001). The theoretical framework of the study depends on Gayatri Spivak's famous article entitled "Can the Subaltern Speak" in order to expose the dynamics of the subaltern subjectivity. A careful critical study of the main characters in both novels shows how they foreground subalternity in their narrative and structure. Both novels have common denominators that can be viewed as postcolonial settings, language, absence of motherhood, tone, atmosphere, narrative shifting, racial discrimination, and self-discovery. Finally, the paper applies all these theoretical ideas on the selected novels to better understand children's serious suffering within the context of subalternity.

**Keywords** Subalternity · God help the child · The secret life of bees

## 1 Introduction

This paper adopts Gayatri Spivak's article 'Can the Subaltern Speak' so as to analyze subalternity in terms of the capability of the subalterns to speak without boundaries. The paper will also show how marginalization plainly shapes the identity of the subalterns. In her article, Spivak argues that it is possible for the subalterns to find a

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voice “inside and outside the circuit of the epistemic violence of imperialist law and education” (“Subaltern”—1985 283).

She marks that subalternity is a position without identity and has no examples. The intersectionality between both American slavery and postcolonial imperialism will draw upon the suffering of the children and the females to provide the reader with a bigger picture to identify the victim and the victimiser.

Both *God Help the Child* and *The Secret Life of Bees* entail an entirely different lens to the problem of subalternity. Depending on Spivak's ideas about the subaltern identity, it is possible to juxtapose both texts and compare them according to racial discrimination, language, tone, loss of motherhood sense, the exploitation of the marginalised, and the victimization of children. In this context, the researcher will examine the impact of subalternity on the characters' trajectory reflecting upon their self-discovery. In general, one can argue that the children's marginalization reveals that their subaltern reality lingers upon their unconscious narrative and memories to have their stories narrated from scratch. This research paper is essentially interested in examining the subaltern as one of the core perspectives of subaltern studies. Postcolonial critics like Gayatri Spivak adopts the comparative approach in observing subalternity. The researcher will employ the descriptive and analytic approaches to arrive at the study objectives. Accordingly, the characters' discourse will be examined and compared to the attributes of the marginalized depending on the context of child abuse. Furthermore, the behavior and the narrative of the oppressed characters will be investigated to show how subalternity, by and large, shapes their subconscious reality, narrative, and self-discovery.

It is essential to observe here that women and children are within the marginalized categories that Spivak referred to in her article, and historically speaking, they are always connected within the postcolonial discourse, especially within the context of subalternity that Spivak used in her approach towards the post colonized nations. As Spivak explains, the question of Woman is a complicated issue when it comes to understand the complexities of subalternity and its consequences from various perspectives whether it relates to class-consciousness or race consciousness. As this quote from Spivak's “Can the Subaltern Speak” shows us, the problematic of women voice is complicated culturally, socially, racially, and psychoanalytically:

Can the subaltern speak? What must the elite do to watch out for the continuing construction of the subaltern? The question of ‘woman’ seems most problematic in this context. Clearly, if you are poor, black and female you get it in three ways. If, however, this formulation is moved from the first-world context into the postcolonial (which is not identical with the third-world) context, the description ‘black’ or ‘of color’ loses persuasive significance. The necessary stratification of colonial subject-constitution in the first phase of capitalist imperialism makes ‘color’ useless as an emancipatory signifier. Confronted by the ferocious standardizing benevolence of most US and Western European human-scientific radicalism (recognition by assimilation), the progressive though heterogeneous withdrawal of consumerism in the comprador periphery, and the exclusion of the margins of even the center



periphery articulation (the 'true and differential subaltern'), the analogue of class-consciousness rather than race-consciousness in this area seems historically, disciplinarily and practically forbidden by Right and Left alike. It is not just a question of a double displacement, as it is not simply the problem of finding a psychoanalytic allegory that can accommodate the third-world woman with the first (Willam and Chrisman p. 82)

The feminine discourse has a special and primary role in such postcolonial context, and it is quite clear that women suffer from double colonization because of the patriarchal oppression that imposes a more painful and stifling constriction on women's voice due to such double colonization that leads to identity displacement and double consciousness. According to Gaytri Spivak:

It is well known that the notion of the feminine (rather than the subaltern of imperialism) has been used in a similar way within deconstructive criticism and within certain varieties of feminist criticism. In the former case, a figure of 'woman' is at issue, one whose minimal predication as indeterminate is already available to the phallogentric tradition. Subaltern historiography raises questions of method that would prevent it from using such a ruse. For the 'figure' of woman, the relationship between woman and silence can be plotted by women themselves; race and class differences are subsumed under that charge. Subaltern historiography must confront the impossibility of such gestures. The narrow epistemic violence of imperialism gives us an imperfect allegory of the general violence that is the possibility of an episteme. (Willam and Chrisman p. 82)

## 2 Literature Review and Significance of the Study

No doubt, *The Secret Life of Bees* perpetuates one of the most time-honored stereotypes of Afro-American women: the devoted caregiver whose loyalty belongs to the white family as a servant, is considered asexual because she dedicates her life as a surrogate mother to the white family's children. Rosaleen is seen as a cultivated black woman who is stronger than white women, both spiritually and emotionally. Because her absolute dedication is related to the white family, Rosaleen's relationship to her biological family is intrinsically detached; she is hardly attached to her own. The divine love draws the reader's attention to the genuine relationship between Lilly and Rosaleen as well as between Deborah and August, which stresses the stereotypical image of the black woman as the devoted caregiver to the white child. These doting relationships highlights Pauline's Breedlove in Morrison's *The Bluest Eye*, whose contradictory resentment for her offspring, Pecola, is portrayed even more horrendous by Pauline's intimacy for the "little girl in pink," the white child whom Pauline looks after (87).

The portrayal of Kidd's characters who exemplify those of Black Women writers might foreground May Boatwright, an Afro-American woman who fell prey to suffer from mental illness because of racial discrimination. The image of black women can be represented as a fragile version of Pecola Breedlove, whose madness is thus,

associated with her internalization of racism [18]. Nonetheless, in Toni Morrison's *God Help the Child*, the protagonist, Bride, lives upon the cruel aftermath of racism among a society of white people. To make matters worse is the way in which she is subject to racist actions by her mother whose skin is lighter than daughter, Sweetness, who instantly denies her from the most fundamental rights a mother could give to her child. "All I know is that for me, nursing her was like having a pickaninny sucking my teat. I went to bottle-feeding soon as I got home," says her mother, Sweetness ([23], p 12).

Mashaqi Omari suggest that using the term "pickaninny" by her mother, Sweetness, to portray her daughter, Lula Ann, is a terrible racist representation. Therefore, Sweetness becomes the elemental reason to cause very racist feelings to Bride. An example of this situation can be depicted in how Sweetness tells her daughter to call her "Sweetness" instead of "mama" or "mother". She further indicates "It was safer. Being the black and having what I think are too-thick lips calling me 'Mama' would confuse people" (Ch.1 Para 6) MJ Dutta refers to Gayatri Spivak and Ranajit Guha claim that "[t]he subaltern studies project focuses on locating the agency of the marginalized subject," and that "much of the work in the field of subaltern studies therefore focuses on resistance and opposition to the status quo, demonstrating the consciousness underlying peasant movements" (qtd. in Dutta 222).

A comparison between *God Help the Child* and *The Secret Life of Bees* can be interpreted as a narrative that is baffled by the stories of females and children who are labelled in accordance with the subaltern category. Knowing that the titles and the multiple use of point of views are significant aspects in the novel, the characters' narrative and their use of language are instrumental to realize when the linguistic aspect of both novels is highlighted and contextualized.

The present study aims at exploring the frame of the two selected novels with a particular focus on interpenetrating the prepotent catastrophe of both child abuse and racism during the twenty-first century within the context of the United States of America. First, Toni Morrison portrays the life of a black child, who later changed her name to Bride. Keeping in mind the longstanding history of African American struggle within the cultural hegemony of color and race, she is born in a family with a different colour of skin as she represents children's marginalization. It is worth mentioning here is that the theme of child abuse is common in Toni Morrison's fiction. Second, Sue Monk Kidd's *The Secret Life of Bees* is mainly about a motherless child named Lilly, raised by a ruthless father, who is desperately eager to take revenge upon her mother's past. Additionally, Kidd displays the picture of the undisputed power of black women in 1960s white American society. The fragments of Lilly's life are foregrounded through the way in which she asserts her identity.

Toni Morrison's *God Help the Child* is a novel laden with thematic suggestions about race and color, especially African American Woman, but such themes are intricately overlapped with childhood issues that trigger the implications of suffering and oppression of a society facing problems of poverty, slavery, and deprivation. She highlights the problem of child abuse and connects it with a broader framework of identity pursuit and self-actualization from a child's perspective. Afrin and Gnanamuttu [2] state that, "The theme frequently applied by Toni Morrison is the racial problem

between African-Americans and American-African peoples. Morrison works set in the time when the dark skin black from people faced many problems, injustices, and slavery. The important roles struggling with their true identity and finding themselves is another common theme that goes throughout the novel. Toni Morrison has many of her characters portrayed as murders and arrested in sexual problems. Morrison's works revolve around with the black people as her main and major character, and she does not focus on white people for the main role. Her writings notably revolve around black women [dark skin] and Morrison did not identify her writing as a feminist. Morrison's role becomes the focus of the types of generations of black women's longing for father and mother, husband, guardian and friends (p. 52).

In fact, this is not different from her other novels in which she tackled the social dilemmas that encounter and threaten the African American women and children. She constantly concentrates on themes that concern almost old and new generations touching issues that affect mainly the lives of African American people on different levels; culturally, historically, and economically, as Afrin and Gnana-muttu [2] continue to write that, "Toni Morrison records the historical, economic and cultural changes damaging the African- American people. She fully opposed African-American women's struggles and slavery in her writings and works and she narrates the black children also wants to get proper education and guidelines, because education is the backbone of everyone's life" (p.52).

It is possible to relate the two selected novels in this paper to Joseph Conrad's *Heart of Darkness* which unveils the silence of the marginalized. Conrad attains a haunting image of repression that monopolizes the African voice. "Conrad's representations of Africans are problematic; by and large, they are rendered subaltern subjects, resulting in colonial fierceness and enslavement. There are a few instances where an African speaker speaks; one famously stated, "Mistah Kutz—he died," "in a tone of scathing contempt" [68-69]. There are no cases where Africans are presented as members of peaceful, organized, and communicative societies. Too often, they are associated with "a complaining clamor, modulated in savage discord" or a "tumult of angry and warlike yells" [41, 47].

This study juxtaposes these novels by a postcolonial perspective that can help the reader investigate the explicit marginalised setbacks. The postcolonial approach will help the reader to understand the marginalised within the American context of slavery, knowing that the dichotomies and the contrasts between American slavery and postcolonial imperialism are different, yet they have at their heart race, ethnicity, racial discrimination, and colour. However, the researcher argues that although they are different, they are much interlinked at the same time. Moreover, the struggle of the marginalized characters is concerned with Afro-American racism and slavery. Hence, this study is interested in showcasing a transition of defiance against stimulating subalternity craving thereby an audacity of speaking truth to power. Having enough boldness is the key crystallization to speak up for the marginalized, manifesting an identity that was ferociously hijacked and challenged by the oppressive society, and becoming the voice of the voiceless "Instead of Spivak's view that the subaltern cannot speak, it is possible to further anticipate a strong possibility in which children might be able to speak" [25] (p. 6).

### 3 Discussion

In Morrison's *God Help the Child*, the protagonist, whose original name is Lula Ann, calls herself Bride thereafter, which tells the story about a significant change in her life; thus, she is no longer the same person as when she used to be as a child. Naming her so refers to Bride as beauty, joy, and the way through which she gets dressed as highlighted by Mashaqi and Al Omari [25]. In Lionel Shriver's review, Bride chooses only to wear white. "The colour sets off her striking complexion, which, in a more progressive era, has transformed from bane to asset" (Shriver 144). The representations of child subalternity is highly influenced by a racially prejudiced society in which Morrison revisits a critical aspect of motherhood. To be followed in this regard, the maternal aspect in *God Help the Child* results in devastating low self-esteem, depression, suicidal wishes, distorted view of the society, lifelong trauma, and a feeling of worthlessness, to name but a few:

"I wished she hadn't been born with that terrible color. I even thought of giving her away to an orphanage someplace. And I was scared to be one of those mothers who put their babies on church steps". (*God Help the Child* Ch.1 P. 12).

Conversely, in *The Secret Life of Bees*, Kidd recounts the story of Lilly Owens, a fourteen-year-old girl. Lilly is a white girl who is raised by Rosaleen, her proud and outspoken African-American caregiver, and her aggressive and neglectful father, T. Ray, right after her mother died mysteriously in a puzzling accident when she was only four years old. What worsens the situation so dramatically is the way through which her father accuses her of killing her mother accidentally. "I could tell you I did it. That's what you wanna hear. I could tell you she did it to herself, but both ways I'd be lying. It was you who did it, Lily. You didn't mean it, but it was you" (*The Secret Life of Bees* Ch.14).

When Lily and Rosaleen escape together to Tiburon, South Carolina, defying thereby a racist and injustice, criminal system to search for the utter truth about Lilly's mother sudden disappearance, they found themselves living among intimate togetherness of black women. Within this community of women, Lilly who has been suffering from a profound sense of mother loss, becomes aware of racial discrimination, whiteness, maternal love, spirituality maternal intimacy, how to stimulate her creativity as well as sophistications and possibilities of her life:

"I leaned into them, felt them close around me. One thing is beautiful beyond my words to say it: August holding you. I was pressed so close to her I felt her heart like a small throbbing pressure against my chest. Her hands rubbed my back. She didn't say, Come on now, stop your crying, everything's going to be okay, which is the automatic thing people say when they want you to shut up. She said, 'It hurts, I know it does. Let it out. Just let it out'" (*The Secret Life of Bees* Ch.12 P. 238).

Ultimately, it is worth mentioning here that Lily is the central character and narrator of the novel. Not only are the black women's tales filtered through the eyes of the creator, but also through their narrative consciousness. Both novels are considered an articulate story that showcases the undisputed power of the African American women, the transcendental ability of true love to transition their lives.

According to this argument, the most important facet of one's life is childhood itself and how its various elements come together to shape adulthood. This paper draws mainly upon these two novels by Sue Monk Kidd and Toni Morrison, in particular, for two main reasons. First, their scope enables the reader to investigate how the marginalized characters are blatantly rendered subaltern subjects in both texts. These novels are unique for their consistency in showing how the subaltern characters defy and resist tyranny and drawing the readers' attention to their intellectual defiance in the two texts. Second, both novels foreground the marginalized characters who are consciously defamiliarized due to their gender and racial differences. Foregrounding these characters and their characteristics can help the reader better understand their 'subalternity', especially when examined from a postcolonial perspective.

#### **4 Language and Tone in Children's Literature: A Postcolonial Perspective**

Postcolonial criticism stresses the need to understand and recognize the language elements and tone within the text. In fact, language plays a crucial element in showing the deep layers of culture and race. Cavallaro [11] suggests that "language incessantly shapes and reshapes the world in a baffling variety of ways, which indicate that the signs through which history, philosophy, literature and human subjectivity itself are constructed are always open to freeplay" [26] More specifically, postcolonial literature addresses sophisticated questions that directly deal with the issue of subalternity in a more rhetorical and metaphorical sense which veers away from direct and sheer criticism. Such rhetorical and powerful use of language amplifies a deeper sense of understanding and persuasion which tends to attract the attention of the cosmopolitan readers, as Cavallaro continues to claim that:

If addressing questions to do with language and interpretation is always, to some extent, a case of facing imponderable, this is especially apposite for the issue rhetoric. Many critical texts explain rhetoric away as the art of expression and persuasion. However, there is a wide diversity of opinion as to what ultimately constitutes this art. The moment one begins to delve beneath superficial definitions of rhetoric as the knack of using verbal devices in sophisticated ways, a veritable can of linguistic warms gets open. It soon becomes clear that rhetoric is not merely a matter of being clever with words or being able to handle complex devices in a convincing and entertaining fashion. Rhetoric may, be the art of expression and persuasion- an art whose currency consists of figures of speech, images, and tropes. Yet, these elements are not mere embellishments of ordinary language used exclusively by orators, poets, fiction writers and writers. In fact, they pervade language in its entirety [27].

Cavallaro stresses the need to understand culture through focusing on language and the sign system which can give meaningful messages about the essence of the

culture, mainly the patterns that relate to the unconscious. She says that “understanding a culture indicates detecting and interpreting its sign system. Signs do not embody specific meanings or concepts. Rather, they give us clues which only lead to meanings through interpretation. Signs become meaningful when they are decoded according to cultural conventions and rules which people employ both consciously and unconsciously” (2001, p. 16).

Bani-Khair et al. [6], suggest that children literature is teemed with multifarious aspects that relate to our modern life, and that language is considered one of the most lively and crucial issues, “Children’s literature characterizes a fascinating domain for the major role that both language and culture play in advancing a better understanding about the structure of modern world nowadays. In fact, language, as a key component in children’s literature, is a product of culture that cannot be detached from its social and cultural milieu” (315).

In children’s literature, promoting cultural pluralism, multiculturalism and linguistic diversity has been long regarded as a symbol of awareness and cultural openness. Children’s books that celebrate the significance of humanity as a universal concept rather than a mere symbol of national identity yield many prominent examples of cultural pluralism, especially in postcolonial literature.

It is also essential to refer to the great role that children’s literature plays within the daily life of children and their awareness of their social life as being members of the society. Such an indispensable role stresses the need to understand multicultural children’s literature in a way that makes one able to realize the world he/she lives in light of the new demanding and dynamic world. Multicultural children’s literature will certainly give children the opportunity to explore, identify and understand cultures other than their own. More importantly, it is an important way to provide children with the chance to know other culture as they can better understand their own cultural values, especially issues related to their families or the family structures.

Multicultural literature creates a vivid room for readers wherein they can observe diverse cultures and languages from different standpoints since it refines their understanding about their own cultures and languages unlike making comparisons between what they read and about and the ones they belong to. Furthermore, children’s literature is not only limited to one culture; for it intersects with issues related to the internal structure of one’s culture and other cultures. For instance, American children’s literature investigates a wide-ranging spectrum of multicultural issues that are germane to the history of the American culture through displaying problems, from both the past and the present, related to race, sexuality, minorities, blackness and whiteness, yet it surveys how other cultures are represented.

Additionally, it is essential to note that children’s literature is teemed with ideologies that reflect cultural misconceptions or stereotypes, mainly ones that relate to whiteness, blackness, and subalternity. Language also plays a vital role in this because it carries those ideologies either by fostering them or by renouncing and disputing them. In fact, Eagleton [13] refers to the definition of culture as a set of complex values which can be viewed differently in several critical lenses, he states that culture can be loosely “culture can be loosely concise as the complex of beliefs, values and practices and costumes which constitutes the way of life for a specific group. It

is 'that complex whole', as the anthropologist E.B. Taylor famously put it in his primitive culture, 'which includes knowledge, belief, art, morals, law, costume, and any other capabilities and habits acquired by man as a member of society'. But 'any other capabilities' is rather recklessly open-minded: the cultural and the social then become effectively identical. Culture is just everything which is not genetically transmissible. It is, as one sociologist puts it, the belief that human beings 'are' what they are taught'. Stuart Hall offers a similarly generous view of culture as 'the lived practices or practical ideologies which enable a society, group or class to experience, define, interpret and make sense of its conditions of existence' [22].

AlHazza and Lucking [4] suggest that teaching multicultural children's literature with a major focus on literature that pinpoints post-colonised cultures will help shift the paradigm of negative stereotypical notions, like the ones that western cultures have about Arabs. In order to lessen the negative conceptions that many people have about Arab literature, the authors emphasize the need for children to study Arab literature that could in turn provide a genuine, beautiful image about their culture. As these authors argue, the primary reason behind this misunderstanding is the mass media as well as the pop-culture that in fact play a key role in escalating the negative view about Arabs and Muslims in general, including the Arab Americans who live in the United States as a minority. They point out that there are many stimulating Arab children's literature that American children can read and appreciate which might have an influence on the way through which they look at Arab children's literature. They conclude that Arab children's literature is rich because it encompasses a broad range of historical, traditional, modern, and contemporary literature which are all pertinent to replace the stereotypical misconceptions with true, decent ones.

## 5 Conclusion

To conclude, this paper shows how subalternity plays a vital role in shaping both novels by Morrison and Kidd. Even though subalternity may domesticate the language, tone, narrative, and characters, as it forms a postcolonial frame and setting to both novels, it is highly anticipated that the subaltern will defy and fight against assimilating marginalisation in every possible way. To validate and generalize these findings, this research can be replicated by conducting a study that adopts the stylistic approach in terms of power relations. More studies are needed to examine the selected novels by applying to the psychoanalytical approach.

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# Interactive Online Teaching of English Language During COVID-19 Pandemic: A Success Story



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**Abstract** The present study aimed to answer the general question, “To what extent was the interactive online teaching of English as a foreign language effective?” Online teaching was discussed in relation to interactive and quality teaching, in addition to its advantages and challenges. The study included all students enrolled in four general English courses, with a total number of 628 students, and it was conducted during the summer semester of the academic year 2019/2020. A qualitative approach was employed with a descriptive and analytical design. Some criteria were set in a general framework to measure the effectiveness of online teaching of English including quality and interaction. The criteria were formed in the following main themes of measurement: academic infrastructure, competent instructor in online English teaching, online English teaching process, competent students in online English teaching, and students attained knowledge and skills. Those themes were set based on the literature review and the researcher’s actual experience during the semester under-study. Obtained results were discussed where the general score of effectiveness was 82%. Some learned lessons and recommendations were stated.

**Keywords** Online TEFL · Quality teaching · Interactive teaching · Synchronous connection · COVID-19

## 1 Introduction

After corona virus pandemic (hereafter COVID-19) first emerged in China, it took very little time to spread out in so many other countries around the world, where every single area of life was affected, including traditional teaching, which was stopped by many governments. Thus, a fast and radical shift had to be made across colleges and

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universities to transfer to remote and online teaching models where virtual domains were created to replace face-to-face physical classrooms [23].

Being one of the world's countries that got COVID-19, Jordan passed a law of defense to regulate teaching which was taken by the government very seriously due to the large numbers of students, at schools and universities. Thus, different available software programmes, online platforms or applications were used. Even some new ones were designed and created to enable teachers and students to do their jobs in the best way they could to cope up with the new educational system. Accordingly, parents became teachers, teachers became distance educators, and the kitchen table became the new classroom [21].

Teaching English language (hereafter TEL) is not an easy task and it was made even harder and more challenging by the inevitable closure of learning institutions. The situation became even more challenging for English as a foreign language teachers (hereafter EFL), who already face many difficulties when teaching English. Being a former instructor of EFL at a public Jordanian university, the researcher herself experienced online teaching (hereafter OT) during the closure, with lots of its advantages and challenges. Therefore, this research paper was conducted to describe some important procedures that need to be taken into account for online teaching of English as a foreign language (hereafter OTEFL) to take place. While describing her success story of online interactive teaching of English, the researcher showed how she turned the challenges she faced into opportunities to improve her teaching quality and methods, and to make it more enjoyable and easier for herself and her students.

### ***1.1 Purpose of the Study***

The present study aimed to answer the following general question, "To what extent was the interactive online teaching of English as a foreign language (OTEFL) effective?"

## **2 Literature Review**

In this section, there will be a discussion on OT, interactive teaching, quality teaching (hereafter QT), and advantages and challenges of OT, respectively.

### ***2.1 Online Teaching***

Scholars discuss the concept of teaching online using different terms such as distance education, e-learning, online teaching, remote language teaching, and live online

language teaching [17–30, 26]. The term which will be used throughout this study is online teaching (OT). No matter what expression is used, it has been found that OT and learning are beneficial to teaching English as a foreign language (hereafter TEFL) [29]. Although online courses are getting less and less different from traditional ones because of technology advances, the general concept refers to the education mode that physically separates the teacher and students during instruction; virtually brings teachers into the classroom to teach a language; and depends on using the internet as the primary means of computer-mediated communication, which can be synchronous; i.e. in real time, or asynchronous; i.e. separated by time [7, 24]. Both synchronous and asynchronous tasks and activities are beneficial for language learning, thus, choosing which kind of them and when to use them should be balanced [13, 31].

OT is described as nontraditional, to target nontraditional students such as workers having full-time jobs [24], as participative, with instructors striving for keeping students' engagement [9], and as a replication of what teaching would be like if the remote teacher was physically present in the classroom [26], because the essence of teaching is always related to passing knowledge to students and developing their skills, no matter what format it takes [19]. What is important is that technology should serve pedagogy so that students experience lasting and significant learning provided that teachers are effective [3]. To achieve language learning objectives, there is a need to educate and train, both teachers and students, on developing their technological knowledge and skills [10], because teachers have been provided with inadequate training on technology integration, a training which is described as a one-size-fits-all approach [14].

OT can be implemented through audio/videoconferencing while using a variety of the internet tools and platforms such as Skype, Zoom, Moodle, Google Meet, and Microsoft Teams, all of which do not require special equipment or information technology infrastructures since these tools are readily available on the internet for free for educational purposes [10]. With all these and other available online platforms, one of the biggest challenges is the effective distinguishing and then choosing the most suitable educational platform [2]. However, the researcher of this study did not face this challenge since the university, where she was teaching, decided to use two specific tools, Microsoft Teams and Moodle.

## ***2.2 Interactive Teaching***

In the educational research, the term “interactive” overlaps with two other variants; namely, “interaction” and “interactivity” with little difference in meaning. Teaching is viewed as interaction which provides learners with opportunities to learn [11]. Online education is seen as communication and interaction, based on a text shared in writing, where online instructors are continually referred to as enabling students to be active and to participate online with peers and professors [18]. The interaction between the instructor and students and among students in an online course should

have a reason for communication; and should involve either synchronous or asynchronous participation between members [7]. Because synchronous communication tools are finally easy to use, they are becoming valuable in interactive OT, especially for demonstrations, review sessions and presentations [3]. As another vocabulary variant, interactivity has the same features of interaction as communication, with the characteristics of being many-to-many, place-independent, time-independent, text-based, and computer-mediated learning [18].

The term “interactive” means that people work together and influence each other through engaging in some dialogues and conversations [8], while enabling the students and their teacher to enjoy a two-way efficient TEL communication [6]. Thus, interaction is possible to develop in an online language course, where learners and their teacher will get a productive and rewarding experience [7]. While many of the materials resources available on the internet claim to be interactive, the authors add, it is not the case in EL courses, because learners are often left to go through the experience alone. Such a situation is caused by the prevailing weak interaction; i.e. between people and a computer, and not with other humans, as in strong interaction, which produces more effective online courses. This is specifically important because interacting with an expert language teacher can help students learn by listening to correct models of language use, by receiving reliable feedback on their use of language, and by obtaining scaffolding; i.e. expert assistance with words and grammar [1]. Furthermore, with the increasing numbers of students, enrolled in a single online class, underusing the different tools that can facilitate strong interaction between participants causes the inclusion of more and more automated quizzes, video and audio clips to result in little attention needed on the teacher’s part [7].

### 2.3 *Quality Teaching*

Quality teaching (QT) has become important in higher education due to the diversity and expansion of students, and modern technologies that have entered the classroom [22]. Scholars have not agreed on a clear definition of QT [4, 22, 28]. To define QT, Harvey and Green (as cited in [22]), state that the term quality should be defined first and it could refer to the traditional meaning of excellence, or transforming of students’ perceptions to apply their knowledge to real world problems. The discussion about quality in adult teaching puts a lot of responsibilities onto the teachers although achieving a successful learning is collaborated between learners, teachers and institutions; the same three parties who should ensure quality while playing their inter-dependent roles [12]. QT can be a performance, to describe what practices teachers do, which is the prevailing idea [28]. QT is described as student-centered, aiming at student learning; where the teacher’s pedagogical skills and the learning environment are stressed to enable students to relate to other students and receive academic help [22].

Two related expressions are discussed in the literature, “excellent teachers,” who have passion for learning, teaching, the teacher’s field, and for their students; and

“good teachers” who hold the right qualification, knowledge and the appropriate disposition; where qualification is concerned with the first degree certificate in the subject area; knowledge is concerned with content, pedagogy and technology; and teacher’s disposition encompasses passion, punctuality and motivation [5]. For a highly skilled language teacher, knowledge is expected to be practical with techniques and strategies; concerned with content of language competence; and concerned with the teacher’s personal beliefs and teaching approach [15].

While good and successful teaching form QT [28], excellent teaching is defined as QT for English language learners (hereafter ELLs), and it “sustains academic rigor, holds high expectations, engages ELLs in quality interactions, sustains a language focus, and develops a quality curriculum for teaching ELLs” ([27]: 81). To deliver good QT, a teacher’s desirable actions are his/her classroom best practices, teacher preparedness and understanding the whole learner [5]. Best practices are exemplified in the instructor’s regular and consistent presence at the course site; his/her creation of a supportive online course community with mini-lectures in text form, and audio or video forms; and his/her search for and use of content resources, published on the internet, such as video tutorials on YouTube. To conduct online QT, there is a need for tools that are affordable, flexible, engaging, and instantly available [3].

Although various theories have been proposed to check the effectiveness of OT, they are not specified to the TEFL area [31]. Wei [29] suggests that the effectiveness of information technology in the TEFL mode is determined by the amount of attention paid to individual differences of students and the build of various interactive platforms. Although benefits and challenges of OT as perceived by teachers, learners, and parents were investigated a lot, fewer studies investigated the effectiveness of the OT process in the EFL context [30].

## ***2.4 Advantages and Challenges of Online Teaching of English***

The advantages of OT can be classified into students’ skills, the teaching process, and technology [7, 16, 19, 20, 25]. As for students’ skills, OT helps in developing students’ listening and comprehension skills by being more attentive to what the teacher has to say; and help them to choose the teacher having his/her preferred styles to achieve autonomous learning. Concerning the teaching process, OT is time-saving for teachers and students, because they all work from home; classes can be held at the time after school or work, with much flexibility; the created teaching environment helps students to learn at their own pace by watching the recordings that their teachers share; and OT develops teaching methods which can be more effective. As for technology, online EFL/ESL education would allow educators to make the best use of the internet, where they make resources available online to support learners’ deep and memorable interactions; use synchronous e-learning to

increase student's self-confidence and motivation; and use asynchronous tasks to increase the student's ability to process information.

The challenges can be discussed in relation to the teaching process, interaction between the teacher and students, and technology [19, 20, 25, 26]. As for the teaching process, students get easily distracted by their laptop or cellphone; and it is difficult to manage the students' attendance and the classroom due to the virtual environment. Regarding the interaction between the teacher and students, OT lacks feedback that is given by students in face-to-face teaching such as the comments they make after the lesson, and body language they show; and it is difficult to deal with students' attitude caused by the lack of good interaction between students and their teacher. As for technology, challenges are related to the occurrence of technological problems such as breaking down of the internet connection; failing to install or use the tools specified by the educational institution; educators being unready to shift to OT and integrate technology in EL teaching although they knew the term of e-learning earlier; and teachers and students' need for support and time to learn and work with the new technology effectively.

### 3 Method

The present study included all the students enrolled in any of the four general EFL courses, during the summer semester of the academic year of 2019/2020, with a total number of 628 students. In addition, the courses were taught online by the researcher herself at a public university.

This study was conducted to answer the general question, "to what extent was the interactive online TEFL (OTEFL) effective? Thus, the researcher employed a qualitative approach with a descriptive and analytical design. A number of criteria were set in a general framework to measure the effectiveness including quality and interaction of OT of English, with the following five main themes of measurement: academic OT infrastructure, competent instructor in OTEFL, OTEFL process, competent students in OTEFL, and students attained knowledge and skills. The paper covered these themes of OTEFL based on the literature review and the researcher's actual experience during the semester under-study. The themes were further classified into more detailed criteria to demonstrate pieces of evidence of the actual achieved tasks of the OTEFL.

### 4 Results and Discussion

To measure the effectiveness of OTEFL, scores and points were given to the actual achieved tasks to cover quality and interactivity. After analyzing the collected data, the following results were obtained as shown in the next paragraphs, where all the tables were developed and calculated by the researcher.

Table 1 shows that the effectiveness of the academic infrastructure of OTEFL is 52%. This score can be justified by the sudden shift to OT at a national level without any preparations concerning online curricula and teaching techniques. Although the university trained the academic staff on using Microsoft Teams platform, they did not share any relevant guidelines to support instructors in their teaching tasks.

Table 2 shows that the effectiveness of the instructor's competence to deliver OTEFL was 98%. This score can be supported by the researcher's constant pursuit to keep students engaged in live lectures requirements. In addition, she kept sharing the OT materials and resources through providing students with different relevant texts and videos. The researcher was also keen to be a self-learner through updating her OTEFL materials and techniques.

Table 3 shows that the effectiveness of the OTEFL process was 92%. This score can be supported by looking at the process before, during and after delivering the live lecture, where the teaching resources were uploaded, the lectures were synchronously recorded, and students were guided and supervised through synchronous and asynchronous chatting and forums using both Microsoft Teams and Moodle.

Table 4 shows that the effectiveness of student's competence in the OTEFL was 88%. The support for this score can be referred to the student's having their own

**Table 1** The effectiveness of academic infrastructure of OTEFL

Theme	Sub-themes	Actual value%	Quality%	Interactive%
a. Academic OT infrastructure	Readiness of curricula	0	0	-
	Readiness of teaching techniques	0	0	0
	Readiness of OTEFL systems	100	100	100
	Instructors and students accessed and used OTEFL	67	67	100
Effectiveness			52	

**Table 2** The effectiveness of the instructor's competence to deliver OTEFL

Theme	Sub-themes	Actual value%	Quality%	Interactive%
b. Competent instructor in OTEFL	Capable of TEFL	100	100	-
	Capable of delivering online TEFL	98	98	98
	Kept students engaged and informed	98	97	98
	Self-learning and development	97	97	97
	Communication skills like mentoring	100	-	100
Effectiveness			98	



**Table 3** The effectiveness of OTEFL process

Theme	Sub-themes	Actual value%	Quality%	Interactive%
c. OTEFL process	Delivered live lectures synchronously	92	92	91
	Communication/kept students engaged in OTEFL-synchronous and asynchronous	85	–	85
	Availability of online content and forums	100	–	100
Effectiveness			92	

mobile and computer devices that can be accessed easily. The students were also licensed to use many facilities of the internet, a situation that allowed them to attend live lectures more than download them. They supported each other through group discussion and sharing materials and information.

Table 5 shows that the effectiveness of student's attained knowledge and skills through OTEFL scored 86%. This score can be supported by students' ability to submit assignments and respond to quizzes and assessment requirements. They were also well-engaged with peers to help each other and overcome challenges through connecting using different channels for chatting.

**Table 4** The effectiveness of students' competence in OTEFL

Theme	Sub-themes	Actual value%	Quality%	Interactive%
d. Competent students in OTEFL	Capable of accessing OTEFL resources and platforms	89	88	87
	Interactive student in OTEFL/ communication	93	90	93
Effectiveness			88	

**Table 5** Students' attained knowledge and skills through OTEFL

Theme	Sub-themes	Actual value%	Quality%	Interactive%
e. Students attained knowledge and skills	Qualified to access	89	89	91
	Well-engaged students	87	–	85
	Managing OTEFL produced materials	91	–	87
	Assessed student performance	79	89	79
Effectiveness			86	

The present study aimed to answer the question, “to what extent was the OTEFL effective? To answer the question, overall quality and overall interaction were calculated and they scored 77% and 87%, respectively. Both quality and interaction lead effectiveness of the OTEFL with a score of 82%. In addition, the four components of the overall OTEFL process scored 80%, and the overall students’ attained knowledge and skills as an outcome was calculated and scored 86%.

## 5 Learned Lessons and Recommendations

Some learned lessons can be observed from this research paper. First, the effectiveness of OTEFL could be calculated in a way to show both strengths and weaknesses. Such a situation helps policy-makers and decision-makers to set laws and regulations to improve the quality of OT. Another learned lesson was related to the high score of interaction and communication among students who showed interest and concern towards each other. This concern can enhance confidence between students and can be employed by instructors to help the students with teaching difficulties. But because shy students may not have the courage to ask for help from their instructor, they can feel free to communicate with a peer student and ask for help.

As for recommendations, it can be said that more research should be conducted to measure the effectiveness of OTEFL in relation to the students’ attained knowledge in specific language skills, the availability and use of educational technological facilities, students’ economic situations, and capacity-building of academic staff provided by educational institutions.

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# The Role of Short Stories Employed by the Jordanian Mothers to Help Their Children Develop Reading Skills



Kholod Naser Olimat

**Abstract** This study looks at how Jordanian mothers' use English short stories to assist their kids learn to read. Data was gathered via focus group interviews and questionnaires, according to the descriptive methodology. The findings imply that mothers' use short stories as a strategy to expose their kids to the English language and culture and to inspire them to take an interest in reading. The study emphasizes the significance of choosing stories that are age- and culturally-appropriate as well as the value of giving children encouraging comments and direction while they read. Overall, the results indicate that English short stories can be a useful tool for Jordanian mothers' in encouraging their kids' literacy development.

**Keywords** Jordanian mothers • EFL learners • Reading skills • English short stories • Jordanian students

## 1 Introduction

Language acquisition refers to a subconscious in which language acquirers are not consciously aware of the grammatical rules of the language, but rather develop a “feel” for correctness. Therefore, it requires certain methods like using computer [13] and other effective strategies. Using short stories is one of the effective methods that help in enhancing vocabulary and developing reading skill. This assumption is based on the findings of previous research that students who read widely have extensive vocabularies. Like other literary forms, short stories are the product of imagination and they allow the readers to use their imagination to create links among ideas and attempt to comprehend the text. In this way, the use of short stories can stimulate students and encourage them to enthusiastically develop their word power, thus becoming able to understand the whole story.

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## ***1.1 Significance of the Study***

### **1.1.1 Subjective Significance**

The use of short stories in developing reading skills of the Jordanian children has not been investigated. Therefore, this is the first Jordanian study to examine the mothers' use of short stories to develop their children's reading skills.

### **1.1.2 Objective Significance**

The results of this study provide a clear image of the Jordanian mothers' motivation for using short stories to develop their children's reading skills. Therefore, other researchers interested in this field will also be enlightened by the findings of this research.

## ***1.2 Research Problem***

English is learnt in Jordan as a foreign language. This requires the use of effective strategies which facilitate the learning process and make learning interesting. This catches our attention to think of the effective role that can be played by the Jordanian mothers in helping their children develop reading skills through the use of short stories. This phenomenon has not been investigated in the Jordanian context.

## ***1.3 Research Objectives***

1. To know the reality of the Jordanian mothers' use of English short stories to help their children develop reading skills.
2. To know the Jordanian mothers' motivation for using English short stories to help their children develop reading skills.
3. To know the methods used for selecting and presenting stories.
4. To know the effectiveness of using English short stories to develop reading skills from the Jordanian mothers' viewpoints.

## ***1.4 Research Questions***

This study is an endeavor to answer the following questions:

1. In actuality, do Jordanian mothers employ English short stories to assist their kids learn to read?
2. What is the Jordanian mothers' motivation for using English short stories to help their children develop reading skills?
3. What are the methods used for selecting and presenting stories?
4. What is the effectiveness of using English short stories to develop reading skills from the Jordanian mothers' viewpoints?

## ***1.5 Research Hypotheses***

This study is based on the following hypotheses:

1. The Jordanian mothers use English short stories to help their children develop reading skills.
2. The Jordanian mothers' motivation for using English short stories to help their children develop reading skills is represented in their belief in the effectiveness of this technique.
3. The Jordanian mothers use certain methods for selecting and presenting stories.
4. The Jordanian mothers are aware of the effectiveness of using English short stories to develop their children's reading skills.

## **2 Literature Review**

The use of literature, including short stories, in language learning is not a new phenomenon. It was used by those following Grammar Translation Method in the nineteenth century [9]. In this respect, Harmer, [8] stressed that enough exposure to L2 reading can ultimately enhance learners' comprehension skill. Besides, short stories can motivate students to explore their feelings through experiencing those that happened in the stories and they will be encouraged to continue reading it until the conflict is resolved. A number of researches [3, 7, 11, 14, 17, 19] reflected that using literature in EFL learning, particularly short stories, indicates an increasing level of motivation. It also increases interest in reading and develops reading skills. Furthermore, this technique is effective in developing learners' critical thinking. [4] attributed the effectiveness of using short stories in language learning to their structure as each short story usually has a beginning, middle and an end. This will motivate every learner to continue reading the story to follow its plot or to answer questions. Other researchers, [10], emphasized the importance of this technique for reading comprehension skills which are the most important skill for mastery a foreign language [16]. Furthermore, [6] highlighted that there are different purposes for reading, and such purposes can be dealt with through the short story technique.

### **3 Methodology**

This study follows the descriptive and analytical method. It is an empirical study as it depends on analyzing the results of a questionnaire which includes four parts. The first part is designed to investigate the reality of the Jordanian mothers' use of English short stories to help their children develop reading skills. The other three parts investigate the Jordanian mothers' motivation for using English short stories to help their children develop reading skills, the methods used for selecting and presenting stories, and the effectiveness of using English short stories to develop reading skills from the Jordanian mothers' viewpoints. The researcher also conducts interviews with the study sample.

#### ***3.1 Population and Participants***

This study's population includes all the Jordanian mothers whose children study English. Moreover, the sample includes a number of 1000 Jordanian mothers (English teachers) who were selected randomly to represent the whole population.

#### ***3.2 Testing Validity and Reliability***

The researcher tested the instrument's validity and reliability by presenting it to a group of 10 arbitrators specialized in educational sciences. The researchers followed the observations and modifications that were agreed upon by more than (85%) of the arbitrators. After making the suggested modifications, the questionnaire included 34 statements in its final form.

### **4 Results and Discussions**

The Statistical Package for Social Sciences (SPSS) is used for analyzing and comparing the results. Besides, the Likart Five-Point Scale is used for finding out the extent to which the participants agree on the questionnaire items for each part. The values of the arithmetic means are used to measure the extent to which the participants agree on the items of the questionnaire. Table 1 shows this.

**Table 1** The arithmetic means values according to the Likert five-point scale

Weighted mean	Level
From 1 to 1.80	Strongly disagree
From 1.81 to 2.60	Disagree
From 2.61 to 3.40	Neutral
From 3.41 to 4.30	Agree
From 4.31 to 5	Strongly agree

\* Prepared by the researcher

## 4.1 Results of the First Question

The participants were asked to select the response that better reflects their opinion on each item. In this context, the arithmetic means and standard deviations related to the reality of the Jordanian mothers' use of English short stories to help their children develop reading skills are represented in Table 2.

The means values of the mentioned items ranged between (3.93 and 4.08). This point evidently indicates the agreement of the participants on the items of the first part according to the values mentioned in Table 1. These results ultimately prove that the Jordanian mothers use short stories to help their children develop reading skills. They also agree with [4, 14, 15, 17, 19] regarding the effectiveness of short stories in developing reading comprehension.

## 4.2 Results of the Second Question

The participants were asked to select the response that better describes their opinion on each item. The means and standard deviations related to this part are presented in Table 3.

The means values related to the mentioned items ranged between (3.79 and 4.08). This indicates the strong agreement of the participants on the items of the second part according to the values in Table 1. It is also powerful evidence that the Jordanian mothers are highly motivated to use short stories in developing their children's reading skills. Besides, it reveals the Jordanian mothers' awareness of this technique as an effective means of learning.

## 4.3 Results of the Third Question

The participants were asked to select the response that better describes their opinion on each item. The statistics related to the items of this part are represented in Table 4.



**Table 2** Arithmetic means and standard deviations of the participants' responses to the items of the firsts part of the questionnaire

Items	Scale	Strongly disagreed	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation	Result
I use English short stories to help my children sound out words they have heard before	Frequency	0	20	40	780	120	4.04	0.498	Agree
	percentage (%)	0%	2.083%	4.16%	81.25%	12.5%			
I use English short stories to help my children recognize the connection between sounds and letters	Frequency	0	0	60	820	80	4.02	0.381	Agree
	percentage (%)	0%	0%	6.25%	85.41%	8.33%			
I use English short stories to help my children understand the meaning of words in context	Frequency	0	0	80	840	40	3.95	0.351	Agree
	percentage (%)	0%	0%	8.33%	87.5%	4.16%			
I use English short stories to help my children read aloud with accuracy, speed and comprehension	Frequency	0	0	40	800	120	4.08	0.399	Agree
	percentage (%)	0%	0%	4.16%	83.33%	12.5%			
I use English short stories to help my children understand sentence construction and cohesion	Frequency	0	0	60	780	120	4.06	0.428	Agree
	percentage (%)	0%	0%	6.25%	81.25%	12.5%			
I use English short stories to help my children develop reasoning and background knowledge	Frequency	0	20	20	840	80	4.02	0.432	Agree
	percentage (%)	0%	2.08%	2.08%	87.5%	8.33%			
I use English short stories to help my children improve working memory and increase attention	Frequency	0	20	40	800	100	4.02	0.478	Agree
	percentage (%)	0%	2.08%	4.16%	83.33%	10.41%			
I use English short stories to help my children develop reading techniques like skimming and scanning	Frequency	0	40	40	820	60	3.93	0.516	Agree
	percentage (%)	0%	4.16%	4.16%	85.41%	6.25%			
Result							4.01	0.058	Agree

**Table 3** Arithmetic means and standard deviations of the participants' responses to the items of the second part of the questionnaire

Items	Scale	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation	Result
I feel that short stories help in making learning English enjoyable	Frequency	0	40	40	760	120	4	0.577	Agree
	Percentage (%)	0%	4.16%	4.16%	79.16%	12.5%			
I believe that short stories stimulate my children's curiosity about the target culture and language	Frequency	0	40	80	720	120	3.95	0.610	Agree
	Percentage (%)	0%	4.16%	8.33%	75%	12.5%			
I feel that short stories offer new vocabulary with the actual usage	Frequency	0	80	40	680	160	3.95	0.734	Agree
	Percentage (%)	0%	8.33%	4.16%	70.83%	16.66%			
I believe that the short story technique enhances vocabulary	Frequency	0	0	80	720	120	4.04	0.454	Agree
	Percentage (%)	0%	0%	8.33%	79.16%	12.05%			
I feel that short stories are effective in developing my children's comprehension	Frequency	20	20	40	800	80	3.93	0.626	Agree
	Percentage (%)	2.08%	2.08%	4.16%	83.33%	8.33%			
I believe in the effectiveness of short stories in developing my children's critical thinking	Frequency	0	20	40	760	140	4.06	0.516	Agree
	Percentage (%)	0%	2.08%	4.16%	79.16%	14.58%			
Result							Agree		

**Table 4** Statistics of the participants' responses to the items constituting the third part

Items	Scale	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation	Result
I ask my children to bring in quotes that deserve attention	Frequency	40	80	80	600	160	3.79	0.956	Agree
	Percentage (%)	4.16%	8.33%	8.33%	62.5%	16.66%			
I ask my children to discuss some characters	Frequency	0	40	40	760	120	4	0.577	Agree
	Percentage (%)	0%	4.16%	4.16%	79.16%	12.5%			
I ask my children to list characters' actions and their reactions	Frequency	0	40	80	720	120	3.95	0.610	Agree
	Percentage (%)	0%	4.16%	8.33%	75%	12.5%			
I ask my children to imagine how the story would be transformed by changing some incidences	Frequency	0	80	40	680	160	3.95	0.734	Agree
	Percentage (%)	0%	8.33%	4.16%	70.83%	16.66%			
I ask my children to say whether the storyteller wants them to like or dislike a particular character	Frequency	0	0	80	760	120	4.04	0.454	Agree
	Percentage (%)	0%	0%	8.33%	79.16%	12.05%			
I consider the needs of my children while selecting short stories	Frequency	20	20	40	800	80	3.93	0.626	Agree
	Percentage (%)	2.08%	2.08%	4.16%	83.33%	8.33%			
I consider the abilities of my children while selecting short stories	Frequency	0	20	40	760	140	4.06	0.516	Agree
	Percentage (%)	0%	2.08%	4.16%	79.16%	14.58%			

(continued)

**Table 4** (continued)

Items	Scale	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation	Result
I consider the stylistic and linguistic level of the text while selecting short stories	Frequency	0	20	60	780	100	4	0.5	Agree
	Percentage (%)	0%	2.08%	6.25%	81.25%	10.41%			
I pay attention to the themes represented in the short stories	Frequency	0	0	40	820	100	4.06	0.376	Agree
	Percentage (%)	0%	0%	4.16%	85.41%	10.41%			
I pay attention to the cultural element while selecting short stories	Frequency	0	0	20	840	100	4.08	0.343	Agree
	Percentage (%)	0%	0%	2.083%	87.5%	10.41%			
Result							3.09	0.172	Agree

Table 4 presents the statistics related to the questionnaire's third part. The means of the items ranged between (3.09 and 4.08). These values are powerful evidence of the Jordanian mothers' agreement regarding the items of this part. They evidently reflect that the Jordanian mothers follow certain methods and strategies when selecting and presenting short stories.

#### ***4.4 Results of the Fourth Question***

The statistics related to this part are represented in Table 5.

The arithmetic means of the items ranged between (3.93 and 4.08). These values indicate the Jordanian mothers' realization of short stories as an effective strategy to develop their children's reading skills. These statistics indicate the Jordanian mothers' cognizance that short stories are useful and effective means of developing reading skills.

#### ***4.5 Focus Group Interview***

The focus group interviews show that the majority of the participants use short stories as a technique to develop their children's reading skills. In this respect, M21 made it clear by saying:

"This is an excellent method to help them realize the correct usage of words..."

In the same context, M31 said:

"I think this is the best way to help them learn not only reading comprehension but syntax as well..."

The focus group participants' responses to questions regarding their motivation behind using short stories revealed that the majority of them believe in the effectiveness of using short stories in enhancing vocabulary. In this respect, M37 said:

"I believe that the short story technique enhances vocabulary. It is also effective in developing my children's comprehension..."

In the same context, M29 said:

"I never found an effective means like the use of short stories..."

Moreover, the participants' responses to questions on the methods used for selecting and presenting stories reflected that the majority of them consider the effectiveness of discussions and the importance of paying attention to the needs and abilities of their children. M17 said:

**Table 5** Statistics of the participants' responses to the items of the fourth part

Items	Scale	Strongly disagreed	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation	Result
Using short stories makes the reading comprehension easier	Frequency	0	20	40	780	120	4.04	0.498	Agree
	percentage (%)	0%	2.083%	4.16%	81.25%	12.5%			
Using short stories provides learners with the correct usage of words in context	Frequency	0	0	60	820	80	4.02	0.381	Agree
	percentage (%)	0%	0%	6.25%	85.41%	8.33%			
Using short stories stimulates learners' curiosity about the target culture and language	Frequency	0	0	80	820	40	3.95	0.351	Agree
	percentage (%)	0%	0%	8.33%	87.5%	4.16%			
Using short stories develops learners' comprehension throughout the independent reading	Frequency	0	0	40	800	120	4.08	0.399	Agree
	percentage (%)	0%	0%	4.16%	83.33%	12.5%			
Using short stories enhances learners' word power	Frequency	0	0	60	780	120	4.06	0.428	Agree
	percentage (%)	0%	0%	6.25%	81.25%	12.5%			
Using short stories makes the readers guess what would happen next	Frequency	0	20	20	840	80	4.02	0.432	Agree
	Percentage (%)	0%	2.08%	2.08%	87.5%	8.33%			

(continued)

Table 5 (continued)

Items	Scale	Strongly disagreed	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation	Result
Using short stories is effective in developing learners' reading techniques	Frequency	0	20	40	800	100	4.02	0.478	Agree
	percentage (%)	0%	2.08%	4.16%	83.33%	10.41%			
Using short stories enables learners to find synonyms and antonyms of words	Frequency	0	40	40	820	60	3.93	0.516	Agree
	percentage (%)	0%	4.16%	4.16%	85.41%	6.25%			
Result							4.01	0.058	Agree

“The text should not be so difficult...”

Thus, it is obvious that the majority of the focus group interview members use short stories to help their children develop reading skills. They are motivated by the fact that this technique is effective in developing both reading comprehension and vocabulary. Moreover, they select short stories after considering the abilities and needs of their children and the appropriate complexity level of the text.

## **5 Conclusion**

### **5.1 Findings**

1. The Jordanian mothers (English teachers) use short stories to develop their children's reading skills.
2. The participants' motivation behind using short story technique stems from their belief that this technique helps in making learning English enjoyable, offers new vocabulary with the actual usage, enhances vocabulary, develops comprehension and critical thinking skills.
3. The most significant methods used in selecting and presenting short stories are asking children to bring in quotes that deserve attention, discuss some characters, list characters' actions and their reactions, imagine how the story would be transformed by changing some incidences, and say whether the storyteller wants them to like or dislike a particular character.
4. The Jordanian mothers (English teachers) view short stories as an effective technique for developing reading skills.

Use stories as a starting point for discussion and your child will have more opportunities to practise speaking, reasoning and building their vocabulary. Use stories as a starting point for discussion and your child will have more opportunities to practise speaking, reasoning and building their vocabulary.

5. Children who Use short stories will have more opportunities to practice speaking, reasoning and building their vocabulary.

### **5.2 Recommendations**

1. The Jordanian mothers should follow those English teachers in using short stories to develop children's reading skills.
2. The officials in the Jordanian Ministry of Education should hold conferences on the effectiveness of using short stories to develop reading skills.
3. Teachers of English at the Jordanian schools should motivate their students to read short stories.



4. The Jordanian mothers could use more resources, such as age-appropriate books and high-quality educational media, to use with their children.
5. Conducting qualitative studies to identify the factors that contribute to the variation in the level of readiness to learn

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# Nilai Polytechnic Student Involvement in Volunteering Activities



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**Abstract** The development of volunteering value is one of the aspects in the development of students' soft skills to produce individuals who care about the reality of their living environment. This quantitative survey study aims to see the tendency of students to venture into the field of volunteering, to see the characteristics of volunteering in students, factors involving themselves and the effects of involvement in volunteering activities. The study was conducted among 270 people from a population of 1820 students online and analyzed descriptively and inferentially. The study found that students are most involved in activities in the field of cleanliness and cheerfulness, students have good volunteering characteristics ( $MS = 4.19$ ,  $SD = 0.58$ ), the main factor for students to get involved in volunteering activities is because they want to improve their skills ( $MS = 4.52$ ;  $SD = 0.59$ ), the effect of students engaging in volunteering activities is at a very high level with an overall mean score of 4.34 ( $SD = 0.57$ ), there is a significant difference in the effect of engaging in volunteering activities based on gender where the score of male students ( $MS = 4.25$ ,  $SD = 0.61$ ) compared to female students ( $MS = 4.41$ ,  $SD = 0.52$ ) with a value of  $t = -2.398$ ,  $P = 0.017 < 0.05$ , students gave high agreement to the suggestions given and submitted additional suggestions and students were also found to be willing and inclined in volunteer activities. Further and periodic research can be done to look in more detail at the volunteering aspect among students to get various inputs which then help many parties in preparing students to develop the value of volunteering and apply it in their lives.

**Keywords** Volunteering • Volunteering characteristics • Involvement factors • Impact • Value polytechnic

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## 1 Introduction

Volunteering activities are not something new in the community because these activities have been part of the practice of life since time immemorial. Volunteering activities are usually motivated by the noble values of individuals and communities based on cultural and religious demands. Volunteering activities have very important implications for the development of the country because through these activities it will be possible to create a society that can maintain harmony, appreciate peace and be grateful for the blessings of unity in a life full of diversity.

According to Ibrahim et al. [9], volunteering is defined as any form of activity carried out to help others and not based on profit, reward and benefits while Wymer [12] explains that volunteering is unpaid work to help third parties. In Islam, volunteering activities generally refer to the act of contributing to community members in need wholeheartedly without being forced or coerced and accompanied by sincere intentions for the sake of Allah SWT. Islam is very concerned about helping matters, especially activities that involve volunteering as Allah SWT says which means:

“.....Help ye one another in righteousness and piety, but help ye not one another in sin and rancour: fear Allah. for Allah is strict in punishment”. (al-Maidah, 5: 2)

This verse was revealed during the opening of Mecca an eighth year of the Hijrah. The Muslims were prevented by the polytheists from performing Umrah during the Hudaibiyah agreement. According to Ibnu [2], when interpreting this verse, explains that Allah SWT commands the believers to always help each other in doing good (al-birru) and abandon all forms of evil, by practicing al-taqwa. Allah SWT also forbids helping in matters of falsehood, committing sins and doing what is unlawful. Thus, Islam does not limit the concept of worship to practices of a specific nature or focus solely on specific worship, however, Islam as a religion that has the nature of tolerance also strongly encourages its people to perform general worship that benefits the people and the community, including volunteering activities. The Prophet SAW also once said:

“The best people are the most beneficial to people” (Hadith Narrated by al-Thabrani)

In another hadith from Abu Hurairah RA that the Prophet SAW said which means:

“Whoever relieves a believer of one hardship from the hardships of the world, Allah swt will ease from him one hardship from the hardships of the Day of Resurrection. Whoever makes it easy for the needy, Allah will make it easy for him in this world and the hereafter. Anyone who covers (aurat or shame) a Muslim, Allah swt will cover (aurat or shame) in this world and the hereafter, Allah swt always helps a servant as long as the servant helps his brother” (Hadith Narrated by Muslim)

The above hadith is an encouragement to Muslims to benefit others in life. In addition, the hadiths also give an overview of the good deeds and help given to others is a very commendable practice and even has a very high value in the eyes of Allah SWT and will receive the best reward in the world as well as a special reward in hereafter. Therefore, every Muslim and member of society needs to be inculcated the

mindset of loving to help and provide benefits and goodness to others in life. On that basis, the government has implemented the matter through the National Education Philosophy (FPK) which was drafted in 1988 by education experts.

FPK has stated that education in Malaysia is a continuous effort towards further developing individual potential in a comprehensive and integrated way to create a balanced and harmonious human being in terms of intellect, spirituality, emotion and body based on faith and obedience to God. The balance and well-being that he possesses are not only beneficial to him, but are reflected in his relationship with other people, the environment and the Creator. The spiritual and emotional elements in FPK also include aspects of faith in God, religious belief, stability of soul, appreciation of noble values and societal norms, noble character and the willingness to sacrifice for the country and serve the community. Therefore, volunteering activities are an implementation of the FPK requirements that have been enacted by the government.

In addition, the National Development Policy has set the intention that TVET Education and Studies can produce holistic and balanced human capital and graduates. The strategic core is formulated at the highest level to the implementation level to realize the policy. Likewise, Leap 1 of the Malaysian Education Development Plan (PPPM) 2015–2025 (Higher Education) focuses on holistic graduates with entrepreneurial and balanced characteristics. Holistic and balanced graduates include ethical and moral, have a strong spirituality, are caring and considerate (Malaysian Education Development Plan 2015). The formation of volunteers among students in institutions of higher learning has shown the development of human capital through volunteering activities and social work toward the community and society. Thus, the volunteering activities and programs carried out by Higher Education Institutions including Polytechnics are in line with the National Development Policy and PPPM (PT) in the development of human capital based on Industrial Revolution 4.0.

At the Polytechnic level, the Malaysian Polytechnic Student Volunteer Foundation or YES! Polytechnic Malaysia was established on 15 July 2011. YES! Polytechnic is a platform for Polytechnic students to contribute service in the form of TVET skills to the community. 7 clusters YES! Polytechnics have been designed which are technology transfer and knowledge sharing, community service operations, entrepreneurship development, educational development, spiritual development, health development and environmental sustainability development so that Polytechnic students can contribute to the clusters they are interested in. The organization of a program related to volunteering is based on the framework of volunteering activities YES! The polytechnic is to analyze the needs of the community, provide sustainable solutions, implement with partners and end with monitoring and evaluation (Port Dickson Polytechnic Volunteer Program Guidelines 2020).

Studies on volunteering activities have also been carried out a lot, among them the study of Hasanudin et al. [9] who found that the motive for participating in volunteering activities among Muslim teenagers is because they want to learn something and the virtues that exist in themselves, they want to get a learning experience the new and train using knowledge, skills and abilities that are rarely practiced. The results of this study are in line with the findings by Nur [15] who found that participation in volunteer activities aims to express or act on noble and humanitarian values.

Zaliha and Mohd [7] also found that an altruistic attitude or prioritizing the happiness and welfare of others over one's happiness and welfare is a factor that motivates young people involved in voluntary activities. In addition, some volunteers want to know more about the current needs, as well as skills that are used, often becoming individual factors involved in volunteering.

Nasir et al. [13] stated that the practice of volunteering also has its role in building the mental health of an individual. This means, if a Muslim individual understands his responsibility to serve others well, prudently and with noble character, he is indirectly included in the category of people who have a healthy soul. This finding is supported by the study of Tharshini and Fauziah [11] which states that the factor of religious belief is that individuals who have strong religious beliefs, positive self-worth and always give priority to helping others are those who are active in volunteering activities. Based on the findings of the study, involvement in volunteering activities is the result of the attitude embedded in the individual and the extent to which the individual appreciates the religious beliefs.

The study of Wan [17] also found that the impact of volunteering activities can increase group cooperation, the spirit of helping each other, adopting a healthy lifestyle, increasing the value of concern, practice the knowledge learned on campus, improve expertise and skills and expanding contacts. This finding is in line with Azrina and Vishalache's [8] that youth involvement in volunteering has the best impact on personality formation, personality, identity, values, beliefs and motivation.

## 2 Statement of Problem

The establishment of YES! The Polytechnic is an implementation at the level of the Polytechnic Studies Department and Community College to realize the government's wishes in the policies that have been enacted regarding students at the higher education level. Many volunteering activities have been planned and implemented by all Polytechnics and Community Colleges in Malaysia, but studies on the extent of the effectiveness of the volunteering activities when compared to the cost, time and commitment given are still lacking at the implementation level.

Therefore, information about the impact of the conducting of volunteering activities is essential to be able to describe the quality of the conducting programs that are relevant to the objectives, policies and directions that have been planned at the polytechnic and national levels. Therefore, this study was conducted to see the effectiveness of volunteering activities as well as details on the elements and fields of volunteering that students are interested in and venture into.

## 3 Research Objective

This study was conducted to obtain information based on the following objectives:

1. What are the main areas that students are involved in volunteering activities?
2. Do polytechnic students have the characteristics of a volunteer and what is the level based on the characteristics?
3. Identify the factors that students engage in volunteering activities.
4. Improving the effect of engaging in volunteering activities among students.
5. Are there differences in the effects of engaging in volunteering activities based on gender?

## 4 Research Methodology

The quantitative study conducted using survey methods at Nilai Polytechnic involved 270 people from a population of 1820 students using a questionnaire instrument developed by the researcher based on a literature review. The questionnaire instrument includes several domains, namely domain A demographic (6 items), domain B the field of involvement in volunteering activities (10 items), domain C characteristics of a volunteer (9 items), domain D factors involved in volunteering activities (20 items), the domain E effect of engaging in volunteering activities (5 items) and the suggestion domain (3 items). Reliability analysis is 0.947 showing that this instrument has very good reliability displayed in Table 1.

Questionnaire instruments are among the instruments that are effective in obtaining information, facts, beliefs, feelings, wishes, attitudes, practices and so on from samples/respondents [3, 5]. The questionnaire was administered online using “Google Forms” randomly for 5 weeks and downloaded in the form of “Excel” data and analyzed using the Statistical Package for Social Science (SPSS) version 23.0 application. The frequently and agreement scale used are detailed in the following Table 2.

Descriptive data are displayed as numbers, percentages, mean scores and standard deviations. The inference data was analyzed using the Independent Sample T-test to

**Table 1** Instrument reliability

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardized items	N of items
0.947	0.959	44

**Table 2** Frequently and agreement scale

Skor	Frequently scale	Agreement scale
1	Never	Strongly disagree
2	Sometimes	Disagree
3	Less frequent	Less agree
4	Frequent	Agree
5	More frequent	Strongly agree

**Table 3** Interpretation scale

Score	Level
1.00–1.80	Very Low (VL)
1.81–2.60	Low (L)
2.61–3.40	Moderate (M)
3.41–4.20	High (H)
4.21–5.00	Very high (VH)

Source Azhar [1]

compare the effects of engaging in volunteering activities based on gender. The interpretation scale used to describe the findings of the descriptive study in the following Table 3.

## 5 Results and Discussion Research Results

Research findings and discussion are displayed according to the order of research questions starting with the demographics of the study.

### Study Demographics

The study is conducted among 270 people out of 1820 PNS students, most of whom were third semester students, 126 people (46.7%), followed by first semester 63 people (23.3%), fifth semester 60 people (22.2%), 18 people (6.7%) semester 3, 2 people (0.7%) semester 4 and the least which is 1 person (0.4%) semester 6 and above. More female students, 142 people (52.6%) participated in the study than male students, 128 people (47.4%). 67.4% (182 people) are Malay followed by 28.1% (76 people) Indian, 2.6% (7 people) Chinese and others 1.9% (5 people). The majority engaged in volunteering activities for less than 1 year (73%) through information obtained from Polytechnics (31.9%), Social Media (23%), Programs/ Carnivals (21.9%) and websites (3%). Details related to the demographics of the study are displayed in Table 4.

### Areas of Student Involvement in Volunteering Activities

To answer the first research question (What are the main areas in which students are involved in entrepreneurial activities?) a descriptive analysis based on a frequency scale was made using frequency and percentage and arranged according to the Mean Score (Average) and displayed in the following Table 5.

Table 5 displays the findings arranged based on the total frequency obtained. The study found that all areas of volunteering activities have participation from students. Students more involved in activities in the field of hygiene/joy ( $MS = 2.88$ ), followed by religion ( $MS = 2.84$ ), fields, sports ( $MS = 2.67$ ), the environment ( $MS = 2.65$ ), recreation ( $MS = 2.54$ ), Education ( $MS = 2.48$ ), culture ( $MS = 2.14$ ), health ( $MS = 1.95$ ), economy ( $SM = 1.78$ ) and the less field which students are



**Table 4** Study demographics

Matter	Items	(N = 270)	%
Semester	Semester 1	63	23.3
	Semester 2	126	46.7
	Semester 3	18	6.7
	Semester 4	2	0.7
	Semester 5	60	22.2
	Semester 6 and above	1	0.4
Gender	Male	128	47.4
	Female	142	52.6
Race	Malay	182	67.4
	Chinese	7	2.6
	Indian	76	28.1
	Others	5	1.9
Period of involvement	Less than 1 year	197	73.0
	1 to 5 years	63	23.3
	More than 5 years	10	3.7
Information on volunteering activities	Social media	62	23.0
	Polytechnic	86	31.9
	Website	8	3.0
	Program/Carnival	59	21.9
	Others	55	20.4

involved in the disaster field ( $MS = 1.51$ ). This finding also shows that students involved volunteering in various fields of and willing to be involve if they have the space and opportunity.

### Characteristics of Volunteerism

To answer the second research question (Do polytechnic students have the characteristics of volunteering and what is the level based on the characteristics?) a descriptive analysis was made using frequency, percentage, mean score (MS) and standard deviation (SD) and is displayed in Table 6 the following.

Table 6 displays the findings related to the characteristics of volunteerism and students give consent according to the consent scale if they have the following characteristics based on the level of consent. The study found that out of 9 items, there are 4 items at a very high level, namely items C1, C4, C5 and C9. Another 5 items are at a high level, namely items C2, C3, C6, C7 and C8. The highest mean score is for item C1 which is ‘I like to help without expecting a reward/praise’ ( $MS = 4.33$ ;  $SD = 0.73$ ) followed by C5 which is ‘I don’t feel ashamed of the voluntary work I do’ ( $MS = 4.31$ ;  $SD = 0.74$ ) and C4 which is ‘I don’t feel proud of the voluntary work I do’ ( $MS = 4.29$ ;  $SD = 0.70$ ). The lowest score is on item C3 which is ‘I can

**Table 5** Areas of student involvement in volunteering activities

Code	Areas	Frequently scale (Frequency and percentage) N = 270					Mean score	Position
		1	2	3	4	5		
B1	Health	126 46.7	70 25.9	45 16.7	19 7.0	10 3.7	1.95 1.12	8
B2	Disaster	178 65.9	56 20.7	27 10.0	7 2.6	2 0.7	1.51 0.83	10
B3	Education	83 30.7	71 26.3	48 17.8	40 14.8	28 10.4	2.48 1.33	6
B4	Economy	151 55.9	61 22.6	33 12.2	16 5.9	9 3.3	1.78 1.08	9
B5	Culture	112 41.5	73 27.0	38 14.1	30 11.1	17 6.3	2.14 1.24	7
B6	Sport	60 22.2	77 28.5	60 22.2	38 14.1	35 13.0	2.67 1.31	3
B7	Cleanliness	49 18.1	73 27.0	54 20.0	49 18.1	45 16.7	2.88 1.35	1
B8	Religious	68 25.2	59 21.9	48 17.8	37 13.7	58 21.5	2.84 1.48	2
B9	Recreation	78 28.9	70 25.9	53 19.6	36 13.3	33 12.2	2.54 1.35	5
B10	Environment	59 21.9	85 31.5	51 18.9	41 15.2	34 12.6	2.65 1.31	4

<sup>1</sup> Never<sup>2</sup> Sometimes<sup>3</sup> Less Frequent<sup>4</sup> Frequent<sup>5</sup> More Frequent

communicate effectively with other people' (MS = 3.99; SD = 0.80) followed by C7 which is 'I am ready to face difficulties/difficulties' (MS = 4.04; SD = 0.83) at a high level.

This finding simultaneously shows that polytechnic students have good volunteering characteristics, are not ashamed to do volunteer work, are ready to give help without expecting anything in return, like to do volunteer work, feel proud, and are willing to commit in volunteer work.

### Factors of Involvement in Volunteering Activities

To see the factors of students engaging in volunteering activities, to answer the third research question ('Identifying the factors of students engaging in volunteering activities') a descriptive analysis was also made using the number, percentage, mean score (MS) and standard deviation (SD) and displayed in Table 7 follows:

**Table 6** Characteristics of volunteering among students

Code	Items	N = 270 Agreement Scale					MS	SD	Level
		1	2	3	4	5			
C1	I like to help without expecting a reward/praise	3 1.1	3 1.1	16 5.9	128 47.4	120 44.4	4.33	0.73	VH
C2	I like working with individuals who do volunteer work	3 1.1	8 3.0	25 9.3	131 48.5	103 38.1	4.19	0.81	H
C3	I can communicate effectively with others	4 1.5	4 1.5	53 19.6	138 51.1	71 26.3	3.99	0.80	H
C4	I don't feel proud of the volunteer work I do	2 0.7	4 1.5	15 5.6	142 52.6	107 39.6	4.29	0.70	VH
C5	I don't feel ashamed of the volunteer work I do	3 1.1	2 0.7	22 8.1	125 46.3	118 43.7	4.31	0.74	VH
C6	I am willing under any circumstances to do voluntary work	5 1.9	6 2.2	32 11.9	133 49.3	94 34.8	4.13	0.84	H
C7	I am ready to face difficulties/ difficulties	4 1.5	9 3.3	39 14.4	139 51.5	79 29.3	4.04	0.83	H
C8	I do not complain/ raise the volunteer work that has been done	3 1.1	6 2.2	24 8.9	146 54.1	91 33.7	4.17	0.76	H
C9	I am willing to learn something in volunteering commitment	2 0.7	3 1.1	19 7.0	140 51.9	106 39.3	4.28	0.70	VH
Total							4.19	0.58	H

<sup>1</sup> Strongly Disagree<sup>2</sup> Disagree<sup>3</sup> Less Agree<sup>4</sup> Agree<sup>5</sup> Strongly Agree

Details the findings of the study on aspects of student involvement in volunteering activities showed in Table 7. 12 factors are at a very high level and 8 factors are at a high level. The highest mean score is for item D4 which is the factor of students getting involved in volunteering activities because they want to improve their personal skills (MS = 4.52; SD = 0.59), followed by awareness of human values (MS = 4.51; SD = 0.59), understanding the reality of life (MS = 4.47; SD = 0.62), to increase

**Table 7** Factors of students involved in volunteering activities

Code	Items	N = 270 Frequently scale					MS	SD	Level
		1	2	3	4	5			
D1	Fills free time	3 1.1		17 6.3	151 55.9	99 36.7	4.27	0.67	VH
D2	Gain experience	4 1.5	6 2.2	24 8.9	146 54.1	91 33.7	4.17	0.76	H
D3	Increase self-confidence	1 0.4	2 0.7	9 3.3	123 45.6	135 50.0	4.44	0.63	VH
D4	Improve self-skills	1 0.4	1 0.4	5 1.9	112 41.5	151 55.9	4.52	0.59	VH
D5	Increase self-esteem	2 0.7	1 0.4	14 5.2	127 47.0	126 46.7	4.39	0.67	VH
D6	Meet the study requirements	2 0.7	1 0.4	35 13.0	136 50.4	96 35.6	4.19	0.72	H
D7	Seeking emotional stability	3 1.1	6 2.2	22 8.1	126 46.7	113 41.9	4.26	0.78	VH
D8	Understand the reality of life	1 0.4		13 4.8	112 41.5	144 53.3	4.47	0.62	VH
D9	Awareness of human values	1 0.4	1 0.4	5 1.9	116 43.0	147 54.5	4.51	0.59	VH
D10	Getting satisfaction/pleasure	2 0.7	3 1.1	25 9.3	124 45.9	116 43.0	4.29	0.74	VH
D11	Build a network of relationships	1 0.4	1 0.4	14 5.2	123 45.6	131 48.5	4.41	0.64	VH
D12	Responsible for doing it	2 0.7	2 0.7	27 10.0	136 50.4	103 38.1	4.24	0.72	VH
D13	Getting a reward (such as a certificate/ appointment letter)	3 1.1	7 2.6	44 16.3	136 50.4	80 26.9	4.05	0.81	H
D14	A form of appreciation of religious teachings	1 0.4	2 0.7	18 6.7	137 50.7	112 41.5	4.32	0.66	VH
D15	A social responsibility Suatu tanggungjawab sosial	1 0.4	2 0.7	14 5.2	150 55.6	103 38.1	4.30	0.63	VH
D16	Life background factors that need help (current/ before)	3 1.1	6 2.2	32 11.9	146 54.1	83 30.7	4.11	0.77	H
D17	Friend's encouragement	3 1.1	7 2.6	29 10.7	141 52.2	90 33.3	4.14	0.79	H
D18	Family encouragement	6 2.2	6 2.2	25 9.3	134 49.6	99 36.7	4.16	0.85	H

(continued)

**Table 7** (continued)

Code	Items	N = 270 Frequently scale					MS	SD	Level
		1	2	3	4	5			
D19	Government encouragement Dorongan Kerajaan	4 1.5	11 4.1	50 18.5	132 48.9	73 27.0	3.96	0.86	H
D20	Encouragement of Non-Governmental Organizations (NGOs)	3 1.1	12 4.4	46 17.0	144 53.3	65 24.1	3.95	0.82	H
Total							4.27	0.50	VH

<sup>1</sup> Never<sup>2</sup> Sometimes<sup>3</sup> Less Frequent<sup>4</sup> Frequent<sup>5</sup> More Frequent

self-confidence (MS = 4.44; SD = 0.63), to build a network of relationships (MS = 4.41; SD = 0.64), to increase self-esteem (MS = 4.39; SD = 0.67), a form of appreciation for religious teachings (MS = 4.32; SD = 0.66), on the awareness of a social responsibility (MS = 4.30; SD = 0.63), to obtain satisfaction/pleasure (MS = 4.23; SD = 0.72), and fill time free time (MS = 4.21; SD = 0.69), looking for emotional stability (MS = 4.26; SD = 0.78) and being responsible for doing it (MS = 4.24; SD = 0.72). The lowest factor is the encouragement of NGO bodies (MS = 3.95; SD = 0.82) but still in a high level in the interpretation scale. This study shows that students have many factors and motivations that attract their attention and interest to engage in volunteering activities.

### Effects of Involvement in Volunteering Activities

Table 8 describes the findings of the study answering the fourth research question ('Enhancing the effect of engaging in volunteering activities among students'). Data was also analyzed descriptively using numbers, percentages, mean score (MS) and standard deviation (SD).

The study found that all items are very high level overall mean score of 4.34 (SD = 0.57). The highest mean score is for item E5; 'Volunteering activities expand contacts/relationship networks' with a mean score of 4.41 (SD = 0.63). The lowest mean score is for item E3; 'Volunteering activities make me attentive to the needs of other individuals' with a mean score of 4.29 (SD = 0.69). This study proved that volunteering activities have the effect of increasing students' self-awareness, forming a healthy lifestyle, nature of concern for the needs of other individuals, improving skills and expanding contacts/relationship networks.

An Independent Sample T Test was conducted to see the difference in perception of the effects of engaging in volunteering activities based on gender. The analysis found that there was a significant difference in the scores of male students (MS =

**Table 8** Effects of involvement in volunteering activities among students

Code	Items	N = 270 Agreement scale					MS	SD	Level
		1	2	3	4	5			
E1	Volunteering activities increase my self-awareness	2 0.7		14 5.2	148 54.8	106 39.3	4.32	0.64	ST
E2	Volunteering activities shape my healthy lifestyle	1 0.4	3 1.1	16 5.9	137 50.7	113 41.9	4.33	0.67	ST
E3	Volunteering activities make me attentive to the needs of other individuals	2 0.7	3 1.1	17 6.3	141 52.2	107 39.6	4.29	0.69	ST
E4	Volunteering activities improve my skills	2 0.7		14 5.2	141 52.2	113 41.9	4.34	0.64	ST
E5	Volunteering activities expand contacts/networks	1 0.4	2 0.7	10 3.7	127 47.0	130 48.1	4.41	0.63	ST
Total							4.34	0.57	ST

**Table 9** Differences in the effect of self-involvement in volunteering activities based on gender

	N = 270 Gender	N	Mean	Std. deviation	t-Value	Sig
Effect	Male	128	4.25	0.61	-2.398	0.017
	Female	142	4.41	0.52		

4.25, SD = 0.61) compared to female students (MS = 4.41, SD = 0.52) with a value of  $t = -2.398$ ,  $P = 0.017 < 0.05$  and displayed in Table 9. This finding shows that female students are more affected by self-involvement in volunteering activities than male students based on the Mean score but both genders have a very high effect by engaging in volunteering activities.

## 6 Suggestions and Recommendations

From the recommendations and suggestions submitted to get student feedback as well as the open questions provided, this study found that students agree that the younger generation needs to get involved in volunteering activities (97.0%), they are ready to be trained to prepare themselves for volunteering activities (95.6%)

**Table 10** Recommendations and recommendations

Code	Items	Yes	No
F1	The younger generation needs to get involved in volunteering activities	262 97.0%	8 3.0%
F2	The younger generation is ready to be given training/courses in preparation for participating in volunteering activities	258 95.6%	12 4.4%
F3	Volunteering activities need to be adapted to the spirit of the young generation	259 95.9%	11 4.1%

and agree that volunteering activities need to be adapted to the soul of the younger generation (95.9%) as shown in Table 10.

Suggestions and suggestions received through open-ended questions found that students tend to engage in volunteering activities related to religion (program management and course participation), charity activities for cleanliness and cheerfulness (the needy), social service (the poor and homeless), recreational activities, awareness campaigns, support services, expertise, green and environmental activities. The findings of the study also found that volunteering activities need to be implemented through education as early as pre-school up to the highest level. Disclosure and awareness must be given so that all parties, especially teenagers, get involved in volunteering activities, especially during critical situations such as during the Covid-19 pandemic, floods, natural disasters and so on.

## 7 Study Summary

Volunteering activities are a manifestation of the willingness to provide devotional service to those in need without expecting a reward to live well together. Volunteering is the foundation for the harmony of Malaysian family life, strengthening good relations and unity in a multi-racial society. The study shows that students are involved in various fields of volunteering, students have the characteristics of volunteering, have good motivating factors in their participation in volunteering activities and the volunteering activities have had a good effect on students. Polytechnics are also seen as the main source of providing information that leads students to engage in volunteering activities. Even so, students are seen as needing some recognition such as a certificate to help them in their career path.

Polytechnic as a higher education institution that aims to produce quality graduates, has and will continue to play a role in shaping students through various activities including volunteering activities in addition to formal teaching and learning activities to provide students with meaningful experiences, develop a sense of responsibility, increase concern, develop positive values and prepare individuals who can play a role in society after graduation and have a good path in the career world.

## Appreciation

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# Framework of Fundamental Concept Regarding Water Jurisprudence in Islam



Umami Zainab binti Mohd Ghazali and Muhammad Azizan bin Sabjan

**Abstract** Water is one of the most important components in Muslim's way of life. It is used exclusively to cleanse impurities and in ablution, as well as in obligatory bathing in Islam. The principal act of worship in Islam, salat, could not be performed without ablution, which must be done with the presence of water. This paperwork aims to explain in brief term how Islam classifies different types of water according to its source and division, and to construct a basic framework of fundamental concept regarding water jurisprudence in Islam. This study employed qualitative method, with data and statements collected from primary and secondary sources. The end result primes to instill understanding towards Islamic perspective on water, particularly according to Imam Syafie's school of thought. It is hoped that this paperwork will achieve its objective of expanding knowledge and increasing Muslim's general consciousness towards Islamic ruling or fiqh regarding water classification.

**Keywords** Mutlak · Mutanajis · Mustakmal · Musyammas · Qullah

## 1 Introduction

Water (*al-Ma'* in Arabic) as a distinct word is repeated 63 times in the holy Quran [1]. This perennial mention in the most sacred text of the Islamic religion is concrete proof that water holds a very special and crucial role in a life of a Muslim. Islamic sharia or jurisprudence, especially according to Syafie school of thought (or referred to as Syafie madhab), has categorized water into four main groups; mutlak, mutanajis, mustakmal and musyammas. Each of these four groups of water has its own characteristics and criteria, and each category of water differs in terms of function and the legal rulings concerning its use.

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## 2 Method

This study employed qualitative method, with data and statements primarily collected from the main sources e.g., Quran, authentic hadiths (i.e., Sahih Bukhari and Sahih Muslim) rather than commentaries from secondary writers to avoid biasness and inaccurate data or misinterpretation, although selected analyses from authoritative secondary sources are included and cited to enhance the clarity of arguments. This paper is primarily intended to discuss fundamental concept of water jurisprudence in Islam according to the Syafie school of thought and to provide its conceptual framework, which is presented at the end of the paper as an elaborate figure. All other data and findings collected to generate this framework are sorted and discussed in orderly manner.

## 3 Mutlak Water (Absolute Water, Pure and Purifying)

Mutlak water is pure and purifying [2]. It is vastly important for Muslims because only mutlak water can be used for the purpose of purifying oneself from minor or major impurities, such as for wudu' (ablution) or ghusl (obligatory or non-obligatory bathing). Mutlak water is also important for the purpose of removing impurities from body parts, clothing or shoes, in addition to cleaning oneself after using the toilet, washing clothes, and removing impurities, all of which require the usage of mutlak water. Other group of waters could not be utilized for such purposes [3].

Mutlak water derives from natural origin and it historically never comes in contact or mixes with other substances that could jeopardize its original natural state of being. According to Syafie madhab [4] mutlak water includes water coming or originating from the sky such as rain, snow and dew, based on two verses of the Quran [5]. Abu Hurairah reported the following hadith, considered sahih (authentic) according to Islamic tradition of hadith narration, to further solidify the argument that water coming from the sky is pure:

Allah's Apostle (Rasulullah) used to keep silent between the Takbir and the recitation of Qur'an and that interval of silence used to be a short one. I said to the Prophet 'May my parents be sacrificed for you! What do you say in the pause between Takbir and recitation?' The Prophet said, '*I say, O Allah! Set me apart from my sins (faults) as the East and West are set apart from each other and clean me from sins as a white garment is cleaned of dirt (after thorough washing). O Allah! Wash off my sins with water, snow and hail.*' [6] no. 744 and [7] no. 1353.

Besides water that falls down or originates from the sky, earth-bound water covering the sea and the ocean are also considered belonging to the category of mutlak. Dalil (argument) that points towards this understanding comes from this specific hadith from the prophet Muhammad s.a.w, narrated by Abu Hurairah r.a:

A man asked Allah's Messenger 'O Messenger of Allah! We sail the seas, and we only carry a little water with us. If we use it for Wudu' (ablution) then we will go thirsty. So shall we

perform Wudu' from the (water of the) sea?' Allah's Messenger said: *'Its water is pure, and its dead are lawful'* (i.e., they can be eaten without any prescribed slaughtering) (Narrated by Imam Malik [8] in Al-Muwatta, Imam Syafie [4] in Al-Umm, Imam Ahmad [9] in Musnad Imam Ahmad, Abu Daud [10] in Syarah Sunan Abu Daud no. 83, and Al-Hakim [11] in Al-Mustadrak Al-Hakim)

Apart from sea and ocean water, water accumulating inside a well is also regarded as one of the mutlak group, based on this hadith from Ali r.a:

The Messenger of Allah (Rasulullah) upon whom be peace, called for a bucket that contained water from the well of Zamzam. He drank from the bucket, then made ablution (with its water) Imam Ahmad [9] in Musnad Imam Ahmad

And also based upon this hadith narrated by Abu Said Al-Khudry:

The people asked the Messenger of Allah: 'Can we perform ablution out of the well of Buda'ah, which is a well into which menstrual clothes, dead dogs and stinking things were thrown?' Rasulullah replied: *'Water is pure and is not defiled by anything'* Abu Daud [10] in Syarah Sunan Abu Daud no. 66

The well of Buda'ah is an ancient well located in the east of Medina, frequently used as a dumping ground for unwanted and putrid objects such as dog carcasses and menstrual rags. Although it no longer exists, it was still present until the end of the thirteenth century, as it was recorded to have survived during the time of Ibn Taymiyyah [12]. According to Abu Daud [10], the width of the Buda'ah well was six hasta (cubit), and the depth of the lake only reached knee level during the dry spell. During the normal season, the water level of the Buda'ah well could reach the hip of adult men.

Regarding two qullah volume requirement for mutlak water, it is based on the following hadith sahih (authentic) reported by three different compilers:

It was narrated from Abdullah bin Abdullah bin Umar that his father said "The Messenger of Allah was asked about water and how some animals and carnivorous beasts might drink from it. Rasulullah said: *'If the water is more than two qullah, it will not carry filth'*" An-Nasai [13] in Sunan An-Nasai no. 52, At-Tirmizi [14] in Jami' at-Tirmizi no 67 and Al-Hakim [11] in Mustadrak Al-Hakim

From this hadith, it can be inferred that water that has been passed through, used, or consumed by crawling as well as wild animals is considered to be pure and can be utilized for cleaning purposes if it has a capacity of at least two qullah [15]. The measure of two qullah is an indicator that the quantity of water is sufficient to withstand impurities (its amount of two qullah is big enough so much so that it does not carry impurities).

Qullah is a type of water container that was used by the ancient Arab society. Each container was capable of holding a certain amount of water, and the volume of water contained in one qullah was referred to as "one qullah". It was still in use during the time of Prophet Muhammad s.a.w, but two hundred years after his death, people no longer used this unit of measurement [12]. Qullah could be measured by weight, volume, or measurement. The difference in hasta (cubit) measurements will result in varying volumes of two qullah, ranging from 192.599 L, 216 L, to as much

as 447.697 L. The value of two qullah equivalent to 216 L is widely accepted and used by most Islamic scholars until the turn of the century [16]. However, Wahbah Zuhaili [17] leans more towards an estimated volume of two qullah equivalent to 15 tins or 270 L of water, and this opinion is becoming more widely accepted and utilized by many contemporary scholars today [18].

Mutlak water that has mixed naturally with foreign substances resulting in change of its natural state of occurrences is still considered as pure and mutlak, as long as it happens naturally without any outside deliberate actions [17]. Examples are lakes that contain a lot of wood and tree branches that have decomposed and sunk into the water, or rivers that are fed by or located in areas with high salt content, causing the water to have a salty and rough taste. For instance, water in peatland areas usually turns yellow or brown. Some areas that are rich in iron ore deposit may cause their surrounding waters to become blue. All these types of water are still considered mutlak despite the apparent change because the element that causes the change is not impure (not najis) and is naturally occurring.

For pure water that has been mixed with other substances, but not occurring naturally, such as mixing with flour, salt, sugar, coffee, tea, flowers such as roses, fruits such as lime, or nuts, and the substance is pure instead of impure, this situation is called mutaghayyir water. Mutaghayyir water is mutlak water that has changed its nature due to the entry of non-natural but pure substances. Regarding the ruling for mutaghayyir water, attention should be paid to the nature of the substance that has been mixed with the mutlak water and the effect it causes [16]. A change in the properties of water will render it unusable for ablution, although it still can be used for drinking because it is still pure, but it does not purify [2].

## 4 Mutanajis Water (Impure and Non-purifying)

Water that has been contaminated or mixed with impurities is known as mutanajis water. These impurities include human and animal urine and faeces, vomit, blood, pus, carcasses, and anything that originates from dogs or pigs and their offspring [19]. Mutanajis water is considered impure and does not purify, meaning it cannot be used to clean impurities or filth, nor can it be used to perform ablution or ritual purification (it is not purifying). Mutanajis water could be divided into two groups:

- (a) **Has changed** at least one of its basic elements of water, whether smell, colour or taste resulting from its mixture with the impure substances
- (b) **Has not changed** any of its basic elements of water, whether smell, colour or taste resulting from its mixture with the impure substances

Scholars, especially those from the Syafie school of thought, imply that mutlak water that is less than two qullah in volume is considered inadequate in quantity and can be affected by impurities. If mutlak water that is less than two qullah in volume contains impurities, even if the impurities are small and do not change the smell,

taste, and colour of the mutlak water, it will still be considered as mutanajis water and cannot be considered as mutlak water [20].

For mutlak water that is more than two qullah in volume, as long as the impurity (najis) does not change the smell, taste, and colour of the water, it will still be considered as mutlak water. If the impurity changes the original smell, taste, and colour of the pure water, then it will be considered as impure water (mutanajis). This was based from the following hadith by Rasulullah narrated by Ibn Majah:

From Abi Umamah al-Bahili r.a, Rasulullah said *“Water is pure and cannot become impure unless the impure thing is added which changes its smell, taste and colour”* Narrated by Ibn Majah [21] in his Sunan Ibn Majah

Although this hadith is considered weak in status by Ibn Abi Hatim, al-Daraqutni, and Imam Syafie, Imam Nawawi [22] has explained that the consensus of scholars in considering water that has changed in terms of smell, taste, and colour as impure is evidence of the impurity of the water, not this hadith. Imam Nawawi, a grand scholar of Syafie madhab, had explained the following in his great book, al-Majmu’:

If someone wants to clean water that has been contaminated with impurities, the condition of the water should be considered. If the impurity is due to a change in colour, smell, or taste and it exceeds two qullah, then the water is considered pure: because the change will disappear on its own, either because additional water is added to it, or because a portion of it is taken out, since the impurity is caused by the change, and the cause of the change is no longer present [22]

Based on the hadiths from Ibn Umar and Ibn Majah, as well as the statement from Imam Nawawi, it can be concluded that only impure (najis) substances that change the colour, taste, and smell of water can change its status from being mutlak. However, if the substance that causes the change in the water’s colour, taste, and smell is not categorized as impure (najis), it will not change the status of the water, even if the physical change of the water has been apparent and has occurred over a long period of time.

## 5 Mustakmal Water (Pure Water but not Purifying)

From a linguistic perspective, mustakmal carries the meaning of “water that has been used”. In terms of Islamic terminology, mustakmal refers to the state in which a certain mutlak water that has gone through one of the following two conditions:

- (a) Has been used for the purpose of removing minor or major impurities, i.e., whether the water has been used for ablution (wudu’) or full ritual bath, including sunnah bath and obligatory bath (ghusl), or corpse bath (ghusl mayyit).
- (b) Has been used to remove or purify impurities (najis).

According to the views of scholars from the Syafie school of thought, mustakmal water refers to the initial small amount of water used for the first washing in removing ritual impurity. This means that for a full body bath to remove major impurity, only

the water used for the first wash is considered as mustakmal water. As for performing ablution (wudu'), the Qawl Jadid of Imam Syafie (Imam Syafie's fatwa when he was in Egypt, regarded to be his final and most authoritative fatwa) states that only the first wash makes the water mustakmal, and subsequent washes do not make the water mustakmal [4]. The water used for the wash only becomes mustakmal after it has separated from the limb.

The ruling and jurisdiction for mustakmal water stand that it is pure, but it cannot be used to purify [2]. This was based on the following hadith from Jabir bin Abdullah, reported both in Sahih Bukhari and Sahih Muslim:

Allah's Apostle came to visit me while I was sick and unconscious. He performed ablution and sprinkled the remaining water on me and I became conscious... [6] no. 194 and [7] no. 1616

Dalil (argument or statement of fact) that states mustakmal water could not be used to cleanse the body during obligatory or non-obligatory bath (ghusl) is from the following hadith from Abu Hurairah r.a:

Rasulullah has said "*None of you must wash in standing water when he is in a state of Junub*". And Abu Huraira was asked how it was to be done; Rasulullah replied: "*It was to be taken out in handfuls*" [7] no. 283

The term mustakmal can be understood and interpreted as somewhat unpleasant because it has been used to perform wudu' (had contacted human body parts) and to clean impurities. During the time of the companions of the Prophet, they did not collect the mustakmal water even in times of water scarcity. Instead, they performed tayammum. The companions of the Prophet also did not collect the mustakmal water to drink because it was considered repulsive [17].

If a small amount of mustakmal water mixes with mutlak water, it is forgiven. However, if a considerable amount of mustakmal water mixes with mutlak water and the initial mutlak water does not reach two qullah, then it cannot be used to perform ablution. This is based on the majority view of the Syafie's school of thought which states that "*if the amount of mustakmal water is more, it is prohibited; if less, it is not prohibited*" (Imam Syafie, 2004 edition). However, if mustakmal water is collected in one place or in one container until it reaches two qullah, it returns to the status of mutlak water according to the majority of Syafie scholars based on the authentic hadith that states "*two qullah of water cannot be made impure by anything*" [17], as discussed above.

## **6 Musyammas Water (Pure and Purifying Water, but Makruh or Discouraged to be Used)**

Musyammas water is an absolute water (mutlak) that is stored in a malleable container such as iron (besides gold and silver vessels) and the water in this container becomes hot due to exposure to direct sunlight. According to the Syafie school of thought,

musyammas water is considered pure and purifying, but its use is deemed makruh (disliked or discouraged). This was based on the following hadith from Umar Al-Khattab r.a:

Do not bathe with musyammas water because it can cause leprosy [4].

Although almost all authoritative hadith scholars had classified the above hadith as matruk (extremely weak and abandoned) due to the presence of the narrator named Ibrahim bin Abi Yahya, Baihaqi [23] reported in his al-Makrifah that Imam Syafie had stated “*although Ibrahim bin Abi Yahya al-Aslami is a Qadari (adheres to the Qadariyah school of thought), he is a trustworthy narrator in hadith transmission*”.

Rather than solely relying on this hadith to give fatwa, it was highly likely that Imam Syafie deemed musyammas water as makruh (disliked or discouraged) from a medical perspective, as it was possible that he was informed by medical experts of his time that the water stored in musyammas containers could be harmful. This can be inferred from the following statement by Imam Syafie in his book, Al-Umm:

I do not consider musyammas water makruh except from the medical perspective and the view of makruh held by Umar [4]

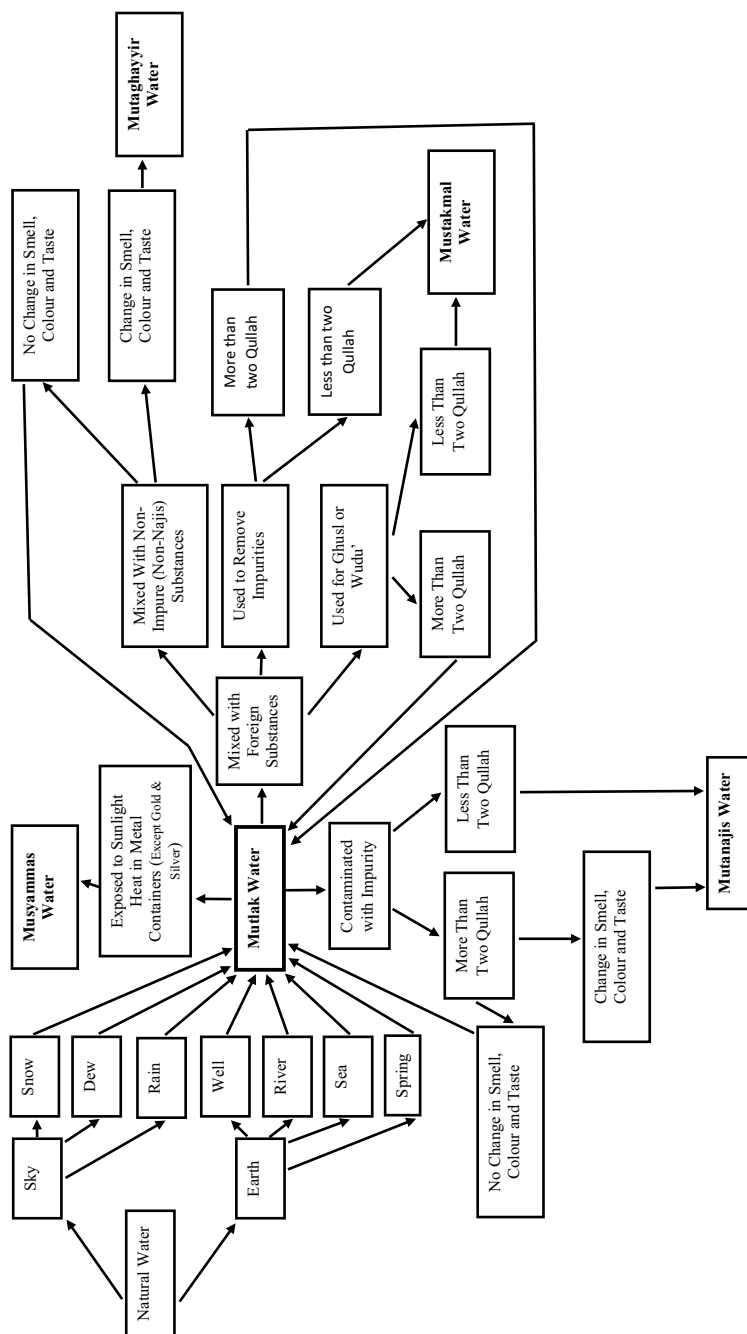
As a result of this, the criterion for the makruh status of musyammas water established by the Syafie's school of thought is that the heat of the water in the container must cause the iron crumbs to float on the surface of the container. The heat of the sun's rays is also limited to countries with extremely hot weather such as those in the Middle East, meaning that musyammas water does not occur in tropical countries such as Malaysia, Indonesia, Singapore or Brunei.

Water of musyammas is only considered makruh (disliked or discouraged) for usage on the body, as it is feared to lead to skin disease (leprosy). However, there is no prohibition or makruh ruling if it is used for non-body related purposes such as for washing clothes. Musyammas water also returns to the original ruling which is permissible (halal) if it has cooled down from the hot temperature. It also does not become musyammas if the container cannot be tempered, such as plastic containers, and it does not become musyammas if the water in the tempered container is heated by something other than the sun's rays, such as by an electric stove.

## 7 Conclusion

The Syafie school of thought has divided the Islamic rulings on water into four main categories, namely mutlak water (absolute water), mustakmal water (water that has been used to cleanse impurities), musyammas water (heated water in a container), and mutanajjis water (impure water), with a sub-category of mutaghayyir water (water that has changed its nature due to the entry of non-natural but pure substance). Based on the detailed and elaborated aforementioned discussion above, a basic framework of fundamental concept regarding water jurisprudence in Islam could be developed, and this is constructed and presented by the Fig. 1.





**Fig. 1** Framework of fundamental concept regarding water jurisprudence in Islam

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# A Representation of the Affective Dimensions of Gurindam Dua Belas for Malay Adolescents in Pekanbaru



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**Abstract** The present era of social instability can be attributed to the dual forces of technological advancement and globalization. This has given rise to various societal issues, including unfair competition, corruption, civil unrest, declining moral standards, and the emergence of new forms of violence. Consequently, there is a pervasive deterioration in moral values, posing a threat to the foundations of modern humanity. Notably, individuals, especially the youth, are increasingly embracing foreign cultures, perceiving them as more aligned with their personal identities due to the ongoing process of modernization. This phenomenon is particularly pronounced in Western societies, impacting the evolution of Malay culture and attitudes. This research aims to illuminate the portrayal of the Malay people and their culture in Raja Ali Haji's Gurindam Dua Belas literature. The study delves into the text's meaning within its cultural and historical context. To make a constructive contribution to intellectual and character development, a comprehensive analysis is conducted. Content analysis is employed as the descriptive methodology, with Gurindam Dua Belas as the primary data source. The study contends that Gurindam Dua Belas imparts cultural and moral values to humanity, with a particular focus on the Malay community. Examples of these virtues include responsibility, submission, attentive listening, advice, respect, affection, and devotion.

**Keywords** Gurindam Dua Belas · Adolescent · Affective dimensions · Representation · Portrays

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## 1 Introduction

Indonesia's rich tapestry of traditions and customs serves as a mirror reflecting the moral underpinnings held by both its government and people. Over time, these guiding principles mature into a societal moral compass and an intrinsic way of life for its residents. These guidelines, in their gradual integration into everyday life, evolve into a repository of accumulated conventional wisdom. As such, it becomes paramount to revive traditional indigenous knowledge among communities such as the Malay people.

A pivotal aspect contributing to the distinctive identity of the Malay people is the paramount importance they attribute to politeness within their culture. In their day-to-day lives, one's character is invariably assessed through the lens of their manners [1].

Given the profound significance politeness holds in the daily existence of the Malay community, they zealously pursue the cultivation of an admirable and noble character, firmly rooted in their faith and piety. Politeness, for the Malays, is emblematic of their faith and piety. The Malay people are celebrated not only for the natural wealth of their land but also for the warm, friendly, and hospitable nature of their populace [2]. This reputation owes itself to the Malay community's unwavering commitment to civility and the pursuit of harmonious coexistence. This global recognition and respect are the fruits of their labor in cultivating politeness from a young age, teaching their children manners to foster well-mannered, virtuous, and noble individuals who possess physical allure and intellectual acumen [3]. This process is meticulously designed to nurture individuals who, through their courtesy, virtue, nobility, charm, and intellect, make constructive contributions to society.

Individual lives are inherently interconnected with those of their families, communities, nations, and states. Association forms an integral facet of life, whether it unfolds in confined or expansive spaces. Consequently, Malay culture provides fertile ground for learning about these interconnections, especially within the context of social interactions involving a multitude of individuals, nations, and tribes. Within Malay society, elders have meticulously harnessed their wealth of knowledge and experience to adeptly gather, refine, categorize, and standardize the high moral standards cherished by Malay society, primarily stemming from Islamic teachings [8]. These values, deeply rooted in Islamic cultural principles, permeate various educational frameworks, ensuring their transmission across generations. They facilitate peaceful and prosperous lives within households, societies, nations, and states, allowing individuals to achieve their defined objectives [14].

Indonesia boasts a diverse array of regional literature that mirrors the nation's rich cultural tapestry through literary expression. One such regional literary treasure is Malay literature. Malay, the language spoken in Malaysia, has ancient literary works that often feature intricate terminology and regional dialects, limiting their accessibility to those residing in specific areas [10]. Language, as a conduit for literary works, is inseparable from culture; thus, it cannot exist independently.

It is relatively rare for literary works' deeper meanings to be rigorously examined from a scholarly perspective. Moreover, understanding the cultural, religious, and moral ideals conveyed by literary works is equally vital. The majority of literary works are deeply rooted in religious beliefs and cultural norms, an undeniable reality. For literary sentences to effectively convey moral messages aligned with cultural and religious values, authors must maintain a profound connection with those values [11].

For instance, examining the works of earlier authors like Buya Hamka, particularly his masterpiece novel "Under the Protection of the Ka'bah," underscores how he interpreted the value of love and loyalty based on Islamic values while upholding traditional norms. The novel portrays the love story between Hamid and Zainab, who face societal disparities but eventually unite in matrimony [13]. Buya Hamka's narrative encapsulates the essence of a relationship founded on Islamic and cultural values, epitomizing Islamic values to the fullest.

Similarly, poetic literary works hold profound significance, ensuring their timeless relevance. In this context, "Tunas Efendi" in "Tunjuk Ajar Melayu" provides a wealth of virtuous principles that can serve as guidelines for a life rich in religious and Islamic values [9]. This work lays the groundwork for a noble Malay identity, provided these values are internalized, integrated, and genuinely practiced. Such individuals exemplify commendable qualities, reliability, skill, wisdom, knowledge, open-mindedness, virtuousness, dignity, and the potential to contribute materially and spiritually to families, communities, nations, and states.

Notably, Rendra Setyadiharja, a young author from Tanjung Pinang, composed a "gurindam" in 2010 titled "Gurindam Mutiara Hidup," a literary masterpiece that comprises 201 "gurindam" stanzas. Previous research suggests that 80 of these stanzas focus on ontological aspects, while 119 center on psychological facets [17]. This phenomenon of regional literature preserving cultural heritage can also be observed in ancient works like Raja Ali Haji's "Gurindam Dua Belas." This text brims with essential messages that continue to resonate with people, particularly the Malay community residing in the Riau region and on the Riau Islands.

The history of Malay cultural heritage narrates that Raja Ali Haji composed "Gurindam Dua Belas" as a dowry for Engku Puteri Hamidah of Penyengat Island. This dowry, crafted from marble, was a profound expression of affection, imbued with strong Islamic undertones. The "gurindam" contains valuable advice, particularly for Raja Ali Haji's immediate community, the Malay populace. This is facilitated by the smooth assimilation of Islamic tenets into Malay social life. In contemporary Malay society, Islam has emerged as the predominant religious tradition [10].

In the modern era of burgeoning communication and information technology, concerns arise over the waning influence of Islamic aspects in Malay community life, partly due to the simultaneous proliferation of social media platforms and the internet [4]. Gurindam, specifically "Dua Belas," represents a style of "gurindam" that has gained contemporary popularity. Raja Ali Haji was instrumental in its development. Gurindam, replete with Islamic guidance, is frequently recited at Malay cultural festivals, bridging the gap between ancient wisdom and contemporary issues. It not only imparts religious teachings but also offers constructive criticism and encourages

constructive behavior. Gurindam serves as an open invitation and sage advice for navigating life's challenges [10].

Furthermore, literary works, particularly poetry, continue to hold profound significance, ensuring their enduring relevance. As an example, this study delves into Gurindam Dua Belas to analyze symbols and meanings encoded within the text's language, literary conventions, and cultural context. The findings suggest that Gurindam Dua Belas embodies a multitude of ethical concepts, encompassing moral values concerning self, interpersonal relationships, and faith in God. Raja Ali Haji's review of the Gurindam Dua Belas manuscripts introduced twelve unique characteristics into the text, spanning teachings on faith, leadership, and "makrifat".

## **2 Method**

### ***2.1 Research Design***

This study employs a qualitative research design, focusing on the analysis of traditional oral poetry genres, specifically Gurindam Dua Belas by Raja Ali Haji.

### ***2.2 Justification for Qualitative Approach***

Qualitative research is deemed suitable for investigations that center around individuals, groups, families, classes, schools, communities, events, or culture [5, 6]. This method, as elucidated by Creswell and Creswell [7], leverages interview techniques to establish a framework wherein respondents can articulate their understanding and knowledge in a context that is personally meaningful to them. It also enables study participants to elucidate cases or situations from their unique perspectives [5].

### ***2.3 Scope of the Study***

This research narrows its focus to the affective dimension of the implementation of Gurindam Dua Belas in the lives of Malay adolescents residing in Pekanbaru City. In a broader context, the concept of emotion encompasses various facets of an individual's life, including attitudes, character, behavior, emotions, interests, and values. The study draws its material from a total of 12 Gurindam Dua Belas poems authored by Raja Ali Haji, with research findings derived from questionnaires administered to 384 Malay adolescents in the city of Pekanbaru.

### 3 Discussion

In a broader context, the concept of emotion encompasses all aspects of human experience that are in some way linked to their attitudes, personalities, behaviors, interests, and values. Within the school environment, students' conduct and attitudes are often assessed based on their emotional states. The emotional aspect remains closely intertwined with cognition, making it generally more feasible to anticipate changes in a person's behavior when they possess a higher level of cognitive ability, although this is not always the case in practice.

Within the realm of the affective dimension, several facets will be examined, all of which are recognized as having the potential to address the research question. Table 1 gives an implementation of Gurindam Dua Belas in everyday life of Malay adolescents in Pekanbaru city.

Based on the survey results presented in the table, it is evident that Gurindam Dua Belas teachings have a varying level of implementation among Malay adolescents in Pekanbaru. Firstly, a significant portion, 57.3% of the respondents, reported occasionally applying Gurindam Dua Belas teachings in their daily lives. This suggests that there is a notable awareness and adherence to these traditional values among a majority of the surveyed population.

However, it's concerning that 8 respondents (2.1%) claimed they didn't know how to put Gurindam Dua Belas teachings into practice. This indicates a potential gap in understanding or communication about these traditional values, which could be addressed through educational initiatives or more accessible resources. On a positive note, 7.3% of respondents mentioned that they very often implement Gurindam Dua Belasteachings. This indicates a strong commitment to these values among a segment of the population, which could serve as an example for others.

Furthermore, a quarter of the surveyed group (25%) reported often using Gurindam Dua's teachings in their daily lives. This suggests that a significant portion of Malay adolescents in Pekanbaru finds value in these traditional teachings and actively integrates them into their routines.

It's noteworthy that 6.3% of the sample, although a smaller percentage, stated that they had never utilized the teachings of Gurindam Dua Belas. This might indicate a

**Table 1** Implementation of the Gurindam Dua Belas in Everyday Life

Implementasi Implementation of the Gurindam Dua in everyday life	<i>f</i>	%
1. Sometimes implemented	220	57.3
2. Not aware	8	2.1
3. Very frequently implemented	28	7.3
4. Implemented often	96	25.0
5. Never implemented	24	6.3
6. Uncertain about implementing the teachings of Gurindam Dua Belas	8	2.1
Total	384	100.0

potential generational or cultural shift where these values are less prevalent or less emphasized.

Lastly, 2.1% of the respondents expressed uncertainty about implementing Gurindam Dua Belas teachings, highlighting the need for clearer guidance or education on how these values can be practically applied.

In conclusion, the survey results reveal a diverse spectrum of adherence to Gurindam Dua Belas teachings among Malay adolescents in Pekanbaru. While a majority occasionally follow these teachings, there are areas for improvement, including addressing uncertainty and increasing awareness about their practical application. This analysis provides valuable insights for educators and policymakers aiming to preserve and promote traditional values among younger generations.

### **1. Emotion and Its Influence on Student Behavior**

In the broader context, the concept of emotion encompasses various facets of human experience, encompassing attitudes, personalities, behaviors, interests, and values. Emotions play a pivotal role in evaluating students' conduct and attitudes during their educational journey. It is imperative to acknowledge that emotions and cognition are intricately interlinked, making it relatively more feasible to anticipate alterations in an individual's behavior when cognitive capacities are heightened, although real-world scenarios often deviate from this premise.

### **2. Emotion's Impact on Student Behavior**

Within the realm of affective dimensions, it is crucial to examine various facets that can offer insights into the issues at hand. These facets hold the potential to provide nuanced answers to the problem statement.

### **3. Emotional Intelligence**

One aspect to consider is emotional intelligence, which relates to an individual's ability to recognize, comprehend, manage, and effectively utilize their emotions. Students with higher emotional intelligence may exhibit more adaptive behaviors in educational settings.

### **4. Motivation and Engagement**

Emotions are closely intertwined with students' motivation and engagement levels. Positive emotions like enthusiasm and curiosity can enhance student motivation, whereas negative emotions like anxiety or boredom may hinder it.

### **5. Interconnected Social and Peer Influence**

The emotional states of students can be significantly influenced by their peers and the social environment within educational institutions. Understanding how peer interactions and social dynamics impact emotions is essential.

### **6. Emotional Regulation**

The capacity to regulate emotions is a vital skill for students. Those who can regulate their emotions effectively are better equipped to cope with challenges and display more prosocial behaviors.



## 7. Cultural and Contextual Factors

Emotions can be influenced by cultural norms and contextual factors. It is imperative to consider how cultural diversity and the educational context affect students' emotional experiences and behaviors.

## 8. Interconnected Nature of Emotion and Cognition

Moreover, it is crucial to acknowledge that the relationship between emotion and cognition is complex and bidirectional. While cognition can influence emotions, emotions, in turn, can affect cognitive processes such as decision-making, problem-solving, and learning.

## 9. Future Research Directions

Future research in this domain should delve into the multifaceted interplay of emotion and student behavior, considering the role of emotional intelligence, motivation, social dynamics, and cultural factors. Additionally, investigating strategies for enhancing emotional regulation skills among students and the implications for educational practices is essential.

# 4 Conclusion

In conclusion, emotions are integral to understanding and predicting student behavior within educational settings. Acknowledging the intricate connection between emotion and cognition provides valuable insights into how emotions influence student attitudes and conduct. Exploring the multifaceted dimensions of emotion in education offers a promising avenue for future research and has practical implications for educators and policymakers.

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# Freedom to Learn in the Novel *Panggil Aku Kartini Saja* and *Cerita Dari Blora* by Pramoedya Ananta Toer: Transformation of Character for the 21st Century



Ahmad Jami'ul Amil, Nor Hasimah Ismail, and Mohammad Syawal Narawi

**Abstract** Putting the novel as an educational function is essential nowadays, making education a tool so that the novel functions as a source of teaching morals and character effectively through learning. So far, the government does not realize that novels by great writers have moral values sourced from historical facts tested by time and age. Enabling the novel so that moral and character education can move optimally and transformatively in independent learning is the primary goal of this study. The *Panggil Aku Kartini Saja* 1962 and *Cerita Dari Blora* 1952 by Pramoedya Ananta Toer are great literary works that contain many characters strengthening through the model of independent learning that can be known through the main character in the novel. This qualitative study was sourced from journals, documents, written sources, and interviews. The data analysis method used content and thematic analysis, while the triangulation method, namely atlas.ti8, was used. The moral theory approach was used in the study to find value education that supports the concept of independent learning through transformative action transformations containing the message of independent learning education through the main character. Freedom to learn in a study that includes character strengthening is independence, prioritizing education, openness, criticalness, responsibility, and courage to defend the truth. This study can be used to reference that the concept of independent learning can be obtained through novels by great writers.

**Keywords** Freedom to learn · Novel · Transformation of character

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## 1 Introduction

A novel is one of the literary works that contain moral values, and until now, it is still relevant as a character education tool. When read and taught, novels can become essential educational tools [1]. As well as technical improvements in teaching in schools, novels can become essential to modelling [19]. It was also expressed by Pulimeno et al. [12] that novels can change a person to have a moral identity, in line with the opinion that school children who read novels can practice the identity of positive moral values when at home and school [9]. When reading a novel, someone will observe the emotions and actions of the character so that action is taken in the form of good and bad judgments to provide lessons that can be used as examples for readers [17]. According to Davies [3], in understanding the novel, the reader is bound by the observation of the story he reads, which also influences the pattern of thought and character. The same thing was also expressed by Mumper and Gerrig [10] that novel stories can change a person's emotions through conflicting characters who can arouse the reader's emotions. The power of the novel, which can deliver the message of character education, is the novel's potential as a transformation of character education.

Since COVID-19 hit all countries, education demands have changed due to changes in learning patterns and learning environments. The data comes from UNESCO [23], which states that the government and schools must change to find a way out because of the current changes in learning. Plus, the disruption of digital technology allows for changes in student learning. According to Rahmatullah et al. [14], digital users continue to increase, so the personal style of students' characters changes. Therefore, the world of education must find a way to stay on the path of holistic education outlined in the legislation, namely, educating students physically and spiritually. Education must have a role in reaffirming learning that touches students' character. Independent learning is also mandated to contain six characteristics: piety, responsibility, cooperation, global diversity, creativity, and innovation.

However, with conditions of rapid curriculum change, many find in the field the need for independent curriculum innovation by teachers. As stated in the study by Elihami and Melbourne [4], teachers need to understand the innovation model of independent learning in education. Freedom of learning brings the impression that teachers are accessible and innovative, following the potential of the school and the environment through project activities that contain moral values and character [15]. Freedom to learn demands a change in students' character towards character development through various relevant sources. The role of teachers and relevant sources must start from the strength of teachers, students and schools to continue to innovate and use all their potential resources.

Seeing the potential of the novel as an educational medium has a role to be improved [6]. The novel is used for reading and technical purposes for education, especially on the role of the independent learning model. The novel could be used as a guide in developing student character education. Character development is always

close to the characters told in the novel. In particular, the novels by the country's greatest writers, namely Pramoedya Ananta Toer in the novel *Panggil Aku Kartini Saja* [22] and *Cerita Dari Blora* [21], contain the freedom to learn about education. Nevertheless, no one uses novels for character development in independent learning. Plus, there is nothing to mention about education in his novel. Most only see the whole, but the focus on moral and character education needs to be noticed. Moral and character education becomes the capital in the development of student character education to support independent learning in the curriculum and appropriate methods in teaching for the development of student character.

## **2 Literature Review**

### ***2.1 Freedom to Learn: Novels as a Source of Character Development***

A novel is one of the literary works that contain the moral value of exemplary. Through themes, content, characters, atmosphere, and plot, the reader can take lessons about the good and the bad that can be learned for lessons in the lives of readers [2]. Freedom to learn opens up extensive opportunities for character development, and one of them is a novel that can be a medium for student character development [18]. Freedom to learn contains a message of developing moral values, which is more for developing student character [7]. Freedom of learning must be progressive and critical; students use any media to realize the character of piety, cooperation, global diversity, creativity, and innovation [13].

### ***2.2 Novel Character: Moral Values Education***

The novel's moral values, especially nationalism and love for the homeland, are in Pramoedya's novel [20]. The educational aspect becomes important when making a novel as a character building for students. In the concept of moral value education theory in the novel, religious education and cultural education become part of making the characters contained in it [16], so that it will bring up the concept of character for the formation of students' personalities. A study on moral values in the novel PAT has been carried out by Faruk [5], which states that the novel Pramoedya contains human moral values. This is also supported by research by Ismail [8] that the novel PAT contains the moral values of honesty, the spirit of progress and responsibility as outlined through a relationship with oneself, humans, nature, and God.

## **2.3 Character Transformation: The Twenty first Century Generation in Novels**

Every era of the younger generation is constantly faced with various changes around them, especially the current generation. The challenge is the rapid development of technology, but also an opportunity if you manage it well. Education has a significant role in being a bridge for the character development of the current generation. The character of the Twenty first-century generation can be directed into the character of nationalism and love for the homeland that comes from moral education through the role of education in the home and school environment. The Twenty first century generation must have a good attitude toward its global character, namely cooperation and respect for differences. Likewise, as stated by Nithyanantham et al. [11], the ability to work collaboratively in groups capable of critical and innovative thinking is a characteristic the current generation needs. These characteristics are due to the educational process driven by the concept of independent learning, namely learning happily without coercion [13]. Transformation of character education refers to the morals and character of the nation and thinks and acts globally towards an advanced and modern nation.

## **3 Materials and Methods**

### **3.1 Research Objectives**

Specifically, this study discusses the freedom of learning in the novels *Panggil Aku Kartini Saja* [22] and *Cerita Dari Blora* [21]. Discussing characters about learning in difficult situations but still being outlined with moral values and character. Moral value education is also discussed to see that the freedom to learn to achieve noble goals is outlined based on morals and character. These two main goals are: to reconstruct the freedom of learning that the characters apply for moral and character purposes in the form of actions that lead to nationalism and love for the homeland. Second, look at moral and character education as seen from the actions of figures who refer to the characters in independent learning, namely education as a medium for building independent learning. These two goals can better understand the novel, not just reading, but to have a progressive role in understanding the freedom of learning in developing morals and character.

### **3.2 Methodology**

This study used a literary moral values approach to analyze two novels by Pramoedya Ananta Toer (PAT). Firstly, reading the novel and examining the moral and character

representations that lead to the development of the character's character through the learning model that leads to independent learning of the character. Here, the primary data collection method used novel textual analysis focusing on the main character. The findings used characters and narratives in which the research object was constructed. While testing the data validity with a focus on the reliability of the analysis of text studies used, the atlas.ti8 tool to see the trend of similarity with content analysis.

### **3.3 Material**

Two novels by PAT as the primary material in this study investigated the character regarding moral education and his character in acting independently in learning based on character development. PAT novels are expected to have a significant role in developing independent learning, one of which is moral and character education in schools. This study will likely find a model of independent learning education based on morals and character traits. The content and construction of this novel are very appropriate because it appears in historical events and the reality which is the basis for the founding of the early independent nation [20]. This material includes characters, moral and character education, and tendencies in learning practices during difficult situations and conditions through independence and learning characters based on morals and character.

## **4 Results and Discussions**

The discussion relates to the main character. Interpreting the phenomenon of the main character through the approach of moral values and literary characters through education reconstructs the character in liberating himself in learning based on morals and character. Characters representing independence learn to develop their knowledge based on their morals and character.

### **4.1 Educational Struggle: Freedom to Learn to Develop Personality and Knowledge**

The figures encourage freedom to learn to develop personality and knowledge, as seen from the figures often found in Kartini [22]. They want more education for the military, Europeans and Natives. "...with the spirit of progress being mounted in Europe [...] and as a link in the chain, Kartini emerged" [22, p. 34], about the spirit of achieving independence through education starting from the family, especially

parents as a family environment. In line with that, Kartini has the intelligence and enthusiasm to read books on the spirit of independence, namely Multatuli's writings [22, p. 26]. The concept of being free to learn about the teachings of cultural wisdom is shown by the character Ibu in [21] "...And sometimes mothers also sing folk songs, Dutch and Arabic [21, p. 6]. Translating independent learning Kartini built the first school in her area, an important city in trade, namely Jepara" [22, p. 35]. Freedom to learn frees children to ask who their god is, and parents explain wisely through example because children see something and give an example "...In a state of not being pregnant, she must pray in her pure white mukenah [...] Sometimes her hand holds a prayer beads" [21, p. 12]. Understanding of religion needs to be instilled and required to seek it through seeking knowledge from the teacher and the right way "why do people pray, Mother?" [...] "When you grow up, you will understand for yourself what it is for. You are still small now. You better just play."

Freedom to learn can be translated into thinking through education, emphasizing reading, thinking, discipline, and the character of progress, modernity, and science in *Panggil Aku Kartini Saja* [22] "Only because he thinks a lot he can see the striking difference between the colonialists and the colonized people. Why is it that other nations can colonize the people and cannot free themselves again? This is probably what caused him to know the strengths that exist in the colonizing nation and the weaknesses of the colonized nation. What is that power? Nothing but progress, modern spirit, science" [22, p. 40]. Making education the key to progress is a form of independent learning, through visionary and awareness about the existence of independent learning itself. "Kartini's father, Raden Mas Adipati Sosroningrat, Regent of Jepara, also wrote in Dutch. One of his writings is a memorandum of protest to the address of the Dutch government on discrimination in education" [22, p. 43]. Freedom to learn is to do something with democracy, nationalism, and love for the homeland, not to discriminate between groups and human races... "Kartini continues the line of progress of her ancestors [...] her worldview has been richer with elements of democracy" [22, p. 49], Kartini's determination of soul and thought creates a continuous path that never ends to learn and do good. Joy is the key to freedom to learn, as the character describes in his dialogue with his parents. "You used to ask to be sent to school. Now don't ask anymore? And I jumped for joy". "Of course, I want more now," I shouted. "When do I go to school, father?" "Tomorrow" [21, p. 29], the emergence of freedom to learn because joy is not burdensome so that his spirit of progress can develop.

Freedom to learn can be seen from the attitude in acting and the firm stance in truth and action, namely Kartini in [22] "[...] Kartini is an honest and brave person" [22, p. 56]. "Having noble actions for oneself and society as the main goal is a form of independent learning, as described by the figure of Kartini. For eternity" [22, p. 59]. Learning is for independence, which is achieved by improving skills. "Swadesi revives the crafts of the villagers. If this can live up to tens of years, Mr Kromo..." [...] One basket cannot be finished by one person in half a day." [21, p. 72]. Freedom to learn to make skills and benefit the community in its role in improving the welfare of the people through education." "There are also many students who have just left public schools, both governors and privates, to enter teacher and carpentry



courses. All my adoptive brothers take care of all this” [21, p, 73]. The importance of understanding skills and competencies in creating skilled human beings not looking for work but creating job opportunities for the community. Independent learning must be filled with increasing knowledge through reading literacy because reading will bring up thoughts, ideas, and skills. “Mom often advises me to follow Kak Hurip’s example in his craft of reading to the extent that in the outhouse, he does not miss his book” [21, p, 78]. The issue of reading is essential today because independent learning requires broad knowledge to know various kinds of knowledge and skills for creativity and innovation.

In the process of independent learning, a person is required to work to produce innovations from his learning project as in the [21] “And he himself has also written volumes of notebooks, [...]” [21, p, 148] Freedom to learn provides the most comprehensive space to develop children’s soft skill competencies. “Ahyat is not a stupid child,” he said. “He’s not a coward either. I know. Hear how steady the piano sounds. And that steady voice would not have been possible had he not had the courage. Listen. He also has subtle feelings – and that is enough to become an artist one day.” [21, p, 200]. Freedom to learn is taught about nationality in schools and the family. “And Sri’s family, who always took teachings on the nationality from school and home relationships, welcomed the arrival of independence with pleasure to the basics. Also, the forest of hardships he faced and entered cheerfully” [21, p, 200]. Merdeka learns to teach about creative innovation and independence.

Sri’s character in learning has her desires because of her circumstances and aspirations to have a higher education. But Sri herself has a great desire to learn. Every night, he borrowed Diah’s books and asked his sister for lessons. He was close to the problems of his own life. And he was worried about what would happen to his younger siblings if they didn’t want to study. This prompted his heart to warn them of each other’s future. The worry was so high. And one time, he took a broom and struck them, shouting: “What will happen to you if you don’t want to study anymore?” [21, p, 241]. Independent learning teaches about learning awareness that arises in oneself from circumstances and situations, so raising awareness of learning is the key to getting out of ignorance and poverty. Whether it is in Kartini’s character that the awareness of learning and reading books arises because of her passion, such as the quote, “So he begged his father to be allowed with his brothers to go to Semarang to study at HBS; he promised to study well; his parents will not be disappointed with him” [22, p, 68], free learns to teach about his ability to think progress and have a vision of progress for himself and the welfare of his community.

#### **4.2 Moral Education and Character of Independent Figures Learn**

Freedom to learn is built on morals and character, meaning that intellectual abilities and skills are based on character and morals instilled in the educational process.

Educating characters equips them to navigate and hone skills starting from the basics of characters with examples and logical things so that children know by thinking, not by frightening them like in the novel *Cerita Dari Blora* [21] “His voice which contains determination softens”: “Lazy is a disease, like an eye disease. He can be contagious. If you go there often, you catch laziness” [21, p. 28]. Studying one of the strategies is to eat less because, in learning, you need to reduce something that makes you lazy, namely eating. Such teachings were taught by the family, especially Mother “[...]”: “Every lazy person likes to eat.” And again, “a character that troubles the people” [21, p. 29]. Liberating education is based on manners and ethics that must still be instilled, such as the Kartini character in [22] “Kartini has a great sense of respect for her ancestors” [22, p. 44], ethics and manners are the essences of education, which must be instilled in the current generation through independent learning.

Moral and character education is in the teachings of wayang and Kartini’s figures have good morals and character and also have innovative and reformist thoughts through the independent learning process in [22] “In wayang stories many give examples: knights who leave name for his son, [...] And wayang stories could not be separated from the life of the Javanese at that time, even part of life itself became a reference for thought and morals, became a psychological pattern [22, p. 51], the teachings of Morals and characters of wayang and knight figures can be taught as character building such as Kartini who gets moral and character education from her parents and family”. Freedom to learn to teach example and character through something that is seen and experienced by children so that parenting really needs to be taught by parents through the reality that children see and feel “And the mother still holds the decency of her household” [21, p. 52]. Moral education and religious character are also very closely related to the characters in [21] “Besides wanting to be a true Muslim, I also want to be a true Javanese” [21, p. 55]. Freedom to learn characters is based on moral values. Furthermore, the character instilled since childhood has progressive progress is moderate, independent, and innovative and is based on noble moral values and character of the family and national culture.

The motivation, enthusiasm, and lessons from the main character Ibu show that the family needs to convey character education to achieve a superior generation with firm words. “She said firmly:” Learn! Don’t delay your studies. [...] “The lessons will never end until you grow up. Go” [21, p. 65]. Adopting moral and character education through the scouting education process is permissible in independent learning because it contains the values of piety, cooperation, responsibility, global diversity, creativity, and innovation [13], “Father told us all to go into scouting. And when there was a bonfire, I saw a line of older people being sworn in as honorary members of the Indonesian scouting nation. [...] And among them was also the father in the uniform of the guide” [21, p. 67]. The characters carry out character and moral development through agricultural and plantation activities and then insert advice for their children, which is very appropriate. Your sweat starts to drip. It will be good for your blood-line and health”. [21, p. 68]. Then: “[...] likes to read thick books like my father, you will know a lot, my son and the sweet potato you planted will eventually have

bulbs” [21, p, 68]. Character and moral education can be instilled through activities and activities that build children’s skills.

The development of the nation’s character through sports becomes an essential point for the character in shaping his personality in [21] “Take care of your body. Playing sports is very important for young children” [21, p, 165]. The character of responsibility and cooperation is based on the education of the nation’s historical knowledge, so freedom to study history education for the nation is essential. “And history,” he said, “must be well known by every citizen. [...] If people don’t know the history of their people—their homeland—it is easy for you to become a foreigner among your people. You get lost easily in your homeland. Tomorrow you must memorize the national anthem and especially the lyrics. Must! Know?” [21, p, 193]. Character education about humanity is instilled in figures about global unity and unity. “It would be nice if we could all live in harmony and peace and not disturb them”, [...] Mini said slowly to herself. “We don’t need to yell at each other. And we’re all brothers.” [21, p, 198]. Through real lessons, awareness of the environment and circumstances gives the characters advanced and innovative thinking. Humanity, equality, modernity, independence, and innovation are built based on the nation’s morals and character through independent learning.

## 5 Conclusion

Freedom to learn was described in the PAT novel long before the government’s policy of free learning was introduced. Novels have great opportunities to develop independent learning through characters who are used as models through their activities based on intellectual abilities, characters who are developed in the characters, and the main goal is to benefit the community. The characters in the two study novels convey progress and prosperity through education and freedom of learning to develop intellectual and character. The character development of piety, cooperation, global diversity, creativity, and innovation are character values developed that can be used as role models in developing character education through an independent curriculum.

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# Applying an Efa to the Prevalence of Arabic-Language Communication in Higher Institutions



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**Abstract** The purpose of this research is to investigate how user acceptance is affected by mobile learning about the acquisition of Arabic language communication abilities. This study investigates respondents' views regarding learning Arabic language communication, specifically through mobile learning. With the help of the Technology Acceptability Model, it was feasible to appreciate the effect that mobile learning had on the acceptance of the technology among the students (TAM). Participants from Malaysian Higher Education Institutions utilised mobile learning for Arabic Language Communication training and answered the User Acceptance questionnaire as a part of their education. Participants were required to complete the programme. According to the data, an improvement in the acceptance rate of students might be attributed, in part, to the use of mobile learning. A study using multiple regression techniques found that six crucial factors influence how well mobile learning is received. The results of this research make a significant contribution when viewed from the point of view of the world's least developed countries, to the expansion of knowledge that has already been accumulated. It provides guidelines for the development of mobile learning applications that can be used by higher education institutions to teach communication skills in Arabic. These applications can be used on mobile devices such as smartphones and tablets. These programs are compatible with various mobile devices, including smartphones and tablets, amongst others.

**Keywords** User acceptance · Technology acceptance model · Arabic language · Language communication · Mobile learning

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## 1 Introduction

Communication is the hardest skill for second language learners to learn. A neurology-based hypothesis can lead to this result, according to Lenneberg (1967). Citation needed Taylor (1974) claims there is no reason for why children learn languages faster than adults. More evidence supports the idea that mature second-language learners can communicate like native speakers from Upshur (1968) and Spolsky (1969). Both investigations were 1960s.

Teaching and learning Arabic has grown in popularity, especially among non-native speakers. Especially for non-native speakers. Many studies and initiatives to improve Arabic language instruction have focused on student education and growth. Many breakthroughs have improved Arabic instruction. Before independence, Malaysia had remarkable success in Arabic language instruction, and the number of Arabic-teaching schools has grown since then. Second-language communication is one of the hardest to learn. A neurology-based hypothesis leads to this conclusion, says Lenneberg (1967). Taylor (1974) believes there is no theoretical reason for children to learn languages faster than adults. Upshur (1968) and Spolsky (1969) show that mature second-language learners can speak like native speakers.

Arabic language education and learning have gained popularity, especially for youngsters whose families do not know Arabic. Students from non-Arabic-speaking parents are disproportionately affected. Recent research has sought to tailor Arabic language instruction to students' prior experiences and academic performance. This has yielded significant Arabic language education and study breakthroughs. Before Malaysia's independence in the eighteenth century, "hut schools" and madrasahs taught Arabic. The Arabic educational system in Malaysia has improved since independence, with some pre-independence advancements. Since then, Shahrizal et al. (2015) have witnessed Arabic language instruction in Malaysia develop significantly. J-QAF operations have led to Arabic in elementary schools, which is expected to continue. Arabic language classes are offered at various levels by the University of Malaya (UM), IIUM, USIM, UniSZA, UiTM, and UPSI. While teaching and learning Arabic has been implemented across different stages of school, language instruction and learning must also prioritise linguistic skills. This uses books, modules, and notes. Language teaching and learning must also focus on language skills, even though Arabic has been adopted at various stages of school.

Researchers are characterising mobile learning in many ways to create a consistent picture. This is because mobile learning has numerous overall elements. Sharples et al. (2007) described mobile learning as "the process of obtaining knowledge through discussions across diverse situations involving humans and personal interactive technologies" using context-based learning. Mobile learning comes from mobility in physical space, technology, conceptual space, and social space, as well as an understanding that learning is distributed over time. This concept informs this explanation. Ally and Prieto-Blázquez (2014) believe that mobile learning demands new skills and a new learning environment for students, particularly engineering students. Sharples et al. (2009)'s comprehensive mobile learning paradigm was

challenging to implement. Mobile learning gives students a fresh learning environment. Learners, instructors, facilitators, and other professionals collaborate on self-directed, customisable, scalable, and adaptable learning. Any education or training that uses ICT is called "mobile learning". Students had more independence in online classes.

Even though kids will have fewer social possibilities with classmates and teachers, Ally and Prieto-Blázquez (2014) advise them to be highly motivated and dedicated to learning. Even though students will have fewer social opportunities with peers and teachers. Internet-based students seek the same results as traditional classroom students, yet they risk incomplete or withheld grades. Mobile technology makes personalised learning better than ever. This helps the correct individual at the right time and place prepare, train, and succeed. Delivering or accessing educational content on mobile devices is not enough to maximise mobile learning.

Mobile learning may evaluate understanding. Mobile learning's most exciting component is studying in a better environment. Martin and Ertzberger (2013) propose a mobile learning paradigm. Student learning theory holds that tailored instruction, real-world application, and ongoing exposure to educational best practices help kids learn. Martin and Ertzberger (2013) shifted mobile learning systems to this paradigm. Student efficacy, efficiency, motivation, and cognitive efficiency improve with this learning technique. Students can relate more when they grasp the subject.

## 2 Literature Review

### 2.1 *Technology Acceptance Model (TAM)*

Within the context of the field of information systems, Davis (1986) constructed the technology acceptance model with the help of TRA. As can be seen in Fig. 2.10, an individual's disposition has an effect on the individual's intention to behave in a particular manner, which in turn has an effect on the individual's perceived ease of use and perceived usefulness. The major objective of TAM was to forecast I.S. adoption rates (Liao et al. 2009), with the intention of discovering design problems in advance of implementation (Morris and Dillon 1997). The fundamental components of the TAM are outlined in this section.

Davis et al. [1] improved the first TAM by removing the attitude variable. They made this alteration. Because attitude did not fully moderate the effect of objective on perceived usefulness, this was done. The TAM was the second most-cited theory in IT acceptability research [2]. The TAM faces obstacles and limits like any other theoretical model. Davis et al. [1] validated the TAM with college students, which severely limited its applicability. Citation needed Lee et al. (2003) and Legris et al. (2003). Second, this model can only explain 40% of people's behavioural intentions, which is inadequate. The TAM's ability to explain observed events can be improved

by increasing the number and type of external variables. Third, TAM variable correlations vary by context. Studies on the effect of perceived ease of use on future behaviour have yielded conflicting results.

TAM has received much empirical support [1]. Around 100 TAM investigations were published in journals, conferences, or technical reports between 1989 and 2001. These papers were delivered at conferences between those years. These studies rigorously tested TAM with varied sample sizes and user groups from the same or other organisations. The data were analysed utilising competing statistical algorithms and models. It applied to email, word processors, groupware, spreadsheets, and the World Wide Web. The TAM was expanded by several research to include gender, cultural norms, years of experience, and self-efficacy. These were examined as predictors. Overall, the study suggests TAM is valid, reliable, and robust. Bibliography needed.

Davis et al. [1] developed and verified PEOU and P.U. scales. He found six highly reliable elements in each construct, with Cronbach's Alpha values of 0.98 for P.U. and 0.94 for PEOU. Research showed that these constructs were measured differently by different researchers. Thus, the number of elements utilised to measure P.U. has increased from six to 50, while PEOU has increased from six to 38. After reviewing the list, we found that measurement item variances between studies tend to adjust TAM to different technologies. The constructs to be measured have similar definitions. Thus, we found that the construct measurement approach did not affect empirical findings on TAM construct relationships.

The empirical data on TAM is inconsistent and inconclusive. One group of studies found that PEOU had no significant effect on T.A., whereas another found that it did. Many studies have shown that PEOU has a bigger influence on P.U. than T.A., while others have found the opposite. Even more confusing, PEOU had a negative relationship with T.A. in some cases but a positive relationship in others when evaluated with different applications. During the same investigation. Various explanations have been presented to explain the contradictory results. However, qualitative and subjective assessments are common. Our view is that these insights must be integrated and synthesised quantitatively and objectively.

## ***2.2 Arabic Language Communication Skills***

Many studies have improved pupils' Arabic communication skills. These studies at Kuala Lumpur National Religious Secondary School use role-playing games to develop Arabic language skills in second and foreign-language learners. Azani et al. (2012) aid Arabic researchers. The survey indicated that respondents' language issues include vocabulary, phonetics, Arabic grammar, and communication methods. Students role-play at an intermediate level. This was based on student opinions on these activities. The study found that students appreciated learning Arabic as a student-centred activity that improved second-language communication. Research's ultimate and most important finding.



Pandian et al. [3] examine halaqah's effects on Arabic language acquisition, classical terminology, and linguistic styles at Malaysia's University of Islamic Science. Graduates of Arabic Language programmes participated. Halaqah involves collective analysis and debate of classical Arabic sources. After that, teachers will have students demonstrate their understanding in class or in small groups. According to research, halaqa findings allow students to actively participate in language class debates and presentations. Instead, this method enables students to express and explore their Arabic values.

Noor Anida et al. [4] studied Arabic language improvement through group activities. Group instruction works well for first-year Malay Arabic majors. Data came from twenty student observations, five student group chats, and five student semi-structured interviews. Research shows that group work enhances language skills. Thus, students can choose from numerous Arabic language activities to fulfil their needs. Students feel more comfortable expressing their thoughts in groups because they practise the target language more. These students have practised the target language more. This means each group member must speak Arabic well. They will also develop communication-related listening skills. Group members must learn to support each other and provide confident, appropriate speeches. The teacher will reward the largest group. The kids learned things not taught in school. In this case, kids have learnt more than instructed.

Malaysian second-language communication was examined by Salih (2016). This study investigates why Malaysian students ignore Arabic classes. This study was done because poor language skills are one of the key reasons students do not communicate. The student may know the topic's components and have enough information in their own language, but Arabic prohibits them from discussing it. Initial causes are psychological: Fear of making a mistake, being teased by classmates, and embarrassing oneself in front of the teacher and other students can create social anxiety. The youngsters will be quiet if the teacher is rude. Teachers who relish pointing out pupils' faults will make learning difficult. Malaysia's atmosphere has little effect on younger, closer learners' speaking dread and shame. Subject matter, considering learner interest or ignorance. Stuttering and stammering are health issues.

Nasser [5] investigates Arabic pronunciation opinions on foreign language transfer. The researcher wants to know how attitudes affect Arabic word pronunciation. This study investigates if Georgetown University's American Arabic students' language skills affect their opinions of native Arabic speakers. Researchers found various attributes of students' negative feelings that may impact pronunciation communication. These include Arabic language instruction and surroundings. Georgetown University randomly selected six first-year students (four girls and two boys). This study gave students a five-point Likert scale accomplishment test and attitude questionnaire. Studies show that pupils who like Arabic speakers and have lived or visited an Arabic-speaking country have the best pronunciation. Negative students or those who have lived in an Arabic-speaking region for a long time have the worst communication skills.

**Table 1** User acceptance questionnaire items

No.	Components	No. of item
1	Perceived ease of use (PE)	6
2	Behavioral intention to use (B.I.)	2
3	Attitude toward using (AT)	3
4	User satisfaction (US)	6

**3 Methodology**

**3.1 Participants**

The intended participants are undergraduate students enrolled in tertiary Arabic language courses at four public universities in Peninsular Malaysia for the 2018/2019 academic year. This study included 140 students who were not natural Arabic speakers. The public university in each peninsular zone was chosen using stratified random sampling. After that, a simple random sample was used to determine which students would respond to the questionnaire.

**3.2 Instruments**

A user acceptance survey administered using a set of questionnaires modified from Davis’ Technology Acceptance Model (1989). This questionnaire was used to gather an interval scale, and students were encouraged to rate each item on a scale of one to ten. Table 1 summarises the distribution of the items:

**3.3 Data Analysis**

The information gathered was classified into four categories: attitude toward utilising the system, actual system use, perceived ease of use, and perceived utility. The IBM SPSS Statistics 25 programme was used to construct the descriptive statistics needed for the data collected. The results were then divided into four unique divisions in accordance with the TAM model.

**3.4 Pilot Study**

Pilot research was conducted on a group of 140 randomly selected students in order to collect data. An exploratory factor analysis was utilised to analyse and evaluate

**Table 2** The KMO and Bartlett's test score

Kaiser–Meyer–Olkin measure of sampling adequacy		0.948
Bartlett's test of sphericity	Approx. chi-square	2063.379
	df	136
	Sig	0.000

the dimensionality of the items characterising the study's construct. The instrument was then subjected to a reliability test to determine its Alpha Cronbach value. The following are the key conclusions from the pilot study:

Exploratory Factor Analysis (EFA) was done on these 17 items to assess Second-order User Acceptance using Principal Component extraction and Varimax Rotation. This revealed Second-order User Acceptance factors. Table 2 shows that the Bartlett's Test of Sphericity can yield significant findings ( $P$ -Value < 0.05). The Kaiser–Meyer–Olkin (KMO) sampling adequacy measure exceeded 0.6, making it exceptional. This shows that the samples represented the population well. The statistical significance of Bartlett's Test and KMO's value of more than 0.6 indicate that the data are sufficient for EFA's data reduction method.

Table 2 shows the EFA analysis results. These findings are summarised in four dimensions or components, along with their corresponding elements. For an object to be retained, its factor loading must exceed 0.5. This need must be met to keep that thing. This means that items in each component must be eliminated because they did not meet the 0.5 factor loading threshold. This need requires 0.5 factor loading. Table 3 shows the items that were kept and those that were rejected because to factor loading below 0.5. These items were rejected because their factor loading was below 0.5. These items were discarded because their factor loading was below 0.5.

As in result, the research needs to determine the value of Cronbach's Alpha, which reflects the level of internal reliability for the items that were chosen to be retained in the measurement of second-order user acceptance. The degree to which individual components of a design can be said to maintain their own integrity over time is referred to as "internal consistency." A value of Cronbach's Alpha greater than 0.7 is required for an item to be considered reliable on the internal level. In Table 4, the Cronbach Alpha was reported for each individual component.

## 4 Discussion and Conclusion

This study's findings will affect Malaysian higher education Arabic language students in important ways. This study illuminated some factors that Malaysian higher education institutions must consider to implement mobile-assisted language learning. Citation needed Citation needed most students agree that studying using mobile applications is a good idea, but they are hopeful about learning Arabic through mobile apps. Because they think studying, using mobile apps is smart, pupils like mobile-assisted

**Table 3** Rotated component matrix

Component	1	2	3	4
PE1			0.845	
PE2			0.829	
PE3			0.888	
PU1			0.864	
PU2			0.867	
PU3			0.926	
AT1		0.893		
AT3		0.701		
AT2		0.915		
BI2	0.909			
BI1	0.637			
US1				0.920
US2				0.861
US4				0.923
US3				0.917
SA1				0.657
SA2				0.772

**Table 4** The Internal reliability for the financial attitude construct

Component	No of items	Cronbach's alpha
1	2	0.752
2	3	0.765
3	6	0.949
4	6	0.927

language learning. Students generally like using mobile devices for language education. Most kids already own technical devices, so they can use them in all aspects of their lives, including school. Smartphone users communicate, do business, use social media, enjoy themselves (listening to music and viewing movies), and play video games. These skills can now be used for education if the students have a learning mobile app. Despite being heavy smartphone users, students intend to practise language communication through mobile apps, another significant finding. Internet and multimedia have made mobile apps more creative, original, and dynamic. Mobile apps for education have garnered interest from the ministry, educational institutions, parents, and students. Mobile applications can help students practise language skills better by giving them the capabilities and functions they need. Mobile apps can also be dynamic, user-friendly, and efficient learning platforms that promote active learning and help foreign language learners acquire higher-order thinking skills.

In addition, this study found that customers are satisfied with mobile apps. They are called digital natives since they were born in the millennium. They prioritise using the latest technologies in their daily life. Digital natives have different information processing and use preferences, tools, and methods. Due to this fact, 21st-century digital natives' educational needs will demand revisions to established language learning pedagogies. Instead of providing information, teachers facilitate and create a student-centered classroom. This research summarises how much students like mobile language education because of these findings. This study provides empirical data on student admission, expanding on previous studies. This study expands on previous research showing that learning a language via a mobile device has several benefits. The apps' perceived simplicity led to a high level of student interest for using them to improve their language skills. It affects youngsters' satisfaction and classroom behaviour. Based on this study, more research is needed to determine what truly influences people's adoption of mobile apps for language learning. This study can be used as a survey and the results inferentially to determine what factors affect mobile app usage.

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# The Usability of Arabic Language Classroom Management Mobile Application Through Fuzzy Delphi Analysis



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**Abstract** The implementation of the Standard Curriculum for Primary Schools (KSSR) and the Standard Curriculum for Secondary Schools (KSSM) has introduced innovation and modification to the Arabic language curriculum. These new curricula introduce the use of *lughatul fasli* (language of classroom management) in teaching and learning. Consequently, the purpose of this study is to evaluate the usability of the e-Lughatul Fasli mobile application for managing Arabic language classrooms. The obtained data were analysed with the Fuzzy Delphi technique. To analyse the fuzziness consensus, a set of usability questionnaires were disseminated to 12 experts who were selected using a purposeful sampling technique. It was discovered that the e-Lughatul Fasli received a high proportion of expert agreement regarding its usability. All usability items have attained unity with a threshold value of  $d \geq 0.2$ , and the proportion of experts in agreement exceeds 80%.

**Keywords** Arabic language · Usability · Mobile application · Language management · Fuzzy Delphi

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## 1 Introduction

The contemporary trend in Arabic language acquisition is focused on oral proficiency. Acquiring proficiency in a foreign language is an advantageous asset for students in order to fulfil the demands of our increasingly interconnected world. The modification, organisation, and adaptation of the curriculum is aimed at facilitating students' comprehension and proficiency in the subject matter. The efficacy of Arabic instruction in educational institutions is contingent upon the competence and function of the Arabic educator within the learning environment, as well as the alignment of their pedagogical approach with the aims and objectives of the Arabic syllabus that has been developed.

According to Yakob et al. (2018), the crux of learning in the teaching and learning process lies in comprehending the subject matter. The teacher aims to elucidate the subject matter to the students in order to facilitate their comprehension. Simultaneously, it is imperative for students to concentrate on and adhere to the continuous teaching and learning process. Currently, students will be directly exposed to terms and expressions that will consistently feature in the teaching and learning process through the utilisation of *lughatul fasli*. Through effective repetition, students can develop the ability to recall and comprehend instructions and actions in accordance with the expectations of their teacher. Regrettably, the teacher's comprehension of the significance of *lughatul fasli* remains rudimentary [1].

The utilisation of *lughatul fasli* is expected to bring about an indirect transformation in the prevailing teaching and learning environment, which conventionally revolves around the teacher. The utilisation of the *lughatul fasli* approach facilitates the implementation of bidirectional interactions, thereby promoting active engagement of students in teaching and learning activities. Thus, the teaching and learning technique has shifted away from a teacher-centered approach, affording students the chance to engage in significant learning experiences.

The study conducted by [1] suggests that there exists a significant correlation between a teacher's knowledge of *lughatul fasli* and their attitude towards its usage. To clarify, educators will utilise *lughatul fasli* provided that they possess advanced expertise. The development and examination of *lughatul fasli* modules have been extensively explored in prior research conducted by scholars such as Yakob et al. (2018), [2, 3]. However, there remains a paucity of research pertaining to the integration of technological components within the *lughatul fasli* module. The advent of information technology has engendered numerous changes in the field of education worldwide, including Malaysia. The utilisation of technology, specifically smartphones, serves to enhance various facets of human existence, including education.

The integration of technology, specifically mobile applications, in the realm of education has proven to be advantageous for both educators and learners in the context of pedagogy. Furthermore, the incorporation of multimedia components [4], such as visual aids, auditory cues, and video materials, has the potential to generate engagement and enhance the drive of educators and learners during the teaching and

learning process. Furthermore, the utilisation of multimedia elements enables the retention of information over an extended duration.

The present study endeavoured to determine the usability of e-Lughatul Fasli mobile application that incorporates multimedia technology components, thereby facilitating the reference to *lughatul fasli* by Arabic language teachers. Furthermore, this application serves as a valuable tool for Arabic language educators to enhance their proficiency in *lughatul fasli* and to cultivate a culture of Arabic language acquisition among their students.

## 2 Research Background

According to [5], *lughatul fasli*, also known as classroom management language, is a succinct and straightforward mode of communication employed by educators to impart subject matter information [3], (Yaakob et al. 2015, 2018). The term “*lughatul fasli*” is utilised by Arabic language educators in Malaysia to refer to a specific aspect of Arabic language education. The term “*lughatul fasli*” is composed of two constituent words, namely “*lughah*” which denotes language, and “*fasli*” which refers to classroom. The combination of these terms results in the phrase “classroom management language.”

The utilisation of *lughatul fasli* by teachers of the Arabic language and students are strongly motivated. [6] and conducted a study on a particular topic said that *lughatul fasli* serves as a tool for enhancing the efficacy of Arabic language education interactions between teachers and students, thereby facilitating their pedagogical objectives. Has identified six distinct categories of *lughatul fasli* in his research on the National Primary Coach for primary school Arabic subjects [2]. While according to a study conducted by [3], the utilisation of a distinct form of *lughatul fasli* by teachers of the Arabic language resulted in a modification of the number of species from six to seven. The discovery was derived from the authors’ examination of Arabic instructors who were present in the *lughatul fasli*.

There exist multiple forms of *lughatul fasli* utilised in succinct communication between teachers and students. The identified types of *lughatul fasli* include greetings (الترحيبات التحيات), instructions (الأوامر), questioning (الأسئلة), praise and reassurance (والاثبات التعزيز), correcting student mistakes (تصحيح الأخطاء), easy expression (العبارات المتداولة), and prohibition (النواهي) [2, 3]. Scholarly attention has been directed towards the practise of *lughatul fasli* by independent researchers, as evidenced by works such as [2] publication, as well as those by [3, 7], and Yaakob Hasan et al. (2018). However, these studies have primarily focused on verbal communication, specifically in terms of voice clarity, correct referencing, and consistent practise.

Numerous studies have been conducted on the development of technology-based modules. For instance, [8] have created learning modules that utilise augmented reality technology. The research additionally incorporates multimedia components, including but not limited to images, videos, and audio. Furthermore, [9] has created interactive multimedia applications for the purpose of facilitating the acquisition of



Arabic language skills. Created an interactive multimedia platform for the purpose of teaching Arabic colocation [10].

Prior research has indicated that the incorporation of multimedia components can enhance the efficacy of instructional resources [8–11]. Furthermore, the utilisation of multimedia has been shown to enhance student motivation [8, 12] and elevate academic achievement [8, 10]. According to recent research, there remains a dearth of studies pertaining to the utilisation of specialised smartphone applications for the purpose of practising *lughatul fasli*. The present study was undertaken with the objective of identifying the usability of a mobile application named e-Lughatul Fasli, which could facilitate the practise of *lughatul fasli* by both teachers and students in various settings, including but not limited to the classroom.

### 3 Overview of E-Lughatul Fasli

The present research involved the development of a mobile application, e-Lughatul Fasli, which was designed to facilitate classroom management for Arabic language teachers in Malaysia. The e-Lugahtul Fasli mobile application was created utilising the Flatter platform and is compatible with the Android operating system. The application encompasses a multitude of primary functionalities, which are expounded upon in the ensuing discourse.

#### 3.1 Main Menu

The primary menu holds significant value in an application as it serves as a navigational aid for users to traverse the application. The e-Lughatul Fasli application's primary menu enumerates the seven distinct categories of language classroom management, namely: (1) greetings, (2) instructions, (3) questioning, (4) commendations and affirmations, (5) error correction, (6) simplified expressions, and (7) prohibition. Users have the option to select their preferred language management approach for use during the process of teaching and learning. The software application features a "favourite" function that enables users to save their preferred language management for future reference. The diagram presented below depicts the primary menu of the application (Fig. 1).

#### 3.2 Interface

This section presents the user interface of the application. In language classrooms, it is common to utilise 3D characters with motion to enhance users' comprehension and



**Fig. 1** Main menu of e-Lughatul Fasli application



**Fig. 2** Interface for asking questions section

provide a more immersive learning experience. In addition, it offers audio pronunciation accompanied by suitable intonation in accordance with the language classroom management. To enable users to precisely imitate the pronunciation. Furthermore, it offers content in three distinct languages, namely Arabic, English, and Malay. The diagrams illustrated below depict the interface of the application (Figs. 2 and 3).

## 4 Methodology

The primary methodology employed in this research is the Fuzzy Delphi method. The Fuzzy Delphi system was developed by Murray, Pipino, and Gigch in 1985. The methodology being employed is a modified version of the Delphi Method, which has been augmented with the integration of Fuzzy Set Theory. The process of Fuzzy Delphi entails a number of procedures that are mandatory to attain expert certification. Furthermore, the Fuzzy Delphi technique employs Binary Terms rating scales ranging from 0 to 1, resulting in increased efficiency and decreased iterations compared to



**Fig. 3** Interface for giving instructions

the Delphi method. The utilisation of the Fuzzy Delphi methodology is expected to yield cost and time savings for researchers in the administration of questionnaires.

This methodology enables specialists to comprehensively express their perspectives, ensure optimal outcomes, and provide unambiguous viewpoints while reducing the frequency of survey iterations. The Fuzzy Delphi methodology ought to accurately reflect the expert's original perspective and portray their genuine response. The study employed the Fuzzy Delphi technique to establish agreement among experts [13] regarding the usability of the e-Lughatul Fasli application. To assess the usability of the e-Lughatul Fasli application, a seven-point system usability questionnaire was utilised as the research instrument. The present study employs a questionnaire to assess the usability of the e-Lughatul Fasli application, wherein participants are asked to indicate their level of agreement with a set of statements. The collected data is then subjected to Fuzzy scale aggregation, and subsequently ranked in descending order.

#### **4.1 Instrument**

The instrument employed in this investigation was derived from the system usability questionnaire developed by [14]. The questionnaire items are centred on evaluating the usability of the system, the quality of information provided, and the quality of the interface. The survey instruments were disseminated among a cohort of 12 subject matter experts, who were tasked with assessing the usability of the application by means of rating the degree of concurrence with the assertions presented in each item. The items are as follows:

1. I am satisfied with how easy it is to use this application.
2. It was simple to use this application.
3. I was able to complete the tasks (searching language instruction) quickly using this application.
4. I felt comfortable using this application.

5. It was easy to learn through this application.
6. I believe I could become productive quickly using this application.
7. This application provides the correct pronunciation.
8. Whenever I made a mistake using the application, I could recover easily and quickly.
9. The information provided with this application was clear.
10. It was easy to find the information I needed.
11. The information was useful in helping me complete the teaching and learning process.
12. The organisation of information on the screens was clear.
13. The interface of this application was pleasant.
14. I liked using the interface of this application.
15. This application has all the functions I expect it to have.
16. This application has all the capabilities I expect it to have.
17. I am satisfied with this application.

## 4.2 *Experts Respondents*

According to [15], Delphi studies do not necessitate a substantial number of experts. The absence of a substantial correlation between the quantity of specialists and the calibre of findings produced by the deliberation cohort is the reason for this. This study exclusively recruited individuals who possess a robust background or expertise in pertinent fields which are teaching Arabic as a second language and instructional technology. It is widely held that these professionals possess the ability to exercise their professional discretion in order to substantiate their viewpoint and arrive at a collective agreement regarding the application's usability. According to [16], the accuracy of results may be compromised when less experienced and knowledgeable "experts" are chosen. Consistent with this assertion, this study employed a sample of 12 subject matter experts as per the criteria outlined by [17]. Regarding this matter, it is deemed appropriate to have a group of 10 to 15 experts, provided that there is a significant level of homogeneity among the chosen individuals. Therefore, the selection of evaluators was based on the subsequent criteria as follows:

1. It is required to hold a minimum of a Postgraduate degree, specifically a master's degree, in the field of Arabic language, educational technology, or other relevant fields.
2. It is required to possess a minimum of five years of experience as an academic or professional in the relevant field.
3. The participant should be capable of maintaining their involvement in the study until its conclusion.
4. The individual in question exhibits a lack of personal agenda and demonstrates impartiality without any indication of personal bias.

The Table 1 below illustrates the details of the subject matter experts chosen for the evaluation process.

**Table 1** List of subject matter experts

Name	Qualification	Expertise	Experience (years)
E1	PhD	-Computer assisted language learning	21
E2	PhD	-e-learning	12
E3	PhD	-Teaching Arabic as a second language	15
E4	PhD	-Arabic language education	20
E5	PhD	-Arabic language education	14
E6	PhD	-Arabic language and literature	16
E7	PhD	-Teaching Arabic as a second language	18
E8	PhD	-Instructional technology	21
E9	PhD	-Instructional technology	20
E10	PhD	-Arabic language	21
E11	PhD	-e-learning	13
E12	PhD	-Instructional technology	24

### 4.3 Data Analysis

To utilise the Fuzzy Delphi method, scholars must adhere to a series of procedures. The Fuzzy Delphi technique's procedural steps are delineated in the literature by [18] and [13].

#### Step 1: Determining the Expert.

The first step involves identifying the individuals who possess expertise in the relevant field. As previously stated, the present investigation selected a cohort of 12 specialists according to the aforementioned criteria. The professionals were tasked with delivering their expert assessment of the e-Lughatul Fasli application in order to arrive at a consensus regarding its usability and appropriateness for Arab tourists visiting Malaysia. Initially, the investigator identified potential specialists via interpersonal communication, participation in research and conferences, and referrals from peers. The researcher utilised various communication channels such as face-to-face interactions, phone calls, and emails to invite potential experts to participate in the research. Upon obtaining consent from the experts, the questionnaires were dispatched via email to each participating expert in this study.

#### Step 2: Selecting the Linguistic Scale.

The second step involves the process of choosing a linguistic scale. The process of translating linguistic variables into Fuzzy numbers is accomplished through the use of a Fuzzy scale. It is a requirement for the linguistic scale utilised in the Fuzzy scale methodology to consist solely of odd numerical values. The present investigation employs a seven-point scale, as illustrated in Table 2.

#### Step 3: Determining the Average Value.

**Table 2** A 7-points fuzzy scale

Linguistic variable (7 points)	Likert scale	Fuzzy scale
Strongly agree	7	(0.90, 1.00, 1.00)
Agree	6	(0.70, 0.90, 1.00)
More or less agree	5	(0.50, 0.70, 0.90)
Neutral	4	(0.30, 0.50, 0.70)
More or less disagree	3	(0.10, 0.30, 0.50)
Disagree	2	(0.00, 0.10, 0.30)
Strongly disagree	1	(0.00, 0.00, 0.10)

The third step involves the process of determining the average value of the Fuzzy scale for each item ( $n_1, n_2, n_3$ ).

Step 4: Determining the Threshold Value ( $d$ ) and Obtaining 75% Expert Consensus.

The fourth step entails the procedure of ascertaining the threshold value and acquiring the consensus of experts. The determination of the level of agreement or consensus among expert respondents for all items in the instrument is contingent upon the threshold value. As per the findings of [13] and Cheng and Lin (2002), in cases where the threshold values ( $d$ ) are equivalent to or exceed 0.2 ( $d \geq 0.2$ ), it can be inferred that the experts have not attained a mutual agreement. As per the findings of Chen (2000), the determination of the threshold can be obtained through the method outlined below:

$$d(\tilde{m}, \tilde{n}) = \sqrt{\frac{1}{3} [(m_1 - n_1)^1 + (m_2 - n_2)^2 + (m_3 - n_3)^2]}$$

The judgement of expert consensus is predicated on the criteria that take into account the level of consensus for each item, which should surpass 75% and be less than or equal to 0.2. According to [13], in cases where the level of consensus falls below 75%, it is necessary to either repeat the Fuzzy Delphi Technique for a second round or eliminate the item in question. One can obtain the degree of consensus by employing the following method:

$$\frac{\Sigma d - \Sigma d}{\Sigma d} \times 100$$

$\Sigma d$  total number of values of the expert's answer threshold.  
 $\Sigma d_1$  total number of ambiguous values that exceed 0.2.

Step 5: Obtaining the Fuzzy Evaluation.

The fifth step involves the process of obtaining the fuzzy evaluation. All Fuzzy numbers are added to determine the aggregate Fuzzy evaluation.

Step 6: Defuzzification (determining the score).

**Table 3** Summary of Fuzzy Delphi technique steps

Steps in Fuzzy Delphi technique	Purpose
Step 1: Determining the number of experts	A group of 12 subject matter experts, each possessing specialised knowledge in their respective fields, were identified and subsequently contacted. The participants were tasked with assessing the veracity and dependability of the collected data
Step 2: Selecting a linguistic scale	The Fuzzy scale was selected to be a 7-point scale
Step 3: Getting the average value	The current step entails the acquisition of the Fuzzy value through the summation of all expert values (d). The variable “d” represents the distance between two Fuzzy numbers that quantify the deviation of the average Fuzzy value from each expert
Step 4: Determining the value of d	The value of the threshold (d) was acquired. The aforementioned statement pertains to the level of agreement among experts. The criterion for determining the degree of expert consensus is a value of $d \leq 0.2$ , with a minimum threshold of 75% agreement required for each item category
Step 5: Fuzzy evaluation process	The procedure entailed acquiring the fuzzy triangular numbers to be utilised in the defuzzification procedure
Step 6: Defuzzification process	The items’ Defuzzification values were ranked in descending order

The sixth step involves the process of defuzzification. The Defuzzification process will help obtain the ranking for each variable. The formula for the process is shown below.

$$nmax = \frac{1}{3} (n1 + n2 + n3)$$

The Table 3 summarises the steps in the Fuzzy Delphi technique.

## 5 Findings

The e-Lughatul Fasli mobile application underwent usability evaluation by a panel of 12 experts, utilising a usability questionnaire. The survey instrument comprises a total of 17 items. Upon the successful return and validation of the questionnaire by experts, an estimation of group consensus was made. The dissimilarity of the two imprecise numbers was determined by quantifying the disparity between the mean imprecise assessment data and the evaluation data provided by the experts. The expert’s consensus on the usability of the application was derived by aggregating the responses provided. This study employed the Fuzzy Delphi method, whereby the evaluation standard for expert consensus was predicated on their joint concurrence. It is imperative that the degree of agreement among experts surpasses 75%, while

simultaneously ensuring that the threshold value ( $d$ ) remains at or below 0.2. Table 4 presents a summary of the outcomes obtained through the Fuzzy Delphi Technique, which reflects the consensus of experts regarding the system usability of the e-Lughatul Fasli mobile application.

The aforementioned table displays the threshold value assigned to each item alongside the percentage of consensus among experts regarding the usability of the e-Lughatul Fasli application. The range of threshold values for each item falls between 0.042 and 0.163. Moreover, the level of agreement ranges from 91 to 100%, surpassing the threshold of 75%. The usability of the e-Lughatul Fasli mobile application has been deemed to have reached a consensus among experts, as evidenced by the attainment of threshold values ( $d$ ) below 0.2 and a consensus percentage exceeding 75%.

**Table 4** Expert consensus through Fuzzy Delphi technique

Item No.	Triangular fuzzy numbers		Fuzzy evaluation				Expert agree-ment	Item acceptance	Ranking
	$d$ value	Consensus value (%)	m1	m2	m3	Skor fuzzy (A)			
1	0.074	100	0.783	0.942	1.000	0.908	Accept	0.911	3
2	0.042	100	0.867	0.983	1.000	0.950	Accept	0.911	3
3	0.102	100	0.733	0.900	0.983	0.872	Accept	0.900	7
4	0.023	100	0.883	0.992	1.000	0.958	Accept	0.875	8
5	0.070	100	0.733	0.908	0.992	0.878	Accept	0.911	3
6	0.102	100	0.733	0.900	0.983	0.872	Accept	0.850	11
7	0.074	100	0.817	0.958	1.000	0.925	Accept	0.588	17
8	0.074	100	0.817	0.958	1.000	0.925	Accept	0.769	15
9	0.163	100	0.733	0.883	0.967	0.861	Accept	0.811	13
10	0.119	100	0.767	0.917	0.983	0.889	Accept	0.906	6
11	0.147	100	0.767	0.908	0.975	0.883	Accept	0.836	12
12	0.095	91.67	0.817	0.950	0.992	0.919	Accept	0.942	1
13	0.068	100	0.767	0.933	1.000	0.900	Accept	0.856	10
14	0.095	91.67	0.817	0.950	0.992	0.919	Accept	0.917	2
15	0.076	100	0.800	0.950	1.000	0.917	Accept	0.794	14
16	0.098	91.67	0.800	0.942	0.992	0.911	Accept	0.758	16
17	0.042	100	0.733	0.917	1.000	0.883	Accept	0.867	9



## 6 Discussion

The present research assesses the usability of e-Lughatul Fasli, a mobile language classroom management application designed for Arabic teachers in Malaysia, through the consensus of experts. Overall, the consensus among experts is that the application is designed with user-friendliness in mind and has the potential to meet the Arabic educators. The defuzzification value of 0.958 indicates that the item with the highest score pertains to the comfortable using this e-Lughatul Fasli among users. This suggests that the classroom language management information provided within the application is meticulously structured. The clear organisation of information provides a positive user experience, enabling users to feel a sense of uniqueness and relevance in their search. The crucial element in maintaining user engagement is the observable and imperceptible interplay between the application and its users. The significance of a positive user experience for teachers cannot be overstated, as it has a direct impact on user acceptance and satisfaction.

The application's perceived ease of use could be enhanced by its user-friendly features, as suggested by the expert evaluation of the e-Lughatul Fasli mobile application. The defuzzification value of 0.878 was obtained for the enjoyment in using the interface's application. This indicates that the majority of experts approve of the e-Lughatul Fasli application's interface. According to the study, the e-Lughatul Fasli application possesses an interface that is interactive, distinctive, and easy to use, which may facilitate the utilisation and navigation of the application by Arabic teachers. The e-Lughatul Fasli mobile application was deemed user-friendly by the majority of experts in terms of information retrieval. The data presented in the application is systematically arranged based on individual states. Additionally, the application compiles a list of language structure according to level of usage popularity. The application has been designed to improve both visible and invisible interactions, thereby facilitating a seamless user experience during information retrieval.

The subsequent element pertains to the capacity to expeditiously accomplish the task through utilisation of the e-Lughatul Fasli. According to the consensus among experts, the e-Lughatul Fasli application facilitates the identification of specific language structure used for classroom management, while the accompanying audio feature assists with the correct pronunciation. The subsequent item pertains to the level of comfort in utilising the e-Lughatul Fasli application. The majority of the experts expressed their concurrence in being at ease with the said application. The reason for this is that the application offers comprehensive information, incorporates numerous user-friendly features, and is accessible to individuals of all age groups without any discernible challenges. The positive impact of utilising the e-Lughatul Fasli application during travel contributes to enhancing teachers' satisfaction levels and promoting user application engagement. The subsequent item on the agenda pertains to the e-Lughatul Fasli application, which has received a satisfaction rating of 0.883. This suggests that the experts have come to a consensus that they are approving the contents in the mobile application. Regarding this matter, it is possible

for Arabic teachers to utilise this application as their primary guide during their teaching and learning process.

The defuzzification value of 0.900 was obtained for the item ‘the interface of e-Lughatul Fasli is pleasant’, while a value of 0.872 was obtained for the statement ‘the user could become productive quickly using the e-Lughatul Fasli application. According to the experts, utilisation of this application enhances user productivity by furnishing information on language classroom management. A defuzzification value of 0.917 was obtained for the phrase “the function users expect to have”. While this was going on, the defuzzification value for “the capabilities users expected to have” was found to be 0.911. According to the findings, the application satisfies all of the requirements that are placed on it by Arabic teachers. Additionally, it offers complete functionality as a mobile application geared towards the education industry.

## 7 Conclusion

This research looked into how well the e-Lughatul Fasli mobile application could be used by Arabic teachers in Malaysia. This application was successfully posted into the Google Play Store, and the usability of the application was evaluated by a panel of 12 industry professionals using the Fuzzy Delphi approach. According to the findings of the research, this mobile application has great usability for Arab teachers, as the consensus scores from the experts ranged from 91 to 100%. As a result, this study offers empirical evidence on the practicability of language classroom management mobile applications by relying on the opinions of industry experts. The experts generally agreed that the e-Lughatul Fasli has a great performance on its usability and that it can be used among Arabic teachers. This study would like to recommend that future studies carry out a qualitative study that specifically employs semi-structured interviews to assess users’ attitudes on the use of the e-Lughatul Fasli application among Arabic teachers in Malaysia and analyse the data using thematic approaches. This is something that this study would want to see recommended for future research. In addition to that, potential future study might conduct a survey in order to determine the level of satisfaction that Arabic educators in Malaysia have with this application.

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# Consumer's Attitude Toward Social Media Advertising, with Special Reference to Facebook in Bangalore City



P. Kumarasamy  and M. Mathiyarasan 

**Abstract** In today's technologically advanced world, media plays an important role in all parts of society. Social media, which is extraordinarily close to the people and regularly extends its clientele, is an unavoidable weapon for increasing its global stature. Publishing products and services is the most crucial aspect of every company's client retention strategy. Social media platforms such as YouTube, Twitter, and Facebook have been increasingly important in this function in recent years for providing corporate advertisements. Facebook is one of the most rapidly developing and frequently utilized social networking platforms. The goal of this research is to examine customers' perceptions of advertisements provided via social media, with a focus on Facebook in Bangalore.

**Keywords** Advertisements · Social media · Facebook user behavior

## 1 Introduction

Marketing professionals are more drawn to social media platforms than other forms of media. Facebook pages are made to influence consumers' purchasing decisions through adverts [1]. Brand perception is thought about a company, its products, Quality, and their evaluation of the brand in the market 2019 (Coleman).

Menon and Soman [2], displaying the ads on their social app boosts the efficiency of their promotion. Marketers can create reports on public intents and frequency of visits. Marketers can use the tools to determine how many times a user has clicked on a specific website and plan their next move.

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Korgaonkar and Wolin [3] investigated the differences among internet users and categories as heavy, medium, and light. Regular and frequent users of web advertising lead to increased purchase intention. Regular internet users report that online ads are more reliable, informative, and interesting. It is useful to the consumers in understanding the features, availabilities, price, etc.

## ***1.1 Objectives***

The main objectives of the study in the research area are as follows. To analyze the demographical factors –age, education, family income, and occupation of the respondents and impacts on customer's attitudes towards advertisement through social media with special reference to Facebook.

## ***1.2 Statement of the Problem***

In today's technologically advanced society, we can't picture living without social media to communicate with others. Social media, particularly Facebook, has become an unavoidable tool for keeping in touch with people these days. It is one of the most potent platforms for online advertising. Online advertising also contributes significantly to business growth. Consumer attitudes are molded by the tools that people use in their daily lives. The instrument that most people utilize in their daily lives is Facebook. As a result, this study seeks to identify the elements impacting customers' attitudes towards social media, with a focus on Facebook in Bengaluru.

## **2 Review of Literature**

Amin and Kaplan [4] in their study 'Investigating the Impact of Facebook on Consumer Attitude' suggests that brand perception does not have a notable gender difference. Their study, suggests that perception on the brand page has an important impact on the attitude of the consumers toward the advertisement in the Facebook. Facebook has taken gender as one of the factors influencing the consumer's attitude regarding perception and intention on the products, services, and its brands in the markets.

Okoe [5]: A study on 'Consumers' attitude towards social media advertising and their behavioral response" indicates that Consumer attitude does not affect their behavioural response. To find the corporate reputation moderates and relationships, they used a hierarchical multiple regression model in their research.

Otugo et al. [6]: A study 'Social Media Advertising/Marketing: A Study of Awareness, Attitude, and Responsiveness by Nigerian Youths" says that youngsters in

Nigeria participate in social media actively. The study further examines the impacts of awareness, attitude, and response to social media advertisements on them and finds that Facebook users are most aware of the reliability of advertisements and provide important information about the products, and services. People enjoy visiting social media ads and their information because it gives interesting new information.

Ioanas and Stoica [7] states that "Social Media and its Impact on Consumer Behavior" Social media pages have an important role in influencing consumers' behavior in the visual environment. There is a close association between income and attitude of the consumers towards online advertisements. It found that youngsters purchase products online especially women who use online purchases and payments.

Vinerean et al. [8]: The article "The Effects of Social Media Marketing on Online Consumer Behavior" says that people who use regular basis, inform about the understanding of students' activities on social media portals. Managers should identify the customers through segmentation.

### **3 Methodology of the Research**

The current research study is based on a natural descriptive investigation. A study was conducted to analyze and comprehend client attitudes toward advertisements delivered via social media, with a focus on Facebook. In the study, a convenient method was used to collect data from respondents. For the interpretation, primary and secondary data were gathered. The total number of respondents in our study is 110. Furthermore, we used the most recent version of SPSS to analyze the data using the percentage and ANOVA tools.

#### **3.1 *Testing of Hypothesis***

1. Ho: No association between gender and attitude towards social media advertisements specifically Facebook in Bengaluru.
2. Ho: No association between age and their attitude towards social media advertising specifically Facebook in Bengaluru.
3. Ho: No association between education and attitudes towards social media advertising specifically Facebook in Bengaluru.
4. Ho: No association between income and attitudes towards social media advertising, specifically Facebook, in Bengaluru.
5. No association between occupations and attitudes towards social media advertising specifically Facebook, in Bengaluru.
6. No association between family income and attitudes towards social media advertising specifically Facebook, in Bengaluru.

## 4 Analysis and Interpretation

**Result.** According to Table 1, male respondents made up the majority of the research (60%), with female respondents accounting for the remaining 40%. Furthermore, Table 1 represents that the demographic aspects of the 120 selected respondents of the study show that male respondents (65%) in the research area outnumber female respondents (35%). It suggests that 42% of the responders are between the ages of 21 and 30. Respondents' education levels are generally degree holders (74%), and employees (24%), and respondents' annual income is between 4 and 6 lakhs (40%).

**Result.** According to Table 2, most of the respondents (above 40%) agree either strongly or slightly with the perception of trustworthy, purchase decisions and

**Table 1** Demographic factors towards advertisements on Facebook

Factors	Description	Frequency	Percent
Gender	Male	65	60
	Female	45	40
	Total	110	100
Age	Below 20	20	18.2
	21–30	42	56.4
	31–40	35	88.2
	Above 41	13	91.8
	Total	110	100.0
Education	Up to 12th standard	11	10.0
	Degree	74	67.0
	Post degree and others	25	23.0
	Total	110	100
Occupation	Farmers	22	23.3
	Employee	24	19.2
	Professional	31	25.8
	Business	12	14.2
	House wife	21	17.5
	Total	110	100
Family annual income	Below 2 Lakhs	17	15.5
	2–4 Lakhs	4	3.6
	4–6 Lakhs	40	36.4
	Above 6 Lakhs	49	44.5
	Total	110	100

Primary data

**Table 2** Frequency analysis of customer attitude factors towards advertisements on Facebook

Factors	Description	Frequency	Percent
Facebook advertisements help in a purchase decision	Str. agree	47	42.7
	Sli. agree	42	38.2
	Neither agree nor disagree	16	14.5
	Sli. disagree	2	1.8
	Str. disagree	3	2.7
	Total	120	100
Facebook advertisement leads to lower price	Str. agree	39	35.5
	Sli. agree	51	46.4
	Nei. agree nor disagree	14	12.7
	Sli. disagree	4	3.6
	Total	2	1.8
Facebook advertisements cause disturbance	Str. agree	58	80
	Sli. agree	40	17.5
	Nei. agree nor disagree	10	2.5
	Sli. disagree	4	3.6
	Total	120	100
Facebook advertisements are trustworthy	Str. agree	103	85.8
	Sli. agree	17	14.2
	Total	120	100

Primary data

lower price information but they agree strongly or slightly towards social media advertisements as a disturbance too.

#### **4.1 ANOVA Test for Gender Attitude Towards the Advertisement**

**Null hypothesis:** H0—No association between gender and their attitude towards social media advertisements, specifically Facebook in Bengaluru.

**Alternate hypothesis:** H1—Association between the gender and their attitude towards social media advertisements, specifically Facebook in Bengaluru.

**Result.** In Table 3, the significant values of all the factors connected to the attitude towards the advertisement through social media are all larger than 0.05. The null hypothesis is therefore accepted in each of these scenarios. The gender mean score and attitudes towards social media advertisement, specifically Facebook, do not



**Table 3** ANOVA test for gender and their attitude towards social media advertisements

Description		Sum. squares	Dg. Fr.	Mean. Sqre	F. Val.	Sig.
Helps purchase decision	Between groups	0.070	1	0.070	0.080	0.778
	Within groups	94.985	108	0.879		
	Total	95.055	109			
Lower price	Between groups	0.009	1	0.009	0.012	0.914
	Within groups	85.891	108	0.795		
	Total	85.900	109			
Makes disturbance	Between groups	0.940	1	0.940	1.767	0.187
	Within groups	57.460	108	0.532		
	Total	58.400	109			
Trust worthy	between groups	0.118	1	0.118	0.384	0.537
	Within groups	33.200	108	0.307		
	Total	33.318	109			

Data SPSS 20

significantly correlate with one another. The conclusion drawn from the study's findings is that the respondents' gender status has no bearing on their attitudes towards social media advertisements.

## 4.2 ANOVA Test for Age Attitude Towards the Advertisement

*Null hypothesis:* No association between the age of the respondents and their attitude towards social media advertising, specifically Facebook in Bengaluru.

*Alternate hypothesis:* H1—Association between the age of the respondents and their attitude towards social media advertising, specifically Facebook in Bengaluru.

**Result.** Table 4 reveals that all of the factors connected to the attitude towards the advertisement through social media have significant values larger than 0.05 based on the SPSS 20 results. In each of these instances, the null hypothesis is therefore accepted. As a result, there is no connection between the age-mean score and the way that people feel about social media advertisements, particularly those that are posted

**Table 4** ANOVA test for age regarding the perception of social media advertising

Description		Sum. squares	Dg. Fr.	Mean. Sqre.	F. Val.	Sig.
Helps purchase decision	Between groups	4.319	4	1.080	1.249	0.295
	Within groups	90.736	105	0.864		
	Total	95.055	109			
Lower price	Between groups	4.240	4	1.060	1.363	0.252
	Within groups	81.660	105	0.778		
	Total	85.900	109			
Makes disturbance	Between groups	1.366	4	0.341	0.629	0.643
	Within groups	57.034	105	0.543		
	Total	58.400	109			
Trust worthy	Between groups	0.891	4	0.223	0.721	0.579
	Within groups	32.427	105	0.309		
	Total	33.318	109			

Data SPSS 20

on Facebook, in general. From the findings, it can be deduced that the respondents' age status has no bearing on their attitudes towards social media advertisements.

### 4.3 ANOVA Test for Education and Attitude Towards Social Media Advertising

**Null hypothesis:** H0—No association between education and attitudes towards social media advertising, specifically Facebook in Bengaluru.

**Alternate hypothesis:** H1—Association between education and attitudes towards social media advertising, specifically Facebook in Bengaluru.

**Result.** In Table 5 shows that the significant values of all variables connected to the attitude towards social media ads are larger than 0.05 (excluding buy decision and trustworthiness). In all of these circumstances, the null hypothesis is accepted. As a result, there is no significant association between the mean score of Education of the respondents, which may not alter the attitude other than purchase decision and trustworthiness towards advertisements through social media, specifically Facebook.

**Table 5** ANOVA test for the education and attitude towards social media advertising

Description		Sum. squares	Dg. Fr.	Mean. Sqre.	F. Val.	Sig.
Helps purchase decision	Between groups	5.216	2	2.608	3.106	0.049
	Within groups	89.839	107	0.840		
	Total	95.055	109			
Lower price	Between groups	3.179	2	1.590	2.056	0.133
	Within groups	82.721	107	0.773		
	Total	85.900	109			
Makes disturbance	Between groups	1.956	2	0.978	1.854	0.162
	Within groups	56.444	107	0.528		
	Total	58.400	109			
Trust worthy	Between groups	2.061	2	1.031	3.528	0.033
	Within groups	31.257	107	0.292		
	Total	33.318	109			

Data SPSS 20

According to the findings, respondents' education has no effect on their attitudes towards social media advertising.

However, education plays a vital part in determining the purchase decision and trustworthiness. According to the findings, respondents' education influences their purchasing decisions and their trust in social media advertisements.

#### ***4.4 ANOVA Test for Occupation Towards Attitude Towards Social***

**Null hypothesis:** H0—No association between income and attitudes towards social media advertising, specifically Facebook, in Bengaluru.

**Alternate hypothesis:** H1—Association between income and attitudes towards social media advertising, specifically Facebook, in Bengaluru.

**Result.** Based on Table 6, it shows that the significant values of all factors related to attitudes towards social media advertising are greater than 0.05. In all of these

**Table 6** ANOVA test for occupation towards attitude towards social media advertisement

Description		Sum. squares	Dg. Fr.	Mean. Sqre.	F. Val.	Sig.
Helps purchase decision	Between groups	3.665	4	0.916	1.053	0.384
	Within groups	91.389	105	0.870		
	Total	95.055	109			
Lower price	Between groups	3.254	4	0.814	1.034	0.393
	Within groups	82.646	105	0.787		
	Total	85.900	109			
Makes disturbance	Between groups	1.414	4	0.354	0.652	0.627
	Within groups	56.986	105	0.543		
	Total	58.400	109			
Trust worthy	Between groups	0.859	4	0.215	0.695	0.597
	Within groups	32.459	105	0.309		
	Total	33.318	109			

Data SPSS 20

instances, the null hypothesis is accepted. As a result, there is no significant association between the respondents' mean occupation score and their attitude towards social media advertising, specifically Facebook. According to the findings, respondents' occupation position has no effect on their attitude towards social media advertising.

#### ***4.5 ANOVA Test for Family Income Towards Perception of Social Media Advertising***

**Null hypothesis:** H0—No association between family income and attitudes towards social media advertising specifically Facebook, in Bengaluru.

**Alternate hypothesis:** H1—Association between family income and attitudes towards social media advertising specifically Facebook, in Bengaluru.

**Result.** In Table 7, it shows that the significance levels of all the variables relating to the perception of social media advertisements are higher than 0.05. The null hypothesis is therefore accepted in each of these scenarios. Therefore, there is no correlation between respondents' attitudes towards advertisements on social media,

**Table 7** ANOVA test for family income in relation to perception of social media advertising

Description		Sum. squares	Dg. Fr.	Mean. Sqre.	F. Val.	Sig.
Helps purchase decision	Between groups	1.043	3	0.348	0.392	0.759
	Within groups	94.012	106	0.887		
	Total	95.055	109			
Lower price	Between groups	4.619	3	1.540	2.008	0.117
	Within groups	81.281	106	0.767		
	Total	85.900	109			
Makes disturbance	Between groups	1.297	3	0.432	0.802	0.495
	Within groups	57.103	106	0.539		
	Total	58.400	109			
Trust worthy	Between groups	1.031	3	0.344	1.128	0.341
	Within groups	32.288	106	0.305		
	Total	33.318	109			

Data SPSS 20

specifically Facebook, and their mean score for family income. The conclusion drawn from the study's findings is that the respondents' family income position has no bearing on their attitudes towards social media advertisements.

## 5 Conclusion

The use of social media advertising to enlighten the public is more well-known and expanding quickly. To keep their current consumers and draw in new ones, the majority of businesses seek to use social media to disseminate information about their new product launches and sales promotions. Meanwhile, bogus news, information exaggeration, etc., have some detrimental effects on social media.

According to the findings of our research in the subject area, we have come to the conclusion that respondents' levels of education are primarily the driving force behind consumers' shifting attitudes in response to Facebook advertisements. The decision-making process for purchases and the evaluation of trustworthiness are both influenced by education. To maintain the trust of the customer, businesses can screen the advertisement material.

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# Augmenting Academic Performance of Accounting and Finance Students Through Integrated Mentoring



Reenu Mohan, S. Indra, and Ch. Raja Kamal

**Abstract** Large amount of higher education institutions have widely used mentoring programmes. As a result, students who desire to improve their academic performance may find that putting these mentorship programmes into practice is one effective learning strategy. The purpose of the mentorship courses is to advance students through educational programmes using an interactive strategy that combines students and academic advisors. Rekha and Ganesh [16] claim that the mentoring programme can train participants in knowledge development, enhancement and learning new skills, positive attitude, and current demands so that they may improve competition and handle challenges in both internal and external environments cautiously. This study aims to investigate how Kristu Jayanti College accounting and finance students perceive mentoring programmes. Along with their undergraduate studies, these students study for professional competitive tests; as a result, they need prompt and ongoing advice, knowledge, and counselling during stressful times. This study is descriptive and cross-sectional. 450 students that were chosen through purposive sampling participated in this study. The study's findings showed that mentorship programmes enhanced the social, emotional, and academic development of accounting and finance students. According to the study's findings, mentorship programmes can help accounting and finance students learn more effectively and improve their academic performance.

**Keywords** Academic performance · Accounting · Finance · Integrated mentoring

## 1 Introduction

The primary duties of a teacher in professional programmes are instruction and mentoring. For the students enrolled in these programmes, mentoring is crucial because they are under a lot of stress getting ready for graduation and competitive

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exams. Mentoring is a special way to help kids build their leadership and learning abilities while inspiring them to pursue their future careers. A mentor is a person who actively tutors, coaches, and guides another person to develop their skills. Both psychological and career-related duties are carried out by mentoring. To address this, the professional accounting and finance department at Kristu Jayanti College has a mentorship programme wherein each faculty member is designated as a mentor for 30 students in a class. The mentors interact with the students to listen to their concerns and offer advice on their overall personality development. Questioning the mentee and providing timely feedback help him eliminate his blind spots and develop his self-awareness throughout the listening stage. Undergraduate students who struggle academically are mentored, and troublesome individuals are assisted in resolving academic, extracurricular, and personal issues. This attempts to proactively identify student population issues and serve as a conduit between students and the college administration by bringing their concerns to the attention of the relevant authorities. It assists students in building a seamless transition from university life to professional life and helps them comprehend the potential and challenges of their life both within and outside of college.

Lewinson defined a mentor as a teacher, sponsor, counsellor, skill and intellect development, host guide, role model, and most crucially, a supporter and facilitator in the realization of the young person's vision for the kind of life he or she wants to lead as an adult.

A successful mentoring programme initially establishes a good mentoring relationship before concentrating on influencing the required behavioural changes. Both formal and informal, structured and unstructured mentoring processes are possible. The three key steps of the mentoring process are communicating, empowering, and helping. Increasing the mentee's autonomy and freedom of action is the goal of empowerment. The mentor ought to inspire the mentee to be independent and innovative.

Before focusing on influencing the necessary behavioural changes, an effective mentoring plan first creates a strong mentoring relationship. It is feasible to use formal and informal, structured and unstructured mentoring techniques. Communication, empowerment, and assistance are the three main components of the mentoring process. Empowerment aims to increase the mentee's freedom of choice and autonomy. The mentor should motivate the mentee to exercise independence and creativity.

By fostering healthy study habits and providing a supportive and collaborative environment for effective teaching, learning, research, creativity, and ideation, mentoring programmes assist students in actively directing their learning in higher education. These initiatives support students' growth as more self-assured, independent learners. Mentors assist mentees in integrating classroom information into real-world situations and in turning life experiences into educational opportunities. By assisting students with their schoolwork and promoting the use of libraries and other research resources, mentoring programmes enhance academic abilities. Mentors play a crucial role in fostering students' desires for higher education, assisting them in



becoming ready for the workforce, and offering advise on how to successfully transition from high school to their first year on campus. Students also experience a greater sense of community and engagement while on campus, which may ultimately boost their performance.

Mentors also give students the emotional and psychological assistance they need to succeed and develop in their jobs. Building a mentorship framework provides advanced education to help students become researchers, politicians, and professionals in the public and commercial sectors engaged in the twenty-first century's complex globalized economy. Enhanced mentorship also functions as a strategy for self-improvement whereby one person helps another person develop by sharing resources, ideas, knowledge, expertise, values, skills, views, attitudes, and proficiencies as well as professional competence. It enables the learner to advance their job chances while developing their knowledge and abilities.

### ***1.1 Mentor***

A non-parental, capable, and reliable person who intentionally assumes personal responsibility for the major developmental advancement of another human is described as a mentor [3, p. 1]. A mentor is thought of as a teacher, counsellor, experienced advisor, dependable ally, and someone who advises, corrects, and helps the students succeed. A mentor assists pupils in discovering and developing their own potential for success in school and in life. Respectful, dependable, patient, trustworthy, and a skilled communicator are all qualities of an excellent mentor.

**Mentee** The mentee is the one who receives aid from the mentor, according to Cohen [3].

### ***1.2 Mentor–Mentee Relationship***

Results of mentoring programmes are influenced by both the mentor–mentee connection and the program's goal. A committed mentee and a competent mentor go hand in hand. Regardless matter where the path takes each mentor–mentee, it is based on trust, understanding, respect, and compassion in every mentoring relationship. Spending time together and exchanging ideas help the mentor–mentee connection develop [12]. By spending time together, the mentee gains confidence in their ability to teach and conduct research based on the mentor's input.

Through a carefully planned mentoring process and educational experience, it is possible to help students develop their abilities, skills, values, and attitudes. These frameworks have the power to alter a young person's views towards the educational system, their perception of their level of academic ability, and their motivation to improve.

Given that both parties can bring expertise to the relationship, the roles of mentor and mentee may overlap. The mentoring experience is improved when there is knowledge exchange between the mentor and mentee.

## **2 Benefits of Mentoring**

1. It boosts pupils' self-confidence and pushes them to attain higher levels by encouraging them to set higher goals and take calculated risks.
2. Individual affirmation and motivation.
3. Availability of psychosocial support when required.
4. Regular guidance/discussion and exchange on juggling academic and professional obligations.
5. By fostering interpersonal skills and assisting students in succeeding in competitive contexts, mentors serve as role models and promote leadership.
6. Students have access to a support network (Mentors) at critical junctures in their intellectual, professional, and academic development.
7. Students learn how to steer their career in the appropriate direction from insiders.
8. Students are exposed to varied scholarly and professional viewpoints as well as experiences in many sectors.
9. The mentees have direct access to strong resources within their field of study or line of work.
10. The mentors lay the foundation for the students to reach greater heights in their professional lives—thereby contributing to lasting personal and professional relationship.

## **3 Models of Mentoring**

In the conventional mentoring model, a senior mentor aids a junior mentor in navigating their respective professional paths. These connections might be official or casual, pre-arranged by a department or chosen by the mentee themselves. They may be time-limited or persist for many years.

A junior faculty member has a mentoring panel or committee that meets once every four to twelve months. With this approach, the mentee can receive a variety of advice from a number of knowledgeable mentors all at once.

## **4 One-on-One Mentoring**

In the conventional mentoring model, a senior mentor aids a junior mentor in navigating their respective professional paths. These connections might be official or casual, pre-arranged by a department or chosen by the mentee themselves. They may be time-limited or persist for many years.

## **5 Mentoring Panel**

A junior faculty member has a mentoring panel or committee that meets once every four to twelve months. With this approach, the mentee can receive a variety of advice from a number of knowledgeable mentors all at once.

## **6 Functional Mentoring**

This entails a mentoring relationship that is project-focused, where the mentee selects a mentor to help with the development of a particular skill or a pre-established project. For instance, creating a fellowship programme, a clinical programme, a funding submission, or a well-focused paper.

## **7 Peer Mentoring**

This often takes place in a group setting where professors with comparable training, experience, or rank get together to discuss experiences, collaborate on projects, or get feedback. These could include casual lunches, peer support groups, professional job counselling sessions, or writing support groups. Peer mentorship is when one person offers another information or advice with the expectation that they will return the favour [11].

## **8 Group Mentoring**

There may be numerous levels of mentors and mentees, each with a different rank and level of experience. In a group environment, one to three senior faculty members frequently mentor a number of junior academics. They have a flowing discourse in which they exchange experiences, concepts, and advice. It is beneficial to shift the burden of mentoring on the few senior faculty members.

**Reverse mentoring:** Also called as Backward mentoring, which involves older managers being mentored by younger staff members, is becoming a more popular alternative, particularly in fields where younger employees may be more knowledgeable, including diversity [7] or technology.

## 8.1 External Mentoring

The process of pairing high potential individuals with mentors outside their organisation is known as external mentoring. However, due to their distance from the mentee's organisation, external mentors may be seen as more unbiased and secure confidants [14]. A formal mentorship programme is less likely to offer this kind of external coaching.

**Mosaic mentoring:** Academic medical professors may need a variety of mentors throughout their careers to achieve the multi-dimension mentoring required. Mosaic mentoring can be understood as a landscape of career mentoring for a single faculty member or as a particular kind of group mentorship.

A broad collection of people from various positions, ages, genders, races, abilities, and experiences join together in a non-hierarchical community for mosaic group mentoring. Collaboration, lessening the burden on mentors, combining small pools, and success in both minority and gender mentoring are all advantages.

## 9 Literature Review

Similar to other researchers, Cohen [3] identified six behavioural functions of the mentor role, including relationship building and information sharing, a facilitative and then confrontive focus that promotes reflection and alternative thinking, modelling, and the prompting of a vision so that the protege begins to take initiative for independent growth and learning. Mentors perform a variety of tasks and duties, including at times walking in a supportive stance behind students, acting as a guide up front, speaking with students directly while listening and asking questions, and lastly standing "shoulder to shoulder... as companion, ally, and [fellow] learner." [5, p. 64].

Similar to other researchers, Cohen [3] identified six behavioural functions of the mentor role, including relationship building and information sharing, a facilitative and then confrontive focus that promotes reflection and alternative thinking, modelling, and the prompting of a vision so that the protege begins to take initiative for independent growth and learning. Mentors perform a variety of tasks and duties, including at times walking in a supportive stance behind students, acting as a guide up front, speaking with students directly while listening and asking questions, and

lastly standing “shoulder to shoulder... as companion, ally, and [fellow] learner.” [13].

## ***9.1 Review of Literature***

For career development, a mentor can provide sponsorship, exposure, visibility, and coaching. The mentor may provide connections and introductions to others in the profession to help the mentee seek employment and advance in the institution and his or her career. The mentor can suggest conferences, journals, courses, and training programs; impart knowledge of appropriate methods; guide research; and supervise writing of manuscripts and dissertations. In the psychosocial function of mentoring, the mentor provides role modeling, social acceptance and confirmation, emotional support, counseling.

Regarding a generally acknowledged definition and method, there are differing opinions on mentoring. There is still much to learn about the antecedents, results, qualities, and mediators of mentoring relationships despite the fact that there is an expanding corpus of empirical study on the subject.

Despite the ambiguity surrounding mentoring, there have also been differences of opinion regarding the right amount of age separation between the mentor and mentee, the length of the mentorship, and the degree of intensity or closeness that should define the mentoring relationship. Separating the effects of mentoring and relationships between students and teachers have also been discussed in the literature.

The influence of student-faculty interactions has been linked with several developing models to form a theoretical basis for identifying student persistence and institutional factors that influence a student's decision to remain enrolled in college, including Tinto's [18] Model of Student Integration, Bean's [4] Student Attrition Model, Nora, and Cabrera's (1996) Student Adjustment Model, and Astin's [1] Student Involvement Theory. Student-faculty interactions have shown to contribute to social integration and satisfaction of students [2, 10, 15, 17]. Through student-faculty interactions, it is possible for aspects of mentorship to be experienced and examined in research.

## **10 Objectives**

During the college days the students usually face the social isolation and adjustment issues, hence they are vulnerable on feelings of anonymity in the crowd. They have doubts and skeptical behavior regarding campus connections, involvements and satisfaction. A long term mentoring is essential for these high risk individuals to retain them. The objective of this research article is:

To determine the impact of mentoring on the accounting and finance students.

**Table 1** Mentoring methods and procedures

Characteristics of mentoring session	Options	Percentage (%)
No of mentors during academic studies	One mentor	65
	Multiple mentors	35
Overall duration with same mentor	Less than 6 months	3
	6–12 months	13
	One year	21
	More than one year	63
Frequency of meetings	Multiple times in a week	8
	Weekly	25
	Monthly	61
	Whenever required	6
Mode of mentoring	Online	41
	Face to face	59

To determine the perceptions of the accounting and finance students towards mentoring.

#### Hypothesis

- Mentoring helped students for career progression
- Mentoring enables students in Personality development
- Mentoring provides encouragement to manage stress related to studies.

## 10.1 Research Design

Mentoring, Awareness, and Perceptions Survey (URE MAPS) tool included both closed-ended and open-ended questions to allow for a more complete understanding of the four constructs stated above. Participants answered 22 questions on a Likert scale out of 30 questions. Three binary (yes/no) questions and five open-ended questions composed the remaining eight questions as mentioned in Table 1.

## 11 Multiple Regression Analysis

### 11.1 Introduction

Multiple Regression Analysis is statistical technique that can be used to analyze the relationship between single dependent variables. Awareness of the scheme and two independent variable that is Gender and Age. We analyzed how gender impacts value of Personality Development in students after undergoing mentoring.

H0—There is no significant association between gender and level of personality development in students after mentoring.

H1—There is significant association between gender and level of personality Development in students after mentoring.

Coefficients <sup>a</sup>					
Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
1 (Constant)	1.333	0.216		6.160	0.000
Gender	0.133	0.146	0.072	0.914	0.365

<sup>a</sup> Dependent variable—personality development

Model summary				
Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.131 <sup>a</sup>	0.017	-0.003	0.50553

<sup>a</sup> Predictors: (constant), gender

ANOVA <sup>a</sup>						
Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	0.213	1	0.213	0.835	0.365 <sup>b</sup>
	Residual	18.267	75	0.256		
	Total	18.480	37			

<sup>a</sup> Dependent variable: personality development

<sup>b</sup> Predictors: (constant), gender

Interpretation

Multiple Regression Analysis was carried out with Personality of respondent as dependent variable and gender as independent variable. ( $\beta = 0.072$ ,  $t = 0.914$ ,  $p > 0.05$ ) and it is clear from the table that gender does not influence the level personality development of the respondent at 5% level of significant. Since  $p$ -value is more than 0.05, we reject the alternative hypothesis and accept the null hypothesis as mentioned in Table 2.

The data presented in Table 2 demonstrates that there is a significant positive relationship between the mentoring and learning readiness among the mentees.

**Table 2** Correlation Matrix between mentoring and learning readiness among mentees

	1	2	3	4	5	6	7	8	9
Motivation to learn	0.45	0.44	0.39	0.61	1				
Social skills	0.68	0.73	0.57	0.65	0.68	1			
Emotional skills	0.02	0.06	0.04	0.18	0.19	0.19	1		
Well being	0.23	0.38	0.97	0.33	0.37	0.52	0.01	1	
Self directed learning	0.38	0.44	0.46	0.38	0.30	0.49	0.01	0.46	1

12 One Way ANOVA

Introduction; The one way analysis of variance is used to determine whether there are any statistical significant differences between the means of Career growth after Mentoring. The objective of this test is to analyze if mentoring helped students for career progression.

13 Hypothesis

- H0—There is no significant relationship in Career growth after Mentoring.
- H1—There is significant relationship in Career growth after Mentoring.

13.1 Interpretation

From the results it is noted that there is a significant progression after Mentoring sessions and the sig level is less than 0.05 hence accepting Alternative Hypothesis and rejecting Null hypothesis as mentioned in Table 3.

**Table 3** One-way ANOVA

ANOVA					
	Sum of squares	Df	Mean square	F	Sig.
Between groups	0.313	5	0.063	0.236	0.001
Within groups	11.687	71	0.266		
Total	18.000	76			



## 14 Conclusion

When done well, mentoring practices have the potential to change people for the better and hence boost productivity. Using an interactive technique that mixes students and academic advisers, the mentorship courses' goal is to advance students through educational programmes. The mentees' view of psychological support and support in academic and non-academic matters lends credence to the mentors' successful performance of their duty. The majority of mentors and mentees concurred that the allotted time for a mentoring session was sufficient. Additionally, mentees recommended that the mentor be kept on throughout the student's time in college, preferably from the first to the last year.

As needed by the mentee, additional mentoring sessions should be scheduled. It would improve the quality of the mentor–mentee relationship if group outings with the mentor and mentee were organized as informal mentoring sessions. This study's generalizability might be constrained by a number of variables. First, since it may be less applicable to students in other streams or post-graduate programmes, we concentrated on how undergraduate accounting and finance students perceived mentorship. Second, it would be easier to generalize the results if there were larger samples from different cities. Mentors should receive training and attend workshops on motivational interviewing techniques, developing competence, problem solving and communication techniques since they require advice on what to say. A successful mentoring relationship is one in which the mentors serve as role models for their mentees through spending time together, listening intently, communicating clearly, being helpful, and empathetic.

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# Consumer's Awareness of Green Marketing Practice—An Empirical Study



P. Kumarasamy  and R. Vijaya Kumar 

**Abstract** Marketing products in a way that promotes environmental sustainability for the benefit of future generations is known as green marketing. Many different processes are included in green marketing. It entails modifying technology, the way things are produced and chosen, the packaging's sustainability, and the way advertisements are used to promote products. The voyage of green marketing is examined in the current study, along with corporate awareness of it, strategies employed by them, and eco-friendly ideas such as product recycling and environmental pollution prevention. This study aims to look at the variables that Tiruchirappalli City consumers in their decision-making process when purchasing green products.

**Keywords** Consumers · Green marketing · Green products · Marketing awareness

## 1 Introduction

Marketing is the all-encompassing activity of recognizing and satiating the needs and wants of consumers and potential consumers. It goes beyond incorporating a green tint onto websites, designing products and packaging with green, or even adding a green theme to brand names.

Environmentally friendly procedures and packaging are used for product manufacturing and presentation as part of a company's broader efforts to eliminate processes that are harmful to the environment. Consumers' top priorities now are environmental protection and fostering a safe living environment. In response to these customer views, businesses have begun to develop "green marketing" as one of their marketing techniques. In today's competitive world, environmental issues are

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becoming widely discussed. The purpose is to find the consumers' awareness about green marketing in Tiruchirappalli City.

Market changes and development are influenced by consumer awareness and development. New products, particularly green items, raise customer awareness and encourage positive thinking about environmental protection. Developing countries such as India are a little further away from a green environment due to a lack of awareness about global warming issues that affect their riches. The green movement is a new one that reaches out to consumers in order to achieve environmental success.

### ***1.1 Need of the Study***

It is to ascertain consumers' awareness of green advertising and green products in Tiruchirappalli, to look into the variables that affect consumers' purchasing decisions regarding green products, to identify the challenges that consumers face, and to find out what motivates consumers to spend more money on environmentally friendly goods.

### ***1.2 Objectives***

It is to study the age, gender, education, family annual income, and occupation of consumers and to find the factors that influence the buying decision of green products. Further, this study attempts to analyze the consumer's awareness regarding green environments, environment sustainability, and green environment product availability.

## **2 Review of Literature**

Manida and Nedumaran [1], the study titled "The Theoretical Study of Green Marketing in Tamil Nadu: Its Importance and Challenges" concludes that Green marketing raises standard security by instilling concern about environmental conservation. Business people must incorporate environmental issues into all elements of the business and its functions. The time when consumers make purchasing decisions for commodities for their living systems, consumers must distinguish between green and non-green products.

Nedumaran and Manida [2] study titled "Green Marketing on Customer Behaviour Towards Usage of Green Products" the study aims to discover buyers' expert natural concerns, mindfulness, and learning about condition-related issues, as well as their purchasing behaviour to incline towards and purchase co-accommodating items and pay a premium price for such items. 'Green Marketing' is the unavoidable element.

Haripriya and Sivabagyam [3], in their study titled “A Study on Customer Perception towards Green Products in Coimbatore –Empirical Study” stated that Consumer are ready to pay more to maintain a neat and clean and to follow green environment. Industrialists should maintain to reduce the negative effects on green products. Consumer awareness can be given about the long time benefits and life security with the green environment.

Usharani and Buvaneswari [4], In their study titled “A Study On Consumer Behaviour Towards Green Marketing With Special Reference To Organic Food Products In Tiruchirappalli District” Adequate and right information should be given about organic food. People are aware of the environment and health of them and the younger generation can be targeted for the advertisement. Educated should teach others the awareness about the green environment.

Kadhar Lal and Abdul Hareez [5], in this article titled “A Study on Consumer's Awareness on Green Marketing and Their Buying Behaviour towards Green Products in Chennai City,” stated that consumers are not more aware due to the lack of information about the green marketing, its importance, products.

Parthiban [6], in their article titled “Consumer perception towards the Green Marketing: A Study with Special Reference to Chennai City” stated that It claims that green marketing is a necessary component of environmental conservation for the sake of the next generation in order to shield the global populace from pollution. Consumers are aware of environmental problems. However, consumers may not receive enough information on environmentally friendly items that offer protection and strength.

### 3 Methodology

This research study is descriptive research in nature. Convenient sampling techniques have been applied to acquire data through the Google-sheet close-ended questionnaire from 120 respondents in the research area. In the Questionnaire, Likert—Scale (5 points) was used for the questions to find the consumers' awareness. The duration of the study was from January to July 2023. Data for the research were primary and secondary used and used the tools of Percentage, and One-Way ANOVA by using SPSS package 20.0.

#### 3.1 Hypothesis

The following statement of hypothesis has been framed to test the mean score of variables and analyze the data.

1. H0: No significant association of gender with consumer's awareness of Green Marketing.

2. H0: No significant association of age with consumer's awareness of Green Marketing.
3. H0: No significant association of education with consumer's awareness of Green Marketing.
4. H0: No significant association of occupation with consumer's awareness of Green Marketing.
5. H0: No significant association of annual Income with consumer's awareness of Green Marketing.

## **4 Data Analysis and Interpretation**

### ***4.1 Frequency Analysis of Socio-demographic Factors of Green Marketing***

Table 1, infers that the demographic features of the 120 selected respondents of the study show the major share as the male respondents (65%) in the research area, and only the rest of 35% are female respondents. It implies that gender is showing a keen variation to access green marketing. In the age factor, the majority of the respondents are under 31–40 years (33.33%) of age interested in green marketing. Further, regarding educational qualifications, most of the respondents are degree holders (74%).

This represents that the persons who are the sample respondents for our study are almost educated. Under the occupation, the maximum of respondents are professionals (31%) and this implies that the professional customers are a keen interest in using green products and they know the importance of the green product next to the farmers. From our table, the maximum percentage of family income (Annual) is 40%. It shows that the average monthly income of the respondent's family is 40–50 thousand nearly.

### ***4.2 Frequency Analysis of Awareness of Customers of Green Marketing***

From Table 2, the majority of the customers strongly/slightly agree with the awareness towards the green marketing practice in the research area as given in Table 3.

Table 3 gives the information that most of the respondents except "you believe in the concept of green marketing" agree strongly on awareness of green marketing. Believing the concepts of green marketing agreed strongly by 32% when we compare to the other factors that have been given above. The rest of the factors show the positive effects of green marketing.

**Table 1** Frequency analysis of socio-demographic factors

Variables and factors		Freq	Pct
Gender	Male respondents	78	65.0
	Female respondents	42	35.0
	Total	120	100.0
Age	Below 20	29	24.2
	21–30	38	31.7
	31–40	40	33.3
	Above 41	13	10.8
	Total	120	100.0
Education	Up to 12th standard	16	13.3
	Degree	74	61.7
	Post degree and others	30	25.0
	Total	120	100.0
Occupation	Farmers	28	23.3
	Employee	23	19.2
	Professional	31	25.8
	Business	17	14.2
	House wife	21	17.5
	Total	120	100.0
Family Annual Income	< 2 Lakhs	18	15.0
	2–4 Lakhs	32	31.7
	4–6 Lakhs	48	35.0
	> 6 Lakhs	22	15.3
	Total	120	100.0

### 4.3 ANOVA—Test the Factors of Gender and Awareness on Green Marketing

**Hypothesis H0:** H0: No significant association of gender with consumer's awareness of Green Marketing.

**Alternative Hypothesis H1:** H0: Significant association of gender with consumer's awareness of Green Marketing.

**Result:** From Table 4, as the value of variables about the consumers' awareness on green marketing is greater than 0.05, the null hypothesis is accepted. It states that there is no significant association of gender with consumer's awareness towards green marketing.

**Table 2** Frequency analysis of awareness

Factors	Description	Frequency	Percent
The concept of the green marketing	Str. agree	32	26.5
	Sl. agree	63	52.5
	N. agree. Nor. disagree	19	16.0
	Sli. disagree	5	4.0
	Str. disagree	1	1.0
	Total	120	100.0
Are you aware of companies going green?	Str. agree	92	76.7
	Sl. agree	26	21.8
	N. agree. Nor. disagree	2	1.5
	Total	120	100.0
Regular marketing techniques harm the environment	Str. agree	96	80.0
	Sl. agree	16	13.3
	N. agree. Nor. disagree	8	6.7
	Total	120	100.0
We should use environmentally friendly products as they are less polluting	Str. agree	111	92.5
	Sl. agree	6	5.0
	N. agree. Nor. disagree	3	2.5
	Total	120	100.0
Most of the products we use are environmentally unsafe	Str. agree	96	80.0
	Sl. agree	21	17.5
	N. agree. Nor. disagree	3	2.5
	Total	120	100.0
All green products are made environmentally friendly	Str. agree	103	85.8
	Sl. agree	17	14.2
	Total	120	100.0
Green products cause lesser damage to the environment, reusable	Str. agree	99	82.5
	Sl. agree	19	15.8
	N. agree. Nor. disagree	2	1.7
	Total	120	100.0
People around you are using green products	Str. agree	97	80.8
	Sl. agree	23	19.2
	Total	120	100.0



**Table 3** Frequency analysis of awareness

Factors	Description	Frequency	Percent
The concept of green marketing–believing	Slightly agree	63	52.5
Are you aware of companies going Green?	Strongly agree	92	76.7
Regular marketing techniques harm the environment	Strongly agree	96	80.0
We should use environmentally friendly products as they are less polluting	Strongly agree	111	92.5
Most of the products we use are environmentally unsafe	Strongly agree	96	80
All green products are made environmentally friendly	Strongly agree	103	85.8
Green products cause lesser damage to the environment, reusable	Strongly agree	99	82.5
People around you are using green products	Strongly agree	97	80.8

**Table 4** ANOVA test for gender and the Awareness

Awareness—green marketing	F-value	Sig. value
The concept of green marketing–believing	0.488	0.486
Aware of companies going green	1.634	0.204
Regular marketing techniques harm the environment	0.356	0.552
We should use environmental friendly products as they are less polluting	0.840	0.361
Most of the products we use are environmentally unsafe	1.942	0.166
Everyone is responsible for green marketing	1.258	0.264
All the green products are made environmentally friendly	0.211	0.647
Green products cause less damage to the environment	0.186	0.667
Green products are reasonable and recyclable	1.969	0.163
People around you are using green products	0.985	0.323

Sources Generated in SPSS 20

#### **4.4 ANOVA Test for Age and the Awareness of the Customers on Green Marketing**

**Hypothesis H0:** No significant association of age with consumer's awareness of Green Marketing.

**Alternative Hypothesis H1:** Significant association of age with consumer's awareness of Green Marketing.

**Result:** From Table 5, as the significant value is greater than 0.05, the null hypothesis is accepted in all cases. It states that no significant association of age with consumers' awareness towards green marketing. Further, it states that the age of the respondents does not affect the awareness of green marketing.

**Table 5** ANOVA test for age and the awareness of the customers towards green marketing

Awareness of customers towards green marketing practice	F-value	Sig. value
The concept of green marketing–believing	0.228	0.877
Aware of companies going green	1.695	0.172
Regular marketing techniques harm the environment	1.456	0.230
We should use environmental friendly products as they are less polluting	0.151	0.929
Most of the products we use are environmentally unsafe	0.450	0.718
Everyone is responsible for green marketing	0.361	0.782
All the green products are made environmentally friendly	2.061	0.109
Green products cause less damage to the environment	0.623	0.601
Green products are reasonable and recyclable	1.195	0.315
People around you are using green products	0.700	0.554

Sources Generated in SPSS 20

#### ***4.5 ANOVA Test for Education and the Awareness of the Customers on Green Marketing***

**Hypothesis H0:** No significant association of education with consumer's awareness of Green Marketing.

**Alternative Hypothesis H1:** Significant association of education with consumer's awareness of Green Marketing.

**Result:** From Table 6, as the significant value is greater than the p-value of 0.05, the null hypothesis is accepted in all cases. It states that there is no significant association of education with consumers' awareness of green marketing. Further, it states that the education of the respondents does not affect their awareness about green marketing.

#### ***4.6 ANOVA Test for Occupation and Awareness of Green Marketing***

**Hypothesis H0:** No significant association of occupation with consumer's awareness of Green Marketing.

**Alternative Hypothesis H1:** Significant association of education and consumer's awareness of Green Marketing.

**Result:** From Table 7, as the values of variables are greater than 0.05, the null hypothesis is accepted and it states that there is no significant association of occupation with consumers' awareness towards green marketing. Further, it states that the occupation of the respondents does not affect the awareness about green marketing.

**Table 6** ANOVA test for the education and awareness of green marketing

Awareness of customers towards green marketing practice	F-value	Sig. value
The concept of green marketing—believing	0.233	0.792
Aware of companies going green	2.592	0.079
Regular marketing techniques harm the environment	2.526	0.084
We should use environmental friendly products as they are less polluting	1.047	0.354
Most of the products we use are environmentally unsafe	0.591	0.555
Everyone is responsible for green marketing	0.551	0.578
All the green products are made environmentally friendly	0.446	0.641
Green products cause less damage to the environment	0.498	0.609
Green products are reasonable and recyclable	0.262	0.770
People around you are using green products	0.466	0.629

Sources Generated in SPSS 20

**Table 7** ANOVA test for occupation and awareness of green marketing

Awareness of customers towards green marketing practice	F	Sig.
The concept of green marketing—believing	0.114	0.978
Aware of companies going green	0.309	0.872
Regular marketing techniques harm the environment	0.551	0.699
We should use environmental friendly products as they are less polluting	0.461	0.765
Most of the products we use are environmentally unsafe	0.182	0.947
Everyone is responsible for green marketing	0.269	0.898
All the green products are made environmentally friendly	0.831	0.508
Green products cause less damage to the environment	0.527	0.716
Green products are reasonable and recyclable	0.321	0.864
People around you are using green products	0.518	0.723

Sources Generated in SPSS 20

#### **4.7 ANOVA Test for Family Annual Income and the Awareness of the Customers Towards Green Marketing**

**Hypothesis H0:** No significant association of annual income with consumer's awareness of Green Marketing.

**Alternative Hypothesis H1:** Significant association of annual income with consumer's awareness of Green Marketing.

**Result:** From Table 8, as the values of variables are greater than 0.05, the null hypothesis is accepted. It states that there is no significant association of family annual

**Table 8** ANOVA test for annual income and the awareness of green marketing

Awareness of customers towards green marketing practice	F	Sig
The concept of green marketing–believing	2.316	0.079
Aware of companies going green	1.090	0.356
Regular marketing techniques harm the environment	0.339	0.797
We should use environmental friendly products as they are less polluting	1.362	0.258
Most of the products we use are environmentally unsafe	0.608	0.611
Everyone is responsible for green marketing	0.771	0.513
All the green products are made environmentally friendly	1.180	0.320
Green products cause less damage to the environment	0.413	0.744
Green products are reasonable and recyclable	0.193	0.901
People around you are using green products	2.711	0.048

Sources Generated in SPSS 20

income with consumers' awareness towards green marketing. Further, it states that the occupation of the respondents does not affect the awareness about green marketing (Except People around you are using Green Products) towards Green Marketing Practice.

It is inferred from the result that the status of the family annual income of the respondents does not affect the awareness of the respondents (Except People around you are using Green Products) who are the customers of green marketing. The result explores the fact that those respondents who are living around you are using green products may not be aware of the green marketing practice as their family annual income differs.

## 5 Suggestions and Conclusion

It is extremely beneficial to understand the notion of green marketing and its products as part of the research. Green marketing practices aided in understanding that it saves both people and the environment. The research also assisted in analyzing client purchasing behaviour and the hurdles purchasers experience while transitioning to green marketing products. When compared to other items, green products only save the lives of all living things on the planet. It protects human and environmental health while also balancing economic disparities by supporting green marketing. This research will aid future research and encourage individuals to purchase green items in order to live a more fulfilling life.

Green Marketing producers should compare green product pricing to other types of products because it appears somewhat higher. The difference in annual family income leads to less awareness among neighbouring buyers. It states that the buyer's money will only be a factor in deciding green marketing practice purchasing behaviour.

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# A Scientometric Analysis of Muslim-Friendly Tourism: A Review and Research Agenda



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**Abstract** In recent times, there has been a growing global interest in Muslim-friendly tourism from both academic and practical circles. However, only a limited number of studies have provided a comprehensive global overview of such a topic. This study aims to use scientometric tools to address the knowledge gap. A total of 268 publications published in Web of Science database during 2010–2022 were analyzed using the VOSviewer software. This paper explores emerging trends in research, as well as the relationships between thematic areas, prominent authors and the research concentration of the field. The results of this study accentuate that the research on Muslim-friendly tourism is still in its early stages and, has been heavily influenced by a limited number of authors, sources, and countries. The main focus of the existing literature is on the conceptual foundation of this domain. Additionally, the results suggest that there are significant and promising areas for further investigation.

**Keywords** Muslim-friendly tourism · Halal tourism · Scientometric analysis

## 1 Introduction

Halal tourism has caused a momentous change in the global tourism industry. The Muslim travel market has been witnessing rapid growth due to several driving factors. For instance, the Muslim population is expected to grow rapidly up to 2.3 billion by 2030 [1, 2], hence expanding the Muslim travel segment globally. The Muslim

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travel market is also expected to reach US\$300 billion by 2026. Additionally, Muslim Millennial Travelers, who make up 23% of the worldwide Muslim population, are set to have a significant impact on the future of Muslim tourism [1]. Therefore, the Muslim travel market represents a substantial opportunity that should be seized by businesses involved in the tourism industry. Given the fact that Muslim tourists or Muslim travelers have unique needs and preferences which are based on the rules of Islam, these demands make it necessary for tourism-related entities to rethink, modify and tailor their strategies and products and services to cater to them [3].

Halal tourism has become a significant branch of tourism research, gaining considerable attention from both practitioners and scholars and producing a large body of literature. Although some researchers attempted to review the literature related to Halal tourism, the studies were scattered. For instance, Heidari [4] conducted the systematic mapping of 181 articles generally addressed the religious and spiritual tourism. However, Heidari's study did not explore the concept of halal tourism or Islamic tourism. Rasul [5] conducted a systematic review of 21 articles addressing the concept of halal tourism published until 2018. Although important, Rasul's study only focused on the notion of Halal tourism and did not include the latest publications after 2018. Few studies have focused on a comprehensive literature review of the concept of Halal tourism. As research on Halal, Halal-friendly, Islamic, and Sharia-compliant tourism has witnessed dynamic development in the last decade, an effective method is necessary to analyze and visualize the status of development and track the hottest research trends. Scientometric analysis is a quantitative approach that provides a visual representation of the structural and dynamic features of existing scientific research in a certain discipline [6]. According to Suhartanto et al. [7], more research is necessary to make additional contributions to developing the Halal tourism theory initiated by Battour et al. [8], as many elements of Halal tourism remain unclear. Therefore, this study aims to produce a comprehensive research panorama of the literature addressing Halal, Halal-friendly, Islamic, and Sharia-compliant tourism through scientometric analysis. This study attempts to understand the development patterns of this field, highlight emerging trends, and identify future directions.

This paper is organized into three sections. Section 2 presents the research methodology. Section 3 analyzes the results of the scientometric analysis. Section 4 identifies potential areas for future research. Finally, Sect. 5 concludes the study.

## 2 Research Methodology

A scientometric technique was used to analyze and review the literature related to Muslim-friendly tourism. Scientometric analysis can be used to identify research trends and evaluate the scientific impact of certain research fields [9]. As research publications in the Web of Science (WoS) core collection database are known for their high quality, it was used to search for relevant literature on Muslim-friendly tourism. The search terms included "Halal tourism," "Halal-friendly tourism," "Islamic

tourism,” “Halal travel,” “Halal tourist,” “Muslim tourist,” “halal destination,” “Halal-friendly tourist,” and “Muslim-friendly”. Using the software called VOSviewer, two analyses were conducted: co-citation and co-word analysis.

### 3 Results and Discussion

Analysis of articles published from 2010 to 2022 revealed that 293 articles related to Halal Tourism were published in English, with the remaining in other languages. After thorough screening and exclusion of those in other languages, only 268 relevant publications were found for the study. Of the total 268 publications, the majority were articles ( $f = 191$ ), accounting for 71.269% of the total. Conference proceedings constituted 52 publications with a share of 19.403%, followed by early access, review articles, book chapters, editorial material, and book reviews constituting 25, 19, 14, 5, and 1 publication(s), with a proportionate share of 9.328%, 7.09%, 5.224%, 1.866%, and 0.373%, respectively.

#### 3.1 *The Scientometric Analysis for Selected Publications*

##### **Reference co-citation network**

Reference co-citation refers to the frequency with which two articles are cited together by other articles [10, 11]. Co-citation analysis is a method used in bibliometrics to identify and map relationships between documents based on the patterns of their citation by other documents [12]. Based on WOS's citation metric, Table 1 reveals the cited references that have been cited at least 50 times. It has been revealed that the most cited co-reference is “Halal Tourism: Concepts, practices, challenges and future,” which was authored by M Battour and Ismail [13]. This article has been published in *Tourism Management Perspectives* and has been cited 102 times. These articles represent high value in the literature of Muslim-friendly tourism.

##### **Top countries contributing to Muslim-friendly tourism research**

The publications emanated from 49 countries. Table 2 demonstrates countries with at least 5 publications and 100 citations. Out of the 49 countries, 12 meet the threshold. It has been revealed that Indonesia has the highest number of publications, with 87 extracted documents and 330 citations, while Malaysia has the highest number of citations, with 1103 for 72 extracted documents (also see Fig. 1). England has the second-highest number of citations, with 839 and 17 extracted documents. This is followed by Turkey with 18 publications and 161 citations, Peoples R China with 16 publications and 500 citations, Egypt with 14 publications and 757 citations, U. Arab Emirates with 12 publications and 415 citations, New Zealand with 11 publications and 213 citations, and Australia with 10 publications and 255 citations. The countries



**Table 1** Most cited publications on Muslim-friendly tourism research

References	Title	Source	Citations	TLS*
[13]	Halal tourism: concepts, practices, challenges and future	Tourism Management Perspectives	102	416
[3]	Muslim world and its tourisms	Annals of Tourism Research	81	353
[14]	Islamic tourism and managing tourism: develop	International Journal of Tourism Research	80	296
[15]	Halal tourism, is it really Halal?	Tourism Management Perspectives	75	349
[16]	The impact of destination attributes on Muslim Tourist's choice	International Journal of Tourism Research	72	302
[17]	Halal tourism: emerging opportunities	Tourism Management Perspectives	67	315
[18]	Sharia-compliant hotels	Tourism and Hospitality Research	62	273
[8]	Toward a halal tourism market	Tourism Analysis	59	269
[19]	The role of Islamic religiosity on the relationship between perceived value and tourist satisfaction	Tourism Management	56	227
[20]	Deciphering 'Islamic hospitality': developments, challenges and opportunities	Tourism Management	55	283
[21]	Exploring halal-friendly destination attributes in South Korea: perceptions and behaviors of Muslim travelers toward a non-Muslim destination	Tourism Management	53	231

\* *TLS*—Total Link Strength

with the least number of documents are the USA and Italy, with 7 documents each, and 256 and 101 citations, respectively.

### Main research interests on Muslim-friendly tourism research

The focus of past studies was analyzed using the co-occurrence of keywords from the scientometric data extracted using VOSviewer [22]. The study considered all keywords (both author keywords and keywords plus) for network visualization to ensure full and comprehensive coverage. Figure 2 illustrates the network visualization

**Table 2** Most countries contributing to Muslim-friendly tourism research

Country	D	C	TLS	Country	D	C	TLS
Malaysia	72	1103	27	China	16	263	9
England	17	839	16	USA	7	256	9
Egypt	14	757	22	Australia	10	255	10
South Korea	15	500	7	New Zealand	11	213	8
UAE	12	415	16	Turkey	18	161	9
Indonesia	87	330	23	Italy	7	101	4

\* *D* Document, *C* Citations, *TLS* Total Link Strength



**Fig. 1** The network map of countries interested in Muslim-friendly tourism research

map with six clusters representing each area of focus of halal tourism research. Halal tourism dominates the map’s center as this was the main search keyword to which other keywords are linked. This keyword occurred 99 times with a TLS of 330, implying a strong co-occurrence with other keywords on the map, as revealed in Table 3.

The assessed documents procured a total of 1006 keywords. VOSviewer helps group these keywords into clusters using a set minimum threshold for co-occurrence. These keywords clarify concentration areas of investigation in past studies. The software has a default minimum number of co-occurrences for the keywords to be extracted, which is five. Hence, a keyword must be mentioned in at least five different papers to appear on the map. A total of 84 keywords met this threshold. After manually observing the keywords, 28 were excluded because they were irrelevant for the study’s purpose, such as impact, model, behavior, and insights. As a result, the map displays the link between the top 56 relevant keywords.

Cluster 1, entitled “Tourists Intention” or “Trip quality or trip value,” is represented by the red nodes on the map and has 14 co-occurring keywords with a TLS of 1447. These keywords include satisfaction, perceived value, loyalty, quality, customer satisfaction, service quality, destination image, experience, behavioral intentions, friendly destination, trust, revisit intention, Muslim tourist, and word-of-mouth. This cluster suggests that the tourism industry needs to provide maximum satisfaction to the



**Table 3** Clusters of the main keywords related to Muslim-friendly tourism

Cluster 1(Red, 14items)	OC	TLS	Cluster 3 (Blue, 11 items)	OC*	TLS*
Satisfaction	80	352	Halal	32	93
Perceived value	38	204	Islamic religiosity	13	63
Loyalty	28	145	Pilgrimage	10	45
Quality	28	149	Religion	10	39
Customer satisfaction	20	110	Consumption	8	43
Service quality	17	67	Religious Tourism	8	27
Destination image	15	80	Content Analysis	6	23
Experience	14	78	Involvement	6	29
Behavioral intentions	11	71	Consumer-behavior	5	21
Friendly destination	11	51	Motivations	5	31
Trust	11	58	Muslims	5	11
Revisit intention	8	48	Cluster 4 (Yellow, 8 items)	OC	TLS
Muslim tourist	6	29	Destination	26	112
Word-of-Mouth	6	35	Muslim travelers	25	122
Cluster 2 (Green, 13 items)	OC	TLS	Muslim tourists	18	86
Halal tourism	99	330	Hospitality	16	69
Food	20	95	Halal-friendly destination	8	28
Halal food	16	55	Halal hospitality	5	26
Intention	12	48	Islamic attributes	5	21
Islamic hospitality	11	45	Muslim-friendly	5	18
Perception	11	51	Cluster 5 (purple, 6items)	OC	TLS
Halal market	9	21	Islamic tourism	66	228
Certification	8	34	Malaysia	20	78
Muslim travelers	8	32	Managing tourism	16	64
Halal certification	7	25	Iran	15	49
Islamic marketing	7	26	Indonesia	14	29
Planned behavior	5	17	Attitudes	7	20
			Cluster 6 (light blue, 4 items)	OC	TLS
			Religiosity	29	149
			Tourist satisfaction	9	38
			Customer engagement	6	42
			Destination loyalty	5	32

\* OC—occurrences, TLS—Total Link Strength

tourism, Malaysia, managing tourism, Iran, Indonesia, and attitudes. This cluster suggests that Malaysia, Indonesia, and Iran are halal-friendly tourist destinations that promote Islamic tourism worldwide by adopting halal-friendly attitudes towards their Muslim visitors. It is evident that Islamic tourism places a strong emphasis on a wide range of topics, including participation and engagement by Muslims, Islamic destinations, products such as residential places, food, entertainment, and beverages, and various dimensions such as social, economic, cultural, and religious considerations. Additionally, there is a focus on managing the offered service processes, including marketing and ethical considerations [23].

Cluster 6, entitled “Religiosity,” is in the light blue region and accounts for four co-occurring keywords with a TLS of 261. These keywords include religiosity, tourist satisfaction, customer engagement, and destination loyalty. This cluster suggests that religious tourists who derive satisfaction from their visit are most engaged and loyal towards a particular destination. The literature on tourism has explored the relationship between religion and tourism in numerous ways [3, 18, 19]. Nonetheless, the majority of research focuses on pilgrimage motivations [24], managerial and marketing features of sacred places, and the travel requirements of religious tourists [25].

## 4 Potential Areas for Future Research

After analyzing the research keywords and the clusters related to the existing literature on Muslim-friendly tourism, it is evident that there are numerous research avenues that could open up promising opportunities for future research. Therefore, several potential areas for future research are suggested in this study, which include:

- A. Muslim tourist behavior and motivations: This research avenue can focus on understanding the behavior and lifestyle of Muslim travelers, their motivations for travel, and how they share information about their experiences through e-WOM. Understanding gender differences in the context of Muslim-friendly tourism can be an opportunity for further research [26]. Additionally, it can also focus on the attributes and competitiveness of Halal-friendly destinations.
- B. Sustainable Muslim-friendly tourism: This research line can be related to understanding the possible intersection of sustainable tourism, environmentally friendly practices, and Muslim-friendly tourism. As concluded by Battour et al. [27], the connection between Halal tourism and the aspects of sustainability is yet to be explored.
- C. Halal tourism marketing strategies: This can be a promising research stream that can explore the needs and preferences of different generational groups of Muslim travelers (e.g., millennials, Generation Z, and Generation Alpha) and develop marketing strategies that resonate with them [2].

- D. AI applications for Halal-friendly tourism: Using advanced technologies for Muslim-friendly tourism is a fruitful area for further research. Few recent studies have focused their attention on how advanced technologies can be incorporated to improve the travel experiences for Muslim travelers through digitalization and AI applications such as ChatGPT [28, 29].
- E. Muslim-friendly tourism after COVID-19 age: This research area can emphasize understanding the impact of the COVID-19 pandemic on Halal tourism and developing strategies to promote and recover the industry in a post-pandemic world.
- F. The intersection of Halal tourism, Islamic banking, and digital currencies: This research stream can explore the role of Shariah-compliant financing for Halal hotels, resorts, and tourism facilities [30]. Additionally, Islamic banks can leverage digital technologies to offer virtual wallets for tourists, allowing them to easily pay for Halal services and products [31].

## 5 Conclusion

This study aimed to conduct a scientometric analysis of relevant literature on Muslim-friendly tourism published in the WOS database during 2010–2022. By conducting two analyses, namely co-citation and co-word analysis, the study explored the current research interests in Muslim-friendly tourism. The study's findings suggest that the creative industries research domain is still in its early stages and has been heavily influenced by a limited number of authors, sources, and countries. There are six main research interests, including trip quality or trip value for Muslim tourists, Halal-friendly Tourism, Muslim tourist characteristics, Halal-Friendly Destination Attributes, Islamic tourism, and Religiosity. Moreover, the study uncovered significant unexplored areas within this domain, indicating great potential for further exploration and development in this field. The study recommends several potential future research trends, including Muslim-tourist behavior and motivations, sustainable Muslim-friendly tourism, Halal-tourism marketing strategies, AI applications for Halal-friendly tourism, and Muslim-friendly tourism post-covid-19 age.

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# Antecedent and Consequences of Brand Love: A Conceptual in Behavioral Loyalty



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**Abstract** Islamic banking has the ability to boost the bank's anticipated market penetration and draw in a sizable number of clients and consumers. One of the most fascinating new breakthroughs in the financial market's expansion of Shariah and spirituality compliance is Islamic finance and banking. The result was a February 2021 announcement by the Indonesian government that three Islamic banks (Bank Syariah Mandiri, BNI Syariah, and BRI Syariah) will merge to establish Bank Syariah Indonesia (BSI). The merger intends to boost the market share of Islamic banks, serve Muslim clients, and enhance their reputation in Indonesia. The spiritual aspects of business goals are starting to be incorporated into Indonesian society. Notably, firms that offer both goods and services and spirituality typically have larger profit margins. In order to achieve long-term commercial objectives, brand love, or how people perceive a brand as their identity in daily life, is essential. Whether customers will stick with a brand out of romantic loyalty or out of a commitment to the brand's attitude and principles depends on how much they love it.

**Keywords** Brand love · Brand fidelity · Attitudinal and behavioral loyalty

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## 1 Introduction

Both Muslim and non-Muslim nations around the world view the Islamic banking system as a quickly expanding financial services industry [1]. Notably, Islamic banking has the ability to increase the bank's expected market penetration and draw in a big number of clients and consumers. Indonesia, the fourth-most populous nation in the world with over 239 million Muslims making up nearly 87% of the population, is a crucial market for the expansion of Shari'ah-compliant commercial activity [2]. The McKinsey Report observed that Indonesia is currently placed 16th in the world economy, therefore there is room for growth [3]. Indeed, this has become a perfect sign and a fantastic opportunity for the use of halal and shariah products in Indonesia, which can generate enormous profits from Muslim market demand [4]. Particularly, the principle of sharia is becoming a phenomenon in civilization as it is increasingly lovingly explored in some life styles [5]. Islamic finance and banking have recently emerged as one of the most exciting developments in the financial market's widening in Shariah and spirituality compliance. Consequently, the Indonesian government announced in February 2021 that three Islamic banks (Bank Syariah Mandiri, BNI Syariah and BRI Syariah,) would merge to form Bank Syariah Indonesia (BSI) [6] (Fig. 1).

According to Sofyan [7], Indonesian society is beginning to incorporate spiritual dimensions as secret tips for achieving business objectives. Significantly, most businesses that combine products and services with spirituality have a higher profit margin [8]. As a result, a large number of spirituality-related products are used in various business sectors, such as education, hospitality, financial services, and banking. Eid and El-Gohary [9] discovered that religious belief is a crucial element being able to impact customer satisfaction, consequently, the dynamic in both customer value and satisfaction can be mediated. Therefore, in Islamic marketing, the engagement of faith and religiosity and its impact on customer behaviors is becoming a topic of increasing attention [10]. Abou-Youssef et al. [11] also confirmed that religious belief is a trending topic of research. Religious faith is a reflection of the faith of the person. It is, therefore, a fundamental derivative of religion. In addition, humans



**Fig. 1** Three islamic banks are merged into one islamic bank

are influenced by religion in their views, practices, group faith and values [12, 13]. For each individual, the intensity varies, causing variations in human behaviour and attitude [12]. This essential interaction is used by Engelland [14] to find that the religious component of advertising in international marketing strategies must be provided more comprehensive and direct attention.

Understanding halal brand awareness, such as recognizing how a product's sharia-compliant manufacturing process can influence customer preferences and decision-making confidence [4] Also, halal brand awareness could also influence a customer's decision to buy goods or services, such as Islamic banking and finance [15]. According to Wilson and Liu [16] the halal brand for Islamic products and services has the potential to become powerful brands and images. Researchers, even more, have combined brand experience with a range of outcomes, including satisfaction, trust, loyalty, WOM [17]. Additionally, other research define brand love as a sustained consumer-brand relationship and connect brand love to satisfaction, trust, and loyalty [18, 19]. In reality, several research have discovered that brand love refers to consumers' emotional attachment to a brand, which inspires them to display long-term loyalty or consistent behavior toward it and, as a result, their desire to purchase a brand at a premium price [20].

Many studies have shown that brand experience and impact are mostly mediated by brand love, which acts as a moderator [21]. Joshi and Garg [22] also made the argument that the customer's emotional aspect must be developed through novel concepts such as love, loyalty, sacredness and fidelity. Like wise, Joshi and Garg [22] rephrased brand fidelity as the impact of brand love and customer behavior. Albert and Manuka [20] believed that brand love still requires systematic attention by associating attitudinal and behavioral aspects with the concept of brand love during market downturns. Furthermore, Zhang et al. [23] used the research framework to construct the building of a sustainable brand using expressive brand relationship, brand love, attitudinal, and behavior loyalty.

The little trend of brand love in the context of Islamic banking products and services becomes the hot issue to be explored even previous research by Wahyuni and Fitriani [10] just investigated the brand regiliusity aura and brand personality in the islamic bank in Indonesia with no clear which Islamic banks were being studied because there is no merger at that time. As a result this research develop a systematically integrated conceptual framework based on existing brand love trends research. To the author's knowledge, no literature discusses customer reactions to an Indonesian Islamic bank brand after the merger.

This study, based on the previous theoretical background aims to examine brand trust, brand image, brand experience and self concruence as antecedents of brand love and uses brand fidelity, attitudinal loyalty and behavioral loyalty as consequences of brand love in the context of BSI brand after merger. Specifically, this study's goal is to explore the impact brand trust, brand image, brand experience and self-congruence on brand love. It is also examine the impact of brand love on brand fidelity, attitudinal loyalty and behavioral loyalty.

This study makes several contributions. First, a framework model was created to empirically investigate the causes and effects of brand love in the context of a merged

islamic brand. Additionally, this study adds to the body of knowledge regarding the relationship between brand love and self-congruence, brand trust, brand image, and brand experience. This study adds to the body of knowledge on customer behavior by examining brand loyalty consequences in the islamic bank brand, which other writers have not yet identified. Additionally, by understanding the connection between brand love and brand faithfulness, the findings of this study will assist marketers better understand customer behaviors and perceptions. They will also help them develop efficient marketing strategies to increase the number of consumers of Islamic banks.

## **2 Theoretical Grounding**

The study's theoretical foundations are structures that describe consumer emotions. This study's proposed framework is divided into two sections. Brand fidelity, Attitudinal Loyalty, and Behavioral Loyalty are antecedents of brand love in the first half, while brand confidence, brand experience, brand image, and selfcongruence are antecedents of brand love in the second half.

### **2.1 *Brand Love***

Recent studies [24, 25] demonstrate the value of brand love in brand management. Researchers like Shimp and Madden [26] and Fournier [19] have used Sternberg's (1986, 2004) triangular theory of love to analyze love in the sense of customers. According to Bagozzi et al. [27] and Zhang et al. [23], brand love, which is made up of thoughts, feelings, and behaviors in the mind, is what connects a brand's image to a consumer's sense of self. In addition, Carroll and Ahuvia [28] defined brand love as the level of zeal and affinity a happy customer feels for a company. Brand love is the passionate adoration of a satisfied customer for a product or service [13, 29] a satisfied customer will always adore the brand.

### **2.2 *Antecedens of Brand Love***

#### **2.2.1 Brand Trust**

Consumer beliefs and the typical consumer's willingness [30] to place their trust in a brand's capacity to carry out a specified function, satisfy a consumer's want [27], and respect their values [31] are two frequent ways to define consumer trust. A brand represents a trust-producing action in daily life and develops into a symbol of quality that promotes the development of trust, according to Bart et al. Afzal et al. definition of brand trust also took brand reputation, brand competency, and brand predictability

into account [32]. Delgado and Alemán [33] specifically categorize brand trust into two categories: dependability and intention. Positive customer reviews of goods and services are also included [34].

Brand and consumer perceptions are closely linked [35], and effective brand interactions can promote reliability and customer satisfaction [33, 36]. Brand trust influences brand loyalty in a similar manner [37]. Lin et al. [38] claim that brand trust emotionally incites consumers to act on their inner assurance in the brand and aids in the maintenance of long-term partnerships [39]. Because of this, it is believed that brand trust influences brand loyalty [40], which acts as a catalyst for building brand loyalty to create a trustworthy brand relationship [30]. A continuous level of client faith in the brand also results in a sentiment of love and understanding for it. Numerous important marketing frameworks are impacted by brand trust, according to branding studies and research [18, 41, 42].

H1: Brand trust has a significant positive effect on brand love.

## 2.2.2 Brand Experience

The brand experience was defined and offered as an experience notion in consumers' perceptions by Holbrook and Hirschman [43]. Furthermore, [44] examined the relationship between specific brand-related sensory qualities and internal cognitions and behavioral responses. A specific justification for brand identification-related stimulants is called brand experience, and it is defined as the consumer's view of a brand based on their previous interactions with it [45]. As a result, this contact might happen directly or indirectly during the buying process [46, 47] and develops into an experiencing activity between the customer and the good or service [48]. The brand experience includes affective, sensory, cognitive, and behavioral reactions [49, 50]. Similar to this, affective responses [40] are the series of ideas, emotions, and intents that businesses create to establish strong emotional bonds with customers [51]. Customers' memories of this event are permanently altered, resulting in either positive (such as brand love and passion) or negative (such as brand hatred and disgust) reactions [52]. Five senses and insights are used in sensory responses: olfactory, visual, tactile, gustatory, and auditory [53] the sensory encounter Show strong intelligence and intuition [40]. As a result, visual components of the sensory response have a greater role in shaping the emotional perception of the experience [46, 54] because they are simpler to recognize and recall. The exposition of the brand's sensory brand experience, according to Tafesse [55], stimulates the senses (such as touch, sound, smell, and vision). The ability to capture images and information that can be easily stored in a consumer's memory makes the visual aspect, on the other hand, the most significant component [56]. In addition, consumer perception is influenced by the intellectual responses, which prompt the consumer to consider the brand [57]. Huaman-Ramirez and Merunka [46] claim that it entails analytical and creative thinking that piques customer interest and prompts them to consider. Analytical thinking requires accuracy and rationality, while creative thinking requires spontaneity and imagination to find answers to questions [58]. Behavioural responses convey a customer's intention

to interact with a brand by expressing themselves through physical activities [46], lifestyle, bodily experience, and interaction with businesses [40, 57]. Nevertheless, previous research and studies have shown that brand experiences have a favorable impact on brand trust and love [22, 58]. According to Rodrigues and Rodrigues and Bçakcolu et al. [59] and Rodrigues and Rodrigues [60], brand experience has a beneficial impact.

H2: Brand experience has a significant positive effect on brand love.

### 2.2.3 Brand Image

Brand image is one of the earliest theoretical ideas to be established to describe how customer emotional perception affects their adoption of a particular brand [61, 62]. Brand image is a belief structure about a particular brand that is retained in the memory of a consumer [63], reflecting the consumer's functional and fictitious impressions of the brand [64, 65]. The practical and symbolic meaning of a brand image is also connected to the brand's distinctive qualities [62]. According to Padgett and Allen [66], brand image refers to a consumer's view of a good or service in relation to a set of perceptions or an offering. In addition, Song et al. [67] and Shabbir et al. [68] claim that brand. As a result, the consumer will evaluate the brand's attitude (affective image), product function (functional image), and brand reputation (reputation) on a regular basis [69]. When intangible qualities of quality are difficult to differentiate [70], compare brands [71], and evaluate [42], a strong brand plays a major role [72] in assisting consumers in making purchasing decisions [73]. Consumers can get a first impression of a product's and service's perceived quality features by looking at the brand image [61]. Consequently, customer buying decisions are heavily influenced by brand image. A positive brand image encourages customers to love the brand by influencing their emotional bond with it.

H3: Brand image has a significant positive effect on brand love.

### 2.2.4 Self-congruence

Brands are chosen by consumers to reflect their sense of identity [74, 75]. Additionally, self-concept is a dynamic component that influences behavior connected to brands [76]. Self-concept is defined as the entirety of thoughts and emotions in individuality as an object in consumer psychology and personality studies and researches. It is frequently used to analyze and forecast individual attitudes and brand attitude models based on the principle of self-congruence as a personality concept [76–78]. Customers choose brands to maintain their self-concept when the brand matches their personality, in accordance with the self-congruity principle [79, 80]. Self-congruence can be divided into two categories, actual and ideal, according to Bem [81]. It is based on Sirgy's [77] notion of self-congruence, which is the equitable balancing of a brand and a customer's personal concept. According to [82], customers' attitudes and behavior are influenced by their perceptions of themselves and their products. In

terms of predicting consumer purchasing behavior, ideal self-congruence performs better than actual self-congruity [83], actual self-congruity [84], and emotional brand connection of the customer [85]. According to Ekinici et al. (2013), self-ideal self-congruence is correlated with customer sentiments toward products, loyalty, and service quality. However, both of them were discovered to be strong predictors of brand fit with the consumer's self [76, 86, 87] because of that. According to brand love develops [87] when a customer uses a brand to express himself in a self-congruent emotional tie.

H5: Brand image has a significant positive effect on brand love.

### ***2.3 The Triad of Relationship Maintenance***

According to this research, brand fidelity, attitudinal loyalty, and behavioral loyalty are three distinct correlations. These three are essential to the brand's long-term success. As important as relationship development is relationship upkeep. People who are loyal to a brand are more likely to overlook minor offenses and work around problems in order to keep the relationship going [88]. Brand loyalty makes sure that the connection develops. In order to foster positive sentiments and encourage return visits to the business, brand fidelity, the greatest level of brand love, must influence customer attitudinal loyalty and drive behavioral loyalty.

#### **2.3.1 Brand Fidelity**

There are more frameworks now [22] that deal with the emotional aspects of branding. According to Grace [89] and [90], a consumer's fidelity to a brand partner is made up of a variety of attitudes and behaviors that support stable and long-lasting relationships, including denigration of alternatives, cognitive interdependence, and positive illusions. Fidelity is described by Langley et al. [91] as a consumer's capacity to replicate new actions precisely, which is significantly influenced by personality traits. According to Grace et al. [89], loyalty demonstrates endurance, constancy, and exclusivity. They also stressed the importance of sticking with a person, cause, or idea.

H6: Brand love has a significant positive effect on brand fidelity.

#### **2.3.2 Attitudinal Loyalty and Behavioral Loyalty**

Long-term research has been done on customer loyalty [92]. Customers that have a history with a brand are more likely to use it and respect its reputation [93]. As a result, consumers who are loyal to their main brand, product, or service are more likely to increase their spending [30, 94]. client happiness and service quality are now regarded to be major factors in marketing theory and practice and are important

predictors of client loyalty, according to Estiri et al. [94, 95]. According to Chiou and Droge [96], behavioral loyalty is defined as making recurring purchases, whereas attitude loyalty relates to a level of company disposition. Attitudinal loyalty, according to Chaudhuri and Holbrook [30] and Ledikwe et al. [97], is the degree of devotion a customer has for a certain product. As a result, it is thought that client attitude loyalty is a mental condition. By asking customers how strongly they identify with the brand or company, how committed they are to it, how likely they are to recommend it to others, and how upbeat they feel about it in comparison to competing products or alternatives, it is possible to gauge their feelings and opinions about it [98]. Notably, [96] claimed that attitude loyalty is a conative phrase frequently used in theory to mediate the connection between affective attitude (affection) and behaviors (repurchase). A positive causal link between attitude and actions is generally supported by enough data in the literature [98, 99]. Previous studies have found that behavioral intention can only partially account for actual behavior [100]. Bandyopadhyay and Martell [101] elaborated on Dick and Basu [98] framework, and Yao et al. [102] provided empirical support for the idea that attitudinal loyalty affects behavioral loyalty. Behavioral loyalty is the regular usage of a service or product, whether through purchase or use [103]. As a result, unless people become linked with a brand, their loyalty to it has an impact on their attitudes and behaviors.

- H6: Brand fidelity has a significant positive effect on attitudinal loyalty.
- H7: Brand fidelity has a significant positive effect on behavioral loyalty.
- H8: Attitudinal loyalty has a significant positive effect on behavioral loyalty (Fig. 2).

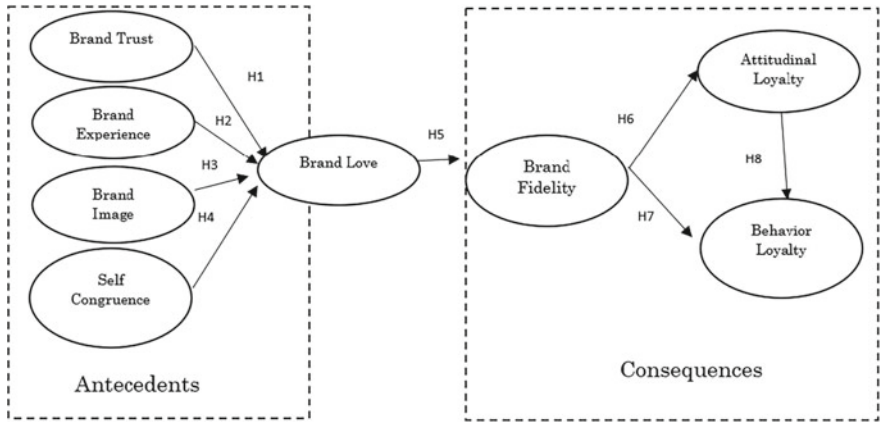


Fig. 2 Conceptual Framework



### 3 Antecedent and Consequences of Brand Love

As was mentioned at the opening of this study, it is challenging to find a case study that is comparable because brand perceptions following mergers are rarely examined, especially in mergers involving Islamic banks. The study of brand love is supported by research on the context of halal brands on halal items that are popular and beloved by the Muslim community [104–107] as well as a plethora of studies in various sectors that look at brand relationships as a general concept. In fact, this is done to show and prove that a brand's influence on consumer behavior is substantial, as well as to pinpoint the main factors that influence the Muslim community's continued loyalty to the Islamic Bank, which has a newer brand.

The uniqueness of this study is that it assesses consumer impressions of Indonesian Islamic Bank after the merger. Furthermore, it is a crucial subject to investigate because the merger of Islamic banks divides consumer opinion into positive and negative aspects. The results show that brand love is positively influenced by brand trust, brand image, brand experience, and self-congruence, which in turn leads to brand fidelity, attitudinal loyalty, and behavioral loyalty. It agrees with the conclusions of [22, 23, 36, 97].

In particular, the first session of this investigation offered four hypotheses that were identified as brand love antecedents. Brand experience is associated to brand love [36], and brand trust is related to brand love [23], according to Zhang et al. According to the same paradigm as [22], brand image and self-congruence both influence brand love. Similar influences exist between these variable factors and brand love. Long-term customer relationships depend on brand trust since it reduces customers' uncertainty about a product while making a purchase decision [107]. In order to ensure that all financial transactions carried out through an Islamic bank correspond to Islamic standards, Muslims who want to do their banking choose a brand that is operationally regulated by the Indonesian Council of Religious Scholars. As a result, customers will instantly link their perceptions with the brand's reputation, affecting the long-term romantic relationship between the customer and the brand as love. In those situations, a brand's features, such as its name, packaging, price, reputation, and prestige, all have a role in how customers perceive the brand's image [108]. Businesses must tie important characteristics to their image in order to shape it because it serves as the foundation of their brand. In other words, the brand image conveys the essence and power of the brand. It is significant that Islamic banks have a positive reputation that encourages Muslim customers to have faith in their religion and to value the goods they use to manage their finances.

Eventually, consumers will engage with the brand. Customers' insights are shaped as a result of their encounters with the entire brand, according to Lee and Kang's definition of experience in [109]. Consumers are also influenced by a range of visual stimuli, including as logos, designs, shapes, and colors, as well as other factors that contribute to brand recognition, claim Das et al. in their study [110]. As a result, the Islamic Bank brand is ingrained in the brains of consumers as an emotional connection to the brand. The interactions between the consumer and the brand are also

crucial to their relationship. Brand-self-congruence is the state in which a consumer's perception of a brand matches their actual or ideal self-concept [111]. Islam itself is a brand with a unique brand identity [112]. Islam permeates every aspect of its adherents' everyday lives, which is one of the main ways it differs from other religions. For Muslims, Islam is much more than a religion. It is a system of rules for conduct, a way of life, and the foundation of their own existence. Muslim customers will remain loyal to Islamic businesses that are founded on emotional ties to their religion. Such Islamic institutions will have stronger defenses against external assaults. Self-congruence is a concept used to describe how compatible consumers and brands are seen to be [74]. Customers are more likely to feel a strong emotional connection and brand loyalty when a brand's image reflects their own self-image [113]. They perceive brands as being consistent with their ideal selves when they are able to inspire them with future goals. As a result, customers develop greater emotional connections to brands. Customers' opinions that businesses have satisfied their need to enrich themselves are the cause of this [86].

Four results make up the final section of the study, which continues the research's four hypotheses. These results show how brand love affects brand loyalty because of consumers' strong attachment to and dedication to the brand under all circumstances. Rusbult [34] was a long-time innovator of the investing idea, which was based on love ties. In its simplest form, the investment model of commitment processes depicts relationship commitment as having a direct impact on relationship behavior and serving as a mediator between satisfaction, alternatives, and investments on behavior. According to the methods, a high level of brand love on the part of the consumer is required to reach this level of brand faithfulness. The consumer's thoughts and feelings will be influenced by this firm commitment to fidelity to develop a loyal attitude and conduct. In order to encourage behavioural loyalty, clients who have a high status for a brand are more likely to adopt positive attitudes and utilize the brand again in the future [114]. Finally, based on the built-in model, Muslim consumers have a genuine passion for the Islamic banking brand and represent a potential market for the expansion of Islamic branding from financial services into other economic activities throughout the cycle of life.

Based on the aforementioned research findings and arguments, this analysis verifies a number of contributions. In order to establish a theoretical foundation for the relationship between brand love and the theoretical growth of the brand value chain, this study first combined the results from the Islamic banking brand research. The study also provides guidance on how to encourage a consistent attitude and behavior toward a brand. This study validates the importance of mediators between brand trust, brand image, brand experience, self-congruence, and behavioral loyalty. Third, this study examines how brand love will ultimately have an impact on brand fidelity through the mediating effect of brand fidelity.

## 4 Conclusion

The results of the study show that the model given in this work, which incorporates variables linked to brand perception and consumer behavior of users of the Islamic banking brand, is adequate for explaining the various variables. The results of the study show that brand loyalty is closely related to consumer perceptions of the brand's image, brand experience memories, and brand self-congruence. Brand love directly correlates with the strength of these four variables; the greater these four factors, the stronger brand love. Additionally, brand love has a comparable impact on consumer brand loyalty as a romantic relationship between a customer and the brand does. Last but not least, consumers that have a strong brand identification will show it through their attitudes and behaviors.

## 5 Limitation and Future Research

Determine the brand's strong and weak points as well as whether the customer impression of the brand matches the suggested marketing strategy in order to understand how their brand is seen by consumers. Constraints: Future research should gather data from a different year, preferably several years after the merger, to evaluate the brand's trajectory because data samples were gathered during the banks merging session. However, it would be interesting to compare responses from people of various socioeconomic groups, occupations, and ages to discover whether a sizable portion of people from various backgrounds have negative perceptions of the brand. The data collected are only from new BSI customers, not from old customers who transferred from shariah banks as a result of the merger (switching experience from old/previous brand to new brand/BSI). This could be a future research idea to gauge the degree of brand love before and after the merger as well as switching experience.

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# Exploring the Factors Influencing the Choice of Medical Tourism Destination and Identifying the Roadblocks



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**Abstract** The healthcare industry in India has been emerging as a popular destination for medical tourism. The medical tourism industry is presently valued at USD 6 billion and is expected to grow leaps and bounds as it is expected to double by the year 2026. Besides, India is also known for spiritual rejuvenations, yoga, the practice of Ayurveda, naturopathy and the like. The medical industry in India is backed by World Health Organisation and US Food and Drug Administration and is gaining worldwide attention. There are several reasons for India involving as one of the most preferred and choicest destinations for medical tourism. From medical expertise to availability of specialised services at affordable rates, India has it all. However, this study makes an attempt to study the factors affecting the choice of a destination and the challenges faced by them in their endeavour for medical treatments and wellbeing. The study has been conducted with the help of primary sources as well and secondary data. The data has been analysed using ANOVA, t-test and Kendall's coefficient of concordance test.

**Keywords** Healthcare · Medical tourism · Challenges · Destination

## 1 Introduction

Atithi Devo Bhava is in the heart of Indian hospitality. The Indian tourism sector proudly welcomes all the tourists around the world. India has a rich heritage of medication and treatment from the Vedic period. It is believed that the practice of Ayurveda to have been there right from 8000 BCE. The pinnacle of Indian health remedies belongs to 800 BCE and continued to exist upto 1000 CE, and had witnessed the writing of Charak Samhita and Sushruta Samhita Naturopathy, Unani, Siddha, Sowa-Rigpa and Homoeopathy are also being recognised all over the world for their

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wellness benefits. India has a unique ecosystem combining modern healthcare and wellness. It is this unison of fitness and wellness wrapped with love, care and concern that brings India as the choicest terminus for Medical Tourism.

Healthcare industry is facing a paradigm shift and the increase in travel overseas for medical interventions has augmented the need for specialised services and the growth of the medical services in India. The Indian medical tourism industry was valued at 7417 US \$ at the end of 2022 and is expected to grow to US \$42,237 by the end of 2032. The Indian medical tourism industry accounts for at least 6.5% of the Global medical tourism market. The demand is further expected to grow at a rapid rate as advancements in the medical sector pave the way for further popularising the market and building an environment of trust and confidence. According to the Medical and Health Tourism Congress, medical treatment in Asian countries is more affordable and cheaper in Asian countries in comparison to those in the developed nations of the world. As per the medical tourism index, India happens to be the tenth most popular destination in the world.

The Indian medical tourism industry is expected to rise at a fast pace. The key driving force behind the exponential growth is the high cost of medical services in other nations of the world. Although there are affordable prices of medical treatment in the lesser developed nations of the world, they do not guarantee quality services. India stands tall in providing medical services not only at cheaper rates but also provides quality services to its seekers. This causes an inflow of people from other nations seeking healthcare services in India. There are other nations like Africa and the Middle East nations that are well known medical tourism destinations for its aesthetic and rejuvenation services. The popular destinations being Dubai, Abu Dhabi and Turkey. Lower costs on cosmetic operations are the key driving forces for the tourists to pick such destinations.

The study is based on the primary data collected from the respondents in Bengaluru District in India. The present article is structured as introduction, statement of the problem, literature review, objectives of the study, research methodology implemented, analysis and interpretation, findings and conclusion.

### ***1.1 Factors Proliferating the Growth of Medical Tourism in India***

A host of reasons have contributed to India becoming one of the most attractive destinations for medical treatments. The cost of treatment of medical diseases and disorders is a lot higher in the developed nations than in countries like India. A saving of approximately 50% in medical treatment costs is likely when treated in India. The charges are affordable and also reliable. This has increased the level of trust of the patients coming for treatment to India.

Moreover, the persons travelling for medical tourism are accompanied by attendants or partners. A treatment may demand post procedure stay too. Therefore, the

hospitality industry too is in great demand as patients tend to occupy hotels for their post-operative care. Repeat consultations and checks and follow ups require them to stay longer and prolonged treatments give room for longer stay for recovery in India.

Technology has played a major role in boosting the medical sector with modern day equipment's. Artificial intelligence assists physicians and health workers for diagnosis and treatment. Ingestible pill monitors, bio stamps, nutrition sensors, AI doctors, and 3D printing are common in the healthcare sector. Healthcare technology brings IT tools that are designed to enhance hospital productivity, and improve the overall quality of healthcare services. The treatment facilities are world class with the adaptation of technology and AI services.

It is not only the advancement of technology that has paved the way for fostering medical tourism in India but the use of highly skilled staff which forms the pool of healthcare workers with adequate knowledge and expertise. The success rates of all the surgeries, procedures and transplants is exceptionally high too. The post-operative care mechanism too is highly efficient.

The traditional forms of treatments are also highly popular in India. Ayurveda originated in India more than 5000 years ago but yet popular. Other forms of treatment such as Homoeopathy, naturopathy, yoga, and Unani are also popular among the medical tourists.

Another reason for the popularity of medical tourism in India is the ease in the mode of communication. English is the main mode of communication everywhere and therefore it facilitates communication, diagnosis and treatment. Hospitals also possess multi-language interpreters for those who do not speak English.

India has gradually come up as a destination for medical tourism owing to the specialist services it offers and also the economic cost of treatment it affords. The pandemic had hit hard yet India was able to manage the spread of the virus, which proves the growth and development of India in the Health and Wellness sector.

The health care industry has grown leaps and bounds in India. The Indian government has constantly strived to provide comprehensive services to the needy. However, the fact is that the nation also faces persistent as well as daunting challenges that are yet to be mitigated, however the fight is on. With the availability of medical facilities, nation sees an upsurge in the patients visiting India from other nations for their medical treatment.

In recent times, India has emerged as a popular destination for medical tourists due to its global standards of healthcare with latest technologies at affordable costs. India also matches the pharmaceutical aids of western countries like USA, UK, Australia, New Zealand etc. Treatments in India costs 10 times cheaper (depending on the clinical procedure and the technology involved) compared to USA and Europe. These mentioned reasons clubbed have made India as one of the most popular destinations in the world to seek clinical treatment. Indian hospitals treated 460,000 international patients during the 2015–2016 financial year that number has only grown with time. Most of these patients travelled to India from neighbouring countries of Bangladesh, Afghanistan, Pakistan and Sri Lanka, there were patients that travelled from Iraq, Nigeria, Kenya, Saudi Arabia too. Patients generally travel to India from

under developed countries as Indian medical facilities possess all the latest technologies for treatment and diagnostics. India also offers highly qualified doctors who are trained in western countries of UK, USA, other European countries etc. Patients from developed countries also prefer India as the treatment of a clinical condition would cost them around 10 times more in their country. The success rate of treatments is as good as any western countries, and all the latest medications and pharmaceuticals launched in the world are available in India too. Also, there is absolutely no lining up in queues or going through a waiting list if you acquire a good Medical Tourism company to do the bidding for you. They say “Health is Wealth”, It is believed that health is a greater luxury compared to wealth. Health cannot be compromised at any cost, and if travelling to another country to seek medical attention is necessary, then patients should opt for that option before their medical condition becomes worse.

## **2 Statement of the Problem**

Health and Wellbeing have become very crucial and vital for mankind especially after the Covid, people have become more health conscious and are looking forward to physical as well as mental wellness programmes to improve and build their immune systems in the long run. Mankind has realized the importance of staying healthy and fit and have the tendency to go to any extent to get well. That would mean that they would even visit other nations seeking health benefits or for treatments in order to stay alive and healthy. Plenty of public as well as private medical institutions are operating on a global scale and at times it is seen that some of them are unable to provide adequate or timely services and the scope for medical negligence have also risen. Moreover, there is a lack of all-in-one medical institutions so that the patients do not lose time in travelling from pillar to post for seeking treatment for multiple issues. At times there are possibilities of medical institutions not equipped with the latest technological equipment, qualifies staff and competent doctors and more. This has obviously led to people migrating from place to place in the hope of better treatments at economical rates. Medical Tourism has gained popularity over the years and is gaining significant attention from the government too. The present study has been made in order to find the potential challenges facing medical tourism and the factors that predominantly affect the choice of medical tourism.

## **3 Literature Review**

Seyama Sultana, Haque et al. conducted a study on Factors that affect the Appeal of Medical Tourism: A study conducted to find the significant factors that have an impact on the desirability of the industry. It was found that the quality of service and the costs were the significant factors affecting the choice of the destination for medical purposes.

A study was conducted by Hyder et al. titled “Medical tourism in emerging markets: The role of trust, networks, and word-of-mouth”. It was found that lack of infrastructural facilities and support cause lacunae in the medical tourism industry and the hospitals and clinics are left with no other choice but to use promotional means to attract inflow of people. Trust plays an important role in the healthcare industry.

The study on “Progress and Challenges of Medical Tourism in India” by Vijayanambi (2014), found that infrastructure was the leading cause for the growth in the medical sector in India. The growth in the economy paved the way for privatization and corporatization in the medical field leading to the high technology and world class medical treatment facilities and the service of the competent medical staff.

Mishra, in a study titled “Prospects in Medical Tourism – India” focused on efficient planning to popularize the nation for medical tourism and provided suggestions to fight the micro as well as macro issues concerning the Tourism industry and set up boards to come up with standards, that will lead to systematized and organized functioning.

Abhyankar and Sandhya, made a study on “Growth Potential of Domestic and International Tourism” which focused different medical tourism options and also Ayurveda Tourism. The foreign exchange earnings from the tourism industry were rising as a result the nation too was growing. Tourism happens to be the second largest net foreign exchange earner for India.

Behrmann et al., made a study on the challenges faced by the Tourism Industry. Summarizes seven leading concerns of the medical tourism industry. The concerns are emergence of technology, vulnerability of populations, international relations and the choice of health care service providers for the medical voyagers. It also states that the medical tourists find it difficult to make a choice with competitive pricing, increased hospitality and success rates of treatments.

Kumar, in a study on “Medical Tourism in India, Management and Promotion” stated that the medical tourism industry has been evolving and emerging at a fast pace and India evolves as a fast emerging nation with opportunities for low costs and high quality health care services which will attract the medical tourists to India. India is a niche market in this sector and has progressed well in the area of medical tourism.

Cook et al., conducted a study on the topic titled “Tourism-The Business of Travel” which focused on the growth of the medical tourism industry and the main reasons for the same were low costs and non-availability of health care systems in their hometown or also the long waiting periods. The rising costs of medicines and the trend to medical rationing will develop the industry further.

## **4 Objectives of the Study**

- i. To analyze the factors that influences the choice of a preferred destination for medical tourism.

- ii. To identify the challenges faced by the respondents' in availing the health care services in Bengaluru.
- iii. To suggest measures to improve the medical tourism industry in India.

## 5 Research Methodology

The present study is empirical in nature and is based on the primary data gathered from the inpatients of the select hospitals in Bengaluru City. A self-addressed questionnaire has been generated for the purpose of the study and instituted to the inpatients of select five hospitals at Bengaluru city. The questionnaire is simple and easy to comprehend and gives no room for ambiguity, and so as to enable the respondents to express their opinions freely and frankly. Ample care has been taken to gather data that is unbiased from the respondents.

For the purpose of the study, secondary data has been collected from health reports and statistics, medical journals, magazines and the websites. Tabulation of data gathered has been made and analysis has been drawn after employing suitable statistical tools and inferences were drawn thereunder.

The study has taken into consideration various private and multi-specialty hospitals, having a capacity of over 300 beds. Five select hospitals in Bengaluru city were considered for the study. The hospitals for the study were as follows—Manipal Hospital (Old Airport Road) Bangalore, Apollo Hospital (Bannerghatta Road) Bangalore, Fortis Hospital, Bangalore (Bannerghatta Road), Sagar Hospitals Jayanagar, Bangalore, People Tree Hospitals, Yeshwanthpur, Bangalore. The data was collected from 200 respondents who were in-patients in the hospitals mentioned above at the time of gathering the data, and who were capable and willing to respond to the questionnaire. The collected data has been analyzed using ANOVA, t-test and Kendall's coefficient of concordance test.

## 6 Analysis and Interpretation

It was observed from the Table 1, that the nearness of the medical institution to the home town has been reported as the highest influencing factor for the choice of the respondents' medical tourism destination. The ability of an institution to provide multi-specialty services is yet another factor that influences the decisions of nearly 40% of the respondents. The reputation of the doctors and the other medical staff also is a factor influencing their decision on the choice of a medical destination and about 34.5% of the respondents made a decision based on the reputation of the medical staff. Out of the 200 responses, about 29% of the respondents' feel that their choice of medical destination would be based on the favorable climatic conditions prevailing in the destination.

**Table 1** Factors influencing the choice of medical tourism destination (multiple responses)

Factors	No. of respondents	Percentage
Nearness to the state or district	93	46.5
Multi-specialty services	80	40.0
Reputation of the medical staff	69	34.5
Favorable climatic conditions	58	29.0
Good infrastructural facilities at the hospital	49	24.5
Economical services	23	11.5
Travel duration	20	10.0
Easy accessibility	19	9.5
Recommendations by friends/relatives/family doctor/other patients	4	2.0
Others	3	1.5

Source Primary Data

It is inferred from the Tables 2 and 3 that out of all the respondents, few (70 respondents) had reported facing challenges while availing medical treatment at their preferred destination. Most of the respondents faced difficulties in hospital charges as they felt that the charges were high and excessive in comparison to other hospitals. Although the medical institutions enjoyed a good reputation, the respondents felt that the doctors' advice and nursing care was not as per their expectations. The respondents felt that they were required to take unnecessary medical examinations and scans which further increased the hospital charges. Long waiting period and nursing care were the next challenge faced by most of the respondents while availing the medical facilities, this has been followed by Billing/payment issues with the overall mean rank of 3.8. Accommodation issues for attenders occupies the 5th rank with the overall mean ranking of 4.51, followed by lack of cleanliness and dietary concerns (mean rank 4.80). Only a meager portion of the respondents have faced discharge delays as their major problem while availing the medical facilities at their destination with the mean rank of 4.87.

## 6.1 Analysis of Variance (ANOVA)

Table 4 describes the Analysis of Variance for the demographic variables of the respondents and the problems faced by them in the hospital while undergoing treatment.

### Hypothesis

There is no significant difference among the demographic variables of the respondents such as their age, area of residence, educational qualification, family size,



**Table 2** Challenges faced by the respondents’ while availing the medical facilities in Bengaluru city

Challenges faced in medical tourism		Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Total
Hospital charges	No	32	4	6	10	6	5	7	70
	%	45.7	5.7	8.6	14.3	8.6	7.1	10.0	100
Doctors’ advice and nursing care	No	5	31	10	5	9	9	1	70
	%	7.1	44.3	14.3	7.1	12.9	12.9	1.4	100
Long waiting period and overcrowding	No	6	11	20	28	10	5	10	70
	%	8.6	15.7	28.6	11.4	14.3	7.1	14.3	100
Billing/payment issues	No	10	4	10	28	5	9	4	70
	%	14.3	5.7	14.4	40.0	7.1	12.9	5.7	100
Accommodation issues for attenders	No	2	7	11	7	28	6	9	70
	%	2.9	10	15.7	10.0	40	8.6	12.9	100
Lack of cleanliness and dietary concerns	No	4	11	4	7	7	24	13	70
	No	5.7	15.7	5.7	10.0	10	34.3	18.6	100
Discharge delays	%	11	2	9	5	5	12	26	70
	No	15.7	2.9	12.9	7.1	7.1	17.1	37.1	100

Source Primary Data

**Table 3** Ranking for the challenges faced in medical tourism

Challenges faced in medical tourism	Ranks
Hospital charges	2.96
Doctors’ advice and nursing care	3.19
Long waiting period and overcrowding	3.86
Billing/payment issues	3.81
Accommodation issues for attenders	4.51
Lack of cleanliness and dietary concerns	4.80
Discharge delays	4.87
<b>Kendall’s W</b>	<b>0.124</b>

Source Primary Data

occupational status and income level and their opinion score regarding the problems faced by them in the hospital while undergoing treatment.

The ANOVA results have shown that the calculated F-ratio values for the demographic variables such as age group of the respondents (2.228), area of residence (0.119), educational qualification (0.177) and family size of the respondents (1.220) are less than their respective table values (2.261, 3.042, 2.146 and 3.042) whereas, the F-ratio values for the demographic variables such as occupational status (2.226) and income level (2.418) of the respondents are higher than their respective table values (2.146 and 2.418).

**Table 4** Demographic variables and problem faced

Demographic variables	Table value	F value	Significant
Age group	2.261	2.228	Ns
Area of residence	3.042	0.119	Ns
Educational qualification	2.146	1.177	Ns
Family size	3.042	1.220	Ns
Occupational status	2.146	2.226	*
Income level	2.418	2.926	*

Source Computed (Primary data)

Ns—Not Significant at 5% Level of Significance

\* Significant at 5% Level of Significance

Hence, it can be concluded that there is no significant difference among the demographic variables of the respondents such as their age group, their area of residence, educational qualification and their family size and the problems faced by them while availing treatment in the hospitals at Bengaluru City.

## 6.2 *t-Test*

Table 5 describes the opinion score of the respondents and t-test for the gender and problems faced by them in the hospital while undergoing the treatment.

### Hypothesis

There is no significant difference between the gender and the opinion score regarding the problems faced by the respondents in the hospital while undergoing the treatment.

It is evident from the Table 5 that the mean value ranges between (22.71 and 23.24). The highest mean value is 23.24, is scored by the female respondents.

It is concluded that the female respondents are highly satisfied with the medical facilities provided by the hospitals in Bengaluru city (Table 6).

The calculated t-test value is 0.418 which is less than the table value of 1.972 at 5% level of significance. Since the calculated value is less than the table value the hypothesis is accepted.

**Table 5** Gender and problems faced by the respondents

Factors		Problems faced-opinion score		
Gender		Mean	S.D.	No.
	Male	22.71	8.90	133
	Female	23.24	7.63	67
Total		22.89	8.48	200

Source Computed (Primary data)

**Table 6** t-test for equality of means-opinion score

t	Table value	df	Sig.
0.418	1.972	198	Ns

It is concluded that there is no significant difference between the gender and the opinion score regarding the problems faced by the respondents in the hospital while undergoing the treatment.

**7 Findings**

- i. Most (46.5%) of the respondents have stated that nearness of the medical institution to the home town has been reported as the highest influencing factor for the choice of the respondents’ medical tourism destination.
- ii. Kendall’s co-efficient of concordance have shown that there is less similarity among the respondents in assigning the ranks for the problems and difficulties faced by them while undertaking the treatment. Therefore, significant conclusions could not be drawn from the test.
- iii. From the ANOVA results it is found that there is no significant difference among the demographic variables of the respondents such as their age group, their area of residence, educational qualification and their family size and the problems faced by them while availing treatment in the hospitals at Bengaluru City. However, for the demographic factors such as income levels and occupational status; the tests are significant at 5% level of significance, which means that the income level and their occupational status does not significantly influence the problems faced by the respondents’ who arrive for treatment.
- iv. t-test results have shown that there is no significant difference between the gender and the opinion score of the respondents regarding the problems faced by them while availing treatment in the hospital.

**8 Conclusion**

In this study, the researcher has attempted to analyze the factors influencing the choice of medical tourism destination in Bengaluru and also have made an attempt to identify the roadblocks they face while undergoing treatment at select hospitals at Bengaluru city.

A major challenge in the growth and survival of the medical tourism in India is to be able to institutionalize and harmonize regulations with the private sector in the country, and still continue catering the best to these tourists. One of the substantial points observed during the course of the study is the cost of the treatment at Bengaluru city, which happens to be a limiting factor. However, the government is initiating various steps including the Heal in India campaign in order to boost medical tourism

in India as India positions itself to become a global hub for medical tourism. However, the government also needs to take initiatives to minimize the threats and maximize the benefits for the tourists in order to expand the medical tourism sector in India. The following recommendations were offered based on the study.

Every individual should be conscious of his/her health and aware of health-related issues. Expenditure on preventive care is considered as an investment and people should allocate at least minimum amount from their family budget to maintain good health among the members of the family.

Health clubs may be formulated among the public. These clubs should educate its members and create and administer health fund from the contributors of its members. The immediate and contingent health care needs of the members may be assisted from this fund.

Latest technology can be promoted in the hospitals for diagnosing the diseases immediately. Parking facilities in the hospitals can be improved. Good hotels at reasonable rates for the patient attenders can be opened near the important hospitals in Bengaluru City.

India has the potential to become a “Global Medical Tourism Destination”, however this status will only be meaningful if we continue to sustain the present status and still continue to strive for excellence.

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# A Study on Moonlighting Practices Among the Employees Working in IT Sector with Reference to Bangalore City



Ashwitha and K. A. Thanuja

**Abstract** In recent times, a noticeable rise in the prevalence of holding multiple jobs has become a prominent trend. This phenomenon is particularly pronounced due to the widespread adoption of flexible work schedules and remote work opportunities by a majority of IT companies. The focus of this research is to delve into the implications of moonlighting on the IT sector in Bangalore. The principal objective of this study is to analyze the various factors influencing moonlighting practices. To achieve this aim, a survey was meticulously conducted, involving a sample size of 50 participants. The survey was effectively executed, yielding valuable data that was meticulously organized and analyzed, leading to the formulation of significant conclusions. The research design employed for this study is primarily descriptive, while the sampling strategy adopted is highly efficient. The outcomes of the research highlight that moonlighting can have a positive impact on an employee's overall standard of living.

**Keywords** Jobs · Schedule · Moonlighting · IT companies

## 1 Introduction

The field of human resource management is currently expanding quickly and introducing personalized working and living styles in organizations. Employees in the IT industry take the initiative to moonlight for a variety of personal wants and reasons because of the flexible working hours and work from home choices available. A person who does a primary job and another employment on the side is said to be “moonlighting.” Moonlighting has always been done to supplement income. In the practice of moonlighting, an employee may separate his or her interests from the primary job. It is an employee's act to work more than one job.

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Employees look for side jobs to supplement their income and build financial stability. Many people may interpret the term “moonlighting” to signify moonlight at night. Actually, completing many jobs is an employee’s act. In this procedure, the person may divide his or her interests from the primary job. Employers and human resource specialists face difficulties when employees moonlight. Employers and employees both benefit and suffer from employee moonlighting. Employee moonlighting must be avoided by employers since it harms the efficiency of their business.

This study investigates moonlighting practices among IT sector employees in Bangalore, emphasizing motivations, impact on job performance, well-being implications, and organizational dynamics. Through a comprehensive literature review, a methodologically rigorous approach is employed to gather and analyze data. The study’s findings shed light on the factors driving moonlighting, its effects on job performance and well-being, and its influence on organizational dynamics. The paper concludes with actionable insights for IT organizations and policymakers, contributing to a deeper understanding of moonlighting’s role in the evolving employment landscape of Bangalore’s IT sector.

## 2 Review of Literature

Irfan [1] this study tries to comprehend the elements that motivate workers in the IT industry to participate in unethical activities. The study will concentrate on examining how societal, organizational, and individual factors affect moonlighting behavior. The analysis will take into account societal aspects like economic conditions and alternative sources of income, organizational factors like workplace culture and job security, as well as individual factors like financial necessity and job happiness.

Preethi and Verma [2] this literature review focuses on the gender pay gap and pay disparity among IT employees in urban Bangalore. The gender pay gap refers to the difference in earnings between men and women performing the same work. Despite women constituting a significant portion of the workforce, they continue to face lower pay.

Ganapathy and Deepak [3] the concept of reskilling on LinkedIn is a groundbreaking approach that offers significant advantages for both employees and individuals seeking employment opportunities. It presents a user-friendly platform for individuals to upgrade their Knowledge, Skills, and Abilities (KSAs) to remain relevant in the job market and pursue career advancement.

Dharshin [4] In India that control multiple employment. However, this tendency benefits the workers since they may take advantage of chances connected to their careers and follow their passions as well. An unstructured legality binds the employer and the employee with regard to employee involvement and employment.

Vipanchi et al. [5] In order to moonlight, one must take on two or more jobs at once in addition to one principal one takes on a second job without the original employer’s

permission, which will lead to the primary employer firing the employee. This essay makes an effort to understand the factors that affect employees' engagement.

Singha et al. [6]. There may be various reasons why an employee may practice moonlight, but it is essential that an employee be happy in the organization. Singha [7] stated that assessing the employee happiness index in the contemporary workplace is paramount for organizations seeking to comprehend and enhance employee contentment and overall welfare. Further, Singha et al. [6] said that cultivating attitudes is pivotal in moulding personal and professional advancement. Attitudes mirror individuals' beliefs, values, and perceptions, exerting a substantial impact on their conduct, choices, and engagements. Employers must integrate the organization's employee happiness index and positive attitude formation. In the study by Singha and Sivarethinamohan [8], they stated that integrating the concept of Ubuntu into workforce diversity management is essential for fostering a positive organizational climate.

Thomas and Ghosh [9] This study delves into the concept of Human Resource Management, which involves selecting suitable candidates, providing training, evaluating performance, and determining compensation. It focuses on the challenges faced by HR professionals in startups based in Bengaluru, acknowledging their unique nature due to the youthfulness of these companies in the industry.

Priya [10] Organizations are providing allowances to employees to enhance their interest in job. But still extra expenses in day to day life is forcing people to think about an additional income. Due to this reason many employees are ready to do additional work, which may help them to meet their extra requirements.

George and George [11] work from home option and flexible working hours are the motivating factors towards a part time job in software industry. It is offering professional and financial growth for the employees.

George and George [11] in their study reveal that, People look into an alternative employment either for additional income or for meeting the day to day requirements. Working from home and flexibility in work time also attracts employees to do extra job. It is inappropriate to stop an employee from doing the same. At the same time secondary job improves the skill of employees.

Seema the process of looking for and engaging in alternative employment is crucial for documenting the progression of workers' withdrawal cognitions (WC). In the past, WC have primarily been investigated in relation to job attitudes for the ultimate consequence of turnover, but in this digital age, it is equally significant to investigate the relationship of job attitudes with this crucial cognition sequenced before turnover stage, i.e. moonlighting, which may ultimately lead to turnover.

Sachdeva [12] According to an analysis of recent layoffs in the IT sector by major companies like Cognizant, Cisco, and Cap Gemini SA in the financial years 2015–16 and 2016–17, positions are increasingly being automated. Every day, new and innovative technologies are developed that aim to overtake the market and make the current ones obsolete. This raises a crucial contemporary issue.

Morais [13] the study is to determine what factors influence charity giving among working professionals who work in the organized sector of the Bengaluru urban district and hold white collar employment. The study also aims to comprehend how



income and non-income factors may influence people's decisions regarding charity donations. Based on its goals, the study records charitable contributions in terms of money, time, and gifts, the emphasis is on monetary donations.

Timothy et al. [14] found that low income people are mostly interested to do moonlighting. Majority try to compensate the differences in their earnings and spending by following it. This is also practiced by teachers and doctors too. Secondary income is mostly attracting male workers than female.

Kaukab [15] states that job satisfaction is a major element in association with a secondary job. Dissatisfaction of present job may lead many to think about a substitute income. It is noticed that the people working under this are giving importance to personal goals than institutional goals.

Rispeel and Blaauw [16] indicates that additional job makes the workers tired. As a result of this workers cannot concentrate much on the outcome. Some cases they find it difficult to manage the working hours and in order to compensate it they take leave from the prime job. Major health issues also noticed among the employees due to unusual working hours.

In 2017, Ashwini et al. investigated whether middle-level employees at specific I.T. firms intended to work a second job. They investigated a number of contributing factors to the workforce's moonlighting and came to the conclusion that in the absence of proactive retention benefits for the committed, experienced employees, they lost organizational commitment and took on second jobs to pursue their personal goals.

Khatri et al. [17] have studied how committed employees of small and medium-sized businesses (SME) are to their organizations and how often they moonlight in the Delhi-NCR region. They discovered that organizational commitment and loyalty are negatively impacted by moonlighting, which is quite widespread in SME. They also examined how the two genders of moonlighting workers perceived organizational commitment, but they found no discernible difference.

Semion and Adebisi according to this study people working in public sector prefer more moonlighting. As per the study reason for moonlighting is unfaithful and dissatisfied work force, bureaucracy, a leisurely attitude towards work, weak leadership, and unproductive organizational practices.

## ***2.1 Statement of Problem***

The level of employee commitment to achieving organizational goals determines how much the organization will grow. However, some IT employees in Bangalore are forced to do the moonlighting because of financial circumstances. Due to this, many employees are compelled to work second jobs in order to survive. Despite the fact that each employee's decision to moonlight was their own, it is important to consider how this choice influenced the firm as a whole. Therefore, the purpose of this study was to investigate the type, frequency, and effects of moonlighting among IT professionals and how it affects how well they perform at work.

## 2.2 Objectives

- To understand the concept of moonlighting practices of working professionals
- To study the moonlighting pattern among employees working in IT sector
- To study the influencing factors for employee's moonlighting practice
- To determine the effect of moonlighting and its relationship to work satisfaction.

## 3 Methodology

A questionnaire is developed to determine the moonlighting practices among the employees working in IT sector. This study used an investigative research approach based on previous field research; a questionnaire was developed to examine the practices of Moonlighting among the employees of IT sector. After trail testing, questionnaire was spread to 200 employees working in IT sector. A structured questionnaire and convenience sampling were used to collect data. The percentage technique, frequencies and correlations, and chi-square tests were used to analyze the data. Tables and graphics are also generated.

### 3.1 Data Analysis and Interpretation

See Table 1.

**Table 1** The table presents a summary of the variables under investigation

Variables	Group	Occurrence	Percentage occurrence
Gender	Men	65	74.5
	Women	51	25.5
Age	20–25	50	25
	26–35	62	31
	36–45	67	33.5
	46–60	15	7.5
	Above 60	6	3
Educational qualification	Up to SSLC	19	9.5
	UG	65	32.5
	PG	57	28.5
	Professional	35	17.5

*Note* the provided information is based on the primary data

**Table 2** Significant differences in moonlighting habits between genders

	Test value = 0					
	t	df	Sig. (2-tailed)	Mean difference	95% Confidence interval of the difference	
					Lower	Upper
Doing ML	7.684	20	0.000	1.90476	1.3877	2.4219
Gender	12.649	20	0.000	1.33333	1.1135	1.5532

*Note* the provided information is based on the primary data

3.2 T-Test

To ascertain whether a procedure or therapy actually has an effect on the population of interest or whether two groups differ from one another, hypothesis testing frequently uses this technique.

H1: there are significant differences between male and female moonlighting habits (Table 2).

As the test performed, the calculated value in 0.000 which is less than the significant value i.e. 0.05. As the calculated value is less than the significant value we will accept the hypothesis which we framed. As per the study we can conclude that the practice of Moonlighting is different between the male and female.

3.3 One Way Anova

Determines whether there is statistical evidence to support the idea that the population mean values are statistically significantly different by comparing the means of two or more separate groups.

H1: there is a significant difference between the moonlighting practice among different level income group (Table 3).

As the test performed, the calculated value is 0.369 which is more than the significant value 0.05, so we are rejecting the hypothesis. Because of this we can conclude

**Table 3** Moonlighting practice among different income level groups

	Sum of squares	df	Mean square	F	Sig.
Between groups	4.260	3	1.420	1.120	0.369
Within groups	21.550	17	1.268		
Total	25.810	20			

*Note* the provided information is based on the primary data

**Table 4** Association between adequate salary and moonlight practices

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	14.294 <sup>a</sup>	12	0.282
Likelihood ratio	17.746	12	0.124
Linear-by-linear association	5.150	1	0.023
N of valid cases	200		

*Note* the provided information is based on the primary data

that there is no significant difference between the moonlighting practices among different income group people.

**3.4 CHI Square Test**

A non-parametric measure is the chi square test. This research uses it to examine the strength of the relationship between two attributes.

H1: There is an association between the adequate salary received by the employees and Moon light practices.

Here two variable are choose for the comparison one is people doing the moonlighting job and the adequate salary received by them in the main job (Table 4).

**Interpretation**

After the calculations are performed, the same is compared with table value taken at 5% given level of significances. The calculated value is 0.282 is more than the significant value i.e. 0.05. So we rejecting the alternative hypothesis. So we can conclude that there is no connection between the amount of salary received by the employees and the concept of Moonlight practice. People are adopting the moon lighting practice not for the purpose they are not getting the enough salary.

**3.5 Correlations**

H1: there is the significant relationship between the various factors on the practices of Moonlighting among the employees working in IT sector (Table 5).

**Interpretation**

As the test is performed, there is totally 10 factors are consider for the study namely Adequate Salary, Standard of Living, Financial Condition, Less Working Hour, job Satisfaction, Conflict, and Career Shift, update Job, Job Opportunity, skill. The purpose of the study is to find out which factor is correlating with the practices

**Table 5** Relationship between various factors and moonlighting practices among employees in the IT sector

Variables	Pearson Correlation	Sig. (2-tailed)	Result
Adequate salary	0.507	0.928	Strong positive correlation
Standard of living	0.551	0.019	Strong positive correlation
Financial condition	0.179	0.010	No correlation
Less working hour	0.771	0.439	Strong positive correlation
Satisfaction	0.887	0.000	Strong positive correlation
Conflict	0.671	0.000	Strong positive correlation
Career shift	0.391	0.001	No correlation
Update job	0.527	0.080	Strong positive correlation
Opportunity	-0.021	0.014	No correlation
Skill	0.291	0.201	No correlation

*Note* the provided information is based on the primary data

of Moonlighting. From the above Correlation Table, we can conclude that Adequate Salary, Standard of Living, Less Working Hour, Job satisfaction, Conflict in work place, update in the jobs these are the factors which is correlating with the practices of Moonlighting practices among the IT employees. Financial Condition, Career Shift, better opportunity and skill development are not correlating with Moonlighting practices. People are having less working hour and also they are not satisfied with current job that is the main 2 reasons why the people will prefer the moonlighting practices.

### 3.6 Regression

Regression is the statistical analysis which helps to study the relationship between two or more variables.

H1: there is statistically significant relationship between the predictor variable standard of living, less working hour, conflict in work, update in job profile and the response variable Moonlighting practices among IT employees (Table 6).

#### Interpretation

As the calculation is performed, we can see that standard of living is having impact on the practices of Moonlighting. Because the calculated value i.e. 0.015 is less than the significant value i.e. 0.05. As the calculated value is less than the significant value we can accept the hypothesis. Same will be applied for less working hour and moonlight practice, Conflict in work place and the moon light practices among the IT sector employees. But when you find the relationship between updating the job profile and practices of moonlighting practices, there is no connection between both. The calculated value is 0.363 which is more than the significant value i.e. 0.05. So

**Table 6** The predictor variables and the response variable being investigated for a statistically significant relationship among IT employees

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	− 0.840	0.308		-2.725	0.015
	Standard of living	0.420	0.122	0.344	3.440	0.003
	Less working hour	0.640	0.127	0.532	5.032	0.000
	Conflict	0.314	0.144	0.290	2.180	0.045
	Update job	0.117	0.125	0.120	0.936	0.363
Model summary						
Model	R	R square	Adjusted R square	Std. Error of the estimate		
1	0.926 <sup>b</sup>	0.857	0.821	0.48069		

<sup>a</sup> Dependent Variable: Doing Moonlighting Practices  
<sup>b</sup> Predictors: (Constant), update Job, Standard of Living, Less Working Hour, Conflic

this particular hypothesis is rejected. In the analysis the R Square value is 0.857 overall all the factors are strongly effecting on the practices of Moonlighting.

4 Conclusion

The study on moonlighting practices among employees in the IT sector, focusing on Bangalore City, holds significant implications for various stakeholders. The findings underscore the importance of reevaluating organizational policies to address secondary employment, thereby promoting conflict-free environments, employee well-being, and work-life balance. The study sheds light on the potential impact of moonlighting on talent retention and attrition rates, calling for strategic measures to enhance employee satisfaction and reduce turnover.

However, it is essential to acknowledge the study’s limitations, including its sample size and regional focus. These factors warrant caution when generalizing the findings to other contexts. The potential for self-reporting bias and the study’s cross-sectional design also highlight areas for future methodological improvement.

Moving forward, future research should explore moonlighting’s intricate relationship with job performance, motivations, and career outcomes within the dynamic IT sector. Comparative studies across sectors and global IT hubs can provide a broader perspective on moonlighting practices, while investigating the influence of technological advancements adds a forward-looking dimension to the field. By considering both the implications and limitations of this study, we pave the way for a more comprehensive understanding of moonlighting’s role in the evolving world of work.

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# Awareness Level of Rural Investor on Various Schemes Offered by Indian Post Office with Reference to Salem District Tamil Nadu



M. Krishnamoorthi and M. Mathiyarasan

**Abstract** The degree and amount of financial planning done has an impact on this culture of saving and allocating savings to productive investments. To accommodate the various needs of investors, Indian post offices offers a wide range of investment opportunities. These investment options are different from one another, among other things, in terms of returns, maturity duration, and investors' risk tolerance. The current research is descriptive in nature. Every demographic item in this study has an equal chance and likelihood of being selected for the sample. As a result, probability sampling techniques like stratified sampling and simple random sampling are employed. There are 163 samples total in the study.. The hypothesis has been examined using the chi square test. Finally the study concludes that the increased saving practises of the local community have been significantly impacted. The post office savings plan has a variety of advantages and distinguishing characteristics when compared to other savings plans.

**Keywords** Rural investor · Post office · Schemes

## 1 Introduction

An economy's expansion critically depends on its financial system and the rate of new capital formation, both of which can be increased by mobilising savings and putting an investment strategy in place. Investment managers must choose the best investment strategy for the group they are working with because there are many different types of investors and each one has distinct goals. The process of managing investments is also dynamic and continual. Many investment alternatives are available for an individual's funds, and he can choose the right investment plans that suit his demands. The cultural background has an impact on how much money people save and invest. Humans naturally spend their earnings, but the necessity to safeguard

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and protect future requirements compels them to save. The degree and amount of financial planning done has an impact on this culture of saving and allocating savings to productive investments.

Our lives are entwined with money in some way. Individuals strive to earn enough money to live comfortably, eat, and buy a home. Saving is therefore necessary for survival. Savings refers to holding onto a portion of one's income and postponing expenditure. Economics defines personal savings as personal income less personal consumption expenses. To accommodate the various needs of investors, India offers a wide range of investment opportunities. These investment options are different from one another, among other things, in terms of returns, maturity duration, and investors' risk tolerance. According to their returns, they can be categorised as either high return or low return. However risk and reward are inversely correlated; the riskier the situation, the higher the predicted return. The Central Government Savings Bank Act of 1873 and the Government Savings Certificate Act of 1959 both set up and established small savings programmes in India. Following independence, Small Savings Schemes were created with the intention of giving low- and middle-income individuals secure and straightforward investing options. Government entities like post offices and nationalised banks facilitated and oversaw the administration of these programmes. The PPF was created in 1968 with the same specific intent help people save money for investments. Today, more people are becoming financially literate in terms of different investing or tax-saving strategies.

The number of people who are willing to accept risks in order to invest in mutual funds and the stock market is rising. Small savings plans continue to be the chosen option for a sizable section of the investing population despite the availability of alternative investment options. Most investors consider small savings plans to be a "most desired" option because of their high levels of safety and alluring returns. Via Post Offices located all over India, the government of India provides a number of programmes. There are several of these programmes, including Post Office Savings Account, Post Office Recurrent Deposit Account, Post Office Time Deposit Account, Post Office Monthly Income Account, Public Provident Fund Account, Kisan Vikas Patra, National Savings Certificate, and Senior Citizens Savings Program.

Savings and investment are essential for the expansion and development of an economy. Every Indian must have a saving mentality, whether they live in a hamlet or a city. They can save some of their hard-earned money through postal savings plans. The Indian postal system enables people to deposit their money in postal for individuals who do not have access to a bank in their neighbourhood. Postal service investment is typically correlated with institutional and individual attitudes, perceptions, and willingness.

The main objective of this plan is to influence rural populations to develop a saving attitude. As a tool for reducing poverty, saving has gained in importance. To function in their daily lives, people need savings. A person's lifestyle affects how much money they save. The economic prosperity of underdeveloped nations depends heavily on domestic savings. To support the economy of our nation, the post office has launched a number of post office savings programmes. Many in India are unaware of Post Office Savings Programs because it is a rural nation. Savings are increasingly

being seen as a potent instrument for reducing poverty. Postal savings accounts are crucial in financing the nation's debt, and in many nations, the money is first directed through a number of policy-based financial organisations with development objectives before being returned to the community of depositors. Savings are the excess of income over consumption expenditures. Savings by individuals are meant to increase their level of life and provide for unforeseen expenses. There are many financial institutions that offer a variety of investment choices, including commercial banks, cooperative banks, post office savings banks, and life insurance businesses public limited companies.

At the start of the nineteenth century, there weren't many banks, and those that did exist were mostly in big cities and towns. The average person found it challenging to travel to a bank to preserve his meagre quantity of money because he had travel charges to pay. In addition, saving was virtually nonexistent, and the majority of people held their life's savings in gold and silver. On the contrary hand, the government was interested in encouraging saving because it immediately wanted money for a range of developmental operations, the bolstering of the military system, and administrative reforms. A savings bank had to be established by the government through the Post Office as a result of these considerations.

The business that post offices do has changed as a result of the quick adoption of information technology. Large-scale induction and assimilation have become crucial for India Post's survival and growth in the modern period of rapidly evolving information and communication technologies. This research aims to assess rural customers' awareness of the Salem District post office scheme.

## ***1.1 Objective of the Study***

To measure the level of awareness of various schemes of post office among the people.

The present study focuses to understand the need and benefits of various scheme offered by Indian post office at Salem District, Tamil Nadu, and also measure the awareness level of various schemes. The paper structured as introduction to study, objectives, and review of literature, rationale of study, methodology, analysis, discussion and conclusion.

## **2 Review of Literature**

Normany et al. [1] claim that sorting letters by hand is challenging for post offices and that a letter sorting machine can help. It aims to build a tool that will increase the effectiveness and efficiency of post office work.

The attitudes and views of investors towards the various Post Office deposit plans are examined by Ganapathi and AnbuMalar [2]. The goals of the programmes are to

improve investors' saving and thriftiness. They successfully compete in the market thanks to their strategies for reducing taxes, security, and high interest rates.

In their article, Krishnamoorthi and Venkatesan [3] look into customer loyalty to post services as well as customer satisfaction with mail delivery services provided by the postal department in Tamilnadu cities. It comes to the conclusion that customer loyalty is positively impacted by how satisfied customers are with the postal services they receive.

Senthil Kumar and Kannaiah [4] emphasise the value of investment possibilities and how investors feel about Post Office savings plans in their study. An instrument for boosting the economy and the overall level of income is investment. The primary objective of the survey is to determine consumer views and attitudes about post office programmes. 630 participants in the study were picked. The rural residents of the Dharmapuri district are chosen. In terms of security, it is the ideal investment tool for quick economic development.

Dutta [5] has emphasised in her paper the involvement of India Post in providing postal life insurance schemes for workers of the federal and state governments as well as rural postal life insurance (RPLI) programmes for general rural population. It looks at the difficulties they have in offering those services. PLI and RPLI were first introduced on February 1 and March 24, respectively. The post-Independence era is important in today's India.

Dipankar Malankar [6] provide evidence of how little low-income and impoverished people utilise of ways to meet their requirements in their article titled "An examination of Postal Investing and Little Savings. "The post provides a number of investment options for disadvantaged individuals to direct their savings towards the growth of their nation.

Senthil Kumar and Kannaiah [4] Rural inhabitants' investments could contribute to the expansion of the nation. Although the amount invested is not a deciding factor, how they invest might help the country's wealth to increase. The post office savings programmes help the rural populace gradually but progressively establish healthier saving practises. Since the commencement of planning, the emphasis has been on investment as the main tool for economic growth and an increase in national revenue. Investment is seen as a key factor in determining whether or not production will meet target levels, and capital formation needs to be supported by a sufficient level of saving.

Postal savings give depositors the flexibility, convenience, and liquidity they need when they're needed. Investment culture, sometimes known as postal savings, relates to people's attitudes, opinions, and readiness to invest their savings in different financial assets. The creation of policies for the growth and regulation of savings in general, and investor protection in particular, might benefit more from a research in this area conducted in Cumbum Town.

Saranya and Karthigeyan [7] Each person approaches saving in a different way. To accommodate different investor needs, India offers a variety of investment opportunities. Economic growth will be gradually impacted by rural savings. Those who are in favour of the post office plan will keep investing their money. Low-risk investors will like placing their money in postal savings. A person's age, level of expertise,

and tax benefits are all significant factors in their decision to invest in post office savings. Studying and analysing investors' knowledge, attitudes, and preferences as well as their behaviour in respect to the many investment options on the market has become more and more crucial.

Khator [8] Over the next ten years, the position of financial organisations will grow more crucial due to the intense rivalry. Any organisation today aspires to be the customer's first choice and to satisfy them in order to gain loyalty for future market survival due to the growing number of firms and competition. Although it is a crucial concern for any organisation in the current environment, it is legitimate to wonder whether the organisations are fulfilling their clients through quality in their service.

Post office savings programmes, in accordance with Mathumitha, provide small investors with a safe, risk-free, and increased selection of investment possibilities. She suggested that the post office adopt cutting-edge technology in order to better serve the public by speeding up transaction times and raising the post office's rate of interest.

Demonstrated that there are alternatives to the post office for the general people to use when sending letters. It provides a range of financial services to the general population, including microsavings programmes, mutual fund investment, international money transfers, and postal life insurance. He also advocated using advertising to accurately inform consumers about post office savings plans in an effort to attract female investors.

According to, Dipankar Malankar [6] investors are motivated to invest in postal services in order to meet domestic needs and to be secure in their later years. They also value regularity, safety, ease of management, and local accessibility. He advises that the government increase knowledge of postal investment plans and the advantages offered by them among rural inhabitants because they have not properly reached them.

### **3 Rationale of the Study**

Rural residents in India are not aware of Post Office savings programmes. When depositing money and getting it back, depositors have many difficulties. The importance of bankers in obtaining extra money from villagers is emphasised by postal reform. The following are some common complaints made by investors about post office savings plans: In rural areas, everything is recorded in a paper register. Investors who lose their money, even accidentally, must scramble from pillar to post to recover it, and the likelihood that they may fall for a post office scheme agent's deception is great. Those persons do not receive identity documents from post offices. Even if they do, there is no way to confirm it since many post offices in villages are staffed and run by a single employee. Together with other tasks, he manages mail, registered mail, speed mail, deposits, and withdrawals. He seems to be in charge of everything. An investor consequently has a long wait for the staff. So, this research will enhance the effectiveness of post office savings programmes in rural areas.

4 Research Methodology

The current research is descriptive in nature. Every demographic item in this study has an equal chance and likelihood of being selected for the sample. Moreover, the population is split into uniform subgroups prior to sampling. As a result, probability sampling techniques like stratified sampling and simple random sampling are employed. There are roughly 163 samples total in the study. The study’s analysis makes use of a few statistical methods. The hypothesis has been examined using the chi square test.

5 Analysis and Discussion

**AIM:** To test the significant relation between gender of the investor and awareness of post office savings schemes.

**Hypothesis**

H0: There is no relationship between gender of the investor and level of awareness among investors.

Ha: There is relationship between gender of the investor and level of awareness among investors.

The Table1 exhibits the *P*-value of Pearson Chi-Square is more than 0.05 ( $P > 0.05$ ). Thus, the null hypothesis is accepted, and alternative hypothesis is rejected. Therefore, there is no significant relation between gender of the investor and awareness.

**AIM:** To test the significant relation between age of the investor and awareness of post office savings schemes.

**Hypothesis**

H0: There is no relationship between age of the investor and level of awareness among investors.

Ha: There is relationship between age of the investor and level of awareness among investors.

**Table 1** Pearson chi-square values between gender of the investor and awareness

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	6.497 <sup>a</sup>	5	0.261
Likelihood ratio	7.482	5	0.187
N of valid cases	163		

<sup>a</sup>Significance level 5%

**Table 2** Pearson chi-square values between age of the investor and awareness

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	17.488 <sup>a</sup>	20	0.621
Likelihood ratio	20.722	20	0.414
N of Valid cases	163		

<sup>a</sup>Significance level 5%**Table 3** Pearson chi-square values between qualification and awareness level of investors

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	15.972 <sup>a</sup>	15	0.384
Likelihood ratio	19.663	15	0.185
N of valid cases	163		

<sup>a</sup>Significance level 5%

Table 2 shows the  $P$ -value of Pearson Chi-Square is more than 0.05 ( $P > 0.05$ ). Thus, the null hypothesis is accepted, and alternative hypothesis is rejected. Therefore, there is no significant relation between age of the investor and awareness.

**AIM:** To test the significant relation between educational qualifications of the investor and awareness of post office savings schemes.

### Hypothesis

**H0:** There is no relationship between educational qualification of the investor and level of awareness among investors.

**Ha:** There is relationship between educational qualification of the investor and level of awareness among investors.

Table 3 shows the  $P$ -value of Pearson Chi-Square is more than 0.05 ( $P > 0.05$ ). Thus, the null hypothesis is accepted, and alternative hypothesis is rejected. Therefore, there is no significant relation between qualification of the investor and awareness.

**AIM:** To test the significant relation between occupations of the investor and awareness of post office savings schemes.

### Hypothesis

**H0:** There is no relationship between occupation of the investor and level of awareness among investors.

**Ha:** There is relationship between occupation of the investor and level of awareness among investors.

Table 4 exhibits,  $P$ -value of Pearson Chi-Square is more than 0.05 ( $P > 0.05$ ). Thus, the null hypothesis is accepted, and alternative hypothesis is rejected. Therefore, there is no significant relation between occupation of the investor and awareness.

**Table 4** Pearson chi-square values between occupation of the investor and awareness

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	11.546 <sup>a</sup>	20	0.931
Likelihood ratio	12.159	20	0.910
N of valid cases	163		

<sup>a</sup>Significance level 5%

## 6 Discussion and Conclusion

There should be numerous campaigns to increase public awareness on the savings programme conducted by post office offices in every rural region. It will persuade more people to take part in the plan. Interest rates ought to be increased to draw in more investors and give rural residents of all ages a better investing environment. Promote the Post Office Savings Bank programmes through techniques like advertising. Inspire people to save money, especially those who live in rural areas. Increase the number of post office agents in rural areas and agents for different programmes. Post office savings banks should introduce more savings plans, especially for women and kids. Create new special programmes to guarantee the involvement of people are under poverty line liaise with other financial organisations to arrange the exciting activity.

## 7 Implications

The decision makers should understand the guarantee that people in need of help are given more thought. Provide new customised programmes to ensure persons with physical limitations can participate. The account opening procedure has to be made easier. It is advisable to decide on a manageable installment amount. Success has been achieved by the post office savings initiative both inside and outside of Salem District. The increased saving practises of the local community have been significantly impacted. The post office savings plan has a variety of advantages and distinguishing characteristics when compared to other savings plans. The post office savings bank in India offers a variety of effective savings strategies for people from different socioeconomic backgrounds, including the post office monthly income scheme, post office time deposits, Kisan Vikas Patra, public provident fund, and national savings certificate. The monthly savings plan offered by the post office is the scheme that most consumers select. What makes people satisfied with the plans is the efficient and satisfying return from them. The analysis shows that most people have little to no understanding about post office savings schemes. Post office savings plans might encourage more people to save money if the government takes any steps to educate the public about them.



## 8 Limitations

The present study conducted only in Salem district rural investor and sample size is limited to 163 and the period of study conducted is short.

## 9 Scope for Further Study

Based on the present study the future researcher can include the or expand their study to urban area and sample size could be increased to more than 500, where the present study used only basic statistical tools, the future researcher can include some advanced statistical tools.

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# Transforming Education: The Intersection of Education Management, Technology, Smart Universities, and the Impact of Covid-19—A Qualitative Analysis



Neerupa Chauhan, A. Karthikeyan, and N. Ravi Kumar

**Abstract** This study aimed to explore the potential long-term effects of the transformations observed in education management, technology integration, and smart universities on the future of education from the perspective of its primary stakeholders, namely professors and administrators to provide practical solutions. Design is a qualitative study. For this study 20 faculty members, 12 administrators and 36 students has been enrolled purposely. The qualitative content analyses were the basis of analysis in this study. The study has been categorised under 4 themes with 20 subthemes for strength, 20 subthemes for weakness, and 25 subthemes for solutions. Administrative Optimization, Data-Driven Decision Making, Enhanced Student Experience, Sustainable Practices and Global Connectivity were among the strengths of Smart Universities, Where as Initial Implementation Costs, Digital Divide, Data Security Concerns, Technical Challenges, Resistance to Change were the glitch in implementation of rapid technological adoption. The most beneficial solutions offered included Digital Inclusion Initiatives, upgrading e-learning infrastructure and Partnerships and Collaborations for future of smart universities. We concluded that Technological advancements for smart universities has many strengths as well as some weaknesses. Identifying these strengths and weaknesses can help policymakers plan better.

**Keywords** Transforming education · Smart universities · Online learning

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## 1 Introduction

The convergence of education administration, technology integration, Smart educational institutions, and the COVID-19 pandemic have changed education in recent years. Technology, education management, Smart universities, and the COVID-19 epidemic have changed education. These revolutionized education delivery, administration, and experience. Understanding these shifts helps set education's direction and overcome problems in this changing context. Digital tools, online platforms, and instructional software have improved education [9]. Technology delivers personalized learning, evidence-based decision-making, and more educational tools.

Smart universities employ technology to improve learning [23]. Smart campuses benefit from IoT devices, data analytics, and automation. COVID-19 disrupted schooling globally in 2020. Online and remote learning must replace campus education [34]. The COVID-19 epidemic has shown education's weaknesses and presented new prospects. Pandemic and technology have troubled educational administration. Fair education and digital access are challenges for the industry. Educators also require digital training and assistance [32]. These improvements enable pedagogical rethinking, student participation, and lifelong learning.

According to Czerniewicz [14], this change is necessary to protect children and instructors from COVID-19. Harris and Jones [21] analyzed the movement from hierarchical to inclusive and cooperative educational leadership. A positive school culture that encourages development and lets instructors lead their classes was stressed. The World Bank [37] found little evidence on education systems' attempts to promptly and broadly deploy online learning amid widespread school and university closures.

UNESCO studied the detrimental effects of school closures during the pandemic in 2020. The book emphasizes the challenges remote students, especially those from disadvantaged backgrounds, have in accessing high-quality education. The study stressed the need of equitable access to technology and digital resources for inclusive education during and after the pandemic.

Hodges et al. [22] also conducted a rapid systematic study of school closures and coronavirus outbreak control measures. The study found several challenges educational institutions faced while switching to online learning. Challenges included curriculum delivery, teacher preparedness, and student engagement. However, institutions' solutions were successful and exceptional.

Thus, the higher education system must assess technology in education administration, technological integration, Smart higher education institutions, and crisis resilience. This research examines educator training and support, student involvement, educational equity, and data-driven decision-making to improve educational practices. This study will also identify major themes and patterns that have emerged throughout this moment of transition and provide useful ideas for educational institutions, policymakers, and interested parties to improve educational outcomes after the epidemic.

## 2 Methods

This qualitative study is based on a researcher-made questionnaire. The participants were selected purposively, and the intensity of the samples was tried to be selected in such a way that there is maximum variety in the data. The study population included administrators, students and professors in the higher education institutes and participated in online courses. The number of participants in the study included 20 faculty members, 12 administrators and 36 students from 6 higher education institutes. All student and faculties are from the commerce and management field.

An interview has been prepared which includes three main questions: What are the main factors contributing to the success or barriers to the successful implementation of technology-based learning in educational settings? What are the potential long-term effects of the transformations observed in education management, technology integration, and smart universities on the future of education? And, what solutions can be suggested to overcome these weaknesses?

This study employs a qualitative research methodology to thoroughly examine the convergence of education management, technology advancements, smart universities, and the repercussions of the Covid-19 pandemic on the education industry. The interviews and conversations has served as a means to gather the participants' viewpoints about the progression of education administration, the incorporation of technology in educational settings, the notion of intelligent universities, and the adversities and prospects arising from the Covid-19 Pandemic. The quantitative aspect entails the acquisition of data via the dissemination of surveys among professors, students and administrators.

The process of data collection has been conducted in many stages. During the preliminary stage, an extensive survey of scholarly literature has been undertaken to collect pertinent data about the progression of education management, technological advancements in the field of education, smart universities, and the ramifications of the Covid-19 pandemic on the educational sector. The semi-structured nature of the interviews and focus group discussions facilitated participants' open expression of their experiences, thoughts, and opinions. The interviews and conversations have been recorded and transcribed in order to facilitate qualitative data analysis. The survey has been created using insights derived from the assessment of existing research and the analysis of qualitative data.

The qualitative data collected from interviews and focus group discussions has been analyzed using a theme analysis method, as described by Braun and Clarke [10]. The interviews and conversations have been transcribed, and further analysis of the transcripts has been conducted to discern recurrent themes, patterns, and trends pertaining to the domains of education management, technology integration, and the notion of smart universities. The topics have been systematically arranged and effectively presented, offering a comprehensive and compelling account of the viewpoints expressed by the participants.

### 3 Results

After analyzing the content, It has been classified under four themes, which include strength, weakness and solution to address the weakness. Under Rapid Technology adoption, there were five sub-theme for strength, five sub theme for weakness and five sub theme for solution to address the weakness. For Training and Support for Educators, there were five sub-theme for strength, five sub theme for weakness and seven sub theme for solution to address the weakness. For Smart Universities and Enhanced Efficiency, there were five sub-theme for strength, five sub theme for weakness and seven sub theme for solution to address the weakness and for Long-term Impact of Educational Transformations, there were five sub-theme for strength, five sub theme for weakness and six sub theme for solution to address the weakness. All the themes with sub themes has been listed in Table 1.

### 4 Discussion

Technology in education has changed both student learning and teacher practices. Digital technologies, internet platforms, and interactive applications have made classrooms more dynamic and engaging.

Keengwe et al. [27] examined student performance on online learning platforms. Online learners outperformed their classroom peers in academic achievement, excitement, and critical thinking.

Flipped classrooms, where students learn online before attending class, are also popular. Bergmann and Sama [8] explored flipped classroom benefits. This teaching technique increased student participation and made better use of class time, especially for interactive discussions and problem-solving activities, according to the researchers.

Study According to Somyurek and Ozdamli [31], smart universities employ AI and IoT to build a learner-centered environment. This setting fosters creativity, critical thinking, and self-directed learning. Intelligent campus infrastructure was stressed to increase student experience and efficiency.

Smart colleges employ technology, data, and AI to provide customized, flexible learning. These schools collect and analyze student academic performance, preferences, and tailored learning techniques using IoT devices, data analytics, and AI algorithms. Institutions tailor educational materials, support systems, and teaching methods to individual learners based on available information.

The qualitative research explained how education administration, technology, intelligent universities, and the COVID-19 pandemic are transforming education. The following discussion analyzes the main findings and their implications for education.

**Table 1** Results of qualitative content analysis

Strength	Sub theme	Weakness	Solutions to address weaknesses
Theme	Sub theme	Sub theme	Sub theme
Rapid technology adoption	<ul style="list-style-type: none"> <li>Enhanced learning experience</li> <li>Flexibility and accessibility</li> <li>Global connectivity</li> <li>Efficient administrative processes</li> <li>Data-driven decision making</li> </ul>	<ul style="list-style-type: none"> <li>Digital divide</li> <li>Loss of human interaction</li> <li>Technical challenges</li> <li>Resistance to change</li> <li>Quality assurance</li> </ul>	<ul style="list-style-type: none"> <li>Digital inclusion initiatives</li> <li>Balanced approach</li> <li>Technical support and training</li> <li>Change management strategies</li> <li>Quality assurance protocols</li> </ul>
	<ul style="list-style-type: none"> <li>Enhanced pedagogical skills</li> <li>Increased confidence</li> <li>Improved student engagement</li> <li>Personalized learning</li> <li>Professional growth</li> </ul>	<ul style="list-style-type: none"> <li>Time constraints</li> <li>Varied skill levels</li> <li>Resistance to change</li> <li>Lack of resources</li> <li>Sustainability</li> </ul>	<ul style="list-style-type: none"> <li>Flexible training formats</li> <li>Differentiated training</li> <li>Addressing resistance</li> <li>Resource allocation</li> <li>Ongoing support</li> <li>Time management</li> <li>Collaboration and communities of practice</li> </ul>

(continued)

Table 1 (continued)

Strength	Weakness		Solutions to address weaknesses	
Theme	Sub theme	Sub theme	Sub theme	
Smart universities and enhanced efficiency	• Administrative optimization	• Initial implementation costs	• Long-term cost–benefit analysis	• Digital inclusion initiatives
	• Data-driven decision making			
Long-term impact of educational transformations	• Enhanced student experience	• Digital divide	• Robust data governance	• Technical support and training
	• Sustainable practices		• Change management strategies	• Pilot projects and gradual rollouts
	• Global connectivity	• Resistance to change	• Partnerships and collaborations	• Professional development
	• Lifelong learning culture		• Resistance to change	• Digital inclusion initiatives
	• Flexibility and adaptability	• Quality assurance	• Overemphasis on technology	• Balanced approach
	• Personalized learning		• Learning curve	• Collaborative and partnerships
	• Global connectivity	• Enhanced assessment methods		• Supportive ecosystem
	• Enhanced assessment methods			



## ***4.1 Rapid Adoption of Technology***

The COVID-19 pandemic accelerated education technology adoption. Online learning platforms, video conferencing, and collaboration software helped the educational institutions to survive the crisis. This finding shows that the education business can adapt to unusual challenges. The fast use of technology in education has changed teaching techniques, learning experiences, and educational administration. This transformation affects schooling. Technology integration was crucial to maintaining schooling throughout the pandemic. Virtual classrooms, video conferencing platforms, and learning management systems let instructors teach remotely. This shift helped prevent learning pauses and maintain student-institution involvement, especially during crises, according to Baldauf and Stair [6]. Online learning systems and digital materials let students study at their own pace. Asynchronous learning allows students to engage with course materials whenever and wherever they choose, promoting self-directed learning, according to Bao [7].

Technology in school may reduce the digital divide and improve access. Students in remote or impoverished areas may now access high-quality instructional resources. To ensure fair and equitable access, digital infrastructure and internet accessibility must be addressed [33]. Interactive and multimedia-enhanced instructional tools have improved learning experiences. Virtual simulations, augmented reality, and gamified learning increase student engagement and motivation, according to Xie et al. [38]. Adaptive learning systems also allow students to customize their learning paths [15].

Technology has benefited and hindered. The digital divide affects students' access to devices and reliable internet. Students and teachers have different digital literacy levels, making technology incorporation difficult. These issues must be addressed to ensure education equality. The digital divide hinders technological integration. Students in underserved or rural areas sometimes lack access to crucial technology and reliable internet connections [32]. The mismatch prevents fair access to educational resources and may exacerbate educational inequities. To promote effective teaching and learning, instructors and educators must grasp technology well. However, instructors are unfamiliar with modern educational technology and how to integrate it into teaching [18]. To solve this challenge, adequate training and professional development are essential. Education technology collects and stores student data, raising privacy and security concerns. Educational institutions need comprehensive data protection policies to preserve sensitive data and comply with data privacy laws [26]. Technology must be matched with educational goals and instructional methods to be effective [29]. Technology without purpose may not improve education. To maximize student engagement and improve learning results, instructors must understand how to integrate technology into their lessons. School and university technology integration need adequate technological infrastructure and technical support. Outdated hardware, software, and network infrastructure may hinder technology-enabled learning [35]. Technology integration often faces change resistance. Educators and stakeholders may be reluctant to adopt new technologies

and pedagogical methods, slowing adoption [1]. Integration requires a welcoming, accepting environment that promotes transformation.

The Pandemic changed education management, including course scheduling, assessment methods, and student assistance. Educational institutions realize the need of flexibility and adaptation to handle future uncertainty. Due to the pandemic, educational management needed a more flexible approach. The fast shift to online and remote learning required administrators to quickly make decisions, adjust academic schedules, and change instructional methods [3]. Educational institutions' post-pandemic decision-making techniques may be affected by improved flexibility. The global health crisis accelerated technological integration in administrative processes. Educational institutions utilize digital technology for enrollment, course registration, and assessment [24]. Thus, administrative streamlining boosted efficiency, laying the framework for a technology-focused management approach. Educational administration prioritized student help and well-being throughout the epidemic. Administrators have to promote students' social and emotional well-being, especially those who struggled due to distance learning and social isolation [7]. Educational administration will continue to prioritize student well-being. The COVID-19 pandemic required efficient communication and collaboration tactics to ensure information flow and active engagement by all stakeholders. Educational management must establish clear communication channels with students, educators, parents, and staff to efficiently transmit information and handle issues [25]. These communication strategies may remain part of school management beyond the pandemic. The worldwide health crisis forced educational institutions to carefully allocate resources and prepare finances. According to Bacchetti et al. [4], educational administration required prioritization and funding for technology infrastructure, student assistance, and educator training. This experience may inspire future strategic financial planning and resource management. The worldwide pandemic has prompted educational management to improve readiness for future volatility. Administrators needed contingency planning and crisis management to handle expected interruptions [5]. Risk management and long-term planning in educational institutions may be affected by a preparedness mindset.

Online learning systems allow students to study at their own pace [9]. This strategy is flexible enough to fit several learning styles and preferences. Remote learning has promoted student self-directed learning. Roddy et al. [30] found that learners are encouraged to take greater control over their learning environment, setting goals, and independently seeking resources. Online learning is flexible, but student engagement is tough. Dhawan [17] suggests that learning gaps may arise if students struggle to stay motivated and engaged in virtual classrooms. Educators must try new ways to get pupils to work together to engage them. Technology competence and digital literacy for students and educators have been emphasized by the COVID-19 pandemic. In order to effectively utilize online platforms and digital resources, students must gain digital skills [39]. Online learning has raised education equity and inclusion issues. Burgess and Sievertsen [11] say low-income kids may struggle in school. Addressing the digital divide requires equal access to digital tools and help. The Pandemic has changed education, refocusing attention on blended learning options.

Combining online and in-person teaching may provide a complete and adaptable learning environment [20].

## ***4.2 Training and Support for Educators***

Educators require rigorous training and ongoing support to successfully integrate technology. Professional development programs and seminars have helped instructors improve their digital pedagogy. This highlights the need of investing in educator professional development to ensure high-quality online education. Training and support programs taught instructors how to teach online. Hodges et al. [22] say instructors may create engaging digital resources, interactive assessments, and student engagement in online learning settings. Online teaching presented several technological challenges for educators. According to Bozkurt and Sharma [9], training participants received the technical skills needed to operate online learning platforms, solve common issues, and optimize digital resource usage. Such help reduced technological integration barriers and built teachers' confidence in using new technologies. Online instructors must facilitate student collaboration in virtual spaces. Cox and Jovchelovitch [13] found that training and support programs prioritized collaboration tools and methods to promote peer-to-peer involvement and group work. Teachers were encouraged to create a welcoming online learning community to boost student participation. Online learning requires rethinking evaluation. According to Espinosa and Juvé-Udina [19], instructors received professional development to learn how to utilize online quizzes, peer evaluation, and multimedia projects. Assessment strategy training has helped instructors create fair and effective methods for measuring students' learning outcomes. Remote learning has also prompted concerns about student well-being. Jandrić et al. [24] reported that virtual educators were trained to give emotional support, build meaningful connections with students, and address mental health difficulties. Such aid helped create a positive and caring learning environment for pupils during uncertain times. Pandemic training and support for educators has lasting effects. Graham [20] states that post-pandemic educators' greater competency in digital pedagogy and technical technologies has opened new doors for blended learning methodologies. As educational institutions realize the need of equipping teachers with the skills to manage changing classrooms, educator training will continue.

## ***4.3 Smart Universities and Enhanced Efficiency***

Participants acknowledged that clever university activities improve administrative efficiency. AI-driven analytics, smart campus infrastructure, and digital administrative systems maximize operations and resource allocation. These initiatives will likely keep optimizing administrative chores. Intelligent institutions may change higher

education by utilizing cutting-edge technology and data-driven methods, improving efficacy across various disciplines. Intelligent technology at university campuses and administrative processes may improve resource allocation, operations, and effectiveness. Smart universities boost efficiency and benefit the education business. Many universities use IoT devices and sensor networks to create smart campuses. These technologies enable energy management, automated building systems, and real-time campus facility monitoring, according to Huang et al. [23]. Large-scale data and analytics help smart universities make strategic decisions. Data analytics gives university administrators insights into student performance, course outcomes, and resource allocation [2]. Data-driven decision-making may improve curriculum, faculty, and support services at universities. AI and learning analytics help smart schools customize student learning. Wang et al. [36] found that artificial intelligence systems can track learners' progress, identify gaps in learning, and provide individualized recommendations to improve results. Customized education improves student engagement, learning performance, and the need for extra help. Thus, education delivery efficiency improves. Intelligent higher education institutions automate and digitize administrative procedures including admissions, registration, and grading. Chowdhury et al. [12] found that automated procedures and digital administrative systems reduce administrative effort and processing time. Efficiency allows university staff to focus on higher-value jobs, increasing productivity. Intelligent educational institutions employ collaborative technology and digital communication platforms to improve student-faculty-staff interactions. Virtual collaboration spaces enable instant interactions, collaborative projects, and information sharing, enhancing productivity and cooperation, according to De Felice et al. [16]. Intelligent technology helps universities plan ahead. [28] suggest adopting cutting-edge technology and data-driven techniques to adapt to changing educational contexts and student and stakeholder needs. This future-proofing approach ensures institutions remain relevant and successful as issues and opportunities emerge.

#### ***4.4 Long-term Impact of Transformations***

Technology, education management, and “smart” universities will have enduring effects on education. After the pandemic, most respondents predicted blended or online education to prosper. To achieve technology's potential, a long-term view is needed. Pandemics have accelerated remote schooling. This will lead to the widespread use of hybrid learning models that include in-person and digital components [20]. Due of its versatility, individualization, and exposure to more resources, blended learning tactics may boost learning. Educational technology will continue to shape pedagogy. Digital technologies, multimedia, and interactive learning platforms can help instructors engage students and promote active learning [18]. Data analysis will inform school reforms that better serve all kids. The Pandemic's digital divide will spur school access efforts. Schools and governments will give technology, internet, and resources to assist impoverished youngsters catch up [32]. Future

education planning will stress equitable educational opportunities for all pupils. The Internet of Things, artificial intelligence, and data analytics will make smart university initiatives more mainstream. Smart campuses improve resource management, energy savings, and student assistance [23]. These changes will make college cheaper, greener, and more sociable. The pandemic emphasized lifelong learning and adaptability. Schools and companies will promote lifelong learning to enable employees gain new skills and grow in their careers [30]. This research emphasizes instructors should utilize current resources and approaches for professional development. The pandemic made assessment difficult. Long-term repercussions will need a change from standardized testing to competency-based assessments [19]. Knowledge will be assessed and applied.

## 5 Conclusion

Thematic analysis of education administration, technology, smart universities, and Covid-19 shows a changing educational environment. The Pandemic caused a quick change in technology usage and smart university curricula. Expanding educational possibilities for everyone requires bridging the digital divide and digital literacy inequities.

Educational institutions need a flexible, adaptive management plan to handle future uncertainties. Technology integration in education requires teacher training and assistance.

A balance between traditional teaching methods and technology is needed to provide kids the greatest education. This qualitative study may help policymakers, educators, and administrators shape the future of education and leverage technology to generate sustainable change.

Technology integration challenges must be overcome to use educational technology to improve teaching and learning. A successful and accessible technology-enabled learning environment entails tackling the digital divide, giving technology literacy training, securing student data, and connecting technology with pedagogical goals. The COVID-19 pandemic created individualized and adaptive teaching opportunities. This aim needs addressing student engagement, digital literacy, and equity. Educator training and support helped online education during the COVID-19 pandemic. Digital pedagogy and technological fluency helped teachers engage students in online learning. Educators' need for continuing professional development and the importance of this crucial aid are emphasised.

"Smart universities" may enhance higher education using cutting-edge technology and data-driven tactics. Smart colleges provide data-driven decision making, personalised learning, and simplified administrative processes. Smart technology may improve efficiency, production, and resource utilization in universities, benefiting their constituents. The COVID-19 pandemic, new educational management, technology assimilation, and "smart" universities will have far-reaching effects. Hybrid learning models, technology-driven pedagogy, equitable access, smart university

programs, lifelong learning, and reinvented assessment systems will influence the future of education. A flexible, creative, and inclusive long-term strategy plan is needed to capitalize on these transitions and enhance education throughout time.

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# Eco Literacy and Ecological Aptitude Among School Students in India



Molly Joy, N. C. Kiran Babu, and P. J. Emmanuel

**Abstract** The aim of this study was to understand how primary and secondary school students perceive ecological thinking, consciousness, and sustainability, and to determine the impact of an Eco literacy program on ecological intelligence. The researchers used a pretest posttest quasi-experimental design, selecting 360 students from two city schools using purposive sampling. The participants were evenly divided between boys and girls in both primary and secondary classes. The students were given a questionnaire that assessed their ecological aptitude. The results showed that secondary school students, both boys and girls, had higher scores in ecological aptitude compared to primary school students. This suggests that overall awareness of ecological issues was higher among secondary school students. The findings have important implications for nurturing Eco literacy among primary and secondary school students. By implementing an Eco literacy program, educators can help students develop knowledge and awareness of ecological issues, as well as the skills needed to address them. This can contribute to the formation of an environmentally conscious generation that understands the importance of sustainability.

**Keywords** Eco literacy · Ecological aptitude and greenhouse gases (GHG)

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## 1 Background

The concept of ecological intelligence, which refers to the ability to make decisions that are environmentally safe at a personal, local, and global level. It emphasizes the need for collaboration and a shared ecological intelligence to navigate the complexities of understanding ecological systems. The world is becoming increasingly complex and unsustainable, and therefore, it becomes importance of ecological literacy, which involves appreciating the natural world and using that knowledge to create sustainable human communities.

Humans with ecological intelligence often engage in meaningful ways in order to raise educational awareness about ecological issues in the environment. Also they may advocate policies to overcome the issues and harmful hazards faced by the society. Therefore it's always a concern for promoting ecological intelligence in the current changing environment. Also involves how eco system will resists the resilience of its deteriorating effects. Human activities have also destroyed the ecology including air pollution, water pollution, introducing of invasive species, soil erosion and habitat destruction. These are the issues leading to a negative consequences for both the environment and the organisms that depend upon it [1].

According to Goleman [2]. Ecological intelligence is essential for making decisions that promote ecological safety and sustainability. It involves understanding the intricate relationships between various components of an ecosystem and the impacts of human activities on the environment. Making informed decisions based on ecological intelligence can help mitigate the negative consequences of human actions, such as pollution and habitat destruction.

No single brain can store all the information needed to make ecologically informed decisions. This means that individuals must rely on the expertise of others and collaborate to develop a more comprehensive understanding of ecological intelligence. At a personal level, ecological intelligence involves being aware of one's individual impact on the environment and making conscious choices to minimize harm. This may include actions such as reducing waste, conserving energy, and supporting businesses or practices that prioritize environmental sustainability. On a local level, ecological intelligence includes understanding the unique ecological characteristics and challenges of a specific region and taking steps to protect and preserve the local environment. This could involve efforts to preserve natural habitats, promote sustainable agriculture, or implement policies and practices that prioritize the health of local ecosystems. At a global level, ecological intelligence requires understanding the interconnectedness of ecosystems worldwide. It involves recognizing the impact of global phenomena, such as climate change and deforestation, and working towards global solutions that address these issues. Collaboration and global cooperation are critical for effectively addressing these challenges and promoting ecological sustainability on a global scale [3].

By pooling together knowledge and perspectives from diverse individuals and disciplines, a more comprehensive and nuanced understanding of ecological intelligence can be achieved. Collaboration between scientists, policymakers, educators,

and the public is essential to address the complexities of ecological issues and make informed decisions for a sustainable future [4].

There is also mismatch between the increasingly complex and unsustainable world we live in and our limited perception, thinking, and education. It emphasizes the need to develop competencies in systems thinking, critical thinking, and creative thinking to address the ecological issue. However, it also emphasizes the need for something more fundamental and challenging: the transformation of ourselves into conscious agents of cultural evolution must be adopted in the improvements of ecosystem and eco diversity. This transformation is necessary to cultivate an ecological culture and participative worldview [5].

lack of environmental knowledge can have negative consequences for us. It is difficult to gauge the impacts of the environmental products we use and the decisions we make, and this can lead to unintended and harmful outcomes. Therefore, it is crucial to develop appropriate techniques and approaches that allow us to improve our collective knowledge and become more mindful and effective consumers and citizens for maintaining the environmental sustainable goals.

Therefore, sustainability has become a buzzword, often used in advertising campaigns and political promises, but it is important to go beyond rhetoric and truly understand the principles and practices that lead to sustainability. The need for new skills and approaches to navigate the challenges presented by modern technologies and a globalized economy. Sustainability is a concept that is often misrepresented and calls for a more responsible and informed approach to consumption and decision-making [6, 7].

Developing environmentally responsible behaviours requires right cognition about climate change, the cause of global warming, carbon emissions and carbon footprint [8]. According to Capra [9]. The survival of humanity in the future will depend on our ability to understand and live by the principles of ecology, In order to build a sustainable world, it is essential that future generations learn how to work with natural systems for the benefit of both humans and the environment. The current generation of young people are faced with numerous environmental challenges such as climate change, resource depletion, and environmentally-related illnesses. To tackle these challenges, it is crucial to develop leaders and citizens who can think ecologically and understand the interconnections between human and natural systems. It is important that these individuals have the will, ability, and courage to take action.

Eco literacy must become a critical skill for politicians, business leaders, and professionals in all spheres, and should be integrated into education at all levels. It emphasizes the importance of building a sustainable world and the role of future generations in partnering with natural systems. The article concludes by stating that an eco-literacy program is essential in schools and colleges to support lifelong learning and develop responsible citizens capable of applying sustainable ecological knowledge.

## **2 Method**

In this study, researchers used a pretest–posttest experimental design to investigate the impact of an Eco literacy program on ecological intelligence among school students. The study included 360 students who were randomly selected from two city schools. The sample consisted of an equal number of boys and girls from both primary and secondary classes. The researchers employed a purposive sampling technique to select the participants. They divided the students into four groups based on their ecological aptitude.

### **2.1 Objectives**

1. To study the knowledge and awareness on ecological thinking, consciousness and sustainability.
2. To study the effect of Eco literacy programme on ecological aptitude.
3. To study the significant difference Eco literacy programme on ecological aptitude between Boys and Girls.

### **2.2 Hypotheses**

H<sup>01</sup>: There is no significant effect of Ecolitercy programme on ecological aptitude.

H<sup>01</sup>: Boys do not differ on Eco literacy in Ecological Aptitude among primary and secondary school students.

H<sup>02</sup>: Girls do not differ on Eco literacy in Ecological Aptitude among primary and secondary school students.

### **2.3 Variables of the Study**

Dependent variable—Ecological aptitude.

Independent variable—Eco literacy programme.

### **2.4 Biographical Variables**

Primary and secondary school students.

Gender—boys and girls.

## 2.5 Ethical Considerations

The researchers ensured that participants were well-informed about the purpose and content of the study, as well as the process of completing the test. They also addressed ethical considerations such as the rights of participants, confidentiality, and data unification. Participants voluntarily agreed to participate in the study by signing a written consent form.

## 3 Results and Discussion

The collected data were tabulated and scored. Further, hypotheses wise the results were studied with inferential statistics. The captured results are presented and discussed hypothesis-wise as follows. The article collected data from school students and analyzed it using inferential statistics. Computed the mean scores and standard deviation for both primary and secondary students. Also used a “t” test to determine if there was a significant difference between the mean scores of the two groups.

**H<sup>01</sup>:** There is no significant Influence of Ecoliteracy programme on ecological aptitude

Overall, the article aims to test the hypothesis regarding the difference in mean scores between primary and secondary students. They collected data from these two groups and calculated the mean scores for each. They also computed the standard deviation to determine the variability in the scores.

Table 1 The researchers conducted a pretest and posttest to measure the scores of primary and secondary school students. The results indicated that there was a significant increase in ecological aptitude among primary school students after the eco literacy program. The pretest scores had a mean of 28.51, while the post test scores had a mean of 51.59, with a standard deviation of 20.78. The statistical analysis confirmed that this increase was statistically significant with a  $p$ -value less than 0.01. The findings led to the rejection of the null hypothesis, which suggested that there was no significant influence of the eco literacy program on ecological aptitude. Furthermore, the researchers discovered that secondary school students performed better in the post test than their primary school counterparts. This suggests that the level of knowledge and awareness on ecological issues played a role in determining the effectiveness of the eco literacy program on ecological intelligence among school students. In conclusion, the study demonstrated that eco literacy had a significant impact on the ecological aptitude of primary school students. This indicates the importance of eco literacy programs in fostering ecological thinking, consciousness, and sustainability among students. The results also highlight the need to implement eco literacy programs at an early stage in education, as secondary school students exhibited higher scores in ecological aptitude. These findings provide valuable insights for educators and policymakers to develop and implement effective eco literacy programs in schools [10]. Finally, ‘research shows that when environmental education alone is not

effective enough in increasing awareness among students, it is necessary to include its materials in the curriculum to increase students' ecoliteracy' [11–13].

Table 2 shows the pretest scores of primary students ( $M = 22.50$ ), secondary ( $M = 34.32$ ) and post test scores of primary ( $M = 46.25$ ,  $SD = 20.78$ ) and secondary ( $58.80$ ,  $SD = 23.25$ ) which was found to be statistically significant indicated that the ( $df = 89$ ;  $t = 3.74$ ;  $p < 0.01$ ) levels among primary and secondary school students. Therefore, rejecting the null hypothesis which stated that the '**There is no significant effect of Ecoliteracy programme on ecological aptitude**'. Finally, it was found that the secondary school students had scored high on ecological aptitude post test results. Therefore, the knowledge and awareness on ecological thinking, consciousness and sustainability determined the effect of eco literacy programme on ecological intelligence among school students. The study analyzed pretest and post test scores of both groups to determine any significant differences. The pretest scores of primary students averaged at 22.50, while secondary students scored higher at 34.32. After the implementation of the eco literacy program, the post test scores of primary students increased to an average of 46.25, with a standard deviation of 20.78. Similarly, the secondary students' post test scores rose to an average of 58.80, with a standard deviation of 23.25. These results were found to be statistically significant, indicating a notable improvement in ecological aptitude among both primary and secondary students.

By conducting a statistical analysis ( $df = 89$ ;  $t = 3.74$ ;  $p < 0.01$ ), the researchers were able to reject the null hypothesis, which claimed that the eco literacy program would not have a significant effect on ecological aptitude. The findings demonstrated that there was indeed a significant impact of the eco literacy program on the ecological intelligence of school students. Furthermore, the study revealed that secondary school students achieved higher scores on the post test, indicating a greater level of knowledge, awareness, and understanding of ecological thinking, consciousness, and sustainability.

**Table 1** Effect of Eco literacy in ecological aptitude among school students

Variable	N	Pretest Mean	Posttest mean	df	SD	t	p
Ecological aptitude	360	28.51	51.59	359	20.78	25.56**	0.01

Note \*  $p < 0.5$ ; \*\*  $p < 0.1$

**Table 2** Pretest and post results of primary and secondary school students

N-360	Category	Pre test mean	Post test Mean	df	SD	t	p
180	Primary	22.50	46.25	89	20.50	3.74*	0.041
180	Secondary	34.32	58.80		23.25		

Note \*  $p < 0.5$

This suggests that factors such as prior knowledge and maturity may influence the effectiveness of the eco literacy program on enhancing ecological aptitude [14–16].

Table 3 shows the results showed that there were differences in the scores between the two groups. The pretest scores for primary school boys were 22.50, with a standard deviation of 20.50, while the post test scores were 46.25. On the other hand, the pretest scores for secondary school boys were 34.32, with a standard deviation of 23.25, and their post test scores were 58.80. These differences were found to be statistically significant, with a  $t$ -value of 10.99 and a  $p$ -value less than 0.01 for the primary school students. This means that the null hypothesis, which stated that there were no differences in eco literacy in ecological aptitude between primary and secondary school boys, was rejected.

Furthermore, the study found that secondary school boys had higher scores in ecological aptitude compared to primary school boys. This suggests that their knowledge and awareness of ecological thinking, consciousness, and sustainability played a role in their higher eco literacy. Therefore, the eco literacy program had a positive effect on ecological intelligence among secondary school boys.

The results showed that secondary school boys had higher scores in ecological aptitude, indicating the importance of knowledge and awareness in ecological thinking. These findings highlight the need for eco literacy programs to enhance ecological intelligence among students, particularly at the secondary school level. In an “Environmental Education articles in Schools: Learning Styles and Genders” which state that boys show greater scores in outdoor treatment groups than in traditional classrooms, boys also get greater scores on attitudes and behaviors than girls [17–20].

**H<sup>02</sup>:** Girls do not differ on Eco literacy in Ecological Aptitude among primary and secondary school students.

In this study, a hypothesis was tested which states that the mean scores achieved by girls in primary and secondary school students are different. The difference of the mean scores of the two groups was also compared (Table 4).

Table 2 shows the effect of eco literacy in ecological aptitude among boys differed among primary and secondary students. The pretest scores of ( $M = 19$ ;  $SD = 18.51$ ) and post test scores of ( $M = 38.83$ ) While, for the secondary school students the pretest scores of ( $M = 38.22$ ;  $SD = 20.83$ ) and post test scores of ( $M = 62.30$ ) which was found to be statistically significant indicated that the ( $df = 89$ ;  $t = 11.14$ ;  $p < 0.01$ ) levels among primary school students. Therefore, rejecting the null hypothesis which stated that the ‘**girls do not differ on Eco literacy in Ecological**

**Table 3** Pretest and post test results among boys

Gender	N-360	Category	Pre test mean	Post test Mean	df	SD	t	p
Boys	90	Primary	22.50	46.25	89	20.50	10.99**	0.01
	90	Secondary	34.32	58.80		23.25		

Note \*\*  $p < 0.1$

**Table 4** Pretest and post test results among girls

Gender	N-360	Category	Pre test mean	Post test mean	df	SD	t	p
Girls	90	Primary	19.00	38.83	89	18.51	11.14**	0.01
	90	Secondary	38.22	62.30		20.83		

Note \*\*  $p < 0.1$

**Aptitude among primary and secondary school students'.** Finally, it was found that the secondary school students had scored high on ecological aptitude among girls compared to primary school students. Therefore, the knowledge and awareness on ecological thinking, consciousness and sustainability determined the effect of eco literacy programme on ecological intelligence among secondary school girls.

The results showed that there was a significant difference in the pretest and post test scores of boys in both primary and secondary schools. Prior to the program, the average score for boys in primary school was 19, while in secondary school, it was 38.22. After the program, the average scores increased to 38.83 for primary school boys and 62.30 for secondary school boys. This difference was found to be statistically significant ( $df = 89$ ;  $t = 11.14$ ;  $p < 0.01$ ) for both primary and secondary school boys, indicating the positive impact of the eco literacy program on their ecological aptitude.

Furthermore, the study examined whether gender played a role in the effectiveness of the eco literacy program. The null hypothesis, which stated that girls do not differ in eco literacy in ecological aptitude among primary and secondary school students, was rejected. The results indicated that secondary school girls scored higher on ecological aptitude compared to primary school girls. This suggests that the knowledge and awareness of ecological thinking, consciousness, and sustainability had a greater impact on the ecological intelligence of secondary school girls.

In conclusion, the eco literacy program had a positive impact on the ecological aptitude of both boys and girls. However, there was a significant difference between primary and secondary school students, with secondary school students showing higher scores. This emphasizes the importance of promoting eco literacy and sustainability education early on in primary schools to ensure the development of ecological intelligence among students [21].

## 4 Summary, Conclusion and Implication

The need for creating awareness and promoting knowledge and skill among school students is a paramount significance to create India as an ecologically intelligent nation. The change should start from the school level to provide ecological training and skill among the students to reduce, reuse and recycle materials of prime use. Providing campaigns to go green making them more environmental conscious at

the school level there should be syllabus renewal and the courses ought to comprise matters on ecological, awareness safety and sustainability. Students should be motivated and reinforced for acting environment friendly. The curriculum should be framed in such a way that both teachers and pupil are virtuous at: analyzing, creating, classifying and cataloging things as 'health issue', 'economic issue', 'social issue' or 'environmental issue'. The class room teaching should create learning situations where the potential for transformative learning experiences is made manifest for developing sustainable environment.

Ecological intelligence is a basic concept in addressing the present environmental issues facing by humanity. By encouraging a deeper facet of ecological structure and promoting healthy sustainable practices, businesses, and governments can work together to create a more volatile and ecologically balanced place. Meeting the ecological intelligence is not just an option; it is an important product for the survival and well-being of our planet and all its inhabitants.

Fostering ecological intelligence is vital for alleviating the influence of human activities on the environment and gaining a sustainable future for harmony. It empowers individuals and societies to make proper decisions, look for innovative solutions to ecological problems, and live in peace with the Earth's natural habitat. By focusing on ecological intelligence, we can foster a higher sense of responsibility and associate to nature, leading to a healthier wellbeing, more equitable planet for generation to come. By understanding the causes and repercussion of climate change, humans living in communities can work towards decreasing greenhouse gas discharge and adjusting to changing climate patterns.

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