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PREFACE

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Welcome to Volume 19, Number 2 (2025) of the *Labuan E-Journal of Muamalat and Society* (LJMS). This issue continues our commitment to providing insightful and impactful research that bridges the gap between the disciplines of *muamalat*, society, and Islamic finance. The articles featured in this edition reflect the dynamic and evolving landscape of contemporary Islamic studies, addressing key issues relevant to our modern world.

In this volume, we are pleased to present a diverse range of studies that explore various aspects of Islamic economics, law, and society. The first article explores the intentions of Malaysian paddy farmers to participate in a *takaful* scheme, providing a valuable perspective on the intersection of Islamic finance and agriculture. Following this, a systematic review of food security and its Islamic perspective presents a timely and essential discussion on the role of Islamic principles in addressing global food crises.

Additionally, we delve into issues surrounding accessibility for persons with disabilities in Malaysia, examining the legal challenges and rights at play in public building designs. Other articles critically analyse the distribution of inheritance within Islamic law and the ethical implications of the prisoner's dilemma, further enriching the discourse on Islamic jurisprudence and its application in modern societal challenges.

The issue also covers the burgeoning field of crowdfunding, particularly in the context of Malaysian Muslims, as well as the role of digital literacy in ASEAN higher education over the past two decades. The exploration of *waqf*-based social entrepreneurship models and their impact on social return on investment (SROI) adds a much-needed dimension to discussions on sustainable development and the role of Islamic endowments in modern economies.

Moreover, this volume reflects on the concept of *Shariah* compliance in the digital gold investment sphere, offering fresh perspectives on Islamic finance in the era of digitalisation. We also examine the aftermath of the COVID-19 pandemic in Sabah, Malaysia, offering important reflections on post-crisis living conditions and recovery strategies, particularly within the framework of Islamic financial tools.

Finally, we conclude with an article discussing the strategic use of Islamic charity in the digital era, emphasising the evolving role of *sedekah* (almsgiving) in supporting social welfare through technological platforms.

We hope this issue serves as a valuable resource for academics, policymakers, and practitioners in the fields of Islamic studies, economics, and social sciences. We extend our deepest gratitude to the contributors for their outstanding research, and we invite readers to engage with these thought-provoking topics.

We look forward to continuing our journey of intellectual inquiry and dialogue with the next volume.

Editor-in-Chief
Professor Dr Hanudin Amin, SPDM, COFSA, CIB
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A PRELIMINARY STUDY ON THE INTENTION TO PARTICIPATE IN PADDY CROP *TAKAFUL* SCHEME AMONG PADDY FARMERS IN SEKINCHAN, SELANGOR, MALAYSIA: EMBRACING THE BLENDED ISLAMIC SOCIAL FINANCE PADDY MICRO-*TAKAFUL* MODEL

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ABSTRACT

Paddy farming in Malaysia is highly vulnerable to risks such as climate change, pest infestations, and crop diseases, threatening both farmers' livelihoods and national food security. To mitigate these challenges, the Malaysian government introduced the Paddy Crop *Takaful* Scheme, supported by an initial grant of RM50 million from the Government. This study examines paddy farmers' intention to participate in the scheme, focusing on key influencing factors such as price, risk exposure, attitude, subjective norms, and perceived behavioural control, using the Theory of Planned Behaviour (TPB) as its analytical framework. A quantitative methodology was employed through a pilot survey involving 30 paddy farmers from Sekinchan, located within the Integrated Agricultural Development Area (IADA) Barat Laut Selangor. Data analysis included descriptive statistics, reliability tests (Cronbach's alpha), validity assessments, and crosstabulations to determine patterns in farmers' decision-making. Findings reveal that attitude and risk exposure are the strongest predictors of participation, while perceived behavioural control had the least influence. Notably, only 13 per cent of farmers received financial support from Islamic social finance institutions such as *zakat* and *waqf*, indicating an untapped opportunity to enhance affordability and inclusivity for low-income farmers (B40 group). The novelty of this research lies in the discourse on agriculture risk management by proposing a blended Islamic social finance paddy micro-*takaful* model, aligned with Malaysia's Value-Based Intermediation *Takaful* (VBIT) framework. Despite the small sample size, the findings provide valuable insights for policymakers and *takaful* operators, advocating for greater integration of Islamic social finance mechanisms to strengthen farmers' financial security and support national food resilience strategies.

KEYWORDS: PADDY CROP MICRO-TAKAFUL SCHEME, PLANTER'S INTENT, ISLAMIC SOCIAL FINANCE, FOOD SECURITY, ISLAMIC FINANCE

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ABSTRAK

Pertanian padi di Malaysia adalah terdedah kepada pelbagai risiko seperti perubahan iklim, serangan perosak, dan penyakit tanaman, yang mengancam mata pencarian pesawah serta jaminan makanan negara. Bagi menangani cabaran ini, kerajaan Malaysia telah memperkenalkan Skim Takaful Tanaman Padi, menerusi geran sokongan permulaan sebanyak RM50 juta. Kajian ini bertujuan untuk meneliti niat/kehendak pesawah untuk menyertai Skim Takaful Tanaman Padi, dengan menumpukan kepada faktor utama seperti harga, pendedahan risiko, sikap, norma subjektif, dan kawalan tingkah laku, menggunakan Teori Tingkah Laku Terancang (TPB) sebagai rangka kerja analisis. Pendekatan kuantitatif digunakan melalui kajian rintis terhadap 30 pesawah padi di Sekinchan yang berada dalam lokaliti Kawasan Pembangunan Pertanian Bersepadu (IADA) Barat Laut Selangor. Analisis data melibatkan statistik deskriptif, ujian kebolehpercayaan (alpha Cronbach), penilaian kesahihan, dan taburan silang bagi mengenal pasti corak dalam proses membuat keputusan pesawah. Dapatan menunjukkan bahawa sikap dan pendedahan risiko merupakan faktor paling dominan dalam mempengaruhi niat untuk menyertai takaful, manakala kawalan tingkah laku mempunyai kesan yang paling rendah. Dapatan awal kajian juga mendapati hanya 13% pesawah menerima bantuan kewangan daripada institusi kewangan sosial Islam seperti zakat dan wakaf. Hal ini membayangkan terdapat ruang agar institusi sosial Islam lebih berperanan untuk meningkatkan kemampuan dan keterangkuman bagi pesawah berpendapatan rendah (kumpulan B40). Keaslian kajian ini terletak kepada hasil perbincangan tentang pengurusan risiko pertanian dengan mencadangkan model integrasi mikro-takaful kewangan sosial Islam, sejajar dengan rangka kerja Takaful Berasaskan Pengantaraan Nilai (VBIT) Malaysia. Walaupun kajian ini berasaskan saiz sampel yang kecil, hasilnya memberikan pandangan berharga kepada pembuat dasar dan pengendali takaful, bagi menyokong integrasi mekanisme kewangan sosial Islam dalam usaha meningkatkan keselamatan kewangan pesawah dan memperkukuh daya tahan makanan negara.

KATA KUNCI: SKIM MIKRO-TAKAFUL TANAMAN PADI, NIAT PESAWAH; KEWANGAN SOSIAL ISLAM; KETERJAMINAN MAKANAN; KEWANGAN ISLAM

1. INTRODUCTION

The agricultural sector in Malaysia holds a vital place in the nation's socio-economic framework, acting as a significant driver of economic growth and an essential source of food security for its population (Abu Dardak, 2022). This sector is expected to see modest growth of 0.8 per cent in Q3 2023, rebounding from a contraction of -1.1 per cent in Q2 2023 (Aman, 2023). Despite its growth, Malaysian agriculture faces persistent threats to food security, including climate volatility, natural disasters, pest outbreaks, and crop diseases (Alam *et al.*, 2020). These challenges are compounded by inadequate subsidies and limited access to effective risk protection mechanisms. Further, paddy as the staple food of many Asians including Malaysian has been a major focus of the government to protect its production toward ensuring the food supply. The risks associated with Malaysia's paddy farming sector are diverse and dynamic, covering a range of natural and economic threats. These include drought, floods, fires, extreme weather, pest infestations, disease outbreaks, and the volatility of both input and output prices, as noted by Bakar and Sum (2020). These hazards not only impact the sector's productivity and economic stability but also threaten the nation's food security. This underscores the urgent need for risk management solutions to support a stable and resilient agricultural foundation.

Agricultural *takaful* is essential for protecting farmers from various risks in agriculture. Despite the importance of this sector in Malaysia, particularly in paddy farming, the scheme has never been introduced in Malaysia, until the first paddy crop *takaful* scheme was introduced in September 2024. This study embarks to explore the factors influencing farmers' intention to participate in paddy crop *takaful* scheme in Selangor as a means of managing agricultural risks. Key variables analysed include demographic profile, price sensitivity, risk exposure, attitude, subjective norms, perceived behavioural control, and overall participation intention in agricultural *takaful*. Despite the growing need for agricultural risk management, existing literature on the factors influencing paddy farmers in Selangor to adopt *takaful* remains limited. Existing literature on paddy farmers' participation in agriculture *takaful* schemes consistently highlights perceived behavioural control and perceived risk as key determinants. For instance, Abd Aziz *et al.* (2015) found these two variables to significantly predict farmers' intention to participate in agriculture *takaful* among respondents from Selangor and Kedah, whereas attitude and subjective norms were less influential. Similarly, Abd Aziz (2014) reaffirmed the importance of perceived behavioural control, perceived risk, and attitude, while demographic factors such as age and income showed no significant effect. Complementing these findings, Johari *et al*. (2024), in a study on crop insurance in Kedah, demonstrated that farm income and individual risk attitudes played pivotal roles in insurance uptake, suggesting that economic capacity may be just as critical as psychological drivers.

While these studies offer valuable insights, they may not fully reflect the behavioural dynamics of farmers in high-productivity zones such as Sekinchan, Selangor. In this region, factors like localised flood risks, cooperative farming structures, and advanced agricultural support systems may shape distinct perceptions and decision-making processes. Furthermore, there is a scarcity of studies exploring the relationship between farmers' income levels and financial assistance received from Islamic social finance mechanisms such as *zakat*, *waqf*, and *sadaqah*. A pilot study in Sekinchan would therefore serve a dual purpose: validating existing behavioural models in a new context, and uncovering region-specific motivators or barriers to *takaful* participation. Such findings would not only enrich theoretical understanding but also inform the development of more responsive, inclusive, and *Shariah*-compliant *takaful* solutions tailored to the needs of high-performing farming communities.

To address these gaps, this study employs a quantitative methodology, utilizing survey data collected from 30 paddy farmers in Sekinchan, located in the Integrated Agricultural Development Area (IADA) Barat Laut Selangor. The data are analysed using frequency and descriptive statistics to provide a comprehensive overview of variable distributions. Reliability is assessed using Cronbach's alpha to ensure internal consistency, while validity tests confirm measurement accuracy. Additionally, crosstabulation analysis is employed to examine relationships between categorical variables, offering deeper insights into farmers' decision-making processes regarding *takaful* participation.

This study aims to provide valuable empirical evidence to support the development of more inclusive and effective agricultural *takaful* schemes, ensuring greater financial protection for farmers while strengthening Malaysia's food security initiatives.

2. LITERATURE REVIEW

Agricultural Risks and the Needs for Protection

Agriculture is a vital sector for economic sustainability, safeguarding food security and significantly contributing to a nation's Gross Domestic Product (GDP) (Huirne, 2003). However, the sector faces persistent low productivity due to substantial risks that are inherent in agricultural activities. These risks, although present in many industries, require constant assessment and management by farmers. In the Asia-Pacific region, Malaysia is particularly vulnerable to threats such as floods, landslides, droughts, and climate change (Alam *et al*., 2020). Previous literature has identified five primary categories of agricultural risk: institutional, market, production, financial, and personal risk. Among these, production risk is highlighted as the most significant issue for farmers, as shown in studies by Komarek *et al*. (2020). Further, Komarek *et al.* (2020) asserted that production risks such as unpredictable weather patterns, pest outbreaks, and crop diseases pose major threats to farm productivity and income stability, especially in regions dependent on rain-fed agriculture. Their findings highlight the need for risk mitigation mechanisms such as agricultural insurance or *takaful* to safeguard farmers' livelihoods against these uncertainties.

To address these risks, *takaful* has become an essential tool for risk mitigation at various levels (Thirawat *et al*., 2017; Alam *et al*., 2020). *Takaful* offers farmers a mechanism to protect themselves from financial uncertainties arising from uncontrollable factors that may hinder their agricultural activities (Rai, 2019). Furthermore, *takaful* schemes provide a protective barrier against adverse effects caused by natural disasters or fluctuating market conditions (Kaur & Malhotra, 2023). The Malaysian government has been proactive in supporting the agro-food industry through assistance programs and subsidies (Bernama, 2022). While these initiatives aim to reduce the inherent risks in agriculture, establishing agricultural *takaful* remains critical for strengthening the financial resilience of farming communities.

Although agriculture *takaful* offers a promising solution to mitigate many risks, it is important to recognize that not all challenges can be fully addressed by this financial tool. According to Fauzilah Salleh *et al*. (2023), as outlined in Table 1, agricultural *takaful* primarily covers production risks, including those associated with natural disasters and climate change.

TABLE 1: DETAILS OF RISK COVERED IN ASEAN

Country	Target	Risks covered
Myanmar	Paddy rice	Weather-related disasters
Cambodia	Rice (rubber, cassava, maise)	Excessive rain, drought, dry days
Indonesia	Rice, maise, palm oil	Flood, drought, named pests and diseases, rainfall, windstorm
Laos	-	-
Philippine	Rice, maise, high-value crops	Natural calamities, pests and disease, other perils insured
Thailand	Rice	Flood, drought, frost, windstorm/ typhoon, fire, hail, pests and diseases, elephant damage
Vietnam	Rice	

Source: Salleh *et al.* (2023)

Existing Agricultural Takaful Models in ASEAN Countries

Comparative analysis of agricultural *takaful* schemes across ASEAN countries as depicted in Table 1 illustrates diverse implementations. Nations such as Indonesia, Thailand, and the Philippines have structured crop insurance programs that cover risks ranging from floods to pest infestations (Salleh *et al*., 2023). Malaysia could be considered somewhat left behind and underdeveloped compared with other ASEAN countries. It was only in the last quarter of 2024 that the country introduced its first agricultural scheme, despite being a pioneer in Islamic banking and finance. The introduction of the Paddy Crop *Takaful* Scheme in September 2024 marks a significant step forward in addressing this gap and reinforcing national food security (The Star, 2024).

Takaful has the potential to provide communities with a necessary safety net, offering families a sense of financial security and optimism for the future (Patel, 2011). Agricultural *takaful*, in particular, plays a vital role in alleviating poverty and ensuring food security. As research indicates, agriculture has a more profound impact on poverty reduction and food security compared to other economic sectors (Pawlak & Kołodziejczak, 2020). By acting as a protective layer, agricultural *takaful* helps lift communities out of poverty and contributes to a stable food supply. According to Ben Ayed and Hanana (2021), agricultural sustainability is essential for addressing food security and eradicating hunger, especially for the growing global population. Agricultural growth is also crucial for advancing Sustainable Development Goal 2 (Zero Hunger) (Zhang *et al*., 2020). Those with limited resources, often highly vulnerable to adverse weather, natural disasters, fires, and theft, are particularly in need of agricultural *takaful* to help them recover from the challenges.

Malaysia's First Paddy Crop Takaful Scheme
Islamic banking and finance have flourished in Malaysia over the past four decades. However, despite the sector's emphasis on fairness and equity, there has been a notable lack of *takaful* or insurance schemes specifically designed to protect the agriculture sector and its underserved farming community. This absence contrasts with efforts in neighbouring countries such as Indonesia, Vietnam, the Philippines, and China, where agricultural insurance initiatives have been established (Panda, 2021). Nonetheless, Malaysia has begun exploring agricultural *takaful* as a response to the complex and unpredictable risks inherent in agriculture, which require careful assessment before integration into *takaful* operations (Panda, 2021).

Agriculture *takaful* has become the talk of the town in Malaysia particularly due to its crucial role in supporting national food security. Consequently, the Malaysian government, through the Ministry of Agriculture and Food Security, has prioritised efforts to protect the agrifood industry. National food security has emerged as a critical concern, especially during the COVID-19 pandemic and amidst the challenges posed by climate change affecting the world. After years of developing a viable agricultural *takaful* model, the first Paddy Crop *Takaful* Scheme was launched in September 2024 by Agrobank. This initiative aims to protect paddy crops, securing paddy as the nation's staple food while also safeguarding farmers' incomes against unforeseen events.

Paddy Crop Takaful Scheme
Agrobank's Paddy Crop *Takaful* Scheme (*Skim Takaful Tanaman Padi*, STTP), developed in partnership with the Ministry of Agriculture and Food Security, is Malaysia's first *Shariah*-compliant insurance program tailored exclusively for paddy farmers. This project, which was officially introduced at the Malaysian Agriculture, Horticulture, and Agrotourism Exhibition (MAHA) 2024, intends to reduce the financial risks that rice farmers suffer as a result of natural calamities, pest infestations, and crop illnesses. The policy covers losses caused by natural disasters up to RM3,000 per hectare per season and damages caused by pest infestations or diseases up to RM1,500, which is more than previous disaster funds provided coverage for. For the first year, the government fully subsidises the annual premium of RM120 per hectare, which covers two planting seasons and ensures farmer access.

Registration for the scheme is open to all registered individual paddy farmers in Malaysia, and forms are available at the Area Farmers' Organisation offices. The STTP's principal goals are to reduce financial burdens on rice farmers, increase their resilience to agricultural risks, and strengthen national food security by stabilising and maintaining paddy production (The Star, 2024). This initiative demonstrates the Malaysian government's commitment to integrating Islamic financial solutions into the agricultural sector, so encouraging sustainability and the well-being of farming communities.

Integration of Islamic Social Finance (ISF) in Agriculture Micro-Takaful Scheme
Islamic social finance, which includes *zakat* (almsgiving), *waqf* (endowments), and *sadaqah* (charitable giving), plays a vital role in supporting socio-economic welfare in Muslim communities. In recent years, the integration of Islamic social finance into *takaful*, particularly micro-*takaful* has been recognised as a significant tool to alleviate poverty, provide financial protection to low-income groups, and support sustainable development in rural and agricultural sectors. Several real-world initiatives and pilot projects have integrated Islamic social finance instruments such as *zakat*, *waqf*, and *sadaqah* into micro-*takaful* schemes. These efforts aim to provide financial protection for underserved and vulnerable populations, particularly in rural and low-income communities. In Pakistan, the Akhuwat model, supported by government and community institutions, uses *zakat* and *sadaqah* in providing *qard hasan* financing to support low-income families (Jaafar, 2018). In

Indonesia, BAZNAS mobilises *zakat*, *infaq*, and *waqf* to fund protection for informal workers and healthcare recovery, including medical aid and health-related *waqf* initiatives (Ascarya, 2022).

The *takaful* system is believed might further secure the nation's food supply and offer social security assurances to rice farmers in the form of income protection (Sulaiman, 2023). While Shamsudheen and Muneeza (2024) proposed blended Islamic social finance micro-*takaful* as a tool for enhancing financial inclusion by promoting socio-economic justice while giving paramount consideration to SDGs. In general, micro-*takaful* is designed to offer protection to underserved populations who face financial vulnerabilities but may not have access to conventional insurance products. Research by Mikail *et al*. (2017) revealed that the integration of Islamic social finance namely *zakat* and *waqf* into micro-*takaful* has resulted in better social outcomes, particularly in terms of poverty alleviation.

Crop *takaful*, a specialised form of micro-*takaful*, provides coverage for risks related to farming activities, such as natural disasters, pest attacks, or adverse weather conditions, which are prevalent in agriculture. The significance of crop *takaful* is highlighted in several studies, showing that it is an effective risk management tool that supports farmers in managing agricultural production risks. However, many farmers, particularly those in the B40 income group (the bottom 40 per cent of income earners), may not be able to afford *takaful* contributions.

Islamic social finance can play a pivotal role in making crop *takaful* more accessible to these farmers. By utilising *zakat* and *waqf*, *takaful* operators can reduce the contribution amount for low-income farmers, ensuring that they are not excluded from the benefits of agricultural *takaful*. ISF ensures the redistribution of wealth, aligning with the Islamic principles of mutual assistance and social solidarity (Mohamad *et al*., 2024). Islamic social finance institutions could also be key enablers in making *takaful* more inclusive, particularly for smallholder farmers in developing countries. Moreover, Sulaiman (2024) pointed out that agricultural *takaful* schemes supported by *zakat* or *waqf* funds could provide protection against losses due to natural calamities, thereby contributing to the resilience of rural economies. These schemes can also be structured in a way that promotes sustainability and long-term viability by leveraging social finance to cover operational costs and pay out claims during high-risk periods.

The crop micro-*takaful* scheme can reduce the community's dependence on the government with stakeholders' involvement in contributing a certain sum as part of their corporate social responsibility initiative (Salleh *et al*., 2023). The study emphasises that paddy crop *takaful* serves as a *Shariah*-compliant risk management tool designed to protect smallholder farmers especially those vulnerable to climate-related disasters like floods. The study underscores how such schemes can enhance resilience and contribute to national food security by stabilising farmers' incomes and reducing the impact of agricultural losses.

According to Sabri *et al*. (2021), the integration of *zakat* and *waqf* holds significant potential as a sustainable source of funding for the development of micro-*takaful*, particularly due to the substantial risk funds required. Likewise, Kassim (2013) proposed a *waqf*-based micro-*takaful* model and recommended that *zakat* be utilised as contributions on behalf of the *asnaf*, ensuring the continuity of the risk fund. Similarly, Md Hashim and Badri (2022) advocated for a model in which micro-*takaful* contributions are funded entirely through *zakat* and *waqf*. To address concerns surrounding *tamlik*, the transfer of ownership of *zakat* from the authority directly to the *asnaf*, the study proposed that the *zakat* amount be disbursed to the *asnaf*, who would then independently contribute to the micro-*takaful* scheme. Furthermore, to mitigate potential legal or operational issues related to *waqf*, the findings suggested that *waqf* and endowment assets be managed and invested by the *takaful* operator, with only the income generated from such investments used to fund micro-*takaful* contributions for the *asnaf*.

While Islamic social finance has immense potential in supporting micro-*takaful* and agricultural *takaful*, certain challenges remain. For instance, the efficient collection and distribution of *zakat* funds may require better institutional frameworks and transparency to ensure that the funds reach their intended beneficiaries (Sawmar *et al.*, 2021). Additionally, creating awareness among farmers and low-income communities about the benefits of *takaful* and how it can protect their livelihoods is essential for improving uptake.

Nevertheless, the opportunities are substantial. The integration of Islamic social finance with micro-*takaful* and agricultural *takaful* represents a holistic approach that combines financial protection with social welfare, helping to foster economic resilience and poverty reduction. As more research and case studies demonstrate the positive impact of these initiatives, there is growing momentum for Islamic social finance to become a cornerstone in expanding *takaful's* reach to underserved population.

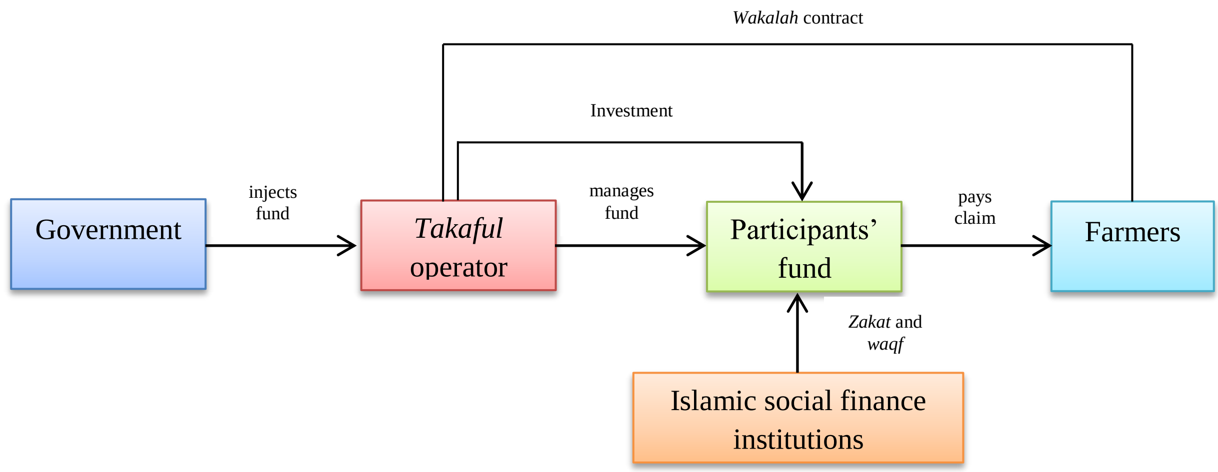

FIGURE 1: CONCEPTUAL FRAMEWORK OF BLENDED ISLAMIC SOCIAL FINANCE PADDY MICRO-*TAKAFUL*
Source: Figure by Authors

Figure 1 illustrates the conceptual framework of the "Blended Islamic Social Finance Paddy Micro-*Takaful* Model". This framework integrates Islamic social finance mechanisms such as *zakat* and *waqf* into the paddy crop *takaful* scheme to support B40 farmers, who belong to the low-income group. The diagram emphasises the collaborative roles of key stakeholders, including the government, *takaful* operators, and Islamic social finance institutions, in establishing a financial safety net for vulnerable farmers. The framework depicts how *zakat* and *waqf* funds can be leveraged to subsidise *takaful* contributions, making agricultural *takaful* more affordable and accessible. Through Islamic social finance mechanisms, such as *zakat* and *waqf*, this will contribute to the sustainability of *takaful* schemes by providing a steady stream of funds to cover the premiums of the poor. This makes *takaful* a more viable and sustainable financial product for underserved markets.

Additionally, the model aligns with Malaysia's Value-Based Intermediation *Takaful* (VBIT) framework, ensuring that *takaful* serves both financial protection and social welfare objectives. By integrating Islamic social finance, the framework aims to enhance financial inclusion, reduce farmers' dependence on government aid, and promote sustainable risk management in the agricultural sector.

The Concept of Takaful
From Islamic point of view, *takaful* is a *Shariah* compliant risk management system that emphasised on collective protection among the participants. *Takaful* derived from an Arabic word "*kafala*" which

means joint guarantee, whereby a group of participants agree to jointly guarantee among themselves against a defined loss (Bank Negara Malaysia, n.d). The values of mutuality and collaboration include kindness, shared responsibility, joint indemnity, common interest and solidarity. It reflects an arrangement which members agree to contribute to a fund that will be used to cover losses incurred by the members.

The *Takaful* Act of 1984 (now repealed with the Islamic Financial Services Act 2013 (IFSA 2013) defines *takaful* as a system rooted in brotherhood, solidarity, and mutual assistance, where participants collectively contribute to a fund intended to provide financial support in times of need. While IFSA 2013 has refined the definition to highlight the element of mutual assistance or *ta'awun*. Under IFSA 2013, *takaful* is defined as an arrangement built on mutual assistance where participants agree to contribute to a common fund. This fund provides mutual financial benefits to the participants or their beneficiaries when pre-agreed-upon events occur. Essentially, it is a *Shariah*-compliant form of insurance based on shared responsibility and risk pooling (Bank Negara Malaysia, 2013). The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) defines *takaful* as "a process of agreement among a group of persons to handle the injuries resulting from specific risks to which all of them are vulnerable" (AAOIFI, 2017). While, the Islamic Financial Services Board (IFSB) defines *takaful* as "a mutual guarantee in return for the commitment to donate an amount in the form of a specified contribution to the participants' risk fund, whereby a group of participants agree among themselves to support one another jointly for the losses arising from specified risks" (IFSB, 2018).

In general, the applicable model of *takaful* in Malaysia is based on *tabarru'* (donation) and *wakalah* model. On the other hand, at international level, there is a shift in the definition of Islamic insurance by the OIC International Fiqh Academy from *tabarru'* (donation) to *ta'awun* (mutual assistance). The resolution in 1985 read as follows: "The alternative contract that respects the principles of Islamic transactions is the cooperative insurance (Islamic insurance) contract that is based on *tabarru'* and *ta'awun*." In 2013, the revised resolution states that "The cooperative (Islamic) insurance is a new contract that is based on the principle of *ta'awun".* Interestingly, the revised definition clearly acknowledged "*ta'awun*" as a new contract departure from the widely accepted *tabarru'* (donation) as the underlying concept of *takaful*.

Factors Influencing' Intention to Participate in Family and Agriculture Takaful?

Farmers in regions where climate changes, diseases, pests are challenges need to mitigate their risk against any calamities through insurance system as a risk management strategy. Despite its benefits, the adoption rate of agriculture *takaful* varies significantly. There are multiple factors that influence farmers' intentions to participate in subscribe agriculture *takaful*. A review of 20 years of *takaful* literature conducted by Ansari (2022), found that the most common theory used to explain consumer behaviour towards *takaful* services is the Theory of Planned Behaviour (TPB). TPB is a well-established theory in the field of psychology and has been widely used to explain consumer behaviour in various contexts. The theory posits that an individual's behaviour is influenced by their attitudes, subjective norms, and perceived behavioural control. In the context of *takaful*, the theory suggests that an individual's intention to participate in *takaful* is influenced by their attitudes towards *takaful*, subjective norms and perceived behavioural control.

A study by Daniel and Steven (2023) concluded that the intention to participate in family *takaful* schemes is not only affected by attitude, subjective norm, and perceived behavioural control but also influenced by moderating factors like demographic variables, consumer knowledge, situational factors, and consumer level of religiosity. However, a study by Md Husin (2014) found that people's attitude and their sense of control are important in deciding to join family *takaful*, but what others think (subjective norm) is not very important. The study also showed that being knowledgeable and having experience encourages people to join. However, being very religious or just aware of *takaful* does not always mean someone actually wants to join sometimes. These factors have little or even a negative effect. Further, Md Husin (2014) found that people are more likely to join family *takaful* if they have a positive attitude and feel in control of their decision. Knowing more and having experience also help increase interest. However, what others think, being religious, or just being aware of *takaful* do not always make someone want to join; sometimes, these factors have little or no effect. These findings indicate that the decision to participate in family *takaful* is influenced by a combination of factors, and the impact of each factor can vary depending on individual and contextual differences. In recent study by Muhammad Zuki *et al*. (2024) who conducted a systematic review highlighted inconsistent findings: some studies document a significant, positive impact of religiosity on both attitude and intention, but others only find a link with attitude, not intention. This point is related to religiosity being an important but non-universal predictor.

Various demographic characteristics influence the demand for family *takaful* plans. The determinants of family *takaful* demand encompass income, education level, Muslim population, agency system, reputation of *takaful* operators, products and services, as well as marketing and advertising efforts for *takaful* items. A study conducted in Malaysia revealed a significant correlation between *takaful* demand and parameters such as income, Islamic banking development, education, dependence ratio, and Muslim population (Sherif & Shaairi, 2013). Sherif and Shaairi (2013) argued that the demand for family *takaful* in Malaysia is largely driven by several key economic and demographic factors. Their study demonstrated a significant positive relationship between family *takaful* demand and variables such as income, Islamic banking development, education, dependence ratio, and the Muslim population. They emphasised that as income levels rise and the Islamic financial sector develops, the affordability and accessibility of *takaful* products improve, thereby boosting demand.

A study conducted by Abd Aziz *et al.* (2015) discovered that perceived risk, attitude, and perceived behavioural control are the key elements that influence the intention of paddy farmers in Kedah to participate in agriculture *takaful*. The survey also revealed that farmers face the most severe and frequently encountered dangers due to pest infestations. In a similar vein, a study by Rifas and Jahan (2022) in Sri Lanka found that both attitude and perceived behavioural control significantly influenced paddy farmers' intention to participate in agriculture *takaful*, while subjective norm had little impact. Perceived behavioural control (the sense of empowerment to join) was the strongest predictor, followed by attitude. The major risks identified were floods, droughts, heavy rainfall, diseases, and especially pest infestations. In another context, however, a research by Sulaiman (2023), Bunu, and Alkassim (2023) in Nigeria reported that attitudes toward *takaful*, perceived behavioural control, and subjective norms all significantly affect farmers' intention to take up agricultural *takaful*. However, perceived behavioural control had the largest influence, suggesting that the more farmers feel able to participate, the more likely they are to do so. Awareness campaigns and improving understanding of *takaful* benefits were also recommended to encourage participation. Newer research examining implementation challenges (Salleh *et al*., 2023; Waqas *et al*., 2025) points out that, beyond perceived risks like pests and climate extremes, low awareness and affordability remain key obstacles to wider *takaful* adoption. These studies suggest that targeted education, policy support, and integrating Islamic social finance could help mitigate risks and enhance farmer participation.

In conclusion, multiple factors able to influence the intention of farmers to participate. However, this study only focusing on price, risk exposure, attitude, subjective norm, and perceived behavioural control as factors that shape the intention of farmers. Prior studies have mostly examined the behavioural patterns of participation in agriculture *takaful* in Kedah, with limited attention given to the corresponding trend among paddy farmers in Selangor. The findings would be advantageous for *takaful* operators, relevant ministries and policy makers to effectively implement an agriculture *takaful* plan for this industry.

3. METHODOLOGY

The research used a quantitative approach, specifically focusing on survey research (questionnaire). The Theory of Planned Behaviour (TPB) is employed to provide a rationale for the research design and to steer the development of the questionnaire, encompassing crucial components such as attitude, subjective norm, and perceived behavioural control. By applying the TPB, the researcher not only justifies the research design but also provides a theoretical foundation for understanding and predicting farmers' intentions in the context of agricultural *takaful*. This approach allows the researcher to organise and analyse experiences, determining the study's significance.

Subjects

This pilot study involved 30 paddy farmers from Sekinchan, Selangor. The respondents were selected in collaboration with the Integrated Agricultural Development Area (IADA) Barat Laut Selangor, which facilitated access to farmers actively engaged in rice cultivation. Although the sample size is limited, the pilot provides early insights into farmers' behavioural intentions toward the Paddy Crop *Takaful* Scheme and helps identify potential patterns that can inform a full-scale study. Participation was voluntary, and respondents were informed about the purpose and confidentiality of the research. While the sample size in this pilot study is limited, it provides early indicators of patterns in farmers’ intentions to participate in the Paddy Crop *Takaful* Scheme. The findings serve as a foundation for refining research instruments and strengthening policy recommendations, ultimately guiding future studies to improve *takaful* adoption strategies and enhance financial protection for farmers (CASP, 2023).

Conducting a pilot study is a crucial preliminary step in ensuring the robustness of the main research. This study, involving 30 paddy farmers in Selangor, provides valuable insights into data collection challenges, questionnaire effectiveness, and respondent engagement, allowing necessary refinements before scaling up the research. Pilot studies serve as a testing ground for assessing measurement validity, enhancing reliability, and optimising survey administration procedures to ensure smooth execution in a full-scale study (Muasya & Mulwa, 2023). Beyond methodological refinement, pilot studies play an essential role in identifying potential limitations and mitigating unforeseen obstacles that could affect the main research. They enable researchers to evaluate feasibility, practicality, and ethical considerations before committing to a larger sample (Simkus, 2023). Such assessments ensure that the study remains methodologically sound and practically feasible, reducing errors and inefficiencies that could arise during full-scale implementation.

Measures

The research employed a structured questionnaire guided by the Theory of Planned Behaviour (TPB), which includes three core constructs: attitude, subjective norm, and perceived behavioural control. Two additional independent variables price perception and risk exposure were integrated to better reflect the context of agricultural *takaful* adoption. The dependent variable is the intention to participate in the Paddy Crop *Takaful* Scheme.

The questionnaire was divided into three sections:

- Section A: Independent variables – price (6 items), risk exposure (9 items), attitude (6 items), subjective norm (5 items), and perceived behavioural control (5 items);
- Section B: Dependent variable – intention to participate (5 items); and
- Section C: Demographic profile – gender, age, education level, and income level (multiple choice format).

A five-point Likert scale was used in Sections A and B, ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*, to capture the respondents’ levels of agreement with the presented statements.

TABLE 2: VARIABLES, ITEMS, AND SOURCES

Variable	Items	Source
1. Price	6	Lichtenstein *et al*. (1993), Ndurukia *et al*. (2017), Sharum *et al.* (2020)
2. Risk exposure	9	Brånstrand and Wester (2014), Ellis (2016)
3. Attitude	6	Razak *et al.* (2021)
4. Subjective norm	5	Razak *et al.* (2021)
5. Perceived behavioural control	5	Razak *et al.* (2021)
6. Intention to participate	5	Aziz *et al*. (2016) and Abi Huraira and Jahan (2021)

Source: Table by Authors

Data Analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 24. The analysis process consisted of the following steps:

- Descriptive analysis: Mean and standard deviation were calculated to summarise responses to the Likert-scale items;
- Demographic analysis: Frequency distributions were used to profile the respondents' gender, age, education level, and income (Section C);
- Reliability analysis: Internal consistency for each construct was assessed using Cronbach's alpha; and
- Preliminary correlation analysis: Crosstabulations were used to explore associations between key indicators and to inform hypotheses for the main study.

These analyses ensure the robustness of the instrument and allow the researchers to evaluate the feasibility of scaling up the study while aligning with the theoretical constructs of TPB.

4. FINDINGS AND DISCUSSIONS

In this pilot test research, 30 questionnaires were distributed among paddy farmers in Selangor to investigate the intention of the paddy farmer to participate in paddy *takaful* scheme. There are three tables illustrated for the analyses covering frequency analysis (demographic profile), descriptive analysis (mean and standard deviation), a combination of reliability (Cronbach's alpha) and validity analysis, and also crosstabulation table for several questions.

TABLE 3: PROFILE OF RESPONDENTS

Variables	Description	Frequency	Percentage (%)
1. Gender	Male	29	96.0
	Female	1	3.3
2. Age	31 – 40 years old	4	13.3
	41 – 50 years old	12	40.0
	51 – 60 years old	7	23.3
	61 – 70 years old	4	13.3
	More than 71 years old	3	10.0
3. Income	Below RM2,500	26	86.7
	RM2,501 – RM3,170	2	6.7
	RM3,171 – RM3,970	1	3.3
	RM3,971 – RM4,850	1	3.3
4. Education	Middle school	8	26.7
	High school	18	60.0
	Diploma/Certificate	3	10.0
	Degree	1	3.3
5. Experience	3 – 4 years	6	20.0

	5 – 6 years	4	13.3
	More than 7 years	20	66.7
6. Financial Aid from ISF	Yes	4	13.3
	No	26	86.7

Source: Table by Authors

As found in Table 3, the demographic profile can be categorised into six aspects namely gender, age, income, education, experience, and financial aid from Islamic Social Finance such as *zakat* or *waqf*. The majority of the respondents are male representing 96 per cent while females account for only 4 per cent comprising a single respondent. In terms of age, none of the respondents are below 30 years old. The highest population falls between the ages of 41 to 50 years representing 40 per cent. This is followed by the 51 to 60 years old category (23.3 per cent), with both the 31 to 40 and 61 to 70 years old categories having the same percentage (13.3 per cent). The lowest population is among those above 71 years old (10.0 per cent). Referring to the income segment, 86.7 per cent of respondents earn income below RM2,500 categorising them as B40 (bottom 40), assuming the income is solely dependent on them without additional support from family members or other sources. The respondents' education was mostly at the middle and high school level (86.7 per cent) rather than the diploma and degree level of study (13.3 per cent). Most farmers have extensive experience in the field, with the majority having seven years or more of experience. The final category assesses whether respondents have received any Islamic social finance assistance such as *zakat* or *waqf*. Only 13.3 per cent of respondents reported receiving Islamic social finance aid while the rest did not.

TABLE 4: DESCRIPTIVE ANALYSIS

Factors	Mean	Standard deviation (SD)
Price	4.042	0.338
Risk exposure	4.102	0.235
Attitude	4.211	0.077
Subjective norm	3.707	0.100
Perceived behavioural control	3.634	0.259
Intention to participate	3.980	0.089

Source: Table by Authors

The descriptive analysis represented in Table 4 indicated the mean and standard deviation of summary item statistics based on the result. The factors are formed according to independent variables (price, risk exposure, attitude, subjective norm, and perceived behavioural control) and dependent variables (intention). As exhibited above, an attitude has the highest value of mean which is 4.211 among the other factors. The second place is risk exposure recorded at 4.102. Meanwhile, for the third place, it is a factor of price with a 4.042. Subjective norm has a mean of 3.707 ranking before the last one. The lowest value is perceived behavioural control with only a 3.634 mean. All of the results for a mean value above 3.000 showed most of the respondents agreed with the statements for each factor can be considered as factors that influence the intention of paddy farmers to participate in agricultural *takaful*.

TABLE 5: RELIABILITY AND VALIDITY ANALYSIS

Factors	Cronbach's alpha	Validity (%)
Price	0.724	93.3
Risk exposure	0.671	83.3
Attitude	0.837	100.0
Subjective norm	0.660	100.0
Perceived behavioural control	0.673	96.7
Intention to participate	0.895	100.0

Source: Table by Authors

The reliability analysis of this study is on the intention to participate in agricultural *takaful* using Cronbach's alpha as an indicator for the reliability test. Cronbach's alpha, represented as α (or coefficient alpha), was formulated by Lee Cronbach in 1951 to gauge reliability. In this context, reliability pertains to consistency. The Cronbach's alpha is utilised to assess the reliability of survey questionnaires. Its value aids in understanding how closely interconnected a group of test items is when considered together. The coefficient of Cronbach alpha ranges from 0 to 1.0, and higher values signify increased reliability. Nevertheless, as a cautious standard, any alpha coefficient above 0.70 is considered an acceptable or suitable measure. Hence, this study used 0.7 as a minimum standard measurement for the reliability test. Moreover, all the variables except risk exposure, subjective norm, and perceived behavioural control were recorded below 0.7. However, according to Nunnally and Bernstein (1994), it can still be considered acceptable if the composite reliability values range from 0.60 to 0.70. Thus, all the results below 0.7 are 0.660, 0.671, and 0.673 still accepted. Since all values are considered acceptable, the result reveals that all variables are reliable.

Table 5 also presents a validity analysis based on 30 respondents, considered 100% with complete and error-free responses. Eight survey questions were found to be invalid. According to the case processing summary, the scale indicates that all cases are considered valid, with no items being removed, resulting in a cumulative validity rate of 73.3 per cent. The variable of price has a 93.3 per cent validity rate since two respondents did not answer some of the questions in this variable section. Similarly, the risk exposure variable consists of five out of eight invalid questions in this section with 83.3 per cent only. The variable with the least invalid question is perceived behavioural control with 96.7 per cent involving only one invalid question.

TABLE 6: CROSSTABULATION BETWEEN INCOME AND FINANCIAL AID

		Financial aid		Total
		Yes	No	
Income	Below RM2500	4	22	26
	RM2501 - RM3170	0	2	2
	RM3171 - RM3970	0	1	1
	RM3971 - RM4850	0	1	1
Total		4	26	30

Source: Table by Authors

In Table 6, a detailed analysis is presented of how financial assistance recipients have been distributed among different levels of income. The outlined table is based on income levels indicating how many individuals never got any form of assistance in terms of *zakat* or *waqf*. Within the income category of under RM2,500, there are a total of 26 respondents. In this category, four people got financial help while the remaining twenty-two did not receive it. This indicates that a few people about 15.4%, in this lowest income category received financial assistance.

Moving on to the next income of RM2501 to RM3170, there are two individuals who none of them receive financial support. Similarly, in the RM3171 to RM3970, there is only one individual who also did not receive any financial assistance. The same pattern is observed in the RM3971 to RM4850, where there is also one individual in this category who did not receive financial assistance.

There were 30 individuals in total and only 4 among them received financial aid while 26 did not. This simply means that financial assistance for *zakat* and *waqf* is not distributed well among the lowest-income earners especially those in the B40 category. This pattern underscores the point that it is vital to prioritize the financial aid funds towards the B40 category since they require them the most, which also aligns with the financial aid objective to assist those with lower income.

TABLE 7: CROSSTABULATION BETWEEN EXPERIENCE OF PADDY FARMERS AND THE FREQUENCY OF RISK OCCURRED

		Frequency				Total
		No Effect	1-2 in a year	3-4 in a year	5-6 in a year	
Experience	3-4 years	2	3	1	0	6
	5-6 years	2	1	1	0	4
	More than 7 years	4	13	2	1	20
Total		8	17	4	1	30

Source: Table by Authors

Table 7 presents an analysis of the frequency of unexpected risks occurring per year in relation to the experience levels of farmers. Among those with 3-4 years of experience, the majority (3 individuals) reported experiencing such events 1–2 times per year, followed by 2 individuals who reported no effect, and 1 individual who experienced the event 3-4 times annually. None of the respondents in this group experienced it 5-6 times per year, totalling 6 respondents.

In the 5–6 years of experience category, 2 individuals reported no effect, and another 2 experienced the event 1–2 times per year. One individual experienced it 3–4 times annually. As for the previous group, none faced the event 5-6 times per year. This category includes 4 respondents. Among those with 7 years of experience and above, the majority, 13 individuals reported experiencing the event 1-2 times a year. Additionally, 4 individuals reported no effect, 2 experienced it 3-4 times, and 1 experienced it 5-6 times annually, making this the largest group with 20 respondents.

Overall, out of the 30 farmers surveyed, 17 experienced the event 1-2 times per year, 8 reported no effect, 4 experienced it 3-4 times, and only 1 individual experienced it 5-6 times annually. These findings suggest that farmers with 7 or more years of experience are the most familiar with such occurrences. Their extended exposure to agricultural risks over time has likely enhanced their awareness and ability to manage these unexpected events.

TABLE 8: CROSSTABULATION BETWEEN AMOUNT OF TAKAFUL CONTRIBUTION AND FREQUENCY OF PAYMENT

		Frequency of payment						Total
		Monthly	Quarterly	Every half year	Every harvest season	Yearly	Other	
Amount of Contribution	RM1-RM10	0	2	1	14	1	1	19
	RM11-RM20	0	2	1	2	1	0	6
	RM31-RM40	0	0	0	0	1	0	1
	RM41-RM50	0	0	1	0	0	0	1
	>RM51	1	1	0	0	0	0	2
Total		1	5	3	16	3	1	29

Source: Table by Authors

Table 8 presents an analysis of the frequency of farmers' willingness to make *takaful* contributions based on their affordability. This comparison highlights the extent to which financial capacity influences contribution behaviour. It sheds light on whether farmers who can afford the contributions make regular payments and whether affordability acts as a barrier for others. This information is critical for understanding contribution patterns, identifying gaps in *takaful* accessibility, and informing the development of more inclusive and flexible contribution schemes that align with the financial realities of small-scale farmers.

Most farmers prefer to make contributions every harvesting season. Two individuals are willing to contribute quarterly, while among the three other cases, one farmer opts for half-yearly contributions, another chooses an annual contribution plan, and the last one falls into the "other" category. All five belong to the RM1–RM10 contribution range, and none prefer monthly contributions.

In the RM11–RM20 range, two farmers are willing to contribute every season, two every harvest, one twice a year, and another once a year, with no preference for monthly contributions. For the RM31–RM40 range, only one individual contributes annually, with no data on other frequencies. In the range of RM41 to RM50, a single farmer contributes on a half-yearly basis, while in the RM51 and above category, one individual contributes monthly and another quarterly.

Overall, out of 29 individuals surveyed, the majority (16) prefer to make contributions every harvest season. Quarterly contributions are the next most common (five individuals), followed by three contributing half-yearly, three annually, one monthly, and one categorized as "other." This information clearly indicates a strong preference for contribution timing to align with the agricultural cycle, particularly the harvest season. Most of these farmers fall into the lowest contribution bracket (RM1–RM10), suggesting that contribution frequency is closely tied to the timing of agricultural income.

5. LIMITATIONS OF STUDY

The study acknowledges its limitation of the small sample size, as it only involved 30 paddy farmers from Sekinchan, Selangor, which restricts the ability to generalise the findings to all paddy farmers in Malaysia. This limitation means that the results may not fully capture the diversity of experiences, challenges, and perspectives present in other regions or among larger populations. Additionally, the study relied solely on quantitative survey data, which may not provide in-depth insights into the underlying reasons behind farmers' intentions and behaviours. Future research should address these limitations by expanding the sample size to include more farmers from various regions and by incorporating qualitative methods, such as interviews or focus group discussions, to gain a deeper understanding of the factors influencing participation in the Paddy Crop *Takaful* Scheme.

6. POLICY IMPLICATIONS AND RECOMMENDATIONS

The findings of this study highlight key areas where policy enhancements can improve the accessibility and effectiveness of agricultural *takaful* for paddy farmers in Malaysia. Policymakers should prioritise affordability, accessibility, and integration with Islamic social finance mechanisms to strengthen national food security and financial resilience among farmers. One of the most pressing issues identified is the financial burden on low-income farmers, with 86.7% of respondents earning below RM2,500. This calls for expanding government subsidies beyond the initial RM50 million grant to sustain long-term affordability. A tiered subsidy system based on income levels can ensure that financial support reaches farmers most in need. Additionally, since only 13% of farmers reported receiving *zakat* or *waqf* assistance, policymakers should institutionalise the use of Islamic social finance such as, *zakat* and *waqf*, to subsidise *takaful* premiums or contributions, creating a structured funding mechanism for vulnerable farming communities.

Another policy recommendation is to align contribution schedules with agricultural cycles. The study reveals that farmers prefer to contribute every harvest season rather than monthly or quarterly. Establishing flexible payment structures that synchronise with crop seasons would reduce financial stress and encourage participation. Moreover, awareness and education initiatives are crucial in increasing *takaful* uptake. Policymakers should collaborate with agricultural cooperatives and farmers' associations to conduct training programs, demonstrating how *takaful* can safeguard their livelihoods.

The study indicates that risk exposure and attitude are the strongest predictors of participation by thus, risk-based pricing models should also be introduced. By implementing tiered pricing structures tailored to farmers' risk profiles, *takaful* operators can provide cost-effective protection while maintaining financial sustainability. Strengthening regulatory frameworks to encourage digital adoption and affordability measures will further enhance the viability of *takaful* within the agricultural sector. Malaysia's Risk-Based Capital Framework 2 (RBC2) can be leveraged to support financial stability and risk mitigation efforts among farmers.

For long-term improvement, future research should explore qualitative insights through focus group discussions, identifying farmers' concerns, motivations, and obstacles to *takaful* adoption. By implementing these policy recommendations, agricultural *takaful* can evolve into a more inclusive and sustainable financial tool, ensuring greater protection for farmers while strengthening Malaysia's food security strategy.

7. CONCLUSION

This study provides valuable insights into the intention of paddy farmers to participate in agricultural *takaful*, highlighting the potential of *takaful* as a financial protection mechanism against unforeseen agricultural risks. The pilot test involving 30 farmers reveals a strong interest in *takaful* adoption, despite existing challenges related to affordability and accessibility. While the study's limited sample size restricts broader generalisations, the findings emphasize the importance of expanding research efforts with larger datasets and incorporating additional influencing factors to further validate these results. Recognising the complexities of *takaful* adoption, this research serves as a preliminary step toward a more comprehensive study, incorporating qualitative approaches such as focus group discussions and stakeholder interviews. A deeper engagement with farmers, *takaful* operators, policymakers, and Islamic finance institutions will help refine *takaful* products to better align with farmers' needs.

Beyond financial affordability, this study has also identified a significant gap in the integration of *zakat* and *waqf* within *takaful* frameworks, with only a small percentage of farmers benefitting from Islamic social finance mechanisms. To address this, policymakers and *takaful* operators should make the scheme more affordable and accessible, especially for low-income farmers, by expanding government subsidies and systematically using Islamic social finance mechanisms like *zakat* and *waqf* to help cover *takaful* contributions. Additionally, awareness and educational initiatives should be strengthened through partnerships with agricultural cooperatives to increase understanding and uptake of *takaful*.

Furthermore, the proposed Blended Islamic Social Finance Paddy Micro-Takaful model, aligned with Malaysia's Value-Based Intermediation Takaful (VBIT) framework, reinforces the principles of *maqasid al-Shariah*, ensuring that *takaful* serves both financial and ethical objectives. However, continued institutional support and policy development are essential to maximize the effectiveness of these initiatives. Future studies should explore long-term sustainability models, assess the impact of *takaful* integration on farmers' financial stability, and develop frameworks that enhance accessibility and participation among vulnerable groups. By addressing these challenges, agricultural *takaful* can evolve into a more sustainable and impactful financial tool, strengthening Malaysia's food security strategy and ensuring financial resilience for paddy farmers.

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FOOD SECURITY AND ISLAMIC PERSPECTIVE: A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT

There is a growing need to review the literature to provide future scholars with a comprehensive understanding of the current discussion on food security in Islam and to identify the gaps that could be addressed by future research. The current study attempts to review the available literature using a Systematic Literature Review (SLR), which is a scientific method that can be used to limit systematic bias by identifying, screening and synthesising research questions using a systematic methodology. The study seeks to identify the studies that discuss the elements of 'availability', 'stability', 'accessibility' and 'utilisation' of food security from an Islamic perspective and discuss the arguments among scholars on the four elements of food security from an Islamic perspective. In methodology, two main databases, Scopus and Dimensions, were used for the collection of literature and analysis was assisted by the QDA Miner Lite software. The collection of literature spans from 2000 to 2023. Findings show that the four pillars of food security were discussed quite extensively in some selected literature particularly on the *halal* and *thoyyib* food production and consumption, the Islamic view of GM crops and GM food production, *halal* tourism, *riba*-free financing of agriculture and food production and the role of state and regulations in monitoring most activities from food production to the delivery process. It is recommended that in the future, more studies could explore the Islamic perspectives of 'utilisation' and 'stability' pillars of food security.

KEYWORDS: FOOD SECURITY, ISLAMIC PERSPECTIVE, AGRICULTURE, LITERATURE

ABSTRAK

Terdapat keperluan yang semakin mendesak untuk mengkaji semula literatur bagi memberikan para sarjana masa hadapan pemahaman yang menyeluruh mengenai perbincangan semasa berkaitan keselamatan makanan dalam Islam serta mendedahkan jurang yang boleh diisi oleh kajian akan datang. Kajian ini cuba untuk mengkaji literatur yang tersedia dengan menggunakan Kaedah Kajian Literatur Sistematik (Systematic Literature Review - SLR), iaitu satu kaedah saintifik yang boleh digunakan untuk mengehadkan miring sistematik melalui proses mengenal pasti, menyaring dan mensintesis soalan kajian menggunakan metodologi tertentu dan sistematik dalam menilai literatur. Kajian ini bertujuan untuk mengenal pasti kajian-kajian yang membincangkan elemen ‘ketersediaan’, ‘kestabilan’, ‘kebolehcapaian’ dan ‘penggunaan’ dalam keselamatan makanan dari

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perspektif Islam serta membincangkan hujah-hujah dalam kalangan para sarjana mengenai keempat-empat elemen tersebut dari sudut pandang Islam. Dari segi metodologi, dua pangkalan data utama iaitu Scopus dan Dimensions telah digunakan untuk pengumpulan literatur dan analisis dibantu oleh perisian QDA Miner Lite. Pengumpulan literatur meliputi tempoh dari tahun 2000 hingga 2023. Penemuan menunjukkan bahawa keempat-empat tonggak keselamatan makanan telah dibincangkan dengan agak meluas dalam beberapa literatur terpilih, khususnya berkaitan pengeluaran dan penggunaan makanan halal dan thoyyib, pandangan Islam terhadap tanaman dan makanan terubah suai secara genetik (GMO), pelancongan halal, pembiayaan pertanian dan pengeluaran makanan yang bebas riba serta peranan negara dan peraturan dalam memantau kebanyakan aktiviti daripada pengeluaran makanan sehingga proses penghantaran. Adalah disarankan agar pada masa hadapan, lebih banyak kajian dapat meneroka perspektif Islam berkaitan tonggak ‘penggunaan’ dan ‘kestabilan’ dalam keselamatan makanan.

KATA KUNCI: KETERJAMINAN MAKANAN, PERSPEKTIF ISLAM, PERTANIAN, LITERATUR

1. INTRODUCTION

Continuing population and consumption growth suggest that global food demand will increase for at least another 40 years. Growing competition for land, water, and energy, in addition to the overexploitation of fisheries, will affect our ability to produce food and to reduce the impact of the food system on the environment. The effects of climate change are a further threat (Robinson *et al*., 2010). The term "food security" was first introduced during the 1974 World Food Conference during discussions on enhancing supply (FAO, 2003). Representatives from 185 countries committed to "achieving food security for all" and to an "ongoing effort to eradicate hunger in all countries" at the 1996 World Food Summit (WFS) (FAO, 1996). FAO et al. (2018) defined food and nutrition security as all people, at all times, having economic, social, and physical access to sufficient, safe and nutritious food that meets their dietary needs and food preferences to enable them to lead active and healthy lives. The four pillars of food security are (i) availability, (ii) stability, (iii) access (including affordability) and (iv)food nutrition, quality, and safety. On the other hand, food insecurity is defined as "a situation of limited or uncertain availability of nutritionally adequate and safe food or a situation of limited or uncertain ability to acquire acceptable food in a socially acceptable way" (Barret, 2002).

Food production (various crops, livestock, and fish) cannot be separated from food security (food availability, access, and use). Agriculture provides most of the world's food and fabrics. It also provides wood for construction, furniture, energy, and paper products. Over the centuries, the growth of agriculture marked and contributed to the rise of civilisations (National Geographic, 2020). The period from the 9th century to the 13th century witnessed a fundamental transformation in agriculture that can be characterised as the Islamic green revolution in pre-modern times. These transformations, along with an increased mechanization of agriculture, led to major changes in the economy, population distribution, vegetation cover, agricultural production and income, population levels, urban growth, the distribution of labour force, linked industries, cooking, diet, and clothing in the Islamic world (Zaimeche Salah, 2001; Bolens, 2016).

No doubt that existing studies and increasing research on food security have contributed a lot to the existing literature. However, very little was found in the literature on the systematic approach or theoretical framework of the Islamic perspectives on food security and/or sustainability. Islamic food security refers to the assurance of access to, and availability of, food that is not only sufficient, safe, and nutritious but also fully compliant with the principles and injunctions of Shariah. This includes adherence to the concepts of *halal* (permissible) and *tayyib* (pure, wholesome, and beneficial), while ensuring the means of production, distribution, and consumption align with Islamic ethical, economic, and social principles. Unlike conventional approaches that focus solely on four primary dimensions namely availability, access, utilisation, and stability. Islamic food security embeds these within a moral and spiritual framework, drawing from the *Quran*, *Sunnah*, and Islamic jurisprudence (*fiqh al-ṭaʿām*).

While research on food security has expanded, studies explicitly addressing it from an Islamic perspective are scarce and often narrowly focused on *halal/haram* classification, food habits, and *Quranic* encouragement of agriculture and charity. Critical gaps remain in areas such as:

- Systematic theoretical frameworks – There is limited integration of Islamic legal and ethical norms into measurable indicators for food availability, sustainability, and best production practices. Conventional models do not incorporate *Shariah* compliance, meaning a food system could be considered "secure" under FAO criteria, yet violate Islamic principles;
- Implementation and policy structures – Existing global frameworks do not address zakat (obligatory almsgiving), *waqf* (endowment), prohibition of *riba* (usury), and other Islamic economic tools that could be mobilised for food security. These instruments are unique to Islamic governance and cannot be substituted by secular welfare policies without losing their spiritual and legal basis;
- Ethics and accountability – Islamic food security imposes accountability not only to society but also to God (Allah), making it a matter of both worldly governance and spiritual responsibility. This dual accountability shapes decision-making differently than in conventional systems, influencing priorities such as equitable distribution, environmental stewardship, and prevention of waste (*israf*); and
- Holistic sustainability – While conventional approaches consider sustainability largely in environmental and economic terms, Islamic food security views sustainability through the lens of *amanah* (trusteeship of the earth) and intergenerational justice, as mandated in Islamic teachings.

Given these distinctive dimensions, Islamic food security must be addressed separately to ensure that solutions are not merely adapted from conventional frameworks but are instead rooted in a comprehensive Islamic paradigm—one that integrates faith, ethics, law, and science into a cohesive system. This approach ensures that the pursuit of food security aligns with both the physical well-being of the population and the fulfilment of Islamic spiritual and moral obligations.

In this sense, Islamic food security is not simply about the type of food consumed, but about ensuring the entire food system—from agricultural production and processing to distribution, trade, and consumption—operates in accordance with *Shariah* principles, promotes social justice, prevents harm (*darar*), and fulfils the *maqasid al-Shariah* (higher objectives of Islamic law), particularly the protection of life (*hifz al-nafs*), intellect (*hifz al-ʿaql*), and wealth (*hifz al-mal*).

Thus, there is a mounting need to review this literature to provide future scholars with a comprehensive understanding of the current discussion of food security in Islam and reveal the gaps that could be fulfilled by future research. Systematic Literature Review (SLR) is a scientific method that could be used to limit systematic bias by identifying, screening and synthesising research questions using a particular and systematic methodology (Petticrew & Roberts, 2008) in reviewing the literature. Nevertheless, it ensures quality assessment on all relevant articles to avoid bias (Kraus *et al*., 2020).

This study intended to systematically examine and organise all published studies from formal academic or industrial institutions on issues of food security from Islamic perspective based on the four pillars of food security namely (i) availability, (ii) stability, (iii) accessibility (including affordability) and (iv) utilization (food nutrition, quality, and safety). In specific, the objectives of the study are to: (1) Identify the studies that discuss the elements of 'availability', 'stability', 'accessibility' and 'utilisation' of food security from an Islamic perspective, and (2) Discuss the arguments among scholars on the four elements of food security from an Islamic perspective.

2. LITERATURE REVIEW

In the context of food security, sufficiency is not only a matter of having enough food available for consumption; rather, it also pertains to other aspects that are necessary for a country to achieve the goal of food security and its people to be considered as food secure. The different aspects or components can be identified based on the definition of food security – to only exist when all people, at all times, have physical and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. From this definition, there are four components of food security identified, which can be illustrated as follows:

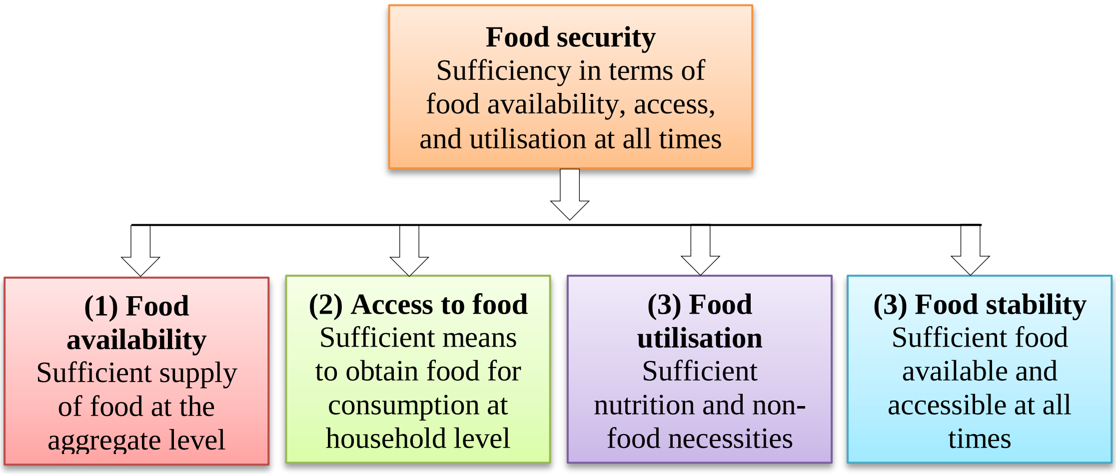

FIGURE 1: FOOD SECURITY AND ITS COMPONENTS
Source: Figure by Authors

Figure 1 shows four components of food security, which consist of food availability, access to food, food utilisation, and food stability. The first component is food availability, which has been defined by the FAO (2006) as the availability of sufficient food of appropriate quality, supplied through domestic production or imports. This considers sufficiency in terms of food supply at the national or aggregate level, which can be accomplished by either locally producing the food or resorting to imports. The second dimension, i.e., access to food, is defined as the access by households or individuals to adequate resources for acquiring nutritious food (FAO, 2006). This could also be described in terms of having sufficient means to obtain food, or in other words, being able to afford food for consumption at the household level.

The third dimension, namely food utilisation, is defined as utilisation of food through adequate diet, clean water, sanitation and health care to attain nutritional well-being where all physiological needs are met (FAO, 2006). This can be understood as consuming food, which contains sufficient nutritional content and is prepared in an environment, where other non-food essentials are sufficiently met to ensure welfare. The fourth dimension, which is food stability, has been described as, to be food secure, a population, household or individual should always have access to adequate food (FAO, 2006). This means food sufficiency must be ensured even during periods of crisis or sudden shocks to the economy and thus, covers both the two former components – food availability and access to food.

Referring to the ‘food availability’ component of food security, there are two sources of food supply that a country can opt for to ensure there is a sufficient amount of food available at the aggregate level. Since a country can either source food locally through domestic production or resort to imported food from exporting countries, the improvement in either the former or the latter will contribute to the increase in the aggregate supply of food and hence, food availability. The ability of a country to command food for its population clearly depends on this specific capacity or ability to self-produce, as well as the ability to import (Clapp, 2017; Clapp, 2015). Importantly, there is a need to secure enough food, particularly in terms of staples for country's own domestic population (Goldman, 1975; Hamilton-Hart, 2019; Yup, 1982). Since irrigation, labour, capital, technology – research and development (R&D), and rural infrastructure all positively affect rice production, policies which involve investing in these factors would therefore, have a positive contribution to the production of the country's staple grain as well (Abidin *et al*., 2022a, 2022b, 2022c; Makoi *et al*., 2017; Tesfaye *et al*., 2018). The ability to improve the production of essential agricultural commodities is certainly important, especially for poor countries, just as Collier and Dercon (2014) called for a massive increase in agricultural production so that the underdeveloped nations in the African continent can successfully achieve economic development in the coming 50 years. Besides, trade-related policies are the key driver, which led the country to produce more food domestically and become more self-sufficient, such as in the case of Russia in the seafood category with the implementation of a food embargo (Brankov *et al*., 2021; Wegren & Elvestad, 2018) and protectionist practices, particularly in terms of export subsidies, in most developed economies (Bureau & Swinnen, 2018).

As for 'food accessibility', a household must have sufficient means to obtain food for consumption. There are two ways of acquiring food at the household level: either by self-producing or through purchase from the market. Most households now buy food rather than growing it themselves, especially in more developed economies that are shifting further away from being agriculture-based. Hence, if buying is the means for households to obtain food, then having sufficient means could be understood as being able to adequately afford the readily available food sold in the market. Affordability can be measured in terms of households' demand, in which the price of the commodity and the income of households are two major factors, which influence the consumption behaviour of households. In Uzbekistan, pro-poor policies of the expansion of domestic availability and the price stability of wheat-based products were adopted for poor households residing in both rural and urban areas (Lombardozzi & Djanibekov, 2020). Fofana (2014) showed the benefits of adopting regional policies in the West African region which includes, raising GDP growth rate that leads to 85 billion USD of additional wealth created, 37 million cumulative employments created in both agricultural and non-agricultural sectors, as well as increase in consumption spending on rice by 14 percent and 4 percent for food products; which altogether are expected to contribute positively to regional food security.

As the third component of food security, 'food utilisation' addresses how well households are able to properly utilise food, which basically looks at sufficiency in terms of both nutritional content of the food consumed and non-food essentials – clean water, sanitation and healthcare, to achieve overall welfare. The attempt to boost domestic production to improve self-sufficiency in Saudi Arabia and the United Arab Emirates (UAE) was rather short-lived due to insufficient water to accommodate agricultural production (Woertz, 2020). The issue of water shortages is also faced by agricultural powerhouses like China, and the situation becomes even dire due to severe water pollution and uneven distribution of water (Ghose, 2014).

As for the fourth component of food security, which is 'food stability', this entails food sufficiency at all times, regardless of any unprecedented crisis or sudden shocks to the economy. This component basically covers the first and second components – food availability and access to food, with the extension that both components must be sustained. Bach and Saeed (1992) previously criticised the attempts to raise food production using short-term policies as harmful measures for the sustenance of sufficient food in the longer term. Nonetheless, Baer-Nawrocka and Sadowski (2019) identified that wealthy economies are able to become self-sufficient and enjoy a surplus in the supply of food due to extensive adoption of protectionist practices, which have left other importing countries vulnerable to encountering volatile situations. As revealed by Brankov *et al*. (2021), crisis conditions did not affect the agri-food market of South-East European countries, which displayed satisfactory levels of food self-sufficiency on average.

Ahmad (1997) noted that Islam establishes minimum rights in the form of a four-point charter by defining the basic needs which a state should procure: food, clothing, water and shelter.

Governments have both national and international responsibilities. These responsibilities on the national level are to fulfil the basic needs of each member of society by ensuring that all are fed adequately, clothed, and provided with water and shelter. The international duty is to fully participate in pooling resources to meet the challenges of wide-scale natural disasters or man-made calamities and to help such countries as are incapable of appropriately handling the crisis. As such, the state must set matters aright by transferring back to the beggars and poor people what truly belongs to them. So, the four fundamental requirements of food, clothing, water, and shelter will have preference over all other considerations.'

As a universal religion, Islam recognises the necessity of sustainable food security for all mankind. In this context, Islam proffers approaches and measures towards ensuring that humanity secures food, particularly for the most vulnerable – the needy and the poor (Omotayo, 2020): Assurance of earth's capability of maximum food for humanity; Declaration of the four basic amenities; Prescription of feeding of the poor as a means of expiation; Encouraging scientific research into agriculture; and General exhortations on feeding of the poor.

Adding to these four dimensions of food security, the Islamic perspective adds a distinct and essential element — the requirement for food to be *halal* (permissible) and *tayyib* (wholesome). While conventional food security frameworks focus on sufficiency, accessibility, utilisation, and stability, the Islamic framework emphasises that the food provided must comply with *Shariah* principles, as stipulated in the *Quran* (2:168, 5:3) and *Hadith*. *Halal* in this context not only refers to the lawful nature of the food source but also its safety, cleanliness, and wholesomeness (*tayyib*), ensuring that it benefits human health and well-being (Alzeer *et al*., 2018). From a food security perspective, this requirement influences the entire supply chain — from production, processing, and storage to distribution and consumption — as *halal* integrity must be maintained at each stage (Bonne & Verbeke, 2008).

The growing global *halal* food industry, estimated at over USD 2 trillion annually, underscores its economic and social importance, particularly for Muslim-majority nations (Thomson Reuters, 2021). Moreover, *halal* assurance is intertwined with broader sustainability principles in Islam, promoting ethical treatment of animals, fair trade, and environmental stewardship (Mohamed *et al*., 2020). Therefore, incorporating *halal* and *tayyib* into food security analysis ensures that the Islamic approach addresses not only the sufficiency and safety of food but also its spiritual, moral, and socio-economic dimensions, thereby providing a holistic framework that differs fundamentally from secular or conventional models.

3. METHODOLOGY

In this study, there were several steps involved in the methodology: the review protocol, formulation of research questions, systematic searching strategies, and data extraction and analysis.

The Review Protocol

The current systematic review adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to achieve the objective and address the research questions. First, the researchers designed suitable research questions and research objectives. Next, researchers performed a systematic search strategy consisting of three main processes: identification, screening and eligibility. The researchers then proceeded with the quality assessment process and finalised the SLR methodology with data extraction and analysis on the selected articles.

Formulation of Research Questions

A formulation of comprehensive research questions is important in SLR. The research question will drive the selection of articles, data extraction and reporting (Xiao & Watson, 2019). As stated at the introduction section, the research questions in this study are, "Did literature discuss the elements of 'availability', 'stability', 'access' and 'food nutrition, quality and safety' of food security from Islamic perspectives?", and "What were the arguments among scholars on the four elements of food security from Islamic perspectives?"

Systematic Searching Strategies

The systematic searching strategy in this study underwent three main phases: identification, screening and eligibility.

Identification

The identification phase is a process that searches for synonyms, related terms and various terms related to the main keyword in this study, which are *food, agriculture, supply, availability, Islam, and Muslims.* In addition, whenever appropriate, the combination of keywords such as food security and Islamic perspective were performed in the databases (see Table 1).

To avoid retrieval bias, as stressed by Durach *et al.* (2017), the researchers decided to use more than one database. Therefore, two main databases, Scopus and Dimensions, were used to find related articles. The reliance on Scopus as the main database is due to its status as a full indexing database that contains more than 70 million records and covers multidiscipline journals, and it has strength in terms of quality control, full text search, maximum search string length, advanced search string and reproducibility of search results at different locations (Gusenbauer & Haddaway, 2020; Martin-Martin *et al*., 2018). Dimensions database was used as a supporting database because of its wide coverage and for discovering the right or most relevant article based on indexing. This database has more than 89 million publication records and more than 50,000 journals. Searching for articles based on databases was carried out within 3 months (December 2023, January and February 2024). The full search string for the Scopus and Dimensions databases is shown in Table 2. Out of all the searches based on two databases, this study found 73 relevant documents.

The three phases of the systematic searching strategies (identification, screening and eligibility) are shown in the PRISMA 2020 flow diagram of Figure 2. The PRISMA 2020 flow diagram was used for reporting the systematic literature review to present the scope for the trustworthiness of findings.

TABLE 1: THE KEYWORDS SEARCH

Keywords	Synonyms
Food security	Agriculture Availability, Supply, Sustainability
Islamic perspective	Muslims, Islam

Source: Table by Authors

TABLE 2: THE SEARCH STRING

Database	Keywords used
Scopus	Food OR Agriculture AND Availability OR Supply OR Security OR Sustainability AND Islam OR Muslims
Dimensions	Food security AND Islamic perspective OR Islam

Source: Table by Authors

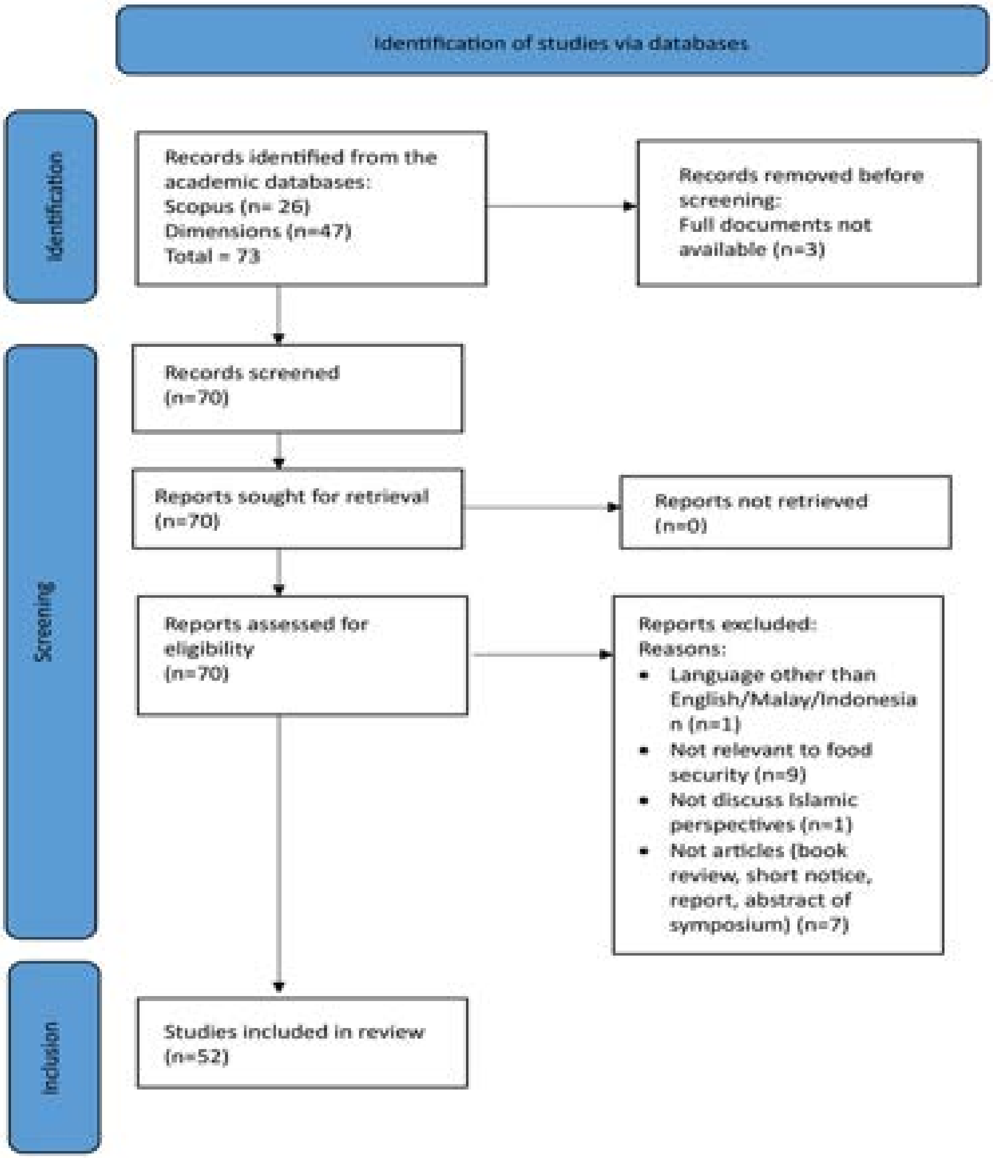

FIGURE 2: PRISMA 2020 FLOW DIAGRAM
Source: Figure by Authors

Screening
All 73 identified records/documents at the identification stage had undergone a manual check on the availability of the full document. Out of 73 documents, only 70 documents were available in full form. The rest were only abstracts. The 70 full documents were then gone through the screening process. The process was done manually, and the criteria for selecting articles were developed based on the research questions formulated earlier (Kitchenham & Charters, 2007). The criterion of selection is important for ensuring that the selected articles are related to the study (Alsolami & Embi, 2018). The process lessens the number of related articles, and Table 3 displays the criterion chosen in this study.

The focus of the study is on the literature, which is in the form of research articles, full papers of conferences and chapters in books. The inclusion of conference papers and a chapter of a book is to expand the searching output since the Islamic perspective studies in the form of research articles are very limited. Other forms of literature were excluded. The timeline of publication is from 2000 to 2023. The duration selection is expected to produce an adequate number of articles for the SLR analysis in line with the concept of study's maturity by Kraus *et al*. (2020). Eight documents were identified to be excluded based on the outlined criterion using a manual searching method. Overall, 62 articles were identified for the next eligibility phase.

TABLE 3. INCLUSION AND EXCLUSION CRITERION

Criterion	Inclusion	Exclusion
Type of documents/literature	Research article Conference full paper Chapter in a book	Article review, book review, review and short notice, abstracts of symposium or conference, report, letter to the editor, book, monograph.
Language	English Malay Indonesian	Other than English, Malay and Indonesian languages.
Timeline	Between 2000 and 2023	< 2000
Subject area	Social Science Pure Science Environmental Science Agricultural Science	

Source: Table by Authors

Eligibility

The eligibility phase is a process where the researcher examines the article's relevance to the needs of the study by examining the title, abstract, findings and discussions. Ten articles were excluded because they did not fulfil the study's needs. These articles were excluded due to irrelevant discussion related to food security and its four elements, and they do not discuss the Islamic issues or anything relevant to them. Overall, 52 articles were selected for the next process, quality assessment.

Data Extraction and Analysis

The systematic review of the eligible 52 articles was done using the QDA Miner tool, which is qualitative data analysis software for coding and highlighting the topics. The common arguments, important discoveries, and future research directions were methodically extracted and analysed from the chosen papers using this tool. Textual data can be easily coded, retrieved, and analysed with the help of QDA Miner, an adaptable qualitative data analysis program. With the aid of this program, the study was able to carefully code each publication's content, spot recurring themes, and identify trends in the literature. The methodical coding procedure made it possible to extract important ideas and synthesise pertinent data, which improved the SLR's depth and rigour.

Furthermore, by offering a thorough summary of the present state of knowledge and pointing out possible possibilities for future research, QDA Miner's use enabled a thorough analysis of the directions suggested for future study. This strategy contributed to the overall strength of the study's methodology by guaranteeing a comprehensive and methodical analysis.

4. FINDINGS AND DISCUSSION

This study examined 52 selected articles. Based on the research objectives, four elements of food security were used as the theme: Availability, Accessibility, Utilisation and Stability. Each theme is analysed in relation to Islamic perspectives as discussed by the selected literature. Table 4 shows the results of the analysis on 52 documents (cases) based on the codes of each theme or category.

Availability

Availability refers to the physical existence of food. On the national level, food availability is a combination of domestic food production, commercial food imports and exports, food aid and domestic food stocks. At the household level, food could be from own production or bought from the local markets. Regarding food production, water resources are required to produce the crops. Due to population growth and climate change, the pressure on existing natural resources, namely land and water, increases. Impacts of climate change often led to land degradation, lack of irrigation water, reduced soil moisture and therefore losses of economic livelihoods (Wocatpedia, 2024).

Based on this concept of 'availability' as one of the elements of food security, several related keywords or codes are searched from the selected literature such as food production; trade, import, export; agriculture, agricultural sector; local product; efficient production, productivity; Islamic financing, *salam* financing, Islamic agricultural financing; supply of food, *halal*; food system; GM (genetic modification) technology; Islam, Islamic spiritual value, Muslims; religion, religious; and environment, climate change. Some of the keywords are extracted from past studies, and some are developed by authors to suit the component of "availability". Godfray *et al*. (2010), for example, mention the keyword "food production". "Food system" was used by Ingram (2011) and Ericksen (2008). The keywords "agriculture" and/or "agricultural sector" were mentioned by Godfray et al. (2010), Ingram (2011), FAO (2008), Pingali (2015), and Ericksen (2008). Meanwhile, the keywords "environment" and/or "climate change" were used by Ingram (2011) and Ericksen (2008).

As shown on Table 4 and displayed on Figure 3, the highest frequency of keywords mentioned under this category is 'food production' (10.1%) from 15 literature and followed by 'supply of food, *halal'* (8.2%) from 16 literature, 'trade, import, export' (6.2%) from 16 literature, while the other keywords the frequency mentioned were found to be less than 5%.

TABLE 4. RESULTS FROM ANALYSIS USING QDA MINER

Dimension	Sub-Category	Count	% Codes	Cases	% Cases
Availability	food production	99	10.1%	15	29.4%
	trade, import, export	61	6.2%	16	31.4%
	agriculture, agricultural sector	32	3.3%	10	19.6%
	local product	4	0.4%	4	7.8%
	efficient production, productivity	4	0.4%	2	3.9%
	Islamic financing, *salam* financing, Islamic agricultural financing	36	3.7%	3	5.9%
	supply of food, *halal*	80	8.2%	16	31.4%
	food system	7	0.7%	5	9.8%
	GM technology	11	1.1%	4	7.8%
	Islam, Islamic spiritual value, Muslims	44	4.5%	14	27.5%
	religion, religious	18	1.8%	4	7.8%
	environment, climate change	15	1.5%	9	17.6%
Accessibility	consumption of halal food	42	4.3%	9	17.6%
	afford, income	49	5.0%	11	21.6%
	prices	56	5.7%	14	27.5%
	market, Islamic, Muslims	166	17.0%	19	37.3%
	halal tourism	127	13.0%	9	17.6%
Utilisation	nutrition, nutritious	34	3.5%	13	25.5%
	diet *Sunnah*	14	1.4%	1	2.0%

Dimension	Sub-Category	Count	% Codes	Cases	% Cases
	clean water	18	1.8%	2	3.9%
	health care	12	1.2%	5	9.8%
	thoyyib	18	1.8%	3	5.9%
Stability	adequate food	19	1.9%	9	17.6%
	sustainability food	12	1.2%	7	13.7%

Source: Table by Authors

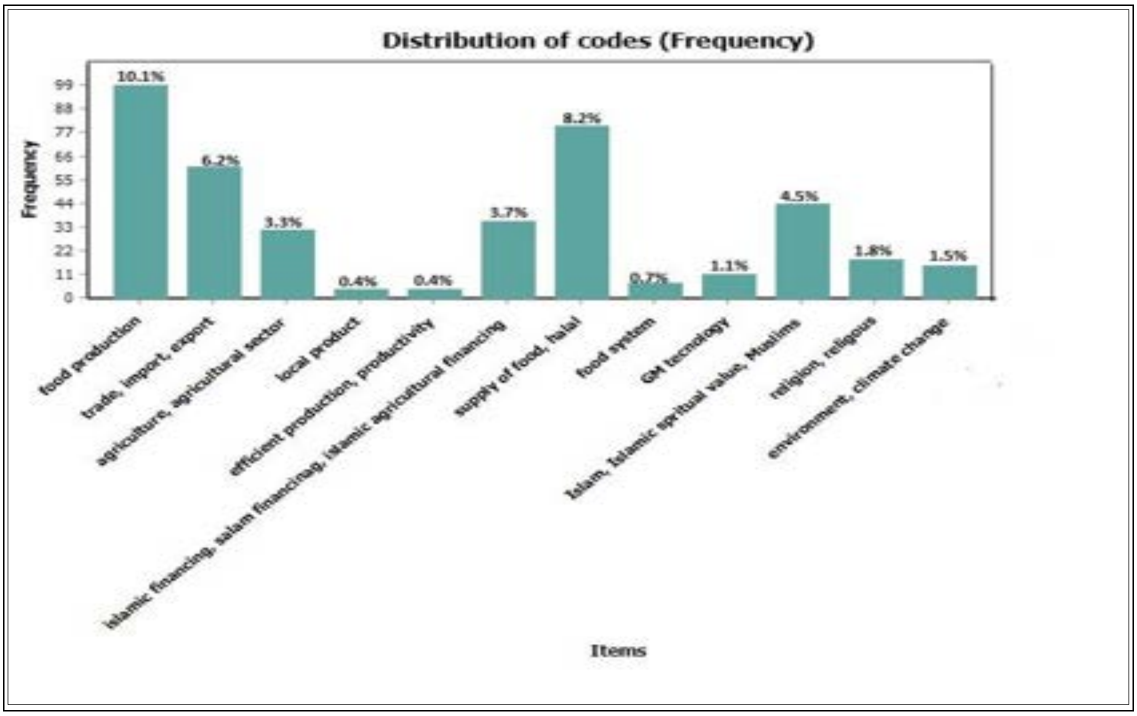

FIGURE 3: FREQUENCY OF KEYWORDS FOR 'AVAILABILITY' AS AN ELEMENT OF FOOD SECURITY

Source: Figure by Authors

Under the element of 'food availability' in the Islamic perspective, most literatures refer to the concept of 'food production' that forbids prohibited materials and those materials harmful to human beings and the environment. Idris *et al.* (2020), for example, stated that the application of Genetically Modified (GM) technology in food production should follow the strict requirements of Islamic law, as the prohibited materials and materials harmful to human beings and the environment in the production of GM food are forbidden. Islamic food certifying body, the Islamic Food and Nutrition Council of America (IFANCA), affirms that there is a place for biotechnology in *ḥalal* food production and it accordingly designates GM food 'permissible' by Islamic standards (Akhmetova, 2016). Kosher food production, on the other hand, often meets *halal* requirements. For devotees of Judaism, Christianity and Islam, food that does not meet standards of 'spiritual quality' in its production or preparation may be unsuitable for consumption. Thus, religious customs have implications for modern methods of food production, particularly when meeting the needs of consumers who depend on a kosher (fit and proper) and *halal* (lawful) meat supply (Farouk *et al*., 2015). As religion strongly affects both food production and demand (Foresight, 2011), a theological approach could provide a pivotal role in changing the basic economics of our food system.

The literature is mostly concerned with *halal* components of food production. The *halal* food standard covers general guidelines on production, supply, handling, distribution and storage to ensure every component of production complies with the relevant *halal* requirements in the food production sector. The food industry is responsible for controlling and ensuring the integrity and safety of food products, starting from the beginning in the production stage until the end product is made. The *halal* food production requirements that should be performed include generating a *halal* manual, halal management organisation, developing *halal* food production standard operating procedures, monitoring every *halal* critical point, providing halal training for all staff, monitoring *halal* food, establishing *halal* internal audit and management review (Rahim *et al*., 2021). From the demand side, taking *halal* food is part of the obligations among Muslims; thus, this scenario boosts the *halal* food industry to become a niche segment of the food industry in which the people involved in the *halal* food supply chain shall ensure that the food is available and accessible to Muslims (Adada, 2019). At this notion, it is the responsibility of every person involved in the *halal* food supply chain to make sure the food is guaranteed *halalan tayyiban* for consumption.

Thus, food production, processing, distribution, storage and other related works should be undertaken by all Muslims. A special unit within or independent of the food reserves department should be set up to oversee food quality standards and monitoring; the work of this unit could include food quality management at production, processing, storage and selling sites. Muslims (either as individuals, groups, countries, or otherwise) should engage in proper planning and development, including those related to resources and food production, to meet their future requirements and needs. As mentioned in *Quran*, Allah created the earth and made it manageable and enabled it in such a way that all creatures can use it to fulfil their life needs, including food production: "It is He who made the earth tame (manageable) for you—so walk among its slopes and eat of His provision—and to Him is the resurrection." (Surah Al-Mulk, 67:15). This verse highlights how Allah has made the earth hospitable and manageable for humanity, allowing people to use its resources, including for food production, to sustain life.

As for the quality of food production, there are many narrations that Umar (r.a) calls the people to improve the quality of the food production process, and in other narrations, Umar got off his horse to teach women in detail to make bread in a better way (Hasun *et al*., 2021).

Nonetheless, food security in Islam from the angle of food availability is also a concern on the whole food production sector, such as the financing, value chains, consumption, production, market and government roles. The food production sector should be financed by interest-free capital and enough flow to support the sector (Hasun *et al*., 2021). The characteristics of the production process in Islam are efficient, safe to the environment, *halal* and *thoyyib* oriented and have adequate capacity (Hasun *et al*., 2021). There are value chains in food production that are built by cooperation between firms, and the contracts in building those value chains must be compliant with Islamic rules, too. The *tawhidic* guidance about food security covers guidance on consumption, production, market fairness, financing, including social and commercial financing, and government roles. In Islam, to achieve food security, besides moderate-*halal*-*thoyyib* consumption, with encouragement to consume local products, efficient production without harming the environment at an adequate capacity to produce quality products, encouraging the market to operate based on market mechanisms, prohibiting *riba*-based financing and defining the clear role of the government (Hasun *et al*., 2021). The role of government is to ensure halal certifications of food supply are provided to related factories, food premises and food establishments (Adada, 2019).

Nugraha *et al.* (2023) further argue that Islamic paradigmatic solutions regarding value-based food security originating from the *Al-Quran* and *As-Sunnah* emphasise the extensification of agricultural land and the intensification of rice production. Extensification refers to the expansion of agricultural land, which is encouraged to ensure that more land is utilised for cultivation to meet the food needs of the population. For example, the *Al-Quran* encourages productive use of land as a resource bestowed by Allah for the benefit of all (Al-Baqarah, 2:22). In modern terms, this could be seen in policies that support land reclamation projects, opening up arid or unused lands for agriculture, as demonstrated by efforts in countries like Saudi Arabia and Egypt. These policies aim to increase food availability by expanding the scope of agricultural production.

The intensification of rice production refers to increasing yields through improved farming techniques, technology, and efficient use of resources. The Islamic emphasis on ensuring the welfare of society through self-sufficiency in food production is evident in the encouragement of adopting sustainable agricultural practices. An example of intensification is the use of better irrigation systems, genetically improved seed varieties, and efficient use of fertilisers, as promoted by several Islamic countries, such as Indonesia and Pakistan, to enhance rice production. Islamic teachings also stress the importance of maintaining balance (*mīzān*) in nature, aligning with modern principles of sustainable agriculture that avoid over-exploitation of resources (Al-An'am, 6:141).

The politics of Islamic agriculture can be understood through the lens of state-led policies in the agricultural sector (Mustapa & Saripudin, 2022). From an Islamic perspective, agriculture is not just an economic activity but a duty of the state to ensure the welfare of its people, particularly in terms of food security. In the primary sector (production), policies might include subsidies for farmers, land grants, or *zakat* (almsgiving) systems specifically dedicated to agricultural development. For instance, in the Islamic tradition, *zakat* is an obligatory form of wealth distribution, and agricultural produce is one of the key categories on which *zakat* is levied. These funds could be used by the state to support smallholder farmers, improve access to inputs like seeds and fertilisers, and facilitate agricultural research.

In the secondary sector (industrial), Islamic agricultural policy encourages the establishment of industries that can process agricultural products, thus ensuring that food remains available in diverse forms, reducing wastage, and increasing value-added products. An example is the establishment of *halal* food industries that align with Islamic values, promoting both local consumption and export to global markets. This approach has been particularly successful in many Muslim countries, where halal certification has opened up extensive markets for processed foods that meet Islamic standards.

Finally, in the tertiary sector (trade and services), Islamic policies emphasise fair and equitable trade practices. The concept of fairness (*ʿadl)* in trade is central in Islamic economics, which condemns monopolies, price manipulation, and hoarding of essential commodities. The state is expected to regulate food prices to ensure affordability for all, especially the poor, while promoting international trade to ensure a steady flow of food products. Examples of such policies include the role of Islamic financial instruments, like *murabaha* (cost-plus financing), in facilitating trade in agricultural commodities across Islamic countries, ensuring a stable and fair market. By combining extensification, intensification, and state-driven policies across these sectors, Islamic agricultural policies create a comprehensive framework for ensuring food availability while promoting justice, sustainability, and equity.

Food availability could also be fulfilled through trade. Islam has set guidelines in terms of trade: the prohibition of unfair competition and the recognition of personal interests. It is proposed that good *muamalah* (transactions) or good trade in Islam be used as one of the guidelines or the basis for strengthening the concept of *nasab minannas* (lineage from the people), which is complementary conditions and requiring through the exchange of goods and benefits between one another that bring us into a life of goodness and prosperity. Certain types of transactions and trade practices, such as hoarding, price gouging and short weighing, are forbidden (Farouk *et al*., 2015). According to Qardawi (Adada, 2019), the Islamic market permits any trade except that which involves injustice, cheating, making exorbitant profit and the promotion of something *haram* (Hasun *et al.*, 2021)

Accessibility

Accessibility is ensured when all households have enough resources to obtain food in sufficient quantity, quality and diversity for a nutritious diet. This depends mainly on the amount of household resources, income and prices (in the market). In addition, accessibility is also a question of the physical, social and policy environment. Drastic changes in these dimensions may seriously disrupt production strategies and threaten the food access of affected households.

As for 'accessibility' as another pillar of food security, the related keywords or codes searched from the selected literature are consumption of *halal* food; affordability, income, prices; market, Islamic, Muslims, and *halal* tourism. The keyword "market" was widely used in past studies, including Barrett (2010), Timmer (2012), and Devereux (2001). The words “prices” or “food prices” were mentioned by Barrett (2010), Timmer (2012), and Headey and Ecker (2013). Meanwhile, the keyword "income" was used by Barrett (2010) to reflect the accessibility component. As for other keywords such as "consumption *halal* food", "Islamic", "Muslims" and "*halal* tourism", these are mostly words found related to accessibility of food among Muslims in many literatures, in particular in the tourism sector.

As shown on Figure 4, the highest frequency of keywords traced under this category is ‘market, Islamic, Muslims’ (17.0%) from 19 literature and followed by ‘*halal* tourism’ (13.0%) from 9 literature, ‘prices’ (5.7%) from 14 literature, while the other keywords were found to be equal and less than 5%.

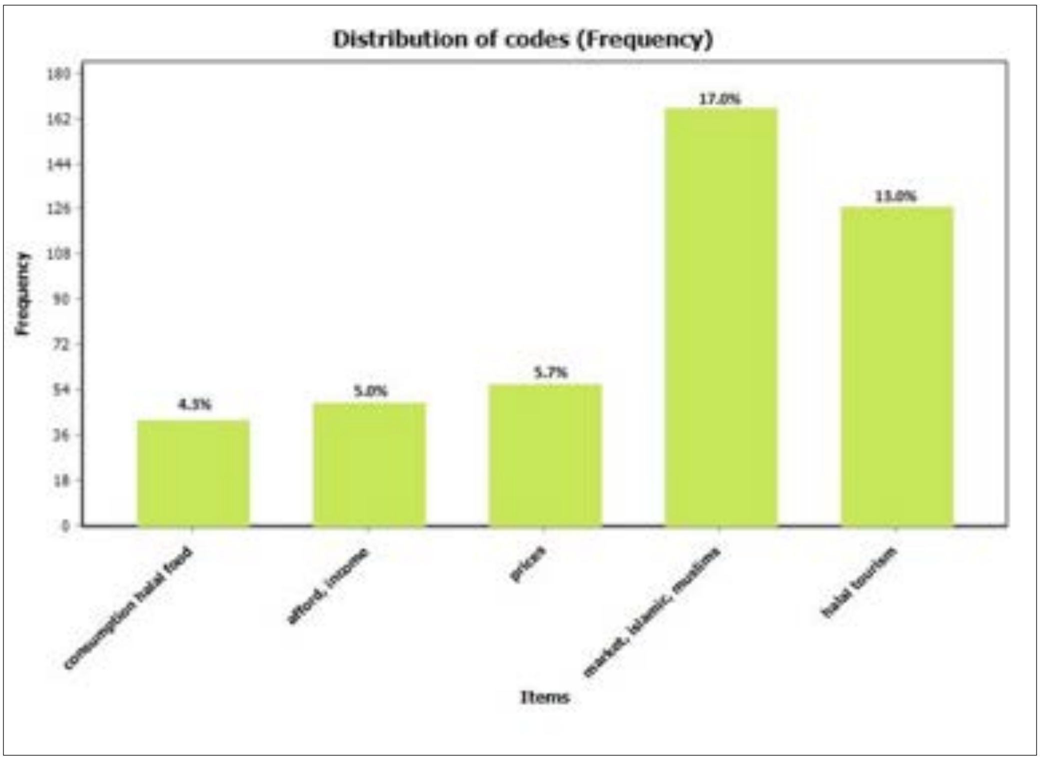

FIGURE 4: FREQUENCY OF KEYWORDS FOR 'ACCESSIBILITY' AS AN ELEMENT OF FOOD SECURITY

Source: Figure by Authors

As for the Islamic perspectives of accessibility as a pillar of food security, most literature, such as Idris *et al.* (2020), Rahim *et al.* (2021), Hasun *et al.* (2021), Obaidullah (2015), Ali *et al.* (2015) and Nusantoro (2018), are discussing the *halal* food market to be accessed by consumers, which provides big business and investment opportunities. This *halal* food market is growing and is driven mainly by the health benefits of food and the trust that has been gained in the *halalan tayyiban* aspects of the food item. Even for the GM food market, the principles of the *Maqasid al Shariah* need to be enforced.

The market is the place where the food is accessible through the price mechanism and the ability of consumers to pay the price of food. The market is a place of exchange for individuals, who, by their nature, are created with severe love for wealth (QS 3:14). Therefore, Islam places moral and regulatory restrictions on the freedom of the market, which is an integral duty of the state. According to Qardawi (Adada, 2019), the Islamic market permits any trade except that which involves injustice, cheating, making exorbitant profit and the promotion of something haram. The Islamic market is organised in a way that promises fair outcomes to participants if allowed to function without manipulations (Adada, 2019). Since Islam places moral and regulatory restrictions on the freedom of the market, *hisbah* is necessary. Ibn Taimiyah has distinguished between a price increase caused by market forces and an increase in price which is caused by people's injustice, such as hoarding, a distinction that provides a ground for price regulation by authorities.

Thus, the role of the state (*al-hisbah*) is very important to regulate its freedom. It should avoid injustice, cheating, manipulation, making exorbitant profit (profiteering) and the promotion of something *haram* (Chapra, 2000). Enough information should be provided to sellers and buyers about price and market conditions. Meanwhile, price control is only permissible in the case of market failure (Ahmad, 2006). Muslims are tied morally to set just and appropriate (and reasonable) prices and profits within limits. It is prohibited to deliberately bid up the prices of staple foodstuffs to inflate the price for a keen buyer when the bidder has no intention of buying (Iqbal & Mirakhor, 2007). Since the *halal* food industry will become a major market force in the near future (Ali *et al*., 2015), practical implications should extend to food marketers and food policy decision-makers who might pursue identity, acculturation, trustworthiness and moral obligation-related strategies in their distribution and communication efforts targeted at the growing *halal* food market segments locally and worldwide.

Since Muslims are also travelling either for leisure or business, the *halal* tourism market is the main issue discussed in several literatures related to accessibility (Rahim *et al.,* 2021; Han *et al.,* 2021; Rusli *et al*., 2018). Various terms have been used, such as *halal*, Muslim-friendly, *Sharia*-compliant or Islamic tourism. In the development of *halal* tourism, the management of the demands of tourists at the planning stage, visits and after visits should be managed based on the Islamic perspective. In the effort to develop *halal* tourism, the highest priority should be on *halal* food and beverage development, followed by availability of places of worship at the same level, availability of recreational facilities for different genders, and an Islamic atmosphere. Nonetheless, *halal* tourism has the potential as an alternative solution to maintain business, environment and cultural sustainability. Deviant behaviour, westernisation or loss of local value in the tourism sector can be reduced through *halal* tourism development activities (Rusli *et al*., 2018). *Halal* tourism activities are the availability of attractiveness, accessibility, and amenity with Islamic reference. Management standards that cover various elements of *halal* tourism are: attraction, accessibility, amenity, marketing, institutional and investment/financial governance, Procedure (Stages or procedures for implementing *halal* tourism, such as: Stage of environmental analysis strategic, product planning and socialisation of the plan, determination, promotion and dissemination of information, evaluation and control stages and development stages) and Criteria (Measures used as the basis for implementing *halal* tourism). *Halal* tourism development should also follow the principles of regulating what is needed, facilitating, in accordance with ability, gradual, priority scale, inclusive principles and protection principles (Rusli *et al*., 2018). The government should support the market by providing legal certainty and *halal* tourism. Human Resource (HR) certification must be realised. HR should understand and care about halal regulations in the halal tourism service industry (Rusli *et al*., 2018).

Accessibility of food could be realised with reasonable prices. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives (Rahim *et al*., 2021). Further, Hasun *et al*. (2021) stated in their work that according to Ibn Taimiyah (Islahi, 1985), rise and fall in prices is not always due to the injustice (*zulm*) of some people. Even Abu Yusuf (d. 798) stated that there is no definite limit of cheapness and expensiveness, and those prices are subject to the command and decision of Allah.

In one *Hadith*, the people said: Messenger of Allah, prices have shot up, so fix prices for us. Messenger of Allah 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 (Sunan Abi Dawood). However, traders must not seek to broaden the gap between the two prices– the basic price or cost per unit and the prevailing price or the price in the market - and take larger profits or income through immoral means such as dishonesty and profiteering (Adada, 2019; Obaidullah, 2015). It is prohibited to deliberately bid up the prices of staple foodstuffs to inflate the price for a keen buyer when the bidder has no intention of buying, regardless of whether the bid-up is done in collusion with the seller or not (Farouk *et al*., 2015).

Food prices, especially *halal* products, however, are found to be more expensive compared to regular products, which are not *halal* (Aljaroudi *et al*., 2019). Thus, Muslims are tied morally to set just and appropriate prices and profits within limits, and any deviation from this is considered a mischief (Haddad, 2012)

Utilisation

Utilisation describes the socio-economic aspects of household food and nutrition security, determined by knowledge and habits. Assuming that nutritious food is available and accessible, the household has to decide what food to purchase and how to prepare it, as well as how to consume and allocate it within the household. Besides, utilisation requires a healthy physical environment and adequate sanitary facilities as well as the understanding and awareness of proper health care, food preparation, and storage processes. In this context, safe drinking water plays an important role, especially for preparing food and creating a healthy environment for the population (Wocatpedia, 2024).

The related keywords or codes searched from the selected literature under the 'Utilisation' pillar are nutrition, nutritious; diet *Sunnah*; clean water; health care; and *thoyyib.* The words “nutrition” or “nutritious” are commonly used by past authors in studies such as Burchi *et al.* (2011), Ruel and Alderman (2013), FAO (2013), Hoddinott and Yohannes (2002), and Pinstrup-Andersen (2007). The term "health" or "health care" as well as "clean water" were mentioned by FAO (2013), Smith and Haddad (2000), WHO (World Health Organisation) (2003), Black *et al*. (2008), FAO (2014), and UNICEF (1990). Additional words of “diet *sunnah*” and “*thoyyib*” are added by authors to reflect the utilisation of food from an Islamic perspective, in which most literature collected on this topic uses the words quite frequently.

As shown in Figure 5, the highest frequency of keywords mentioned under this category is 'nutrition, nutritious' (3.5%) from 13 literature, followed by 'clean water' (1.8%) from 2 literature, as well as '*thoyyib*' (1.8%) from 3 literature. Besides, other keywords such as 'diet *sunnah*' were found in 1 case and 'health care' was found in 5 cases with low frequency of codes.

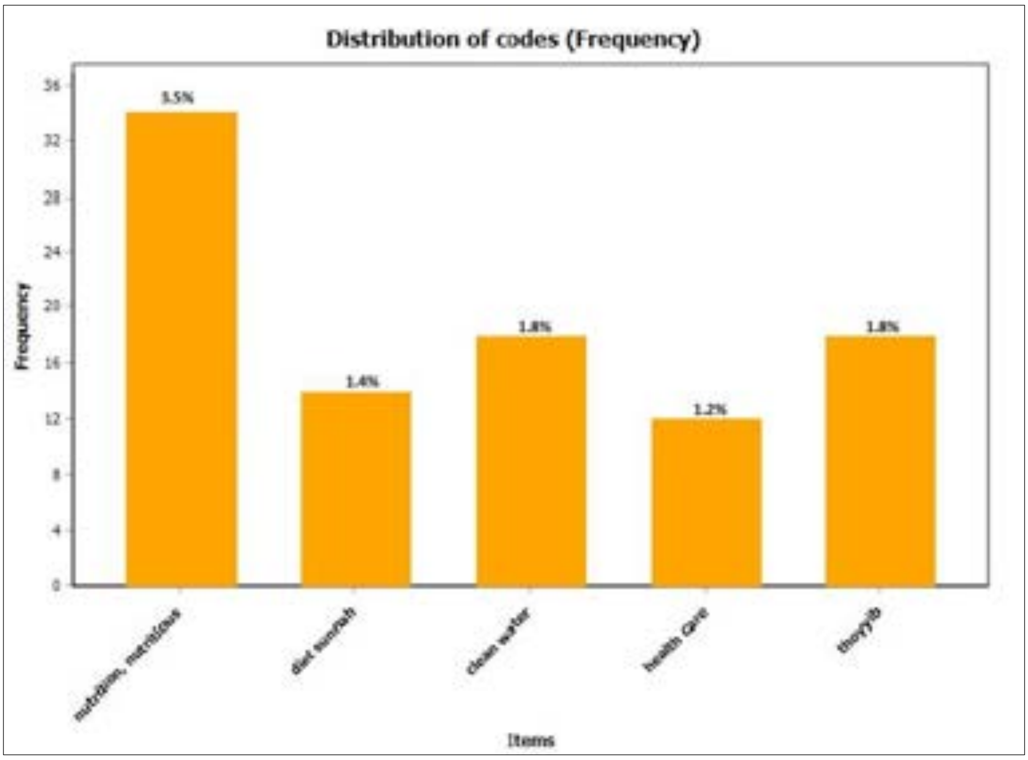

FIGURE 5: FREQUENCY OF KEYWORDS FOR 'UTILISATION' AS AN ELEMENT OF FOOD SECURITY
Source: Figure by Authors

The Islamic perspectives on the concept of utilisation of food security, particularly on the word nutrition, were mentioned many times by several authors. Most literature is in consensus that *halal* and *thoyyib* foods are wholesome and nutritious to be consumed. Besides, it is expected to be derived from trusted and reliable sources that do not involve unjust practices such as usury and monopoly and not hurt the environment or disturb the ecological balance (Idris *et al*., 2020). A Muslim should give and share from his/her sustenance (food nutrition) the part he/she likes most or the best quality of what he/she has (based on the *Quran* verse) (Haddad, 2012). In another *Quranic* verse, it is stated that Muslims are required to eat what is lawful, wholesome, pure, nutritious, and safe (*Quran* 2:168; 5:87) and not what is loathsome or foul (*Quran* 7:157) based on three basic principles: 1) God alone has the right to determine what is allowed or prohibited to be eaten, and everything is permitted for use except that which is prohibited by God or through His Prophet (PBUH); 2) Things are prohibited because they are impure and harmful; and 3) Necessity dictates exception (Farouk et al., 2015). Besides, Surah An-Nahl verse 114 is always coupled with the words *kulu* (eat) and *thoyibbah* (nutritious) (Kurahman *et al*., 2023). Nonetheless, in *the Quran*, it is stated that Muslims are required to eat what is lawful, wholesome, pure, nutritious, and safe. Honey is the most eatable nutritious food mentioned in *al-Quran*. Besides, the expected behaviour of consumption in Islam is *halal* and *thoyyib*, moderate or not excessive, minimum waste, and local product consumption priority.

With the combination of *toyyibban* and *halal*, which is similar to clean, hygienically handled, nutritious, good quality and safe, *halal* products are suitable to be consumed by everybody regardless of their religious belief (Rahim *et al*., 2021; Jalil & Musa, 2012). Since *halal* products have gained the confidence of consumers who are becoming more concerned about health, nutrition, safe and good quality, these characteristics should be maintained starting from farming, processing, packaging and labelling, warehousing, transportation, delivery and consumption (Jalil & Musa, 2012). These characteristics should also be applied to GM crops and GM food.

Moreover, healthy nutrition is a crucial dimension of *halal* food performance. Boosting the availability of *halal* food and enhancing the healthy and nutritious facets of existing *halal* food are hence imperative for a non-Islamic destination product to appeal to Muslim visitors. Improving the performance of *halal* food by focusing on its cleanness/safety/hygiene, accreditation, availability, and health nutrition can elicit approach behaviours for destinations, eventually increasing business opportunities, creating more jobs, and bringing monetary investment/benefit to the destinations (Han *et al*., 2021)

The word *thoyyib* is always mentioned together with nutrition in the studies collected. The Arabic term *thoyyib*, when used in the context of food in the *Quran*, refers to that which is good, pure, wholesome, and beneficial. It goes beyond mere physical attributes and includes both ethical and spiritual dimensions. Foods that are *thoyyib* are not only lawful (*halal*) but also beneficial to one's health and well-being. The term "nutritious" in the context of modern food science refers to food that provides essential nutrients necessary for the body's growth, repair, and maintenance, such as vitamins, minerals, proteins, and carbohydrates. Nutritious food supports physical health and overall well-being. The *Quran* repeatedly emphasises the consumption of *halalan thoyyiban* (lawful and good) food. For example, in Surah Al-Baqarah (2:168): "O mankind, eat from whatever is on earth [that is] lawful and good (*halalan thoyyiban*) and do not follow the footsteps of Satan. Indeed, he is to you a clear enemy." (Surah Al-Baqarah, 2:168)

In this verse, Allah encourages believers to consume food that is not only lawful but also good, pure, harmless, high-quality and beneficial (Siti Hafsyah Idris *et al*., 2020; Rahim *et al*., 2021). This aligns closely with the modern concept of nutritious food, which must be healthy and sustaining. Thus, the concept of *thoyyib* food encompasses both spiritual and physical dimensions—food that is ethically sourced, environmentally sustainable, and beneficial to health, corresponding to what we would today term nutritious food. In other words, the term *thoyyib* has the meaning of everything that is considered good by the physical and the soul or anything that does not contain reprehensible and repulsive elements (Hasun *et al*., 2021). Foods that are *thoyyib* provide essential nourishment, align with Islamic values, and ensure the well-being of the individual and the broader community. In practical terms, a diet based on *thoyyib* principles would include whole foods like fruits, vegetables, grains, and ethically sourced meat, which are rich in nutrients and support good health, while avoiding harmful or overly processed foods.

Having said this, both households and poor households are consumers of food, and the expected behaviour of consumption is: *halal, thoyyib*, moderate or not excessive, minimum waste and local product consumption. To achieve food security, besides moderate-halal *thoyyib* consumption, Islam encourages the consumption of local products, efficient production without harming the environment at an adequate capacity to produce quality products, encouraging the market to operate based on market mechanisms, prohibiting *riba*-based financing and defining the clear role of the government (Hasun *et al*., 2021).

The use of clean water for food utilisation is a significant concern in Islam. Water used for purification must be pure and free from any changes in its smell, colour, or taste. This reflects the wisdom in Islamic jurisprudence (*fiqh*) regarding why water for purification must remain unchanged in these qualities. If impure substances (*najasah*) are mixed with clean water, the water is considered pure again once the impurities disappear. Sheikh Abd al-Rahman Abd Al-Khalik explained that the essential nature (molecule) of water remains forever pure. The Saudi Arabian Fatwa Council has ruled that large amounts of water affected by impurities can be considered pure if the impurities are removed naturally, such as by adding clean water or due to environmental factors like exposure to sunlight or wind (Rahim *et al*., 2021).

Stability

Stability describes the temporal dimension of food and nutrition security, respectively, the time frame over which food and nutrition security are being considered. Stability is given when the supply on the household level remains constant during the year and in the long term (sustainability). That includes food, income and economic resources.

The related keywords or codes searched under 'Stability' of food security are adequate food and sustainable food. Studies on the stability component of food security often discuss the concepts of "adequate food" and "sustainable food systems," emphasising the importance of long-term availability and access to food that meets nutritional needs while also considering environmental sustainability. Among those studies are Godfray *et al.* (2010), Ingram (2011), FAO (2010), and Pretty, Toulmin and Williams (2011)

As shown in Figure 6, the highest frequency of keywords under this category is 'adequate food' (1.9%) from 9 literature and followed by 'sustainable food' (1.2%) from 7 literature.

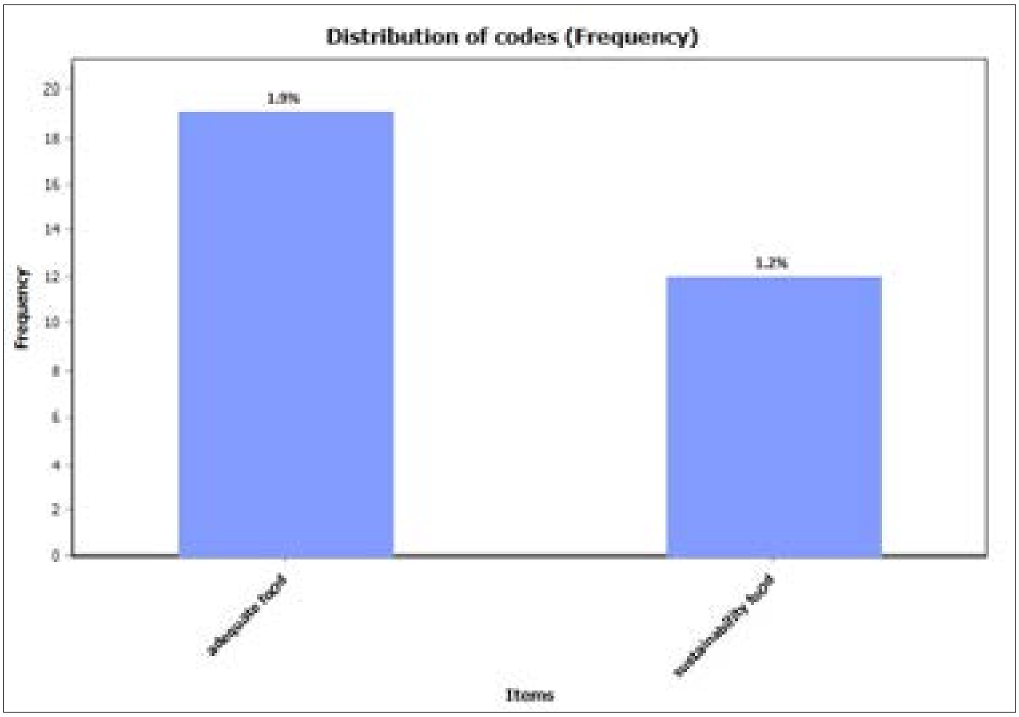

FIGURE 6: FREQUENCY OF KEYWORDS FOR 'STABILITY' AS AN ELEMENT OF FOOD SECURITY
Source: Figure by Authors

It is discussed in the literature that the characteristics of the production process from the view of Islam are efficient, safe to the environment, halal and *thoyyib* oriented and have adequate capacity. *Halal* food safety, security and sustainability are a right for all human beings and should not be withheld from anyone in this world (Rahim *et al*., 2021). This approach not only meets ethical and religious requirements but also aligns with modern values of sustainability, food safety, and adequate production capacity. Islam views *halal* food safety, security, and sustainability as fundamental rights for all human beings. No one should be deprived of access to safe, nutritious, and ethically sourced food. This principle extends beyond just Muslims; it emphasises universal access to clean, *halal*, and wholesome food for all people, underscoring the importance of social justice and equity in food systems.

For a stability element in food security, particularly in crop production, the sustainability of irrigation systems, through the development, operation, and maintenance of irrigation networks, should be realised (Nugraha *et al*., 2023). The stability element in food security, particularly in crop production, is directly tied to the sustainability of irrigation systems. The development, operation, and maintenance of irrigation networks must be carefully planned to ensure a consistent water supply for agricultural production. Efficient water management systems are critical in regions prone to drought or water shortages. This aligns with Islamic environmental ethics, where water is considered a precious resource that must be conserved and used wisely.

From the *tawhidi* perspective, which emphasises the oneness of Allah and the unity of creation, sustainability should be achieved in a manner that is consistent with divine laws (Hasun *et al*., 2021). This means that sustainable practices should not conflict with Islamic principles, such as causing harm to the environment or exploiting natural resources irresponsibly. True sustainability is achieved when human activities align with the natural order as established by Allah. For example, avoiding the overuse of land or water resources and ensuring ethical treatment of animals and workers in food production aligns with the *tawhidi* approach. This perspective emphasises harmony between human activities and the broader ecosystem, ensuring that food production is not only environmentally sustainable but also spiritually grounded.

If unsustainable food practices are contributing to climate change, it is essential for the Muslim world to actively participate in global efforts to promote sustainability. Climate change affects all, and its impact on food production—through droughts, floods, and changing weather patterns—poses significant threats to food security. From an Islamic perspective, taking action to mitigate climate change is a moral duty, as it involves preserving the balance (*mīzān)* of creation and fulfilling the trust (*amānah*) given by Allah to humanity to protect the Earth. Muslim countries can lead by integrating Islamic environmental ethics into modern sustainability practices, such as reducing greenhouse gas emissions, promoting renewable energy, and adopting sustainable agricultural techniques that align with Islamic principles. This not only helps maintain global sustainability but also ensures that food systems are resilient to the challenges posed by a changing climate. In summary, Islamic teachings provide a comprehensive framework for sustainable food production that incorporates ethical, environmental, and spiritual dimensions, promoting a balanced approach that addresses both human needs and environmental stewardship.

When examining the four components of food security—availability, access, utilisation, and stability—from an Islamic perspective, several limitations must be acknowledged. First, Islamic teachings on food security primarily focus on ethical and moral guidance rather than detailed policy frameworks, which can limit the practical application of these principles in modern contexts. This limitation is highlighted by Al-Qaradawi (2002), who notes that while Islamic principles offer guidance on equitable distribution and charity, they do not always translate into concrete policies for modern food systems. Existing studies often lack comprehensive analyses of how Islamic teachings can be applied to modern food security challenges, such as market volatility and global food supply chains. Siddiqui (2011) emphasises that Islamic economics provides valuable ethical guidance but is less detailed in addressing practical aspects of food security like distribution efficiency and long-term stability.

Second, access to food in Islam is guided by the principles of justice and equity (*Hadith* of the Prophet Muhammad), but these teachings may not directly translate into effective policy measures for addressing systemic inequalities in diverse socio-economic contexts.

Third, utilisation is highlighted through dietary guidelines and prohibitions (*Quran* 5:3), yet the focus is more on health and spiritual well-being rather than on comprehensive nutrition security. The focus on dietary laws and ethical consumption in Islamic texts, as discussed by Ramadan (2010), tends to overshadow other critical dimensions of food security, such as access and stability, which are essential for a holistic approach. This limitation results in an incomplete understanding of how Islamic teachings address all aspects of food security.

Fourth, the component of stability is less explicitly addressed in Islamic texts, which may leave gaps in understanding how to ensure long-term food security in the face of environmental and economic challenges. These limitations highlight the need for integrating Islamic principles with contemporary food security strategies to effectively address modern challenges.

Lastly, there is a gap in empirical research that specifically examines the integration of Islamic principles with modern food security frameworks. Khan (2017) argues that while Islamic economics offers a strong ethical foundation, there is a need for more empirical studies to bridge the gap between religious teachings and practical food security solutions.

5. CONCLUSION

The current study attempts to review the available literature sourced from Scopus and Dimensions databases on the Islamic perspectives of food security. Using Systematic Literature Review (SLR) which is a scientific method that could be used to limit systematic bias by identifying, screening and synthesising research questions using a particular and systematic methodology in reviewing the literature, the study seeks to identify the studies that discuss the elements of 'ávailability', 'stability', 'accessibility' and 'utilisation' of food security from Islamic perspectives and discuss the arguments among scholars on the four elements of food security from Islamic perspectives. Out of 73 literature obtained, 52 pieces of literature are finally analysed after they have gone through identifying and screening processes.

Overall, the findings show that the four pillars of food security were discussed quite extensively by some selected literature particularly on the *halal* and *thoyyib* food production and consumption, the Islamic view of GM crops and GM food production, *halal* tourism, *riba*-free financing of agriculture and food production and role of state and regulations in monitoring most activities from production to delivery process.

This study offers several suggestions that future studies should take into account. The studies on 'utilisation' of food through clean water, sanitisation and health care from Islamic perspectives are very scanty. Most studies mainly focus on the nutritious concept of food with relation to the concept of *thoyyib* and *halal*. The report by UNICEF & WHO (2019) provides a comprehensive overview of global disparities in access to clean water and sanitation, with particular emphasis on the challenges faced by countries in the developing world, including many Muslim-majority nations. As most third-world Muslim countries are facing difficulties in accessing clean water and sanitation, studies on the Islamic perspective of this important accessibility should be undertaken seriously. The financing model for these facilities, such as through Islamic financing or Islamic social financing, should be explored in these countries.

Meanwhile, there are also limited studies on the issue of food 'stability' from Islamic perspectives (Hassan & Basit, 2021). While there is growing interest in integrating Islamic principles into discussions of food security, particularly about justice, equity, and sustainability, the specific focus on "stability" remains underexplored. Hassan and Basit (2021) explore the concept of food security within an Islamic framework, noting the limited focus on food stability as a distinct component in Islamic economic literature. The authors call for more research in this area to fully understand how Islamic teachings can contribute to ensuring food stability in Muslim-majority countries. Households must have access to adequate food at all times based on the stability concept of food security. More discussion or studies are expected to be conducted on how Islam views the issue of maintaining and reforming the agricultural sector, climate change, global warming and adopting new technology in the food industry for sustainability. The discussion on technology should not be limited to GM technology. It could be explored further on precision agriculture, Artificial Intelligence in quality control and food safety assurance, vertical farming and others.

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PUBLIC BUILDING ACCESSIBILITY IN MALAYSIA: LEGAL CHALLENGES AND THE RIGHTS OF PERSONS WITH DISABILITIES

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ABSTRACT

The growing proportion of persons with disabilities in Malaysia has underscored the urgent need for accessible public buildings, as access is intrinsically tied to the exercise of fundamental rights. This article examines the legal challenges that impede persons with disabilities' access to public buildings in Malaysia and proposes legal reforms to enhance compliance with international standards. A qualitative research design was employed, utilising a doctrinal legal methodology supported by content analysis. Primary data sources included statutory instruments such as the Persons with Disabilities Act 2008 [Act 685], the Uniform Building By-Laws 1984 (UBBL), the Convention on the Rights of Persons with Disabilities (CRPD), and relevant case law. The findings reveal several deficiencies within the current legal framework: inconsistencies between domestic legislation and CRPD, vague or narrow legal definitions, the absence of mandatory access audits, and limited enforcement powers of the National Council for Persons with Disabilities. These shortcomings hinder the realisation of accessibility rights for persons with disabilities. This study highlights the need for legislative amendments to Act 685 and the UBBL to align Malaysia's legal framework more closely with the CRPD. While the study is limited to a doctrinal analysis without empirical fieldwork, it offers a timely and original contribution by identifying specific legal reforms necessary to advance accessibility rights. The findings carry significant implications for policymakers, legal practitioners, and disability advocates seeking to ensure inclusive development through legal means.

KEYWORDS: ACCESSIBILITY, PERSONS WITH DISABILITIES, PUBLIC BUILDINGS, DISABILITY, INCLUSIVE SOCIETY

ABSTRAK

Peningkatan bilangan orang kurang upaya di Malaysia telah mewujudkan keperluan mendesak untuk memastikan bangunan awam boleh diakses, memandangkan akses secara langsung berkait rapat dengan pelaksanaan hak asasi manusia. Artikel ini bertujuan untuk meneliti cabaran undang-undang yang menghalang hak orang kurang upaya untuk mengakses bangunan awam di Malaysia serta mencadangkan reformasi perundangan bagi meningkatkan pematuhan terhadap piawaian antarabangsa. Reka bentuk penyelidikan kualitatif telah digunakan dengan mengaplikasikan

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metodologi perundangan doktrinal yang disokong oleh analisis kandungan. Sumber data utama merangkumi instrumen perundangan seperti Akta Orang Kurang Upaya 2008 [Akta 685], Undang-Undang Kecil Bangunan Seragam 1984 (UBBL), Konvensyen Mengenai Hak Orang Kurang Upaya (CRPD) serta kes-kes undang-undang yang berkaitan. Dapatan kajian menunjukkan beberapa kelemahan dalam kerangka perundangan sedia ada, termasuk ketidakselarasan antara undang-undang domestik dengan CRPD, takrifan undang-undang yang kabur atau terlalu sempit, ketiadaan keperluan audit akses secara mandatori dan kuasa penguatkuasaan yang terhad oleh Majlis Kebangsaan bagi Orang Kurang Upaya. Kekurangan ini menghalang pemenuhan hak akses kepada orang kurang upaya. Kajian ini menekankan keperluan untuk meminda Akta 685 dan UBBL agar kerangka perundangan Malaysia lebih selaras dengan CRPD. Walaupun kajian ini terhad kepada analisis doktrinal tanpa kajian lapangan secara empirikal, ia tetap memberikan sumbangan yang penting dan bersifat asli dengan mengenal pasti reformasi undang-undang yang khusus bagi memajukan hak akses kepada orang kurang upaya. Penemuan ini membawa implikasi yang signifikan kepada pembuat dasar, pengamal undang-undang dan aktivis hak orang kurang upaya dalam usaha memastikan pembangunan yang inklusif melalui pendekatan perundangan.

KATA KUNCI: KEBOLEHAKSESAN, ORANG KURANG UPAYA, BANGUNAN AWAM, KURANG UPAYA, MASYARAKAT INKLUSIF

1. INTRODUCTION

Persons with disabilities in Malaysia continue to face significant disparities in accessing essential services such as healthcare, education, and employment. They frequently experience inadequate access to disability-related support services and are systematically excluded from full participation in societal life. For instance, the lack of facilities for students with disabilities in institutions of higher learning has hindered them from experiencing a comfortable life similar to that of other students. According to the World Health Organization (2021), it was estimated that 16% of the global population had some form of disability in 2021, representing over one billion individuals. The significant proportion of persons with disabilities in the worldwide population necessitates the provision of various disability-friendly facilities and appropriate access to these services.

At the international level, the Convention on the Rights of Persons with Disabilities (CRPD) was introduced on 13 December 2006 during the 61st session of the United Nations General Assembly (Abdul Rahim & Abd. Samad, 2010). According to the United Nations (2022), as of 31 December 2022, 185 countries had signed and 164 had ratified the CRPD, including Malaysia. Malaysia ratified CRPD on 19 July 2010 with reservations on Articles 15 (Freedom from torture or cruel, inhuman or degrading treatment or punishment) and 18 (Liberty of movement and nationality) (Mokhtar & Md. Tah, 2016). According to the Human Rights Commission report (2011), Malaysia has not yet signed the Optional Protocol to CRPD. Under Article 1(1) of the Optional Protocol to CRPD, the United Nations Committee on the Rights of Persons with Disabilities is mandated to consider individual complaints regarding violations by any State Party concerning the provisions of CRPD.

According to the United Nations (2022), as of 31 December 2022, 94 State Parties had signed the Optional Protocol to CRPD, while 101 State Parties had ratified it. Malaysia's ratification of the CRPD demonstrates the country's commitment to implementing the rights of persons with disabilities as enshrined in the CRPD (Krishnamoorthi *et al*., 2022). However, Malaysia’s decision not to sign the Optional Protocol indicates that the country is not yet prepared to adopt the reporting mechanisms stipulated in CRPD as a benchmark for ensuring the rights of persons with disabilities in Malaysia.

CRPD represents a significant and unequivocal recognition of the fundamental rights of persons with disabilities, encompassing civil, cultural, political, social, and economic rights. Article 1 of CRPD outlines its purpose, which is to promote, protect, and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities and to promote respect for their inherent dignity. Preamble (v) of CRPD recognises the importance of accessibility to the physical, social, economic, and cultural environment, as well as to health, education, information, and communication, in enabling persons with disabilities to fully enjoy all human rights and freedoms. Furthermore, Article 9 of CRPD requires State Parties to take appropriate measures to ensure that persons with disabilities have equal access to their surroundings as persons without disabilities. Article 2 of CRPD affirms that discrimination on the basis of disability against any individual constitutes a violation of the inherent dignity and worth of the person. This includes all forms of discrimination, including the denial of reasonable accommodation.

Following Malaysia's ratification of CRPD on 19 July 2010, the Malaysian government, as a State Party to CRPD, bears the responsibility of upgrading its policies and legislation to create a public environment that is inclusive and accessible for persons with disabilities. According to the Human Rights Commission of Malaysia (2012), several issues were raised by *Gerakan Bersama Kebangkitan Orang Kurang Upaya 2012* in a memorandum entitled *Memorandum Gerakan Bersama Kebangkitan Orang Kurang Upaya 2012* (Memorandum BANGKIT 2012), which aimed to draw the attention of both the public and private sectors to the specific needs of persons with disabilities. *Memorandum BANGKIT 2012* outlined eleven key points that broadly urged the government to establish government and private agencies, as well as a society that is responsive and aware of the needs, capabilities, and contributions of persons with disabilities.

According to the Malaysian Bar (2012), in the legal context, Item 1 of *Memorandum BANGKIT 2012* proposed the strengthening of existing laws to ensure the survival and protection of persons with disabilities. This includes amending Article 8(2) of the Federal Constitution to explicitly prohibit discrimination based on disability, amending the Persons with Disabilities Act 2008 (Act 685) to provide appropriate remedies and penalties against parties who fail to uphold the rights granted to persons with disabilities, fully ratifying CRPD including the Optional Protocol and empowering the National Council for Persons with Disabilities established under Section 3 of Act 685. This also involves making the Council's reports accessible to all relevant stakeholders. Based on the issues highlighted in *Memorandum BANGKIT 2012*, several problems have been identified in relation to Malaysia's legal framework in ensuring access rights of persons with disabilities to buildings, particularly public buildings.

According to the Human Rights Commission of Malaysia (2019), although Malaysia has ratified CRPD, persons with disabilities continue to face challenges in gaining full access to public buildings. The report highlights that Malaysia's legal framework, particularly the Persons with Disabilities Act 2008 (Act 685), does not adequately empower persons with disabilities to take legal action against instances of discrimination or the failure to provide appropriate accessibility. Under Act 685, the government and related entities are immune from being sued for violations of these rights (Md. Tah, 2014).

Notably, the Ministry of Women, Family and Community Development (2022), there are seven categories of persons with disabilities in Malaysia, including physical, hearing, and visual impairments. However, the legal definitions concerning persons with disabilities and public buildings remain inconsistent, resulting in confusion and weaknesses in the implementation of existing laws. In this context, this article reviews and analyses the issue of accessibility to public buildings for persons with disabilities in Malaysia. It also evaluates the shortcomings of the current legal framework and proposes recommendations for a more comprehensive implementation of the law to ensure the rights of persons with disabilities are upheld.

Based on the issues discussed, the objective of this article is to analyse matters related to the right of access for persons with disabilities to public buildings in Malaysia and to propose legal improvements to ensure the protection of access rights for persons with disabilities to public buildings in the country.

2. LITERATURE REVIEW

Persons with disabilities face discrimination and various barriers that hinder their full participation in society on an equal basis with others. According to the Human Rights Commission of Malaysia (2014), the inequality experienced by persons with disabilities is caused by multiple obstacles, including attitudinal barriers and stigma, which often prevent them from being actively involved in society. Their difficulties in accessing essential services further marginalise this group, preventing them from leading a meaningful daily life (Asalal *et al*., 2023).

In the legal context, the Federal Constitution does not explicitly prohibit discrimination based on physical or mental disability. In Malaysia, the case of *Jakob Renner & Ors v Scott King & Ors [2000] 5 MLJ 254*, which was decided by the courts before the enactment of Act 685, interpreted both Article 5 of the Federal Constitution, which guarantees the right to life, and Article 8, which guarantees the right to equality, as protecting against discrimination towards persons with disabilities. Although the Jakob Renner case specifically concerned the right of a child with disabilities to access education, the critical issue highlighted was the lack of adequate infrastructure in schools, which effectively denied the child's right to education (Sufian, 2007). Since the Jakob Renner case and the enactment of the Persons with Disabilities Act 2008 (Act 685), there have been no reported legal cases in Malaysia directly addressing the right of access to public buildings for persons with disabilities.

Although there have been no other reported legal cases in Malaysia, there remains a pressing need to evaluate the existing Malaysian legal framework (Maidin, 2012). Persons with disabilities face substantial challenges in progressing in life because they are denied access to fundamental rights such as freedom of movement, education, employment, and social participation. This denial is largely due to the inaccessibility of buildings, particularly public facilities such as schools, business premises, workplaces, public transportation, and other public amenities (Maidin, 2012). This demonstrates that the denial of access rights to public buildings for persons with disabilities is indeed a real issue in Malaysia and must be addressed urgently to prevent further marginalisation and discrimination.

Access to public buildings remains a critical challenge for persons with disabilities in Malaysia, despite the existence of legal provisions and policy commitments. Many public facilities, including schools, offices, transport hubs, and government buildings, are still not fully compliant with accessibility standards, which restricts the mobility and participation of persons with disabilities in society (Adam *et al.*, 2025). Although Malaysia has adopted universal design principles and introduced guidelines such as MS 1184:2002, the implementation and enforcement of these standards are inconsistent, leading to significant gaps between policy and practice (Adam *et al*., 2025). Poorly designed ramps, inaccessible toilets, inadequate signage, and the absence of guiding blocks for the visually impaired are among the recurring issues that undermine accessibility (Adam *et al.*, 2025). Therefore, ensuring accessible public buildings is not merely a matter of infrastructure, but a fundamental prerequisite for achieving equality, inclusion and the protection of the rights of persons with disabilities in Malaysia.

At the international level, several legal cases have been reported concerning the right of access for persons with disabilities. One such case is *Stegner v. Franco, 228 F.3d 889 (8th Cir. 2000)*. In this case, the United States Court of Appeals held that Mr. Burch, who was visually impaired, had standing to claim Title II of the Americans with Disabilities Act 1990 due to his inability to locate restrooms that were not marked in Braille or with any other identifiable signage. Another case, *The Royal Bank of Scotland Group Plc v. Allen [2009] EWCA Civ 1213*, established the obligation of service providers in the United Kingdom to make reasonable adjustments when it is impossible or unreasonably difficult for persons with disabilities to use services or access public premises, unless it would be unreasonable for the service provider to do so.

In the case of *Fowler v. Kanawha Valley Fine Jewellery and Loan LLC, 2015 WL 164096 (S.D.W.VA. 2015)*, the court ordered the defendant to pay damages to the plaintiff due to injuries sustained as a result of the defendant's failure to provide an appropriately constructed wheelchair-accessible ramp at their business premises in the United States. Therefore, although no legal cases concerning access to public buildings for persons with disabilities have been reported in Malaysia since the enactment of Act 685, reference to the legal principles established in such international cases is essential. The situations faced in these cases can similarly occur in Malaysia, thus reinforcing the need for robust legal protections to uphold the rights of persons with disabilities.

In the context of previous literature, the perspectives of scholars from other countries regarding accessibility tend to focus more on raising awareness and promoting initiatives aimed at ensuring accessibility for persons with disabilities. Imrie (1996) asserted that since the early 1980s, governments in Western countries have voiced the need to improve the accessibility of spaces and areas within the built environment through public policy. This is evident in the establishment of institutions dedicated to developing accessibility policies for persons with disabilities in the United Kingdom. In the United States, the concept of a barrier-free environment has received attention since 1968. Policies and programmes intended to create accessible spaces for individuals with impairments have been prioritised in the welfare agendas of several countries, including Germany, the Netherlands, and Sweden. This reflects the growing awareness of the importance of access to buildings for persons with disabilities, which has, in turn, influenced the development of legal frameworks in these Western nations. Although Imrie's work focuses on the accessibility of the built environment for individuals with disabilities, it does not go into detail regarding the concept of universal design, as it had not yet been introduced at the time.

Furthermore, Molly *et al.* (1998) introduced and elaborated on the concept and principles of universal design. Universal design is defined as the design of products and environments that are usable by all people, to the greatest extent possible, regardless of age or ability. The concept is expected to become increasingly important in response to the growing number of persons with disabilities and the ageing global population. The development of the legal framework began as early as the 1960s in the United States, starting with federal legislation that served as a guideline for setting minimum accessibility standards for a small percentage of facilities and eventually expanded to ensure full access to the public. This demonstrates that legal frameworks play a significant role in advancing the concept of universal design. Since the idea of universal design was only recently introduced at that time, earlier writings focused more on its background, historical development, principles, and theoretical foundations.

Subsequently, Gray *et al.* (2003) explained that in creating a built environment that reduces barriers to disability, design practitioners, landscape architects, urban transport planners, developers, contractors, and other related parties must be considered as key stakeholders. In addition to the goal of establishing an environment that minimises barriers to the activities of persons with disabilities, building design practitioners can also benefit from consultations with groups representing persons with disabilities. Differing views on the significance of environmental factors as barriers to the participation of persons with disabilities in society, the feasibility of universal design, and legal justice have positioned the issue of access to buildings as a matter of civil rights. However, their writing does not address the legal requirements concerning the construction of buildings accessible to persons with disabilities.

From a legal standpoint, Sufian (2007) argued that there is a need to amend existing laws and policies to meet the needs of persons with disabilities and to ensure accessibility within the built environment, including buildings and housing in Malaysia. Although guidelines exist for developers in providing barrier-free public buildings, there is a lack of monitoring and enforcement mechanisms to evaluate the extent of compliance with these guidelines. Policymakers, urban planners, architects, designers and local authorities are urged to consider best practices from other countries as references in constructing buildings and housing that are friendly to persons with disabilities. Nevertheless, Sufian’s views do not take into account the provisions under the Persons with Disabilities Act 2008 (Act 685), as his article was written before the enactment of this legislation.

In the context of accessibility, Maidin (2012) emphasised that the barriers within the built environment require urgent attention. Accessibility is defined as the provision of equal access to all individuals. Local authorities should play a pivotal role in ensuring that building plans and planning permission applications are prepared with due consideration of the needs of persons with disabilities. A barrier-free environment would allow persons with disabilities to access public transport, buildings, and other facilities necessary for acquiring knowledge and skills required for employment. Furthermore, persons with disabilities would also gain the freedom to move within their respective communities. This, in turn, would enable persons with disabilities to become active members of society and contribute to community activities and development. Maidin's perspective takes into account the provisions under Act 685 and the Uniform Building By-Laws, the definition of the term “disability,” the scope of existing Malaysian standards, the functions and roles of the National Council for Persons with Disabilities and local authorities, as well as the issue of weak enforcement. However, the issue of alignment between the existing legal framework and CRPD, as well as a specific focus on public buildings, is not addressed in her writing.

In the context of employment, Ta and Leng (2013) asserted that in Malaysia, accessibility issues within the built environment constitute the primary barrier faced by persons with disabilities in gaining access to employment opportunities. Although the Uniform Building By-Laws stipulate that all public buildings must be equipped with accessible facilities for persons with disabilities, the enforcement of these provisions is lacking. As a result, many public buildings remain inaccessible, especially for wheelchair users. The Persons with Disabilities Act 2008 (Act 685) has also been criticised for failing to protect persons with disabilities from discrimination and oppression. There have been calls for Act 685 to be amended or for a separate anti-discrimination act to be introduced, similar to legislation in the United States and the United Kingdom, to safeguard the rights of persons with disabilities in Malaysia. This particular writing focuses more on equality in employment and training opportunities for persons with disabilities and does not elaborate in detail on the legal framework in Malaysia concerning accessibility to public buildings by persons with disabilities.

Ramírez-Saiz *et al*. (2025) stated that recent advancements in universal design have placed greater emphasis on creating urban environments that are not only accessible to persons with disabilities but also responsive to the needs of a rapidly ageing population. The core idea behind universal design is to ensure that public spaces, facilities, and mobility systems are usable by as many people as possible, regardless of their physical, sensory, or cognitive abilities. Current developments highlight those features such as wayfinding systems, intermediate seating along walking routes, barrier-free and inclusive crossings, continuous and stable pavements, as well as the removal of steps and small obstacles, are no longer considered special accommodations but essential elements of inclusive planning. Importantly, recent research demonstrates a strong overlap between the mobility requirements of persons with disabilities and those of older adults, showing that both groups benefit significantly from the same design solutions. This recognition has led to a shift away from segregated infrastructure towards more integrated and holistic approaches that consider diverse needs simultaneously. By applying the principle of “design for all,” policymakers, planners, and designers can foster safer, more comfortable, and socially inclusive environments that encourage participation, active mobility, and social connection across different population groups.

From a legal perspective, Md. Tah (2013) highlighted the need to establish remedial provisions to address any violations of the rights of persons with disabilities. In any legislation designed to protect civil rights, it is essential to employ anti-discrimination mechanisms to ensure the implementation and enforcement of such rights. One such mechanism involves the creation of remedial provisions that not only prescribe penalties but also allow persons with disabilities to lodge complaints against any authority or relevant agency. Among the proposals made are to strengthen Act 685 by incorporating remedial provisions, to repeal sections 41 and 42 of Act 685, and to expand the functions of the National Council for Persons with Disabilities to include investigating complaints lodged by persons with disabilities. However, this writing addresses the legal framework related to Act 685 in a holistic manner and does not specifically focus on the legal aspects concerning access to public buildings by persons with disabilities in Malaysia.

Furthermore, Abdul Rahim *et al*. (2014) argued that universal design promotes accessibility for all individuals, encompassing a range of ages and abilities or disabilities. Professionals are urged to provide accessibility and apply universal design principles in all new projects, regardless of whether the development involves public or private buildings. Universal design should be included in the curriculum of all universities offering architecture degree programs to instil early awareness, and access audit simulations should be conducted to improve and upgrade the existing built environment. In summary, this study focuses on the relationship between universal design and accessibility and does not discuss the legal issues concerning the right of access for persons with disabilities to public buildings in Malaysia.

M. Rezaul (2015), on the other hand, argued that persons with disabilities in Malaysia have been marginalised from the national development agenda and live in poor social and economic conditions. Social exclusion at the community level occurs when facilities are inadequate and necessary equipment is lacking, preventing persons with disabilities from participating in community activities. At the institutional and national levels, exclusion is attributed to an unfriendly environment, inaccessible communication systems, and inadequate transportation, all of which result in limited access to public facilities and the absence of appropriate, legally recognised support at the national level. This writing is more focused on the factors contributing to social exclusion of persons with disabilities and does not address the legal framework in Malaysia concerning their right of access to public buildings.

Mohamad Zahari *et al.* (2022) contended that the legal framework in Malaysia regarding accessibility for persons with disabilities has progressed significantly with the enactment of the Persons with Disabilities Act 2008 (Act 685). This Act represents a pivotal step in recognizing accessibility as a fundamental right, particularly in relation to access to public buildings and facilities. The legislation aligns with Malaysia's commitment as a State Party to the United Nations Convention on the Rights of Persons with Disabilities (CRPD), emphasising equal opportunities and the elimination of barriers that hinder participation in social, economic, and cultural life. However, while the Act provides a policy foundation and establishes the National Council for Persons with Disabilities to oversee its implementation, it does not contain strong enforcement mechanisms or punitive provisions against non-compliance. As a result, the realisation of accessibility rights often relies on administrative measures, guidelines, and the goodwill of stakeholders rather than binding legal obligations. This has led to criticisms that the framework, while progressive in principle, remains limited in practice, requiring further legal reform to ensure more effective protection and enforcement of accessibility rights for persons with disabilities in Malaysia.

Based on the literature review above, it is evident that while there are existing studies discussing accessibility and the rights of persons with disabilities in Malaysia, most of these works provide only a general overview or focus on specific aspects such as social inclusion, infrastructure design, or policy implementation. However, they do not sufficiently address the comprehensive legal framework that governs the right of access to public buildings. This indicates a significant gap in scholarly discourse, particularly in terms of examining the strengths, weaknesses, and enforceability of the current legislative provisions. Hence, this article seeks to contribute to the body of knowledge by offering a detailed legal analysis of accessibility rights under the Persons with Disabilities Act 2008 (Act 685) in relation to public buildings, while also identifying areas where legal reform may be necessary to strengthen protection and enforcement mechanisms for persons with disabilities in Malaysia.

3. THEORETICAL FRAMEWORK

The analysis of public building accessibility in Malaysia requires a theoretical foundation that integrates disability studies, human rights, and legal perspectives. Accessibility, in this sense, is not limited to technical compliance with building codes but is closely tied to questions of equality, inclusion, and the lived experiences of persons with disabilities. The social model of disability provides an essential point of departure, emphasising that barriers within the built environment, rather than individual impairments, are the primary source of exclusion. Studies of Malaysian facilities have consistently documented such barriers, from poorly designed ramps to inaccessible restrooms, demonstrating that physical spaces continue to reproduce inequality when they are not designed with universal access in mind (Rahim *et al*., 2014; Hashim *et al*., 2012). This perspective positions accessibility as a prerequisite for inclusive citizenship and full societal participation.

At the international level, Malaysia's ratification of CRPD in 2010 binds the state to guarantee accessibility under Article 9. This obligation is reflected domestically through the Persons with Disabilities Act 2008 (PWDA), which represents a formal recognition of accessibility as a right. However, the Act has been assessed for its weak enforcement mechanisms and lack of penalties for non-compliance, which limits its effectiveness in practice (Hussein & Yaacob, 2012). Without institutionalised monitoring or sanctioning processes, accessibility provisions risk remaining declaratory rather than transformative. Comparative work suggests that stronger enforcement measures are critical, as seen in jurisdictions where accessibility standards are legally binding and coupled with penalties for violations (Wazani *et al*., 2021).

The domestic legal framework in Malaysia provides additional points of analysis. The Uniform Building By-Laws 1984, particularly by-law 34A, mandate that new public buildings provide accessible facilities. Yet research has found that compliance is inconsistent, especially in older or heritage buildings, where retrofitting remains limited (Hooi, 2016). Accessibility audits of commercial complexes similarly reveal that while certain aspects of design meet accessibility requirements, others fall short, suggesting a pattern of partial or symbolic compliance (Hashim *et al*., 2012). These findings highlight the persistent gap between legal standards and their implementation, raising questions about institutional accountability and political will.

A rights-based approach underscores that accessibility should not be seen as a charitable gesture but as a legal entitlement grounded in the right to equality. Article 8 of the Federal Constitution guarantees equality before the law, and when interpreted through the lens of disability rights, this provision affirms the obligation of the state and private actors to eliminate barriers that prevent equal participation. From this perspective, accessibility becomes an issue of substantive equality, requiring proactive measures to dismantle systemic barriers rather than mere formal guarantees (Kamarudin *et al*., 2014).

At the same time, a socio-legal perspective draws attention to the broader social, cultural, and institutional contexts that shape how laws are implemented. Studies emphasise that challenges extend beyond legislative inadequacies to include attitudinal barriers, lack of awareness among building professionals, and limited institutional coordination (Krishnamoorthi *et al*., 2024). Critical disability theory and rights-in-practice analysis suggest that without addressing these deeper structural and cultural factors, legal reforms will have limited impact. Thus, the theoretical framework for analysing public building accessibility in Malaysia rests on an integration of the social model of disability, human rights theory, constitutional equality principles, and socio-legal perspectives, enabling a more nuanced understanding of both the legal challenges and the lived realities of persons with disabilities.

Other jurisdictions have enacted enforceable accessibility legislation. In the United States, the Americans with Disabilities Act of 1990 (ADA) empowers individuals to bring civil actions for discrimination, including in relation to public facilities, and imposes penalties for non-compliance (Kanter, 2015). Similarly, the Equality Act 2010 in the United Kingdom provides explicit legal remedies and requires "reasonable adjustments" to be made by service providers and building owners, strengthening the enforceability of accessibility rights (Yang & Chen, 2015). These examples illustrate that effective accessibility frameworks require not only declaratory provisions but also enforceable rights and sanctions for violations.

The domestic framework in Malaysia reveals further limitations in definitional consistency. Terms such as "persons with disabilities," "public building," and "universal design" are inconsistently applied or undefined across the PWDA and the Uniform Building By-Laws, leading to interpretative uncertainty. Comparative perspectives demonstrate how greater precision in statutory language can support enforcement. In Canada, the Accessible Canada Act 2019 provides clear definitions of accessibility and sets out measurable standards across federal jurisdictions (Prince, 2023). Likewise, in Australia, the Disability Discrimination Act 1992 incorporates accessibility standards directly into statutory obligations, creating a legal mechanism to challenge inaccessible facilities (Pooran & Wilkie, 2005). These approaches help ensure that accessibility provisions are not weakened by ambiguous or conflicting terminology.

The absence of mandatory access audits in Malaysian law also highlights the gap between Malaysia and other CRPD state parties. Countries such as Norway and Canada have incorporated building audits, regular reviews, and inspection regimes into their accessibility frameworks as part of compliance with Article 9 of the CRPD (World Health Organization, 2011). In Malaysia, by contrast, accessibility audits remain sporadic and largely research-driven rather than legally required, leaving significant deficiencies unaddressed (Kadir & Jamaludin, 2012). A comparative perspective suggests that without statutory mechanisms to monitor and enforce accessibility standards, the practical realization of rights remains limited.

Finally, the limited authority of the National Council for Persons with Disabilities under the PWDA illustrates the weakness of Malaysia's institutional framework. While the Council is mandated to recommend legislative changes, it lacks the powers of enforcement or sanction. By contrast, in countries such as the United States, agencies such as the Department of Justice play an active enforcement role under the ADA, while the United Kingdom's Equality and Human Rights Commission can initiate investigations and legal proceedings for accessibility failures (Kanter, 2015; Yang & Chen, 2015). These comparative models highlight the importance of empowering institutional bodies not merely to advise but to enforce compliance.

In the Association of Southeast Asian Nations (ASEAN) context, comparative perspectives offer additional insights. Singapore has adopted a relatively strong accessibility regime through the Building Control Act and the Code on Accessibility in the Built Environment, which impose binding obligations on new developments and retrofitted buildings to provide accessible facilities. The government also introduced mandatory accessibility upgrades for older buildings through the Accessibility Fund, thereby ensuring more consistent compliance than Malaysia's largely declaratory model (Cherdsuriya & Tochaiwat, 2024). Thailand presents a different picture. The Ministerial Regulations on Accessible Facilities were enacted under the Persons with Disabilities Empowerment Act 2007, mandating that public facilities adopt accessible designs. Yet research shows that enforcement remains uneven, and accessibility barriers persist in transport and public buildings, often due to inadequate monitoring and professional awareness (Chuangchai, 2025; Kranrattanasuit, 2017). Comparative studies indicate that while Thai legislation recognizes accessibility as a right, weak enforcement mechanisms limit transformative impact, echoing challenges seen in Malaysia (Abd Samad, Said, & Rahim, 2018).

Indonesia has also advanced its framework following the Law on Persons with Disabilities 2016, which incorporates accessibility into building regulations and public service delivery. However, implementation remains highly localized, with significant variation across provinces and municipalities. Studies highlight persistent design and attitudinal barriers, alongside weak enforcement capacity at the municipal level (Kurniawan *et al*., 2024; Parker, 2001). Unlike Singapore's centralised enforcement and audit system, Indonesia's decentralised governance often results in fragmented compliance.

This theoretical framework views public building accessibility in Malaysia as part of a broader human rights agenda while acknowledging weak enforcement and legal gaps that limit progress. Comparative experiences show that effective accessibility requires more than legal recognition; it depends on strong enforcement, clear definitions, regular audits, and empowered institutions. Singapore demonstrates how centralized oversight and mandatory measures can achieve real progress, whereas Malaysia, Thailand, and Indonesia continue to struggle with weak enforcement, limited retrofitting of older buildings, and reliance on non-mandatory audits. Together, these insights emphasize that accessibility must be supported by enforceable mechanisms to ensure genuine equality and inclusion.

4. METHODOLOGY

This study adopts a qualitative research approach employing a pure doctrinal-legal method. A qualitative research design based on Content Analysis was selected, as the study does not involve scientific or empirical investigation but instead focuses solely on library-based research concerning the legal access of persons with disabilities to public buildings in Malaysia. The Content Analysis method is appropriate, given that this article examines the contents of the Persons with Disabilities Act 2008 (Act 685) and the Uniform Building By-Laws (Selangor) 1986. Data collection was conducted through library research, which involved reading, examining, and extracting information from books, journals, articles, reports, and newspaper clippings. References were also made to relevant legal sources, including Act 685, the Uniform Building By-Laws (Selangor) 1986, and decided court cases.

5. FINDINGS

There are four main issues concerning the access of persons with disabilities to public buildings in Malaysia. These issues were identified through a comprehensive analysis of Malaysia’s current legal provisions and their implementation in practice. The first issue is that the Malaysian legal framework is not aligned with the provisions of CRPD. Although Malaysia has ratified CRPD, the existing legislation, namely the Persons with Disabilities Act 2008 [Act 685], does not provide persons with disabilities with the legal right to initiate action against those who discriminate against them or fail to provide adequate facilities. The provisions under Act 685 grant immunity to the government and certain entities from being sued in court (Md. Tah, 2014). Section 41 explicitly states that no action, lawsuit, prosecution, or other legal proceedings shall be brought, initiated, or maintained in any court against the Government, the Minister, or the National Council for Persons with Disabilities. According to Section 2 of Act 685, the term “Minister” refers to the “Minister charged with the responsibility for social welfare.”

Section 42 of Act 685 further refers to the application of the Public Authorities Protection Act 1948 [Act 198], stating that Act 198 shall apply to any action, lawsuit, prosecution or proceeding brought against the Government, the National Council for Persons with Disabilities or any of its members, committee members or agents, in relation to any act, omission or default committed in the course of their duties. These two provisions render Act 685 a "toothless tiger," offering no specific remedies for violations that involve discrimination against persons with disabilities (Md. Tah, 2014). As a result, persons with disabilities are not fully protected under Act 685 in instances where their rights, including the right of access to public buildings, are denied. This is because they are legally barred from initiating any proceedings against the Government, the Minister, or the National Council for Persons with Disabilities.

The second issue concerns the limited scope of the legal framework. This limitation arises from the absence and inconsistency of essential terminologies in Malaysian laws related to the right of access to public buildings for persons with disabilities. Section 2 of the Persons with Disabilities Act 2008 (Act 685) defines “persons with disabilities” as “include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society.” Meanwhile, the Uniform Building By-Laws (Selangor) 1986 defines the term “disabled persons” under by-law 2 as “people with a physical, hearing, or sight impairment which affects their mobility or their use of the building as referred to under by-law 34A.” This reveals a contradiction in the definitions of persons with disabilities.

Additionally, the term “public building” is mentioned in Act 685 but is not defined either in Act 685 or in the Uniform Building By-Laws (Selangor) 1986. The term “universal design” is defined and included in Act 685, but it is neither mentioned nor defined in the Uniform Building By-Laws (Selangor) 1986. These inconsistencies and the absence of clear definitions for key terms relevant to the issue of access to public buildings for persons with disabilities in Malaysian law result in vague, limited, and incomplete legal interpretations of these terms.

The third issue is the absence of a legal provision mandating access audits. According to the World Health Organization (2011), the reporting guidelines for CRPD require State Parties, including Malaysia, to report progress in achieving Article 9 concerning accessibility. Several State Parties, such as Canada, Norway, and Uganda, have reported practices implemented to comply with Article 9, which include enacting legislation with mandatory accessibility standards, requiring reviews and inspections to ensure good design, and carrying out access audits of buildings. Access audits can be divided into two categories, namely audits to assess the existence of facilities for persons with disabilities and audits to determine the extent to which a particular facility within a building is functional and usable by persons with disabilities (Abdul Rahim and Abd. Samad, 2014).

In the context of building modifications, Kadir and Jamaludin (2012) note that certain renovations of public buildings have not been carried out in accordance with Malaysian Standards, thereby posing safety risks to building users. One example is ramps for wheelchair users that are too steep. In Malaysia, there are public buildings and basic facilities that do not meet the needs of persons with disabilities. In a survey conducted in 2012 by students from the Faculty of Architecture, Planning and Surveying at Universiti Teknologi MARA Malaysia, it was found that guiding blocks installed on the floor as tactile indicators for visually impaired persons to guide them toward Masjid Tuanku Mizan and the Immigration Department in Putrajaya were incorrectly positioned. The placement indicated the wrong direction, which could endanger and confuse visually impaired individuals who rely on tactile guidance to enter those buildings.

The fourth issue concerns the limited authority, function, and role of the National Council for Persons with Disabilities. Under Act 685, the Council has several functions. Among them, subsection 9(1)(f) of Act 685 provides that the Council is responsible for recommending amendments to existing laws and proposing new laws to ensure the full and effective participation of persons with disabilities in society, including facilitating accessibility. Subsection 9(2) of Act 685 further states that the Council shall have all such powers as are necessary for the performance of its functions under the Act. However, Act 685 does not include any provision that empowers the Council or any individual or body to impose penalties or prosecute any person, body, or agency for violations of any provision within the Act.

Accordingly, legislative gaps can lead to the denial of the right of access to public buildings for persons with disabilities and result in discriminatory practices against them. Inaccessibility to buildings, roads, and transportation systems, as well as the lack of assistive devices, can hinder participation in education and training, employment, family life, and community activities. Furthermore, it may foster negative attitudes and poor perceptions toward laws and institutions that fail to support the inclusion of this group.

6. DISCUSSION

Findings from the study reveal that there are critical issues concerning the right of access to public buildings for persons with disabilities in Malaysia. These issues should be taken seriously by both the government and society. This is because the right of access to buildings is a fundamental right for persons with disabilities, essential for ensuring continuity and realisation of other rights such as access to education, employment, healthcare, and social participation. Without adequate access to public buildings such as schools, hospitals, office buildings, libraries, cinemas, and rehabilitation centres, persons with disabilities are unable to enjoy life on an equal basis with others and are hindered from participating fully in society. Denial of access to public buildings for persons with disabilities contradicts the principle of equality enshrined in the Federal Constitution, the CRPD, and the Persons with Disabilities Act 2008 (Act 685).

Based on the findings of the study, two key recommendations are proposed to improve and ensure better protection of the right of access to public buildings for persons with disabilities in Malaysia.

The first recommendation is that Act 685 should be reviewed and amended accordingly. One proposed amendment is to harmonise the definitions of the terms “persons with disabilities” and “disability” in Act 685 to be consistent with the definitions used in CRPD. This harmonisation is necessary to facilitate easier reference and clearer understanding among Malaysians, including persons with disabilities, in accordance with international standards as set out in CRPD. Additionally, Act 685 should be amended to include definitions for the terms “public building,” “access,” “accessibility,” and “access audit.” These amendments are crucial to clarify the meaning of these terms so that individuals responsible for the construction of public buildings can understand them more precisely, thereby avoiding disputes or confusion during the planning and construction of accessible public buildings in Malaysia.

Furthermore, the provisions within Act 685 relating to the functions of the National Council for Persons with Disabilities (the Council) should also be amended to empower the Council to receive complaints and conduct investigations regarding non-compliance with requirements for accessible public buildings. Act 685 should also be amended by repealing Section 41, which currently provides immunity to the government, Minister, Council, any Council member, committee member, or any other person lawfully acting on behalf of the Council. Section 42, which relates to the application of the Public Authorities Protection Act 1948, is also recommended to be repealed. These two sections should be replaced with provisions that protect the rights of persons with disabilities to lodge complaints or pursue legal claims in court. This is essential because the rights of persons with disabilities are already enshrined under Act 685. Those rights must be protected and guaranteed by ensuring the availability of appropriate remedies, including the introduction of legal provisions that protect against any form of oppression or discrimination and the imposition of appropriate penalties.

The second recommendation is that the Uniform Building By-Laws (Selangor) 1986 should be reviewed and amended accordingly. One of the proposed amendments is to harmonise the definitions of the terms “persons with disabilities” and “disability” in the Uniform Building By-Laws (Selangor) 1986 so that they are aligned with the context of CRPD. This harmonisation is necessary to facilitate easier reference and clearer understanding by the Malaysian public, including persons with disabilities, regarding these terms based on the international context provided by CRPD, which offers clearer and more comprehensible definitions.

In addition, the Uniform Building By-Laws (Selangor) 1986 should be amended to include definitions for the terms “public building,” “access,” “accessibility,” and “universal design.” These amendments are essential to clarify the meanings of these terms so that those responsible for constructing public buildings may understand them in greater detail, thereby avoiding disputes or confusion during the preparation of building plans and the construction of public buildings intended to be accessible to persons with disabilities in Malaysia.

Furthermore, the Uniform Building By-Laws (Selangor) 1986 should be amended to include a provision requiring building developers to submit an access plan outlining how persons with disabilities will access public buildings, before approval for the construction is granted. If such an access plan is not submitted, the local authority should not approve the proposed construction of the public building. Provisions should also be introduced to mandate access audits by building developers and monitoring by local authorities. Developers and local authorities that fail to comply with these provisions should face legal action.

Additionally, the Uniform Building By-Laws (Selangor) 1986 should be amended to include a provision empowering any public authority to blacklist individuals or entities that construct public buildings which fail to comply with accessibility requirements for persons with disabilities.

7. IMPLICATIONS/CONTRIBUTIONS

This study offers several important contributions to both legal scholarship and disability rights advocacy in Malaysia. First, it fills a significant gap in the literature by specifically addressing the legal dimensions of accessibility to public buildings for persons with disabilities, an area that has received limited attention in Malaysian academic discourse. By employing a doctrinal legal methodology, the study systematically identifies and critiques critical deficiencies in the Persons with Disabilities Act 2008 [Act 685] and the Uniform Building By-Laws (UBBL), highlighting the misalignment between national laws and the standards set by CRPD.

Second, the article provides practical legal reform proposals aimed at improving the enforceability of accessibility rights, including the introduction of clearer legal definitions, access audit requirements, and the removal of immunity provisions that currently hinder accountability. These recommendations serve as a valuable reference for policymakers, legal practitioners, urban planners, and disability advocates working toward an inclusive built environment.

Finally, this study contributes to the broader human rights discourse by reinforcing the notion that accessibility is not merely a matter of infrastructure but a fundamental right that must be protected through strong legal frameworks. In doing so, it supports Malaysia's obligations under international law and promotes a shift towards a rights-based approach to disability policy.

8. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

This study has demonstrated that the legal framework governing access to public buildings in Malaysia remains inadequate and fragmented, thereby impeding the full realisation of the rights of persons with disabilities. Although Malaysia has ratified CRPD, the lack of enforceable legal remedies, vague definitions, absence of access audit requirements, and limited authority granted to the National Council for Persons with Disabilities continue to undermine the effective implementation of accessibility standards.

Some flaws in the study were identified. Notably, this research is limited to a doctrinal analysis of statutes, regulations, and selected case law, without incorporating empirical data or stakeholder perspectives. As a result, while the study offers a robust legal critique, it does not capture the lived experiences or practical challenges faced by persons with disabilities on the ground.

Therefore, future research should consider adopting a mixed-methods approach by integrating empirical fieldwork, including interviews with policymakers, disabled persons' organisations, architects, and enforcement agencies. Such research would provide a more comprehensive understanding of both the legal and practical barriers to accessibility and would further strengthen the case for legislative and policy reform. Additionally, comparative studies with jurisdictions that have successfully enforced accessibility laws could offer valuable insights for Malaysia's ongoing efforts to promote inclusivity and uphold the rights of persons with disabilities.

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ISLAMIC INHERITANCE DISTRIBUTION AND THE PRISONER'S DILEMMA: A CONCEPTUAL STUDY

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ABSTRACT

Disputes among heirs in Islamic inheritance distribution can lead to prolonged legal processes, emotional strain, and financial losses, rendering the estate economically inefficient. To better understand the behavioural dimensions underlying such conflicts, this paper proposes a conceptual application of the Prisoner's Dilemma (PD) to explore the strategic interactions between heirs and how their choices either to cooperate or defect affect inheritance outcomes. The model is applied to both male–male and male–female heir scenarios. In male–male interactions, mutual cooperation typically results in a balanced and efficient distribution. However, if one heir defects in pursuit of a greater share, it may trigger retaliation, leading to escalating conflict, litigation, and delayed resolution despite eventual redistribution. In male–female dynamics, structural differences in *faraid* allocations, where males receive twice the share of females, can lead to perceived inequities. While female heirs may be inclined to defect for a more equitable outcome, male heirs may sometimes respond with empathy or voluntary compromise. Yet, mutual defection results in costly, time-consuming disputes that harm both parties. This study contributes to the theoretical extension of the PD by applying it within the context of Islamic inheritance practice. It also highlights the critical role of inheritance agencies in fostering awareness, mediation, and cooperation to ensure timely and fair wealth distribution in accordance with Islamic principles.

KEYWORDS: ISLAMIC INHERITANCE, PRISONER'S DILEMMA, FARAID, COOPERATION, DEFECT

ABSTRAK

Pertikaian dalam kalangan waris semasa pembahagian harta pusaka Islam boleh mengakibatkan proses perundangan yang berpanjangan, tekanan emosi dan kerugian kewangan, seterusnya menjadikan harta pusaka tidak lagi efisien dari sudut ekonomi. Dalam memahami dimensi tingkah laku yang mendasari konflik ini, kajian ini mencadangkan konsep Dilema Banduan secara konseptual untuk meneroka interaksi strategik antara para waris dan bagaimana pilihan mereka samada untuk bekerjasama atau mementingkan diri, memberi kesan terhadap hasil pembahagian harta pusaka. Model ini diterapkan dalam dua senario iaitu waris lelaki-waris lelaki dan waris lelaki-

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waris perempuan. Dalam interaksi sesama waris lelaki, kerjasama bersama biasanya menghasilkan pembahagian yang seimbang dan cekap. Namun, jika salah seorang waris memilih untuk membelot demi memperoleh bahagian yang lebih besar, tindakan ini boleh mencetuskan tindak balas daripada pihak lain. Perkara seterusnya membawa kepada konflik yang memuncak, tindakan undang-undang dan kelewatan penyelesaian pusaka, walaupun pembahagian tetap berlaku pada akhirnya. Dalam dinamika waris lelaki-waris perempuan pula, perbezaan struktur agihan faraid iaitu waris lelaki menerima dua kali ganda bahagian berbanding bahagian perempuan boleh menyumbang kepada perasaan tidak sama rata. Waris perempuan mungkin terdorong untuk membantah agihan demi mendapatkan bahagian yang lebih sama rata, manakala waris lelaku kadangkala bertindak dengan empati atau bertolak ansur secara sukarela. Namun, jika kedua-dua pihak memilih untuk membantah, perkara ini boleh mengakibatkan pertikaian yang mengambil masa dan mahal, dan merosakkan hubungan kekeluargaan. Kajian ini menyumbang kepada peluasan teori Dilema Banduan dengan menerapkannya dalam konteks amalan pewarisan Islam. Hal ini turut menekankan peranan penting agensi pewarisan dalam meningkatkan kesedaran, mendamaikan waris dan menggalakkan kerjasama demi memastikan pembahagian harta yang adil dan tepat pada masanya mengikut prinsip Islam.

KATA KUNCI: PEWARISAN ISLAM, DILEMA BANDUAN, FARAID, KERJASAMA, BELOT

1. INTRODUCTION

Islamic inheritance law, known as *faraid*, is rooted in divine principles and aims to ensure the equitable distribution of wealth among family members in accordance with clearly defined religious guidelines. More than a legal obligation, *faraid* serves as a core element of Islamic wealth management by preventing the concentration of wealth in the hands of a few and promoting its circulation among eligible heirs (Wan Jusoh & Mohd Salehen, 2024). At the societal level, the efficient implementation of Islamic inheritance law contributes to economic stability by minimising asset stagnation and encouraging the active use of inherited wealth. Moreover, timely and transparent estate administration fosters family unity and reinforces social justice, both of which are essential for maintaining trust in the legal and cultural systems governing asset distribution (Mohd Yusof & Saiman, 2024).

Despite its comprehensive and divinely ordained structure, the implementation of *faraid* in contemporary settings presents several practical challenges. These challenges do not stem from deficiencies in the system itself but rather arise from the evolving nature of modern social and economic contexts. For example, the distribution of wealth based on classical inheritance principles may appear misaligned with today’s diverse family dynamics and financial responsibilities (Limbong, 2025). In addition, the emergence of digital assets such as e-wallets, cryptocurrencies, and online investments introduces complexities that were not anticipated in early Islamic legal texts. While the foundational principles of *faraid* remain intact, the application of these principles to new asset categories requires thoughtful interpretation and guidance. The absence of standardised procedures for managing such assets can lead to uncertainty and potential disputes during the estate distribution process (Kamis *et al*., 2025).

Another persistent challenge involves the division of immovable assets, particularly land. Under *faraid*, land is divided fractionally according to each heir’s entitlement, which often results in fragmented ownership. Over time, this can hinder the productive use or sale of the property, contributing to economic inefficiency and legal complications (Md Rasul & Awang, 2024; Sulong *et al*., 2024). Moreover, a general lack of awareness and planning among Muslim families exacerbates these issues. Many individuals remain unfamiliar with the procedural and legal requirements for inheritance distribution, leading to delays, misinterpretation of entitlements, and disputes among heirs (Ibrahim *et al*., 2024; Saiman & Romeyzee, 2024; Wan Jusoh & Abu Bakar, 2024).

Conflicts frequently arise due to differing interpretations of inheritance rights or a lack of clear understanding regarding prescribed shares. Although the *faraid* system is precise in its stipulations, its complexity can become a source of confusion when heirs are not well-informed or when documentation is incomplete. In some cases, disagreements escalate into legal disputes, both in Syariah Courts and, occasionally, in Civil Courts, particularly when parties contest the fairness or clarity of the division process (Azuan & Jalil, 2024; Md Rasul & Awang, 2024; Nasrul *et al*., 2024)

This study seeks to address the enduring issue of inheritance disputes within Muslim communities by exploring the behavioural and strategic dimensions underlying these conflicts. While existing literature has extensively covered the jurisprudential, procedural, and institutional aspects of *faraid* (Kahar Muzakkir & Fatimah, 2024; Limbong, 2025; Md Rasul & Awang, 2024), the current practice of Islamic inheritance agency (Abdul Saha *et al*., 2024; Saiman & Romeyzee, 2024), current type of inheritance practice (Kamis *et al*., 2025), there remains a notable gap in understanding how heirs behave during the inheritance process, particularly when personal interests conflict with religious obligations and family harmony. These strategic behaviours often reflect a broader social dilemma, wherein individually rational actions lead to collectively detrimental outcomes (Nasrul *et al*., 2024).

To better understand this dynamic, the study employs the Prisoner's Dilemma (PD), a foundational model in game theory, as a conceptual tool. The PD demonstrates how individuals, acting in self-interest without trust or coordination, may make choices that ultimately harm all parties involved (Kumar *et al*., 2021). In the context of inheritance, this model helps explain why heirs may choose conflict over cooperation, even when mutual agreement would yield more efficient and equitable outcomes.

Understanding the strategic dimensions of inheritance disputes is essential for scholars, legal practitioners, and community leaders seeking to enhance the practical implementation of *faraid*. By incorporating insights from both Islamic legal tradition and behavioural theory, this interdisciplinary approach contributes not only to the study of Islamic inheritance law but also to broader discussions on cooperation, conflict resolution, and ethical decision-making in familial and financial contexts.

2. CHALLENGES IN ISLAMIC INHERITANCE LAW

The administration of Islamic inheritance in Malaysia involves multiple institutions, including Amanah Raya Berhad, the Civil High Court, and the Estate Distribution Division. Each body operates within its own jurisdiction and adheres to distinct procedural requirements, which can overlap or even conflict. This institutional complexity adds significant layers of bureaucracy to the inheritance process, making it difficult for the average heir to navigate. The need for extensive documentation, such as identity verification, death certificates, and legal declarations, can be overwhelming, particularly for families dealing with emotional distress after the loss of a loved one (Mohd Yusof & Saiman, 2024; Nasrul *et al*., 2024; Saiman & Romeyzee, 2024). Moreover, limited manpower and inefficient workflows within these agencies can further delay estate settlement, complicating the ability of beneficiaries to assert their legal rights promptly (Ibrahim *et al*., 2024)

Compounding these administrative challenges is the dual legal system under which Malaysia operates, in which both Syariah law and Civil law play significant roles in the distribution of inheritance. While the Syariah Courts address religiously mandated shares under *faraid*, Civil Courts may oversee estate administration procedures. This overlap can create procedural ambiguity and legal uncertainty for heirs and administrators, particularly when the interpretation or execution of laws between the two systems diverges. Estate planning and distribution can become increasingly cumbersome if the parties involved are not in agreement, often resulting in procedural delays and legal disputes (Abdul Saha *et al*., 2024; Md Rasul & Awang, 2024; Nasrul *et al*., 2024).

Beyond legal and administrative concerns, the influence of cultural practices poses an additional challenge to the proper application of *faraid*. In some cases, traditional customs or family expectations may take precedence over religious guidelines, leading to the marginalisation of rightful heirs, particularly women. Scholars and reformers have called for stronger adherence to the Qur'anic injunctions and Prophetic traditions in inheritance matters. They emphasise the need to resist cultural distortions and to educate the Muslim community on the principles and procedures of Islamic inheritance. Proposed solutions include strengthening legal enforcement mechanisms and implementing widespread public education initiatives to promote compliance with Islamic law (Bature & Sulong, 2024).

The role of *baitulmal* is also central in cases where a deceased person has no surviving heirs eligible under the *asabah* principle. In such instances, *baitulmal* assumes responsibility for managing the estate, ensuring that the assets are redirected for communal benefit in accordance with Islamic values (Abdul Saha *et al*., 2024). While this mechanism preserves wealth within the Muslim community, recent discourse suggests that channelling the surplus estate to extended relatives (*zawil arham*) could provide more direct financial support to individuals in need. This approach aligns with the ethical imperatives of equity and compassion embedded within Islamic inheritance principles (Abdullah *et al*., 2024)

In addition to institutional and procedural challenges, conceptual and technological developments have introduced further complications. For example, in classical Islamic inheritance law, the concept of joint marital property is not explicitly recognised. Even though spouses may accumulate assets together during marriage, traditional *faraid* rules treat these assets as part of the deceased’s individual estate unless proven otherwise. To address this, several Muslim-majority countries have adapted their legal frameworks to account for modern understandings of marital ownership. However, such adaptations often generate uncertainty and inconsistency in inheritance outcomes (Limbong, 2025).

A similar gap exists in the treatment of digital assets, such as e-wallet balances, cryptocurrencies, and online financial holdings. These assets are not directly mentioned in classical Islamic legal texts, and as such, there is limited guidance on how to categorise and distribute them within the *faraid* framework. Issues such as asset identification, ownership validation, and transferability further complicate their inheritance. The absence of clear legal or religious directives in this area has the potential to create disputes and confusion among heirs, particularly in estates that include substantial digital wealth (Kamis *et al*., 2025).

Research on gender justice in inheritance distribution highlights the concept of 'gender-friendly justice' within Islamic inheritance law, emphasising fairness, equity, and mutual agreement. This concept is grounded in two core principles, which are the principle of agreement and the principle of gender equity. The agreement principle underscores the importance of resolving inheritance matters through mutual consent and family deliberation, helping to prevent disputes and ensure harmonious outcomes. Meanwhile, the gender equity principle promotes equal and just treatment for both men and women, aligning with broader Islamic values of mercy and the belief that both genders are equally regarded as Allah’s creations, caliphs, and servants with shared responsibilities. Together, these principles frame a more inclusive interpretation of inheritance that reflects both religious integrity and contemporary notions of justice (Ahyani *et al*., 2022).

The study highlights that in South Aceh, inheritance is predominantly distributed according to customary law rather than strictly following the Islamic inheritance system. This preference is rooted in the flexibility of customary law, which accommodates local socio-economic realities and community values. A significant feature of this practice is the equal distribution of inheritance between male and female heirs, contrasting with the traditional 2:1 ratio favouring males in Islamic law. This reflects the community’s commitment to gender justice and balanced fairness. In practice, the distribution process often begins with an explanation of Islamic provisions but ultimately depends on mutual agreement among heirs. When consensus is achieved, assets are commonly divided equally, demonstrating a pragmatic approach that prioritises family harmony and collective approval over rigid legal formulas (Harnides *et al*., 2023).

3. THEORETICAL FRAMEWORK: PRISONER'S DILEMMA (PD) MODEL

The Prisoner's Dilemma (PD) model is a foundational model in game theory, widely employed to examine strategic decision-making in situations where individual rationality may lead to collectively suboptimal outcomes. This model has been instrumental in illustrating how self-interested behaviour can undermine cooperation, even when mutual collaboration would result in better outcomes for all parties involved. The PD model has been applied across various fields, from behavioural economics to evolutionary biology, to explain how cooperation can emerge and persist under specific conditions. Notably, it has demonstrated how a small group of committed individuals can influence and eventually reshape the behaviour of an entire population, offering valuable insights into the dynamics of cooperation within social dilemmas (He *et al*., 2024; Prétôt *et al*., 2024). Its integration with reinforcement learning and spatial dynamics has further expanded its applicability, deepening the understanding of cooperation in structured populations(Yang *et al*., 2024).

As a simple yet powerful framework, the PD model enables researchers to explore how individuals make decisions when their choices affect not only themselves but also others. It captures the inherent tension between self-interest (defection) and mutual benefit (cooperation), making it a highly effective tool for analysing ethical behaviour, fairness, and long-term strategy (Feehan & Fatima, 2024; Kekki, 2024; Yamamoto & Goto, 2024). In addition to human social behaviour, the PD model has been employed to simulate conflict scenarios in nature, where organisms must choose between acting selfishly or contributing to group survival and well-being (Russell & Xu, 2024).

The classical formulation of the PD model involves two individuals, commonly referred to as prisoners, who must independently decide whether to cooperate (stay silent) or defect (confess). If both cooperate, they receive a moderate penalty. If both are defective, they receive a harsher penalty. However, if one defects while the other cooperates, the defector is rewarded with a lighter sentence, while the co-operator receives the most severe punishment. This payoff structure creates a fundamental dilemma; although cooperation produces a better collective outcome, the dominant strategy for each individual is to defect in pursuit of personal gain (Hao, 2024).

TABLE 1: **PRISONERS' DILEMMA**

	Individual B		
	Options	Cooperate	Defect
Individual A	Cooperate	6,6	0,10
	Defect	10,0	2,2

Source: Feehan & Fatima (2024) and Mieth *et al*. (2021), and the Authors' modifications

Table 1 illustrates the classical payoff matrix of the PD model. If both players choose to cooperate, each receives a moderate payoff (6,6), representing the optimal collective outcome. If one defects while the other cooperates, the defector gains the highest individual reward (10), while the co-operator receives nothing (0), reflecting exploitation. Mutual defection results in lower payoffs for both (2,2), symbolising a collectively inferior outcome due to mistrust. This configuration highlights the central paradox of the dilemma, although cooperation maximises collective welfare, rational self-interest often drives individuals towards defection, making cooperation difficult to sustain in the absence of mechanisms such as trust, reputation, or repeated interactions.

In economics, the PD model has been widely applied to explain strategic decisions in competitive markets. For example, firms often face pricing decisions that mirror the dilemma; if all firms cooperate by maintaining high prices, they can enjoy long-term profitability. However, if one firm undercuts the price while others cooperate, the defector gains a temporary advantage. When all firms adopt this strategy, it results in price wars and diminished profits for everyone (Wang, 2024). Similar dynamics have been observed in supply chain management, particularly in order timing. A study found that although synchronised ordering could enhance joint profits, firms frequently act in their own interest, resulting in mutual defection and reduced efficiency, clearly reflecting the PD structure model (Chen *et al*., 2024).

Previous research has also demonstrated the relevance of the PD model in analysing how changes in payoff structures influence cooperative behaviour. When the perceived benefits of cooperation outweigh the incentives to defect, individuals are more likely to pursue collaborative strategies. This underscores the importance of how incentives are framed and communicated. Even minor adjustments in payoff configurations can significantly alter behaviour, promoting either cooperation or conflict depending on how rewards and risks are structured (Gächter *et al*., 2024).

4. APPLICATION OF PD MODEL IN ISLAMIC INHERITANCE DISTRIBUTION

Islamic inheritance, as stipulated in the Qur'an and Sunnah, ensures that all eligible heirs receive their rightful share in a clear and just manner. However, in practice, disputes among heirs often arise, which can have serious consequences such as straining familial relationships, delaying the distribution of wealth, and even depleting the estate’s value due to prolonged litigation. To better understand the strategic nature of these conflicts, the PD model is applied as a conceptual model. The model helps explain why heirs might choose actions that undermine collective welfare, even when cooperation would produce better outcomes for all parties involved.

Strategic Behaviour in Inheritance Disputes

In the context of inheritance distribution, each heir faces a strategic decision which is to cooperate by accepting the division according to *faraid*, or to defect by challenging the process, concealing information, or attempting to obtain a larger share through legal or informal means. Cooperation facilitates harmony, ensures compliance with Islamic principles, and allows for the timely and efficient distribution of wealth. Conversely, defection may result in short-term personal gain but often leads to broader familial conflict, legal delays, and financial losses for all parties involved. This situation reflects the classical PD model as in Table 2, where rational individuals pursuing personal advantage may ultimately contribute to a worse collective outcome. The PD model thus provides a useful lens for understanding inheritance disputes not solely as legal issues, but as strategic interactions shaped by self-interest, mistrust, and limited coordination.

TABLE 2: PD MODEL FOR STRATEGIC BEHAVIOURS

		Individual B	
	Options	Cooperate (accept *faraid*)	Defect (challenge/litigate)
Individual A	Cooperate (accept *faraid*)	Fair and peaceful distribution; family harmony is preserved.	A loses share or trust; B gains more by exploiting the system.
	Defect (challenge/litigate)	B loses share or trust; A gains more by exploiting the system.	Conflict, delays, court involvement, loss of time, and money.

Source: Table by Authors

Payoff Matrix in Inheritance Conflicts

Table 3 presents a game-theoretic model illustrating how two male heirs, referred to as Individual A and Individual B, may behave during the distribution of an Islamic inheritance, specifically when confronted with the choice to either cooperate or defect. In this context, cooperation refers to an heir accepting the *faraid*-based distribution as prescribed by Islamic law, while defection involves challenging the division, whether through legal action, withholding information, or seeking a larger share by informal means. The table uses symbolic payoffs to represent the relative benefits to each heir, with higher numbers indicating more favourable outcomes, such as a peaceful process, lower costs, and quicker resolution.

If both heirs choose to cooperate, the result is a fair and harmonious distribution (5,5), representing the best collective outcome. However, if one heir cooperates while the other defects, for instance, A cooperates while B defects (2,8), the defector may obtain a greater share or advantage, while the co-operator experiences a disadvantage or loss of trust. The reverse scenario, where A defects and B cooperates (8,2), yields a similar imbalance in favour of the defector. When both heirs choose to defect (3,3), the process becomes mired in conflict, legal costs escalate, family relationships suffer, and the overall outcome is worse than if both had chosen to cooperate. This model reflects the real-world tension often seen in inheritance disputes, where individually rational actions lead to collectively harmful results. The PD model thus offers a valuable lens for understanding and mitigating such conflicts through strategic and ethical interventions.

TABLE 3. PD MODEL FOR ISLAMIC INHERITANCE (MALE-MALE)

		Individual B (male)	
	Options	Cooperate (accept *faraid*)	Defect (challenge/litigate)
Individual A (male)	Cooperate (accept *faraid*)	(5,5)	(2,8)
	Defect (challenge/litigate)	(8,2)	(3,3)

Source: Table by Authors

Table 4 illustrates a strategic interaction between a male heir (Individual A) and a female heir (Individual B) using the PD model, contextualised within Islamic inheritance distribution. This model integrates the reality of gender-based share allocations as prescribed in *faraid*, where male heirs are entitled to a portion double that of female heirs. The payoff (9,3) represents the scenario in which both heirs cooperate by accepting the *faraid* distribution. The male heir receives his larger, legally entitled share, while the female heir accepts hers, resulting in a peaceful and religiously compliant outcome. The outcome (6,6) appears in two positions within the matrix, signifying situations in which one party defects while the other cooperates. In such cases, disputes are averted, but the standard distribution is altered, often through voluntary negotiation or informal compromise to achieve a more balanced division. The outcome (7,1) occurs when both heirs defect by challenging the distribution through legal or informal channels. Here, the male heir may still benefit due to legal leverage, while the female heir ends up significantly disadvantaged. This asymmetry underscores how power dynamics and access to resources can influence the strategic behaviour of heirs, especially within a system that inherently differentiates shares by gender.

TABLE 4. PD MODEL FOR ISLAMIC INHERITANCE (MALE-FEMALE)

		Individual B (female)	
	Options	Cooperate (accept *faraid*)	Defect (challenge/litigate)
Individual A (male)	Cooperate (accept *faraid*)	(9,3)	(6,6)
	Defect (challenge/litigate)	(6,6)	(7,1)

Source: Table by Authors

Factors Influencing Heirs' Decisions

Several factors may influence an heir's decision to either cooperate or defect during the inheritance distribution process. First, some heirs may choose to defect due to a fundamental lack of trust in other beneficiaries. This distrust often stems from perceptions of inequality, past family tensions, or limited transparency in the handling of estate matters. Heirs may fear that those receiving larger shares, whether due to seniority, gender, or legal entitlement, will mismanage the inheritance, utilise it irresponsibly, or fail to act in the collective interest of the family. Such concerns can lead to actions like contesting the *faraid* distribution, delaying the settlement process, or initiating legal proceedings. These responses, although rooted in self-protection, can ultimately reduce the overall value of the estate through administrative costs, prolonged litigation, and deteriorated family relationships. The fear of unfair treatment, even if unfounded, becomes a catalyst for conflict, undermining both the spiritual objectives of *faraid* and the practical goal of equitable wealth distribution.

Second, economic disparities among heirs can significantly influence their willingness to accept the standard *faraid* distribution. An heir experiencing financial hardship, such as unemployment, debt, or having greater dependents, may perceive the fixed share allocated under Islamic law as insufficient to meet their immediate needs. This perceived inadequacy can lead to dissatisfaction and a stronger motivation to challenge the distribution, either formally through legal channels or informally through family pressure. In such cases, the heir may not necessarily reject the principles of *faraid* but rather seek a more favourable outcome that aligns with their personal circumstances. This economic vulnerability often becomes a driving factor behind strategic behaviour, contributing to disputes and tension among family members during the inheritance process.

Third, some heirs may believe they are entitled to a greater share due to the care or services they provided to their parents during their lifetime. This sense of personal entitlement, based on past sacrifices, can lead them to reject the fixed shares outlined in Islamic law in favour of a distribution they perceive as more equitable. These factors often contribute to tension and disputes among heirs, undermining family harmony and delaying the fair and efficient settlement of the estate.

Policy Implication

To ensure equitable and efficient inheritance distribution, heirs must cooperate and adhere to the *faraid* framework. Cooperation fosters not only the optimal distribution of wealth but also strengthens familial relationships and preserves harmony. Emphasising collective benefit over individual gain is essential, as defection, whether through disputes, concealment, or litigation, often leads to prolonged conflict, emotional strain, and increased financial costs. Therefore, heirs should be educated and encouraged to act responsibly, understanding their religious and ethical duties as beneficiaries.

Institutions and agencies directly involved in inheritance matters, such as Amanah Raya Berhad, Estate Distribution Division, *Shariah* Courts, and estate planning services, should play their active role in supporting heirs to comply with *faraid* principles. This includes providing legal guidance, mediation services, and public education campaigns. When disputes arise and heirs choose to defect from the established distribution, the process becomes more complicated, involving multiple parties and extended timelines, ultimately diminishing the value and benefit of the inherited estate. Promoting cooperation and awareness is thus essential for safeguarding both the legal and spiritual integrity of Islamic inheritance practices.

For example, Amanah Raya Berhad, the High Court, and the Estate Distribution Division should consider adopting a Prisoner's Dilemma-based advisory model as part of their counselling and dispute resolution processes. By simulating the strategic outcomes of cooperation versus defection among heirs, this model can help explain the real impact of inheritance disputes, such as financial costs, legal delays, emotional strain, and family fragmentation. Through this model, heirs can be shown that continued non-cooperation or legal contestation may lead to long and costly proceedings with little actual benefit. While some heirs may initially resist or challenge mediated recommendations, highlighting the collective benefits of cooperation, such as preserving family harmony, ensuring faster access to assets, and supporting more vulnerable family members, can encourage voluntary agreement.

By applying the PD framework, estate planners can simulate different inheritance scenarios to better understand the potential outcomes of heirs' decisions. In cooperative scenarios, where all parties accept the distribution, the result is typically a quick, peaceful, and cost-efficient resolution that preserves family relationships and emotional well-being. In contrast, defective outcomes arise when one or more heirs act in self-interest by challenging the distribution, withholding information, or pursuing litigation, often leading to prolonged disputes, financial erosion, and fractured family bonds. This model allows estate planning professionals to clearly illustrate to clients and heirs the tangible and intangible costs of conflict versus the long-term advantages of cooperation, thereby promoting more rational, informed, and harmonious decision-making in the inheritance process.

5. CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

This study has proposed the PD model as a conceptual framework to understand strategic behaviours among heirs during Islamic inheritance distribution. While the *faraid* system offers clear religious guidance on share allocation, conflicts still arise due to individual interests, trust deficits, and perceived inequities. The PD model illustrates how two rational heirs may either cooperate by accepting their respective shares or defect, seeking to gain more through dispute or legal challenge. Although cooperation aligns with both religious compliance and collective benefit, defection may appear attractive to individual heirs who perceive themselves as disadvantaged or entitled to more.

In male–male heir interactions, cooperation often results in a balanced and efficient distribution of wealth. However, if one party defects, the defector may temporarily benefit by securing a larger portion of the estate. This imbalance may provoke the cooperating party to retaliate by defecting as well, leading to a cycle of conflict, increased cost, and delay. Though the shares may eventually be equalised through litigation or negotiation, the process is often emotionally and financially burdensome.

In male–female heir dynamics, the potential for conflict is shaped by the structural difference in *faraid* allocations, where the male heir typically receives twice the share of the female. While cooperation may fulfil religious obligations, it often leaves the female heir with a smaller portion, potentially motivating her to defect in pursuit of a more equitable outcome. Interestingly, male heirs who are recognising the broader social expectations or emotional significance may respond with understanding or voluntary compromise. Nevertheless, if both parties defect, the result is mutual disadvantage, with increased costs, time delays, and fractured family relationships.

Ultimately, this study emphasises that heirs must prioritise cooperation and understanding to preserve family unity and uphold the ethical intentions of Islamic inheritance. Institutions such as Amanah Raya and the Syariah courts should also play a more proactive role in supporting heirs through mediation, legal education, and procedural guidance. When cooperation prevails, inherited wealth can be distributed fairly and promptly, ensuring it benefits all rightful heirs and honours the spiritual objectives of *faraid*.

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CROWDFUNDING DONATION INTENTIONS: PERSPECTIVES OF MALAYSIAN MUSLIMS IN SABAH

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ABSTRACT

This study examines the factors influencing Sabahan Muslims' intention to donate to crowdfunding initiatives in Malaysia. Specifically, it investigates the roles of attitude, sense of self-worth, face concern, moral obligation, subjective norm, and perceived behavioural control on donation behaviour. Using a convenience sampling, data were collected from 152 respondents through an online survey. Multiple regression analysis was applied to test the relationships between the variables. The results indicate that attitude, moral obligation, and perceived behavioural control have a statistically significant positive impact on the intention to donate, suggesting that individuals with favourable attitudes, a strong sense of moral responsibility, and a higher perception of control over their actions are more likely to engage in donation crowdfunding. Conversely, sense of self-worth, face concern, and subjective norm did not have significant effects, indicating that social pressure or concerns over reputation play a less critical role in shaping crowdfunding intentions for this population. These results suggest that to boost crowdfunding participation, campaigns should focus on creating positive attitudes and appeal to internal motivations, like showing the meaningful impact donors can make, rather than relying on social pressure. Hence, this study contributes to valuable insights for crowdfunding platforms and non-profit organisations in designing more effective, values-driven donation strategies tailored to the Malaysian Muslim community in Sabah.

KEYWORDS: CROWDFUNDING, THEORY OF PLANNED BEHAVIOUR, DONATION, INTENTION

ABSTRAK

Kajian ini meneliti faktor yang mempengaruhi niat Muslim di Sabah untuk menderma kepada inisiatif pendanaan awam di Malaysia. Secara tuntasnya, kajian ini mengkaji peranan sikap, rasa harga diri, keprihatinan terhadap maruah, kewajipan moral, norma subjektif dan kawalan tingkah laku yang dirasakan terhadap tingkah laku pendermaan. Dengan menggunakan pensampelan mudah, data dikumpulkan daripada 152 responden melalui tinjauan dalam talian. Analisis regresi berganda telah digunakan untuk menguji hubungan antara pembolehubah. Dapatan menunjukkan bahawa sikap, kewajipan moral dan kawalan tingkah laku yang dirasakan mempunyai kesan positif yang signifikan

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terhadap niat untuk menderma. Ini menunjukkan bahawa individu yang mempunyai sikap positif, rasa tanggungjawab moral yang tinggi, serta persepsi kawalan yang lebih besar terhadap tindakan mereka adalah lebih cenderung untuk terlibat dalam pendanaan awam. Sebaliknya, rasa harga diri, keprihatinan terhadap maruah dan norma subjektif tidak menunjukkan kesan yang signifikan. Ini menunjukkan bahawa tekanan sosial atau kebimbangan terhadap reputasi kurang memainkan peranan penting dalam membentuk niat untuk menyertai pendanaan awam bagi populasi ini. Hasil ini menunjukkan bahawa untuk meningkatkan penyertaan dalam pendanaan awam, kempen perlu menumpukan kepada pembentukan sikap positif dan memberi fokus kepada motivasi dalaman individu seperti menonjolkan kesan baik yang diberikan oleh penderma daripada membuat kempen yang terkait dengan elemen tekanan sosial. Justeru, kajian ini menyumbang kepada dapatan berharga kepada platform pendanaan awam dan organisasi bukan keuntungan dalam merangka strategi derma yang lebih berkesan dan berpaksikan nilai yang disesuaikan dengan komuniti Muslim di Sabah.

KATA KUNCI: PENDANAAN AWAM, TEORI TINGKAH LAKU TERANCANG, DERMA, NIAT MENDERMA

1. INTRODUCTION

Crowdfunding is a method of raising funds through small contributions from a large number of individuals, typically using online platforms (Rončević & Šafarić, 2023; Dibrova, 2016). This decentralized strategy engages a large audience, thus enabling fundraisers to amplify the impact of small contributions in achieving greater goals and paving the way for people with limited financial means to contribute and assist (Mollick, 2014; Belleflamme *et al*., 2015). This has allowed crowdfunding to become a vital mechanism for initiatives like community development, social initiatives, creative projects, and philanthropic activities (Agrawal *et al*., 2015; Gleasure & Feller, 2016). Further, crowdfunding has emerged as a significant catalyst for economic growth, deeply influenced by the principles of Islamic social finance that underpin both economic and social development (Munim *et al.*, 2020). For Muslim communities, crowdfunding holds particular resonance as it aligns with Islamic principles of charity and social justice. In Islam, there are two primary forms of giving: *sadaqah* (voluntary charity) and *zakat* (obligatory almsgiving). Crowdfunding enhances these practices by offering wider reach and ease of access, enabling giving and donations to be facilitated in new and impactful ways. Besides, crowdfunding enables Muslims to fulfil their religious obligations consistently and effectively by donating to various causes, including community-led businesses, religious institutions, and educational initiatives.

In Malaysia, for example, fintech is gaining popularity and success for crowdfunding, particularly due to the economic challenges brought by the Covid-19 pandemic (Sahri, 2021). Crowdfunding campaigns can support a diverse range of activities, including business start-ups, creative projects, charitable initiatives, and personal needs. For example, Salim *et al.* (2021) confirmed that crowdsourcing addresses the financial access challenges faced by Small and Medium-sized Enterprises (SMEs). Moreover, Tan (2021) also indicates that crowdfunding in Malaysia can fulfil the funding demands of startups and SMEs, which are, in turn, important for both job creation and economic growth.

Malaysia currently hosts 15 locally active crowdfunding platforms, including prominent ones like Ata Plus, Mystartr Sdn. Bhd., and PITCHIN Crowdfunding. So far, these platforms play a pivotal role in fostering the growth of small businesses, improving access to healthcare, alleviating suffering in the aftermath of disasters, and nurturing educational programs particularly within underprivileged communities. Most importantly, crowdfunding aims to reduce poverty in the country, strengthen social cohesion, and establish a sustainable financial ecosystem for underserved segments of the population. Despite continuous government efforts to tackle these issues, they remain unresolved (Economic Planning Unit, 2021). In Sabah, for example, based on the Household Income Survey report from 2022, the extreme poverty rate in Sabah remains high at 1.2 per cent, compared to the national rate of 0.2 per cent. Notably, eight of Malaysia's ten poorest districts are located in Sabah, with Tongod recording the highest extreme poverty rate at 5.9 per cent, followed by Beluran (5 per cent), Pitas (4.8 per cent), and Kinabatangan (4.6 per cent). These statistics highlight the urgent need for tailored economic interventions to address the unique challenges faced by Sabah's rural populations (Bernama, 2024).

This situation implies the need for crowdfunding donations to be implemented in Sabah. Therefore, understanding the factors that influence Muslims' intentions, particularly in Sabah, to contribute to crowdfunding is essential for developing effective strategies to attract potential donors, increase participation levels, and ensure the success of these initiatives. This study employs the Theory of Planned Behaviour (TPB) (Ajzen, 1991) and the Self-Determination Theory (SDT) (Ryan & Deci, 2019). The findings aim to contribute to the growing body of literature on Islamic social finance and offer practical insights for improving the effectiveness of crowdfunding initiatives in Malaysia. The study is structured into a literature review, methodology, results, discussion, and concluding remarks.

2. LITERATURE REVIEW

This study uses SDT and TPB. SDT is a theory that is based on psychological framework to explore human intrinsic motivation and well-being, emphasising the importance of intrinsic motivation and the satisfaction of basic psychological needs. SDT provides a nuanced understanding of motivation by highlighting the interplay between intrinsic and extrinsic factors, making it applicable and relevant in this study. SDT variables used are sense of self-worth, face concern, and moral obligations. Meanwhile, TPB incorporates several variables such as attitude, subjective norm, and perceived behavioural control to examine their impacts on the intention to donate in crowdfunding among Muslims in Sabah.

The use of SDT and TPB in this study is complementary since SDT explains why people are motivated to donate, while TPB explains how that motivation translates into intention and behaviour of donating. Both SDT and TPB theoretical frameworks give a fuller, more holistic picture of donation behaviour—both its internal drivers (motives) and external influences (social/cognitive beliefs) in the context of this study. Muslim donors may be influenced by both personal moral obligations (SDT) and religious/social expectations (TPB). A dual-theory framework captures this interaction between personal values and societal norms, which is especially relevant in collectivist or religious communities.

In the context of charitable crowdfunding, Liu *et al*. (2020) studied SDT (empathy, self-worth, etc.) and TPB constructs to model donor behaviour. They found that integrating both theories explained more variance in intention than either theory alone. Other past studies have also successfully combined SDT and TPB to explore behaviour in various contexts, including health, education, and prosocial behaviour. For example, Hagger and Chatzisarantis (2009) found that SDT's basic needs predicted TPB constructs, which in turn predicted behavioural intentions. This showed the interplay between motivation (SDT) and intention pathways (TPB). Meanwhile, Guay *et al.* (2003) proposed an integrated model where SDT constructs (autonomy, competence) influence TPB variables, enriching the explanatory power of TPB. Therefore, since this study examines intention to donate among Muslims in Sabah, combining SDT and TPB allows this study to capture donors' internal values (e.g., moral obligation, self-worth) rooted in religious identity and personal ethics.

Attitude

Attitude refers to a person's perceptions, personality, and motivations, which influence their behaviour (Maryam *et al.*, 2019). Generally, the more favourable an individual's attitude toward a specific behaviour, the more likely they are to engage in that behaviour. In the context of the present study, this refers to the attitude of Muslims toward participating in donation crowdfunding. A study by Knowles *et al*. (2012) revealed that attitude positively and significantly influences one's intention and behaviour to donate to charitable organisations. This finding is further supported by studies such as Chen *et al*. (2019) and Vijaya *et al*. (2023), which confirmed that attitude has a significant positive impact on the intention to donate in crowdfunding contexts. The emphasis on a positive attitude is particularly critical, as it reflects a donor's favourable evaluation of the act of donating. Such positive evaluations enhance emotional connection to the cause and strengthen behavioural intention to contribute. Given that a positive attitude is associated with positive intention and behaviour in donation activities, the following hypothesis was proposed:

H_1: Attitude is significantly related to the Muslim intention to participate in crowdfunding donations.

Subjective norm

Subjective norm refers to one's perception of social pressure from important others such as family, friends and coworkers to either perform or avoid a particular behaviour (Chen *et al*., 2019). These social influences can significantly shape a person's decision-making. When the perceived social pressure supports or encourages a specific behaviour, the individual is more likely to engage in it. Conversely, if the social environment expresses disapproval or holds negative perceptions about the behaviour, the individual is less likely to perform it. Based on a study in India, Vijaya *et al*. (2023) and Baber (2019) found that subjective norm positively influences the intentions to donate in crowdfunding. The result showed that people are more likely to donate if they believe that important others (like friends or family) support the act of donating. However, Fischer *et al*. (2009) mentioned that individuals within a collectivistic culture will be strongly guided by group norms, duties, and obligations, in contrast to those who have grown up in an individualistic culture. For example, the finding in Pérez and Egea's (2019) study found that subjective norm has an insignificant impact on people's intention to donate sustainable rural development projects in Spain. Based on the Hofstede individualism score, Spain was reported to be an individualistic country. Therefore, when people in Spain have an individualistic culture, they will be less guided by group norms. In the context of this study, people in Sabah are more towards collectivistic culture. Hence:

H_2: Subjective norm is significantly related to the Muslim intention to participate in crowdfunding donation.

Perceived behavioural control

Perceived behavioural control refers to the perceived difficulty or ease with which people can achieve a certain behavioural goal (Ajzen, 2015). In other words, it refers to a person's perception of the difficulty or convenience of carrying out tasks or behaviours (Fuadi, 2013). Perceived behavioural control also relates to how individuals perceive external and internal factors that either facilitate or hinder their ability to engage in certain behaviours. Fuadi (2013) found that perceived behavioural control significantly and partially affects the Islamic banking customers' intention to contribute funds to waqf institutions. In a related context, Yulandreano and Rita (2023) explored investors' intention to invest and acquire equity through crowdfunding, showing that PBC had a significant positive impact on investment intention. Within the domain of donation-based crowdfunding, studies by Vijaya *et al*. (2023) and Chen *et al*. (2019) identified perceived behavioural control as a key predictor of participation, indicating that individuals who perceive themselves as capable and adequately supported are more likely to donate. However, a contrasting finding by Kenang and Gosal (2021) revealed that perceived behavioural control had an insignificant effect on donation-based crowdfunding intention, implying that other psychological or contextual factors may outweigh the influence of perceived control. Therefore, H_3 was postulated:

H_3: Perceived behavioural control is significantly related to the Muslim intention to participate in crowdfunding donation.

Sense of self-worth

Sense of self-worth is a multifaceted concept that encompasses an individual's overall feeling of self-value and deservingness (Batchelder & Hagan, 2022). Self-worth is also characterised as an existential reality, manifesting in one's ability to make choices aligned with personal values and beliefs. In the context of donation crowdsourcing, one's sense of self-worth is determined by whether the individual believes that contributing via crowdfunding platforms would result in actual happiness, accomplishments, and a greater sense of personal worth. Ryu *et al.* (2016) suggested a positive relationship between a sense of self-worth as an altruistic motivator and funder behaviour in crowdfunding. They highlighted that individuals who experience an enhanced sense of personal value through their contributions are more likely to engage in funding activities. This relationship highlights the importance of psychological fulfilment, as funders are driven not just by rewards but also by the intrinsic satisfaction of contributing to causes that align with their values. As a result, if a person feels inner fulfilment or delight while donating to crowdfunding platforms, their self-esteem is likely to be validated. Thus, the following hypothesis was proposed:

H_4: A sense of self-worth is significantly related to the Muslim intention to participate in crowdfunding donations.

Face concern

Face concern refers to an individual's focus on maintaining or enhancing their social status and reputation by fulfilling specific social roles, emphasising the importance of one's reputation in the eyes of others (Hall & Bucholtz, 2013). This concept is based on the desire for social acceptance and respect, as people often adjust their behaviour to fit societal expectations and avoid actions that might damage their reputation. The need to protect one's face can influence decision-making processes, especially when something involves social interaction. While face concern and subjective norm are both related to social influence, there is a conceptual distinction between them. Face concern is internally driven by concern for honour, dignity, or loss of face and often based on emotional and identity involving shame, pride, or social dignity. In contrast, subjective norm is externally oriented, particularly reflecting perceived social pressure to perform or abstain from certain behaviour, where individuals may fear rejection or hope for social rewards such as approval or inclusion (Etcheverry & Agnew, 2004; Kashif *et al*., 2018). Several researchers have demonstrated a link between face concern and behavioural intention. For instance, Bekkers and Wiepking (2011) found that face concern had a substantial impact on individuals' intention to donate in charitable contexts. This is further supported by Zagefka and James (2015), who reported that face concern positively correlates with the intention to donate. It indicates that individuals with higher concern for their social image are more likely to express a willingness to donate. Therefore, this research suggests the following hypothesis:

H_5: Face concern is significantly related to the Muslim intention to participate in crowdfunding donation.

Moral obligation

Moral obligation is described as individuals' tendencies to act morally, legally and willingly when they have a sense of duty (Haines *et al*., 2007). Indirectly, when donors' perception of moral obligation increases, their desire to give to crowdfunding also increases (Beldad *et al.*, 2015). Bekkers and Wiepking (2011) also discovered in their study that moral obligation has a significant impact on donation intentions in charitable giving. Meanwhile, Pérez and Egea (2019) found that moral obligation has a significant influence on donation intention in farming-related sustainable development activities. In another context, Meijboom and Brom (2012) found that a strong feeling of moral obligation encourages people to engage in virtuous behaviours, including environmental conservation, supporting those in need, and reducing pollution, which demonstrates a positive association between moral obligation and behavioural intention. As most of the studies found that moral convictions of individuals related to intention to participate in the activity, therefore, this study hypothesised the following:

H_6: Moral obligation is significantly related to the Muslim intention to participate in crowdfunding donation.

3. METHODOLOGY

The unit of analysis of this study was Malaysian Muslims residing in Sabah. Using a convenience sampling method, a total of 152 responses were collected through various online platforms such as WhatsApp, Facebook, Instagram, and Telegram. The sample size of this study is deemed sufficient for further statistical analysis. This is in accordance with Hair *et al.* (2006), who recommended a minimum of five respondents per measurement item to ensure robust data collection. A pilot test was conducted beforehand, and all variables fulfilled the reliability requirement with satisfactory Cronbach's alpha values exceeding the accepted threshold.

The questionnaire used in this study was adapted from Sapir *et al*. (2023) and Pitchay *et al.* (2021). Specifically, the attitude items were adapted from Sapir *et al.* (2023) while the remaining constructs, such as crowdfunding donations, sense of self-worth, face concern, moral obligation, subjective norm, and perceived behavioural control, were adopted from Pitchay *et al*. (2021). All items were measured using a five-point Likert scale, ranging from 1= Strongly Disagree to 5 = Strongly Agree. The list of items used in this study is presented in Table 1.

TABLE 1: ITEMS FOR ALL VARIABLES

Variable	Coding	Question
Intention	INT1	Assuming I have access to the donation crowdfunding platform, I intend to participate in it
	INT2	I intend to participate in donation crowdfunding in future
	INT3	I would use the donation crowdfunding platform to help others
	INT4	Participating in donation crowdfunding is something I would like to do
Attitude	ATT1	I have a positive perception of crowdfunding
	ATT2	Giving to crowdfunding will be rewarded
	ATT3	Crowdfunding can help improve the Muslim socio- economy
	ATT4	I like crowdfunding
Sense of self- worth	SSW1	Donating on crowdfunding platforms will give me a feeling of happiness
	SSW2	Donating on crowdfunding platforms will give me a sense of accomplishment
	SSW3	Donating on crowdfunding platforms will realise my personal value
Face concern	FC1	I do not want others to say I am stingy
	FC2	I pay considerable attention to how others see me
	FC3	I do not want people around me to feel I am indifferent
	FC4	lam concerned with not bringing shame to myself
Moral obligation	MO1	I would feel guilty if I did not help others
	MO2	Not helping others goes against my principles
	MO3	It would be morally wrong for me not to help others
Subjective norm	SN1	Most of the people who have an important influence on me will donate to crowdfunding
	SN2	My family encourages me to donate to crowdfunding
	SN3	My friends around me encourage me to donate crowdfunding
	SN4	The government actively advocates and implements help to others in need
Perceived	PBC1	If I wanted to, I could easily donate money to crowdfunding

behavioural control	PBC2	It is mostly up to me whether I donate money to crowdfunding
	PBC3	I am confident that I will be able to donate money to donation crowdfunding
	PBC4	Donating money to donation crowdfunding is easy for me to do

Source: Adapted from Sapir *et al.* (2023), and Pitchay *et al*. (2021)

The collected data were statistically analysed using the Statistical Package for Social Sciences (SPSS) v.27. Several statistical methods were employed, including factor analysis, reliability analysis, correlation analysis, and multiple regression analysis. Factor analysis was conducted to assess construct validity and identify underlying dimensions of the constructs. Reliability analysis was used to evaluate the internal consistency of the measurement items. Meanwhile, correlation analysis was employed in this study to examine relationships between independent and dependent variables. Finally, multiple regression analysis was used to determine the predictive power of the independent variables on donation intention.

4. RESULT AND DISCUSSION

TABLE 2: DEMOGRAPHIC PROFILE OF RESPONDENTS

Demographic profile	Frequency (N=152)	Percentage %
Gender		
Female	84	55.3
Male	68	44.7
Age		
18-21	39	25.7
22-25	105	69.1
26-30	5	3.3
31-34	1	0.7
35-40	2	1.3
Level of Education		
SPM	16	10.5
STPM	18	11.8
STAM	0	0
Diploma	0	0
Bachelor’s degree	118	77.6
Master’s degree	0	0
Employment Sector		
Student	123	80.9
Government	6	3.9
Private	15	9.9
Self-employed	8	5.3
Monthly income		
Below RM1,500	126	82.9
RM1,501 – RM 2,000	19	12.5
RM 2,001 – RM 2,500	3	2
RM2,501 – RM 3,000	1	0.7
Above RM 3,001	3	2.0

Source: Table by Authors

Table 2 shows the demographic profile of the respondents. The demographic profile of the 152 respondents reveals a fairly balanced distribution between genders, with 55.3 per cent female and 44.7 per cent male participants. The majority of respondents (69.1 per cent) fall within the 22-25 age group, followed by 25.7 per cent in the 18-21 age range, and smaller percentages in the older age brackets. In terms of education, most respondents hold a Bachelor's degree (77.6 per cent), with 11.8 per cent having completed STPM, and 10.5 per cent holding SPM as their highest qualifications. Regarding employment, the majority are students (80.9 per cent), with smaller representations from the private sector (9.9 per cent), self-employed individuals (5.3 per cent), and government employees (3.9 per cent). In terms of income, most respondents (82.9 per cent) earn below RM1,500, with a small percentage earning between RM1,501 and RM3,001 (12.5 per cent).

Factor analysis

TABLE 3: ROTATED FACTOR ANALYSIS

	Components					
	1	2	3	4	5	6
ATT1	.870					
ATT2	.661					
ATT3	.764					
ATT4	.770					
ATT5	.686					
FC1		.896				
FC2		.825				
FC3		.883				
FC4		.873				
PBC1			.791			
PBC2			.769			
PBC3			.802			
PBC4			.763			
SN1				.680		
SN2				.737		
SN3				.796		
SN4				.720		
SSW1					.796	
SSW2					.854	
SSW3					.773	
MO1						.702
MO2						.912
MO3						.892
Eigenvalues	3.497	3.423	3.201	2.917	2.523	2.371
Variance Explained	15.204	14.884	13.919	12.684	10.969	10.309
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.839					
Bartlett's Test of Sphericity	333.601					
Cronbach' Alpha/Reliability Test	0.889					

Notes: INT=intention, ATT=Attitude, SSW=Sense of self-worth, FC=Face concern, MO=Moral obligation, SN=Subjective norm, PBC=Perceived behavioural control

Source: Table by Authors

Table 3 shows the rotated factor analysis for this study. According to Shrestha (2021), factor analysis is highly beneficial for organising and simplifying large datasets. The result prevailed that the Kaiser-Meyer-Olkin (KMO) value was 0.839, indicating that the sample data is appropriate for factor analysis. This is because, according to Tabachnick *et al.* (2007), a KMO value should be at least 0.6

for the analysis to be considered valid, which is met in this case. The analysis revealed a total variance explained of 77.669 per cent. All variables loaded significantly onto factors with loadings exceeding 0.6, ranging from 0.656 to 0.912. Table 2 shows that variables related to attitude and face concern exhibited strong loadings on their respective factors, without any cross-loadings. It is important to note that all four items from the perceived behavioural control construct were included in the analysis, maintaining the integrity of this construct. The subjective norm also showed consistent loadings, further supporting the distinctiveness of the constructs.

Reliability test

The reliability of the data was assessed through the utilisation of Cronbach's alpha coefficient (Cronbach, 1951). When Table 4 is checked, the Cronbach alpha coefficients obtained exceeded the threshold value of 0.75 for all constructs, indicating that the data utilised in the study exhibited a significant degree of internal consistency and stability (Hinton *et al*., 2004).

TABLE 4: RELIABILITY TEST

Measurement items	No. of items	Cronbach' alpha
ATT	5	0.907
SSW	3	0.881
FC	4	0.931
MO	3	0.835
SN	4	0.831
PBC	4	0.913

Notes: INT=intention, ATT=Attitude, SSW=Sense of self-worth, FC=Face concern, MO=Moral obligation, SN=Subjective norm, PBC=Perceived behavioural control

Source: Table by Authors

Correlation analysis

Correlation analysis is a statistical method used to assess a possible linear association between two continuous variables (Mukaka, 2012). Meanwhile, according to Senthilnathan (2019), the correlation coefficient in this correlation analysis measures the strength of the relationship between two variables. The correlations between the main variables used in this study, as depicted in Table 5, show that the independent and dependent variables have positive and significant correlations, with all values in the range of -1 and 1. Mainly, if the coefficient is a positive number, the variables are directly related, and if the coefficient is negative means the variables are inversely related. As the coefficient reported a positive number, this suggests that higher attitude, sense of self-worth, face concern, moral obligation, subjective norm, and perceived behavioural control levels are associated with an increased likelihood of participation in crowdfunding.

TABLE 5: CORRELATIONS

	INT	ATT	SSW	FC	MO	SN	PBC
INT	1						
ATT	.615**	1					
SSW	.488**	.588**	1				
FC	.323**	.334**	.267**	1			
MO	.340**	.295**	.215**	.174*	1		
SN	.362**	.521**	.357**	.449**	.399**	1	
PBC	.546**	.614**	.556**	.420**	.316**	.464**	1

Notes**. Correlation is significant at the 0.01 level (2-tailed).

Notes: INT=intention, ATT=Attitude, SSW=Sense of self-worth, FC=Face concern, MO=Moral obligation, SN=Subjective norm, PBC=Perceived behavioural control

Source: Table by Authors

TABLE 6: MULTIPLE REGRESSION ANALYSIS OF CROWDFUNDING INTENTION

Model	Standardised Coefficients	*t*-value	*p*-value	Significant
(Constant)	-	2.154	0.033	-
ATT	0.396	4.621	0.001	Yes
SSW	0.136	1.751	0.082	No
FC	0.091	1.277	0.204	No
MO	0.161	2.389	0.018	Yes
SN	-0.081	-1.009	0.315	No
PBC	0.184	2.180	0.031	Yes

Notes: INT=intention, ATT=Attitude, SSW=Sense of self-worth, FC=Face concern, MO=Moral obligation, SN=Subjective norm, PBC=Perceived behavioural control

Source: Table by Authors

Multiple regression and discussion

The result from Table 6 indicates that attitude has a coefficient of 0.396. The *t*-value for this predictor is 4.621, and it has a *p*-value of 0.001, indicating statistical significance. This suggests that a positive attitude plays a crucial role in enhancing crowdfunding intention. Specifically, as individuals develop a more favourable attitude towards crowdfunding, their intention to participate in such initiatives significantly increases. This finding underscores the importance of fostering positive perceptions and attitudes as a means to encourage engagement in crowdfunding activities. This result aligns with the findings reported by Meghana *et al.* (2024) and Vijaya *et al.* (2023), both of which found that attitude positively affects the intention to donate to crowdfunding.

The variable sense of self-worth has a coefficient of 0.136. The *t*-value is 1.751, with a *p*-value of 0.082, indicating that the effect is not statistically significant at the conventional 0.05 threshold. Although the positive coefficient suggests a potential influence of sense of self-worth on crowdfunding intention, the lack of statistical significance implies that this variable may not be a strong predictor in this context.

The analysis of the variable face concern shows a coefficient of 0.091. The *t*-value is 1.277, and the *p*-value is 0.204, indicating that this variable is not statistically significant. Contrary to expectation, this result suggests that Face Concern does not have a meaningful impact on crowdfunding intention. A possible explanation for this could be that for Muslims, when they decide to do something, they may do it primarily for the sake of Allah. This result replicates the result reported in Jiao *et al.* (2021), where reputation concern is insignificant to intention to donate in online crowdfunding activities in China. In contrast, it opposes the earlier research by Bekkers and Wiepking (2011) and Zagefka and James (2015) drawn from different research design, leading to the result.

Further, the moral obligation has a coefficient of 0.161. The *t*-value is 2.389, with a *p*-value of 0.018, indicating significant outcome. This suggests that moral obligation has a significant positive effect on crowdfunding intention. Basically, people tend to participate and donate in crowdfunding as they feel that they are fulfilling ethical or moral responsibilities towards others. This finding confirms the result reported in Bekkers and Wiepking (2011) and Pérez and Egea (2019). This implies that one is likely to contribute when he can internalise moral obligation, shaping the formation of contribution behaviour for a large amount of crowdfunding.

On the other hand, the analysis of the variable subjective norm reveals a coefficient of -0.081. The *t*-value is -1.009, with a *p*-value of 0.315, indicating that this variable is not statistically significant. The negative coefficient suggests a potential inverse relationship between subjective norm and crowdfunding intention, meaning that higher subjective norm might be associated with lower intentions to engage in crowdfunding. However, since the effect is not significant, it implies that subjective norm does not play a meaningful role in predicting crowdfunding intention in this context.

The findings of this study supported the findings in Chen *et al.* (2019); Kenang and Gosal (2021) but it is tandem with findings by in Baber (2019) and Vijaya (2023). Therefore, if family, friends, religious leaders, or social circles approve of donating or supporting crowdfunding, an individual is more likely to make donations. However, in the current context, the decision is reversed, given the insignificant and negative results reported in Table 6.

Finally, the perceived behavioural control shows a coefficient of 0.184. The *t*-value is 2.180, with a p-value of 0.031, indicating statistical significance. This suggests that perceived behavioural control has a significant positive influence on crowdfunding intention. In essence, as individuals feel more in control over their ability to participate in crowdfunding, their intention to engage in such activities increases. This result aligns with previous studies by Yulandreano and Rita (2023) and Chen *et al.* (2019), which found a significant influence on perceived behavioural control towards crowdfunding intentions.

5. CONTRIBUTIONS AND IMPLICATIONS

Theoretical contributions

The combining TPB with SDT, this study provides a more comprehensive understanding of the psychological and social drivers influencing crowdfunding intention. While TPB has been widely used to predict intention, SDT variables such as moral obligation, sense of self-worth, and face concern add depth to understanding intrinsic motivations among Muslim donors. Besides, this study also enriches the limited body of literature on donation behaviour among Muslims in Southeast Asia, particularly in the under-researched region of Sabah. Moreover, face concern and subjective norm are not significant issues to the existing beliefs on the dominance of social pressure in collectivist or religious communities, which may indicate more autonomous and internalized motivations in digital giving contexts.

Moreover, the results from this study support previous findings regarding the positive impact of attitude, moral obligation, and perceived behavioural control on intention to donate, while also providing contrasting evidence where subjective norm and face concern are not influential—adding nuance to the ongoing debate on the role of social influence in crowdfunding behaviour.

Practical implications

As subjective norm and face concern were found to be non-significant, fundraising strategies should shift away from messaging that relies on communal expectations or social conformity. Instead, efforts should emphasise individual choice, personal values, and meaningful engagement. In practice, the results from this study can be applied to crowdfunding platforms and campaign creators targeting Muslim populations in Malaysia. They can focus on enhancing positive attitudes toward crowdfunding by showcasing the real-world impacts of donations. Campaign narratives that highlight moral responsibility, ethical duty, and personal empowerment are likely to resonate more strongly than those that appeal to public pressure or reputation.

The positive influence of perceived behavioural control suggests that when individuals believe they can easily and effectively participate in crowdfunding, they are more inclined to donate. Therefore, improving platform usability, offering flexible donation options, and ensuring transparency in the donation process may enhance participation rates. The significance of moral obligation aligns well with Islamic values around charity (e.g., *zakat* and *sadaqah*). Platforms can leverage this by framing crowdfunding not just as financial support, but as a moral and spiritual contribution aligned with donors' ethical and religious identities.

6. CONCLUSION AND FUTURE RESEARCH

Looking into crowdfunding campaigns in Sabah, Malaysia, has shown valuable insights into what influences people's choices to donate. Central to these findings are three key elements: attitude, moral obligation, and perceived behavioural control. Together, these factors significantly shape the willingness of Malaysians, particularly Sabahans, to contribute to crowdfunding efforts. Evidently, the study demonstrates that factors outside the individual, such as Sense of self-worth, face concern, and subjective norm, do not significantly influence intentions to donate. This finding underscores a crucial aspect: respondents generally make choices rooted in their personal opinions and intrinsic motivations rather than conforming to societal norms or external expectations. Given this insight, it becomes clear that effective crowdfunding efforts must shift their focus inward, developing internal motivators that align with the personal values and beliefs of potential donors.

Therefore, successful engagement of potential donors by campaigns depends on devoting attention to their motivations that boost self-efficacy via the view of their ability to make effective contributions and moral commitment, which represents a commitment to serving others. Boosting these internal motivators enables crowdfunding projects to nurture a much deeper emotional connection with donors, supporting a range of causes going forward. In contrast to methods that rely heavily on conventional community expectations or a need for public recognition, this approach may yield limited sustainability in donor engagement or fall short of true donor commitment.

In addition, internal motivators are aligned with the wider trends observed in successful crowdfunding efforts globally. Campaigns expressing individual experiences and interacting with the community usually attract more powerful support from those who might become supporters. Organisers can create an emotional richness that boosts giving by illustrating the campaign targets alongside the experiences of those involved. This approach enhances donor contribution and also cements a community supported by shared values and aspirations.

The findings demonstrate the essential function of zeroing in on what inspires a person's motivation when designing crowdfunding campaigns in Sabah. Organisers of campaigns can build true relationships with potential donors by targeting internal variables such as self-efficacy and moral commitment as opposed to external elements such as subjective norm or face concern. This approach is probably going to produce a bigger impact on support for crowdfunding projects, eventually aiding their importance and success in Sabah.

As the majority of our respondents are among Generation Z, future studies may look into other generations, such as Millennials, Generation X (born 1965–1980), and Baby Boomers (born 1946–1964). This would provide valuable insights into how different generations perceive and engage with crowdfunding initiatives, enabling campaign organizers to tailor strategies more effectively for diverse demographic groups.

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DIGITAL LITERACY IN ASEAN HIGHER EDUCATION: A TWO-DECADE BIBLIOMETRIC REVIEW

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ABSTRACT

This study provides the first comprehensive, two-decade bibliometric review of digital literacy research in ASEAN higher education. While the field is of critical importance for the region's economic and social development, its intellectual and collaborative structure has remained unmapped. Using a dataset of 248 articles retrieved from the Scopus database (2005–2024), we employ performance analysis and science mapping to chart the research landscape. The findings reveal a significant paradox: the field has experienced explosive publication growth, with over 75% of all research published in the last five years, yet it remains profoundly fragmented. Co-authorship analysis at the country, institution, and author levels reveals a community fractured into national and institutional silos with minimal cross-border collaboration. This social fragmentation is mirrored by a disconnected intellectual base, confirmed by a co-citation analysis showing no shared theoretical foundation among the field's foundational scholars. We conclude that the field's rapid, crisis-driven growth has not yet led to maturity. By mapping these structural weaknesses, this study offers a clear, evidence-based agenda for fostering the cohesion needed to build a more impactful and sustainable research ecosystem.

KEYWORDS: DIGITAL LITERACY, BIBLIOMETRIC ANALYSIS, HIGHER EDUCATION, ASEAN, DIGITAL DIVIDE

ABSTRAK

Kajian ini menyediakan ulasan bibliometrik komprehensif pertama selama dua dekad mengenai penyelidikan literasi digital dalam pendidikan tinggi ASEAN. Walaupun bidang ini amat penting untuk pembangunan ekonomi dan sosial serantau, struktur intelektual dan kolaboratifnya masih belum dipetakan. Dengan menggunakan set data 248 artikel yang diperoleh daripada pangkalan data

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Scopus (2005–2024), kami menggunakan analisis prestasi dan pemetaan sains untuk mencarta landskap penyelidikan. Dapatan kajian mendedahkan satu paradoks yang signifikan: bidang ini telah mengalami pertumbuhan penerbitan yang pesat, dengan lebih 75% daripada semua penyelidikan diterbitkan dalam lima tahun terakhir, namun ia kekal terpecah-belah secara mendalam. Analisis penulisan bersama di peringkat negara, institusi, dan pengarang mendedahkan sebuah komuniti penyelidik yang terpisah kepada silo-silo kebangsaan dan institusi dengan kolaborasi rentas sempadan yang minimum. Fragmentasi sosial ini dicerminkan oleh asas intelektual yang tidak berhubung, yang disahkan oleh analisis sitasi bersama yang menunjukkan tiada landasan teori yang dikongsi dalam kalangan sarjana pengasas bidang ini. Kami merumuskan bahawa pertumbuhan pesat bidang ini yang didorong oleh krisis masih belum membawanya kepada kematangan. Dengan memetakan kelemahan struktur ini, kajian ini menawarkan agenda yang jelas dan berasaskan bukti untuk memupuk kepaduan yang diperlukan bagi membina ekosistem penyelidikan yang lebih berimpak dan mampan.

KATA KUNCI: LITERASI DIGITAL, ANALISIS BIBLIOMETRIK, PENDIDIKAN TINGGI, ASEAN, JURANG DIGITAL

1. INTRODUCTION

In an era defined by technological advancement, the line separating academic success from digital literacy has effectively vanished (Thangaraj *et al.*, 2024; Zakir *et al.*, 2025), making a graduate's ability to command digital information tools a prerequisite for entering the knowledge economy (Rosly *et al.*, 2023). This global imperative presents a unique and urgent challenge in the Association of Southeast Asian Nations (ASEAN), a region of vast economic diversity and rapid digital transformation (Ahmad Radhi *et al.*, 2024; Mawang & Lai, 2024). ASEAN was established on August 8, 1967, in Bangkok, with the founding members being Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Brunei joined in 1984, Vietnam in 1995, Laos and Myanmar in 1997, and Cambodia in 1999 (Bhasin & Kumar, 2022). Table 1 below illustrates key indicators of digital transformation across ASEAN, highlighting substantial disparities in internet penetration and ICT development. These figures demonstrate how varying levels of infrastructural readiness continue to shape the pace of digital integration in higher education.

TABLE 1: SELECTED INDICATORS OF DIGITAL TRANSFORMATION IN ASEAN (2024)

Country	Internet penetration (%)	ICT Development Index Rank (2024 est.)	Notes on digital readiness
Singapore	84.5	High	Mature digital infrastructure; advanced e-government and AI initiatives
Malaysia	82.3	Upper-medium	Strong digital policy framework; Industry 4.0 adoption
Thailand	79.0	Upper-medium	Expanding broadband access; regional innovation hub
Indonesia	77.5	Medium	Rapid mobile connectivity; uneven rural access
Philippines	73.2	Medium	Digital learning expansion; connectivity challenges persist
Vietnam	72.8	Medium	Growing tech sector; improving digital literacy integration
Brunei	71.4	Medium	Strong government digitalization; small population advantage
Cambodia	48.9	Lower-medium	Expanding telecom sector; low higher education integration
Myanmar	43.1	Low	Political instability limits progress

Laos	21.9	Low	Limited infrastructure; early stages of digital inclusion

Source: Compiled from Habbal *et al.* (2024); ASEAN ICT Masterplan (2024); and World Bank Digital Readiness Data (2024).

While ASEAN nations belong to the Global South, their pace of digital transformation reveals sharp internal contrasts. In contrast to the Global North, where digital ecosystems have matured through decades of sustained investment, ASEAN's progress remains uneven, often reactive, and shaped by contextual constraints such as infrastructural gaps, policy inconsistency, and socio-economic inequality. Nevertheless, these challenges also foster adaptive innovation: ASEAN's mobile-first strategies, open educational platforms, and community-led digital literacy initiatives exemplify context-sensitive responses to resource limitations. This comparison underscores ASEAN's distinctive developmental trajectory within global digital transformation.

Here, the mission of higher education to cultivate these skills is not merely academic. It is a cornerstone of national competitiveness and social progress (Maji & Laha, 2020). Complicating this mission is the region's significant "digital divide," which extends beyond access to technology to include disparities in digital competencies, pedagogical capacity, and institutional readiness to integrate digital learning ecosystems (Chetty *et al.*, 2018; Paul & Crowe, 2023). If ASEAN is to achieve its goal of a unified digital economy, policymakers and educators need a clear, evidence-based map of the current digital literacy research. This mapping would allow the region to identify strengths, overlaps, and structural gaps in how digital literacy has been conceptualized and implemented across different national contexts.

To date, however, no such map exists. The existing body of literature offers a fragmented picture at best, with most studies confined to single-country analyses or sector-specific discussions that fail to capture the regional interconnectedness of ASEAN's higher education systems. While scholars have examined related themes such as regional "digitalization" (Suranto *et al.*, 2025), digital banking (Tuli, 2023), financial literacy (Drajat Stiawan *et al.*, 2024), and early bibliometric trends (Arya *et al.*, 2024), these studies remain limited in temporal scope (typically under ten years) and conceptual focus, providing snapshots rather than comprehensive overviews. In contrast, the present study bridges this gap through a systematic, two-decade bibliometric review of 248 peer-reviewed publications (2005–2024), offering for the first time an integrated and longitudinal understanding of ASEAN's digital literacy scholarship in higher education.

Our study addresses this gap by providing the field's first comprehensive bibliometric review, spanning from 2005 to 2024. Using performance analysis and science mapping, we move beyond simple metrics to reveal the intellectual architecture of the field. Our findings uncover a central tension: a dramatic acceleration in research output, spurred by the COVID-19 pandemic, coexists with a profound lack of collaborative and thematic integration. To investigate this disconnect and propose a clear agenda, we pose the following research questions (RQs):

RQ1: What has been the publication trend of digital literacy research in ASEAN higher education over the last two decades?
RQ2: Which countries, institutions, and authors are the most productive and influential contributors to digital literacy research in ASEAN higher education?
RQ3: What are the dominant research themes and foundational intellectual structures of the literature on digital literacy in ASEAN higher education?
RQ4: What are the primary research gaps and promising directions for a future research agenda on digital literacy in ASEAN higher education?

2. LITERATURE REVIEW

Digital literacy is a core educational concept that constantly evolves with technology (Jige, 2025). Once defined by narrow technical skills, it has since matured into a rich set of competencies essential for navigating the modern digital age. This review traces the evolution of digital literacy and establishes its critical importance for higher education in the ASEAN region. This overview of the existing research provides the necessary foundation for the comprehensive bibliometric analysis at the heart of our study.

A Concept in Motion: The Journey of Digital Literacy

The term "digital literacy" has been on a remarkable journey since Paul Gilster introduced it in 1997 (Ahsan *et al.,* 2021; Davydov *et al.,* 2020). Its earliest forms, often called "computer literacy" or "ICT literacy," were tethered to the machine itself, focusing on the practical skills needed to operate hardware and software (Bawden, 2008; Solmaz *et al.*, 2023). But as the internet became essential, this simple definition failed (Tomczyk & Eger, 2020). True literacy was no longer about mastering the machine, but about mastering the flood of information it generated (Aussu, 2023).

This realization sparked a critical evolution. From the field of library science, the idea of information literacy emerged, stressing the ability to locate, vet, and strategically use information (Hicks *et al.*, 2023). In parallel, the rise of social media and the 24-hour news cycle gave birth to media literacy (Cho *et al.,* 2024), which armed individuals with the critical tools to analyse and question the digital content they consumed (Van Zyl *et al.,* 2020). Today's robust understanding of digital literacy, which this study adopts, is a powerful fusion of these elements. According to Park et al. (2020), digital literacy is a multidisciplinary field, a holistic concept that integrates the technical (ICT skills), the cognitive (information and media literacy), and the socio-emotional skills required for any citizen to engage effectively and ethically in the digital world (Martínez-Bravo *et al.*, 2022). This view is vital because it prioritizes the user's critical and ethical reasoning over mere technical skill.

Digital Literacy in ASEAN: Bridging the Skills Gap

For ASEAN, digital literacy has moved beyond the classroom to become the very engine of socio-economic progress. To unlock the promise of a regional digital economy, the first step is always better connectivity (Chong *et al.,* 2023). Recognizing this, ASEAN has launched a cascade of strategic plans. Initial efforts like the ASEAN ICT Master Plan 2015 aimed to close the digital divide by getting more technology into schools (Prajaknate, 2017). More recently, the ASEAN Digital Integration Framework Action Plan 2019-2025 has taken on tougher challenges, from cybersecurity to persistent skills gaps (Chen *et al.*, 2023). These top-down plans are complemented by collaborative, ground-up efforts like the ASEAN Network on Information Literacy (ASEAN-NIL), which builds partnerships to raise the bar for information literacy across the region (Sacchanand, 2022).

But what does this picture of progress look like on the ground? Dangerously uneven. A deep "digital divide" fractures the region, creating stark inequalities in nearly every sphere of life. The numbers tell a story of two ASEANs: internet penetration soars at 84.45% in Singapore but plummets to just 21.87% in Laos (Habbal *et al.*, 2024). This is more than a gap in access; it is a chasm in development. While nations like Malaysia, Indonesia, and Thailand are accelerating into the digital future, others like Cambodia, Laos, and Myanmar are struggling to build the on-ramps (Suranto *et al.,* 2025). This divergence is painfully clear in education, where investment in school ICT projects varies wildly; some nations have decades of experience while others are just getting started (Prajaknate, 2017). This is the region's core challenge: ensuring the promise of digital development becomes a shared reality, not a privilege for a select few.

The region’s economic future can be jeopardised by a significant digital skills deficit caused by the digital divide, and thus, the majority of ASEAN communities can be lacking of digital literacy skills (Li *et al.*, 2024). Thriving in an Industry 4.0 world demands a sophisticated digital toolkit of advanced competencies, from data analysis to virtual collaboration, that makes basic operational skills insufficient (Kipper *et al.,* 2021; Shet & Pereira, 2021). This places ASEAN universities at a critical juncture, facing immense pressure to embed these skills into their teaching (Chung & Cam, 2024; Khlaisang & Mingsiritham, 2016). A failure to do so will not only curtail the prospects of individuals but will ultimately stifle national innovation and economic vitality (McFarlane *et al.*, 2024; Prajaknate, 2017).

An Uncharted Territory: Mapping the Research Landscape

The growing urgency surrounding digital literacy has naturally sparked scholarly interest for fostering economic growth (Ahmad Radhi *et al.*, 2024), bridging the digital divide (Chong *et al.*, 2023), supporting effective policy-making (Apriliyanti *et al.*, 2021), and thus, promoting an ASEAN identity (Thompson & Sunchindah, 2023). This scenario leads to a steady increase in research that this paper will systematically measure. However, while previous studies have explored parts of this territory, a complete and coherent map has been missing.

While existing thematic reviews offer valuable insights, they tend to provide only narrow glimpses into the larger landscape. A systematic review from Malaysia, for example, shows a research preoccupation with information literacy and communication, typically studied through quantitative surveys (Ahsan *et al.*, 2021). In the same vein, a policy review covering Singapore, Thailand, Indonesia, and Myanmar found a strategic focus on the crucial groundwork of improving network infrastructure and technology access for learners (Machmud *et al.*, 2021). Expanding the focus beyond formal education, other studies highlight the need for culturally adapted digital literacy training for parents and the establishment of ASEAN-wide research networks to create a sustainable digital literacy ecosystem for families (Lukitowati *et al.*, 2025). Collectively, these findings underscore the importance of regional collaborations and inclusive digital strategies that consider the unique socioeconomic contexts of each nation to bridge the digital divide (Suranto *et al.*, 2025). What these studies reveal are important but isolated pieces of a much larger, and still incomplete, puzzle.

This paper, therefore, builds on this earlier work to do something fundamentally new: to conduct the first comprehensive, long-term bibliometric review of digital literacy in ASEAN higher education. By charting the key contributors, intellectual currents, and thematic structures, we aim to provide a clear, evidence-based roadmap for the future.

3. METHODOLOGY

To address the research questions, this study employs a quantitative bibliometric approach to systematically analyse the landscape of digital literacy research in ASEAN higher education. The methodology integrates two key techniques: performance analysis, to measure the productivity and impact of researchers and institutions, and science mapping, to visualise the collaborative and thematic structures of the field (Herrera-Viedma *et al.*, 2016; Li, 2023).

The final dataset were processed and analysed using a combination of specialised software. Microsoft Excel was instrumental in the initial data management phase, used for organizing bibliographic records, ensuring data integrity, and generating the descriptive statistics for the publication trend analysis (RQ1) (Janzen, 2022; Lindquist & Sulewski, 2024). For the subsequent network analysis, VOSviewer was used to construct and visualize the science maps (van Eck & Waltman, 2010; Wei *et al.*, 2025; Zupic & Čater, 2015) (van Eck & Waltman, 2010; Wei *et al.*, 2025; Zupic & Čater, 2015). This allowed for a detailed examination of the collaborative networks (RQ2) as well as the identification of the primary research themes and intellectual structures of the field (RQ3).

Data Source and Search Strategy

The data for this bibliometric review were systematically retrieved from the Scopus database. Scopus was selected as the data source for three primary reasons (Baas *et al.*, 2020): its broad coverage of global and regional literature (Mongeon & Paul-Hus, 2016), which is crucial for a

study focused on the ASEAN region; its high-quality curation by an independent advisory board, ensuring the reliability of the indexed publications; and its provision of rich, comprehensive metadata, including author affiliations and full cited references, which are essential for conducting robust network analyses (Pranckutė, 2021).
A comprehensive search query was developed to identify relevant publications. The query was designed to be both sensitive enough to capture the breadth of the field and specific enough to maintain focus. It consisted of three main conceptual blocks connected by the "AND" operator:

1. Subject matter: A set of nine keywords related to the core concept of digital literacy ("internet literacy" OR "computer literacy" OR "digital literacy" etc.);
2. Population and context: A set of five keywords to limit the search to the higher education context ("higher education" OR "university" etc.); and
3. Geographic scope: A filter using the AFFILCOUNTRY field to include only articles with at least one author affiliated with one of the 10 ASEAN member states: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, or Vietnam.

The search was further refined by two final criteria. The publication year was limited to the 20 years from January 1, 2005, to December 31, 2024, to align with the "Two Decades" scope of the review. The document type was restricted to full research articles (ar) or review articles (re) to ensure the analysis was based on peer-reviewed, substantive scholarly work. The final search was conducted on September 3, 2025.

The search strategy described above was operationalised into a specific query syntax for the Scopus database. The complete and final search string used to retrieve the articles for this review is as follows:

(TITLE-ABS-KEY ("internet literacy" OR "computer literacy" OR "digital literacy" OR "digital competence" OR "digital skills" OR "information literacy" OR "media literacy" OR "ICT literacy" OR "IT literacy")) AND (TITLE-ABS-KEY ("higher education" OR "university" OR "universities" OR "tertiary education" OR "undergraduate*")) AND (AFFILCOUNTRY (brunei) OR AFFILCOUNTRY (cambodia) OR AFFILCOUNTRY (indonesia) OR AFFILCOUNTRY (laos) OR AFFILCOUNTRY (malaysia) OR AFFILCOUNTRY (myanmar) OR AFFILCOUNTRY (philippines) OR AFFILCOUNTRY (singapore) OR AFFILCOUNTRY (thailand) OR AFFILCOUNTRY (vietnam)) AND (PUBYEAR > 2004 AND PUBYEAR < 2025) AND (DOCTYPE (ar) OR DOCTYPE (re))

Source: Scopus Database

Following the initial database search, a two-stage screening process was conducted to identify the final set of articles for review. To ensure the relevance and quality of the final dataset, a precise set of inclusion and exclusion criteria was developed and applied during this process. The criteria, detailed below, guided the screening of titles and abstracts, followed by a full-text assessment of the potentially relevant articles.

A study was included if it met all of the following conditions:

1. Subject matter: The study must focus on one or more of the core concepts of digital literacy. The title, abstract, or keywords had to contain at least one of the following terms: *"internet literacy"*, *"computer literacy"*, *"digital literacy"*, *"digital competence"*, *"digital skills"*, *"information literacy"*, *"media literacy"*, *"ICT literacy"*, or *"IT literacy"*;
2. Population and context: The research must be set within a higher education context. The title, abstract, or keywords had to include terms such as *"higher education"*, *"university"*, *"universities"*, *"tertiary education"*, or *"undergraduate*" (and its variations);

3. Geographic scope: The study must originate from Southeast Asia. This was determined by the affiliation of at least one of the authors. The author affiliation country (AFFILCOUNTRY) had to be one of the following: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, or Vietnam;
4. Publication year: The article must be published within the 20 years period from January 1, 2005, to December 31, 2024, inclusive. This aligns with the "Two Decades" scope of the review;
5. Document type: The publication must be a full research article (ar) or a review article (re); and
6. Language: The article must be written in English to be eligible for analysis.

Studies were excluded if they met one or more of the following conditions:

1. Did not meet inclusion criteria: Any article that failed to meet all of the inclusion criteria listed above was automatically excluded;
2. Context mismatch: Studies where the primary focus was not on general education or skill development, even if the keywords were present. This includes; and
    - Studies focused on a specific clinical or health context (e.g., health literacy for patients);
    - Studies focused on a specific non-educational profession (e.g., skills for accountants, lawyers); and
    - Studies focused on highly technical training for a single piece of software (e.g., MATLAB, AutoCAD).
3. Document type mismatch: Publications that were not primary research or review articles. This includes editorials, book reviews, conference announcements, letters to the editor, notes, corrections (errata), and abstracts-only from conferences.

Data Collection and Screening

The data for this bibliometric analysis was systematically collected from the Scopus database on September 3, 2025. An initial search using the comprehensive query detailed in the previous section yielded 372 documents. These records were then subjected to a rigorous screening and selection process to determine the final dataset for analysis. To ensure full transparency, this process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement (Page *et al.*, 2021) as illustrated in Figure 1.

The screening was conducted in two stages. The first stage consisted of a title and abstract review of all 372 articles. This initial screening led to the exclusion of 82 records that were clearly irrelevant due to an incorrect geographic scope (n=42), a context mismatch (n=34), or publication outside the specified date range (n=6). The remaining 290 articles were deemed potentially relevant and advanced to the second stage.

The second stage was a full-text eligibility assessment. The full text of each of the 290 articles was retrieved and read to make a final determination of its suitability based on the inclusion and exclusion criteria. This detailed review resulted in the further exclusion of 42 articles for reasons including an unstated geographic location (n=26), inability to retrieve the full text (n=7), a context or population mismatch (n=7), the article not being in English (n=1), or an incorrect country affiliation (n=1). Upon completion of this two-stage process, a final dataset of 248 articles was included in the bibliometric analysis.

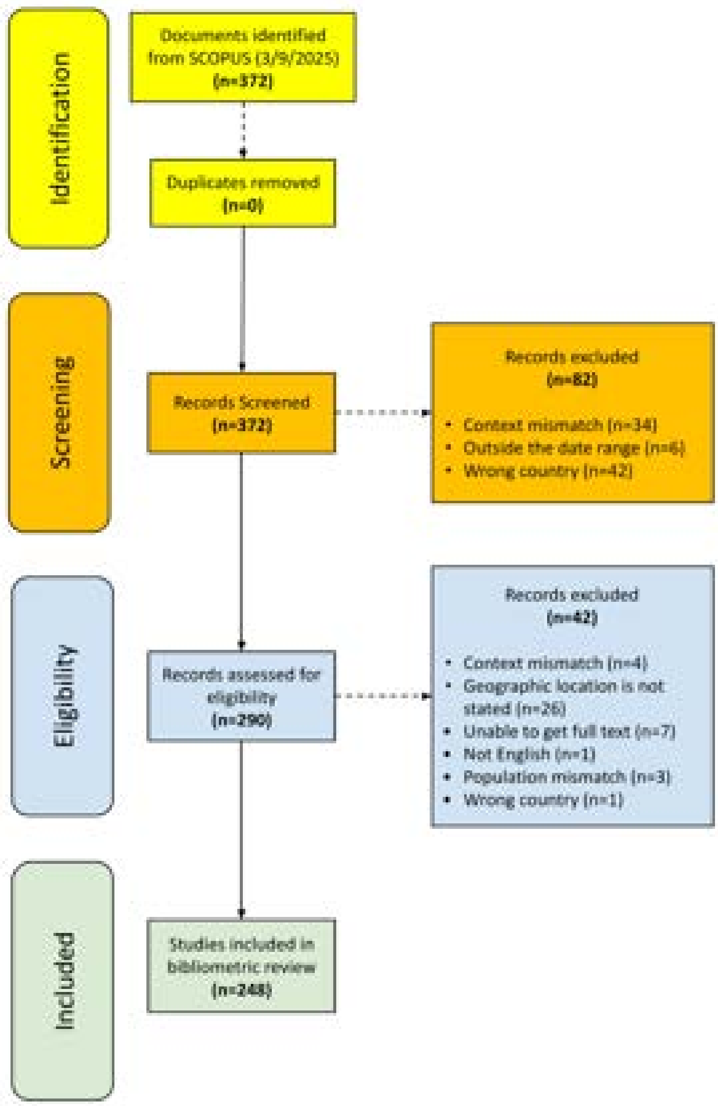

FIGURE 1: THE PRISMA DIAGRAM OF THE STUDY SELECTION PROCESS

Source: Adapted from Page *et al*. (2021)

Data Analysis and Visualisation

The final dataset of 248 articles was analysed using a combination of performance analysis and science mapping techniques to address the four research questions (Donthu *et al.*, 2021). Descriptive statistics were generated using Microsoft Excel, while network analysis and visualization were conducted using VOSviewer (version 1.6.20) (van Eck & Waltman, 2010). VOSviewer was selected because of its robust capacity to visualise bibliometric networks through intuitive, high-quality maps that effectively display relationships among authors, institutions, and keywords. It allows researchers to identify thematic clusters and structural gaps within large datasets efficiently. However, like most co-occurrence tools, VOSviewer has limitations: it offers limited options for advanced statistical modelling, relies heavily on author-supplied keywords that may introduce bias, and cannot automatically harmonise variations in author or institutional names. Despite these constraints, its balance between analytical depth and visual clarity makes it one of the most widely adopted tools in bibliometric research.

To address RQ1 on publication trends, the publication year of each article was used to generate a frequency distribution in Microsoft Excel. The results were visualised as a bar chart to illustrate the annual publication output and identify key growth periods over the two-decade span.

To answer RQ2 regarding the most productive and influential contributors, a series of co-authorship analyses was performed in VOSviewer, with the unit of analysis set to Countries, Organizations, and Authors. In each analysis, productivity was measured by the total number of documents (TD) and influence by the total number of citations (TC). The results are presented in summary tables and as network maps visualizing collaboration patterns.

To address RQ3 on dominant themes and intellectual clusters, two distinct network analyses were conducted. First, to identify the "research front," a co-occurrence analysis of "All Keywords" was performed, as this method effectively maps thematic clusters by assuming that keywords appearing together in articles are conceptually related. Second, to identify the "intellectual base," a co-citation analysis of "Cited Authors" was conducted. This technique is the standard for revealing foundational scholars, as it envisages which authors are cited together in the reference lists of the papers being studied (Passas, 2024; Zupic & Čater, 2015).

Finally, to address RQ4 and propose a future research agenda, the thematic network map was qualitatively analysed. Specifically, we identified the structural holes, the gaps and underexplored spaces between existing research clusters (Burt, 2014). Analysing these areas allowed for the identification of promising and underexplored topics for future investigation.

4. FINDINGS

Publication Trends (RQ1)

To answer RQ1, we analysed the publication trajectory of the 248 articles over the two-decade study period. The findings, illustrated in Figure 2, reveal a field that was largely dormant for its first decade before entering a phase of explosive growth, with the vast majority of research concentrated in the last five years. This dramatic surge can be understood in three distinct phases.

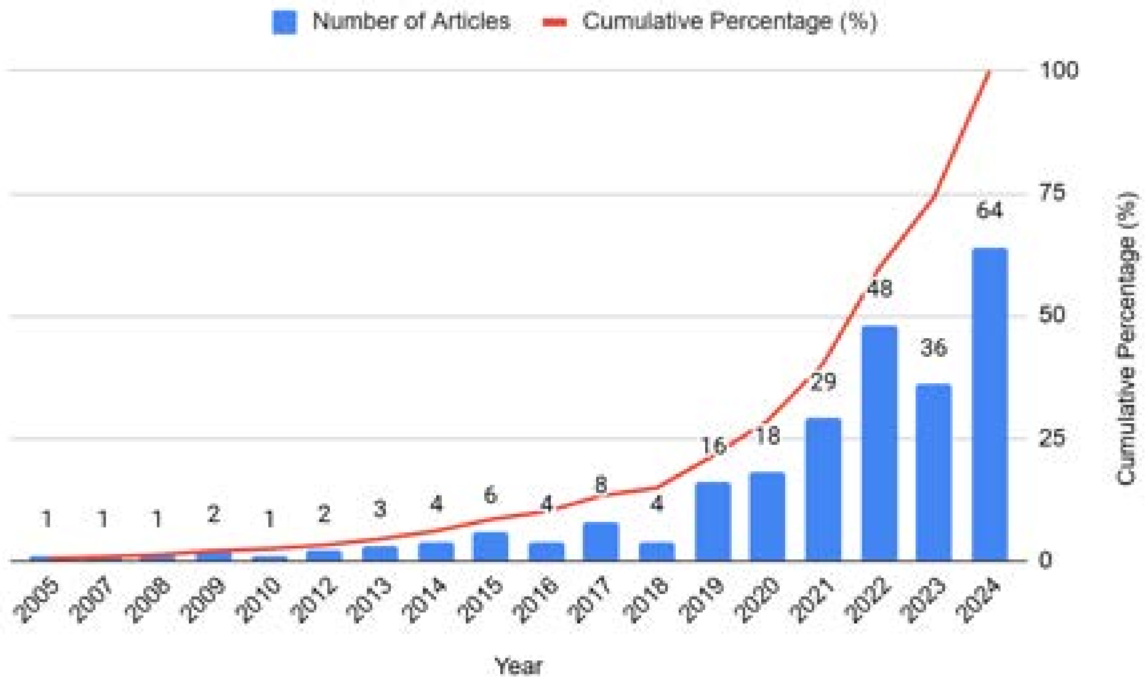

FIGURE 2: A COMBO CHART OF PUBLICATION TRENDS
Source: Authors' analysis based on data retrieved from the Scopus database (search conducted on 3 September 2025) and processed using Microsoft Excel (2024) for descriptive statistics and visualisation.

The publication trend of the 248 articles, illustrated in Figure 2, reveals a clear story of exponential growth, which can be understood in three distinct phases.

1. The nascent phase (2005–2013): For nearly a decade, the field was largely dormant. Publication output was minimal, with most years yielding only one or two articles, indicating a niche and sparsely populated area of research;
2. The emerging phase (2014–2019): This period marked the first signs of life and growing interest in the topic. While inconsistent, publication numbers began to climb, culminating in a notable jump to 16 articles in 2019 that signalled a field on the verge of expansion; and
3. The rapid acceleration phase (2020–2024): The field experienced a dramatic surge in research output beginning in 2020, with publications climbing from 18 to a peak of 64 in 2024. As the cumulative percentage line (red) confirms, the vast majority of this research is remarkably recent; a staggering.

Furthermore, 75% of all publications in the last two decades were published in just the last five years (2020–2024), underscoring the powerful impact of recent global events on the field's trajectory. Therefore, this surge reflects a reactive expansion in scholarly activity largely triggered by the COVID-19 pandemic and the rapid transition to digital learning environments across ASEAN. While this accelerated output demonstrates growing academic interest, it also suggests that the field's development has been driven by short-term, crisis-induced imperatives rather than sustained, strategic research agendas; an issue that subsequent sections of this paper address in greater depth.

Analysis of Productive and Influential Contributors (RQ2)

To address RQ2, we mapped the key players shaping the research landscape by conducting a co-authorship analysis at the level of countries, institutions, and individual authors. This analysis reveals the social structure of the field, identifying not only the most productive and influential contributors but also the collaborative patterns and significant disconnections, which define the research community.

TABLE 2: PRODUCTIVITY AND IMPACT OF COUNTRIES WITH 3 OR MORE DOCUMENTS

Rank	Country	Total Documents (TD)	Total Citations (TC)	ACPP (TC/TD)	Total Link Strength (TLS)
1	Indonesia	107	811	7.58	16
2	Malaysia	60	911	15.18	15
2	Thailand	60	646	10.77	6
4	Philippines	18	213	11.83	2
5	Singapore	11	456	41.45	2
6	Australia	9	97	10.78	8
7	United States	4	39	9.75	4
8	Saudi Arabia	3	19	6.33	3

Note. TD = Total Documents; TC = Total Citations; ACPP = Average Citations per Paper; TLS = Total Link Strength

Source: Authors' analysis based on data retrieved from the Scopus database

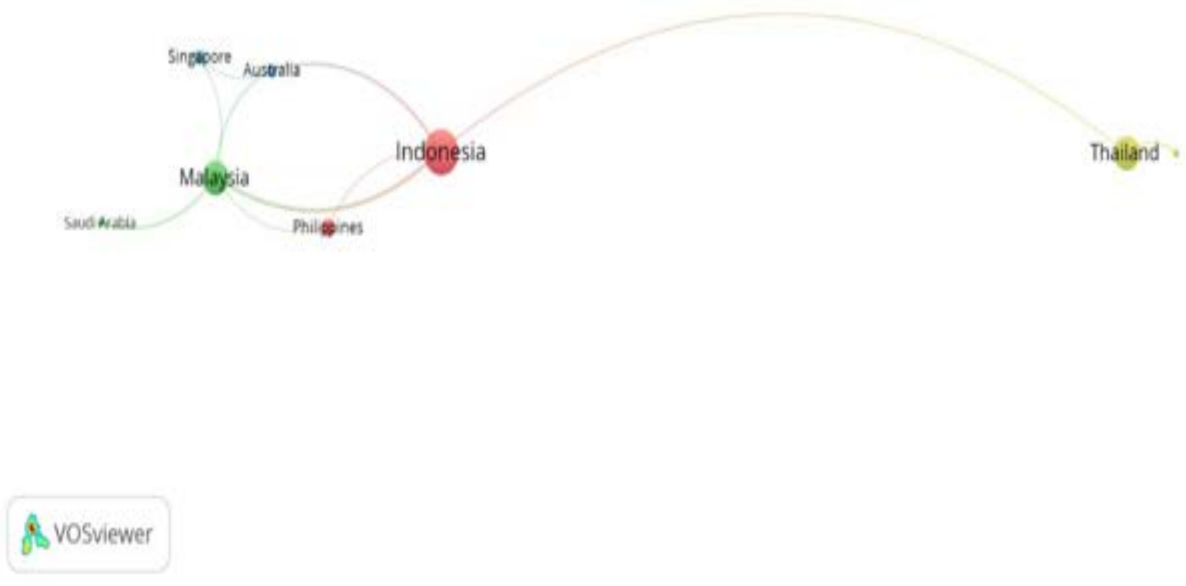

FIGURE 3: CO-AUTHORSHIP NETWORK OF COUNTRIES
Source: VOSviewer Analysis

To identify the most productive and influential countries, a co-authorship analysis was conducted. The findings for all countries with three or more documents are presented in Table 2, and the corresponding collaboration network is visualized in Figure 3. The productivity of each country is shown by the node size in Figure 3 and the Total Documents (TD) in Table 2. The analysis identifies Indonesia as the most productive country, leading significantly with 107 documents (TD=107). Malaysia and Thailand are tied for the second-most productive, with 60 documents each. The influence was measured in two ways: citation impact and collaboration.

- Citation impact: Table 2 shows that Malaysia has the highest total citations (TC=911). However, for normalised impact, Singapore (ACPP=41.45) has by far the highest average citations per paper, followed by Malaysia (ACPP=15.18); and
- Collaboration: The collaboration network (Figure 3) and Total Link Strength (TLS) scores in Table 2 reveal the collaborative structure. Indonesia (TLS=16) and Malaysia (TLS=15) are the two main collaboration hubs. Figure 3 shows these countries form a large, interconnected cluster with partners like Australia, Singapore, and the Philippines. In sharp contrast, Thailand (TLS=6) is highly isolated from this main cluster, with only one visible link to Indonesia.

TABLE 3: PRODUCTIVITY AND IMPACT OF INSTITUTIONS WITH 3 OR MORE DOCUMENTS

Rank	Institution	Country	Total Documents (TD)	Total Citations (TC)	ACPP (TC/TD)	Total Link Strength (TLS)
1	Universitas Negeri Malang	Indonesia	14	63	4.50	7
2	Universiti Malaya	Malaysia	13	165	12.69	2
3	Universiti Kebangsaan Malaysia	Malaysia	11	97	8.82	3
3	Universiti Teknologi Mara	Malaysia	11	53	4.82	6
5	Universitas Negeri Jakarta	Indonesia	10	62	6.20	4
6	Universitas Negeri Padang	Indonesia	9	27	3.00	6
7	Universitas Negeri Yogyakarta	Indonesia	6	35	5.83	2
8	Uin Alauddin Makassar	Indonesia	5	46	9.20	3
8	Universitas Negeri Semarang	Indonesia	5	50	10.00	2
8	Universitas Pendidikan Indonesia	Indonesia	5	28	5.60	2
8	Universitas Sebelas Maret	Indonesia	5	14	2.80	2
12	Universitas Islam Negeri Syarif Hidayatullah Jakarta	Indonesia	4	24	6.00	1

Rank	Institution	Country	Total Documents (TD)	Total Citations (TC)	ACPP (TC/TD)	Total Link Strength (TLS)
13	Brawijaya University	Indonesia	3	13	4.33	1
13	Universitas Diponegoro	Indonesia	3	8	2.67	2
13	Universitas Islam Negeri Imam Bonjol Padang	Indonesia	3	8	2.67	4
13	Universitas Negeri Surabaya	Indonesia	3	8	2.67	3
13	Universitas Pendidikan Mandalika	Indonesia	3	55	18.33	2

Note. TD = Total Documents; TC = Total Citations; ACPP = Average Citations per Paper; TLS = Total Link Strength

Source: Authors' analysis based on data retrieved from the Scopus database

As shown in Table 3, Universitas Negeri Malang (TD=14) is the most productive institution, followed by Universiti Malaya (TD=13). Universitas Negeri Malang also appears to be the main collaboration hub (TLS=7). This prominence can be attributed to the university's strong research focus on digital pedagogy, information and communication technology (ICT) integration, and teacher training—areas that align closely with national education digitalisation priorities. Additionally, Universitas Negeri Malang has maintained several active Scopus-indexed journals and international collaborations that encourage faculty publishing, thereby amplifying its research output in digital literacy. However, Universitas Pendidikan Mandalika shows the highest average impact (ACPP=18.33) by a significant margin, followed by Universiti Malaya (ACPP=12.69). This suggests that while some institutions produce more, Malang's institutional capacity and supportive research culture underpin its productivity, whereas Mandalika and Malaya lead in per-paper influence. The data indicate that research productivity within the specific scope of this study is heavily dominated by institutions from just two countries: Indonesia and Malaysia. This suggests that the knowledge production in this field is primarily a regional endeavour, centered within Southeast Asia.

FIGURE 4: CO-AUTHORSHIP NETWORK OF INSTITUTIONS
Source: VOSviewer Analysis

Figure 4 envisages the co-authorship network of the 17 institutions that met the 3-document threshold. In this map, the size of each node (circle) corresponds to the institution's productivity (Total Documents). The links (lines) represent co-authorship collaborations, and the colours represent distinct collaborative clusters.

The network is dominated by a few large nodes, with Universitas Negeri Malang (red) and Universiti Malaya (green) being the most prominent, confirming their high productivity as shown in Table 3. The map reveals a structure of two main, dense clusters that are only weakly connected:

1. The Indonesian cluster (Red/Pink/Blue/Yellow): The largest cluster is a dense network of Indonesian institutions. Universitas Negeri Malang (red) is the clear central hub of this group, with the highest Total Link Strength (TLS=7). It is closely linked to other productive institutions like Universitas Negeri Jakarta (blue) and Universitas Negeri Yogyakarta (yellow); and
2. The Malaysian cluster (Green): The second cluster is a smaller, separate network of Malaysian institutions, with Universiti Malaya as its main node.

A single, long link is visible connecting these two major clusters, indicating that while collaboration within national groups is strong, direct collaboration between the primary Indonesian and Malaysian research hubs is less frequent.

TABLE 4: TOP 20 MOST PRODUCTIVE AND INFLUENTIAL AUTHORS

Rank	Author	Country	Total Documents (TD)	Total Citations (TC)	ACPP (TC/TD)	Total Link Strength (TLS)
1	Anthonysamy, Lilian	Malaysia	4	221	55.25	0
2	Tuamsuk, Kulthida	Thailand	4	55	13.75	2
3	Edzan, N. N.	Malaysia	4	49	12.25	1
4	Hidayat, Hendra	Indonesia	4	12	3.00	7
5	Sin, Sei Ching Joanna	Singapore	3	243	81.00	4
6	Pimdee, Paitoon	Thailand	3	90	30.00	3
7	Nilsook, Prachyanun	Thailand	3	55	18.33	2
8	Khalid, Fariza	Malaysia	3	52	17.33	2
9	Sukkamart, Aukkapong	Thailand	3	26	8.67	3
10	Kantathanawat, Thiyaporn	Thailand	3	12	4.00	3
11	Heriyanto	Indonesia	3	8	2.67	3
12	Anwar, Muhammad	Indonesia	3	5	1.67	7
13	Yin-Leng, Theng	Singapore	2	215	107.50	2
14	Viriyavejakul, Chantana	Thailand	2	102	51.00	1
15	Kaeophanuek, Siriwatchana	Thailand	2	50	25.00	2
16	Nasongkhla, Jaitip	Thailand	2	49	24.50	2
17	Chavez, Jason V.	Philippines	2	44	22.00	0
18	Khlaisang, Jintavee	Thailand	2	42	21.00	0
19	Daud, Md Yusoff	Malaysia	2	35	17.50	2
20	Dewi, C. A.	Indonesia	2	35	17.50	0

Note. TD = Total Documents; TC = Total Citations; ACPP = Average Citations per Paper; TLS = Total Link Strength

Source: Authors' analysis based on data retrieved from the Scopus database

The performance data in Table 4 highlights two key trends. First, in terms of productivity, the field is led by a group of four authors tied for the top rank with four documents each: Anthonysamy, Lilian (Malaysia), Tuamsuk, Kulthida (Thailand), Edzan, N. N. (Malaysia), and Hidayat, Hendra (Indonesia). The list of top producers is geographically diverse, with a notable concentration of scholars from Thailand (8 authors), Malaysia (4), and Indonesia (4). This can be attributed to a confluence of regional academic priorities, national research funding structures, and the maturation of specific research domains within Southeast Asia.

Second, a clear divergence between productivity and citation impact is evident. While Anthonysamy, Lilian, is both a top producer and highly cited (TC=221), the most influential author by total citations is Sin, Sei Ching Joanna from Singapore (TC=243), who has only three documents. This high-impact, low-volume profile is even more pronounced for another Singaporean author, Yin-Leng Theng (TD=2), who has the highest average citations per paper by a wide margin (ACPP=107.50). In contrast, some of the most productive authors, such as Hidayat, Hendra (TD=4), have a comparatively lower average impact (ACPP=3.00), suggesting a distinction between high-volume research output and high-impact, foundational work.

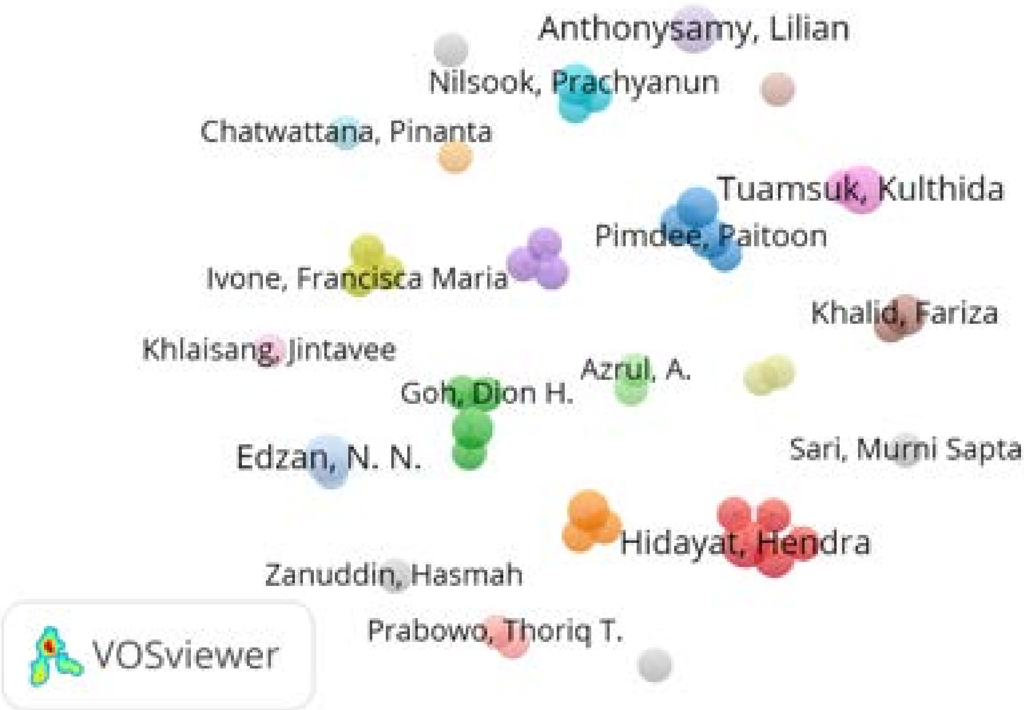

FIGURE 5: CO-AUTHORSHIP NETWORK OF AUTHORS
Source: VOSviewer Analysis

The co-authorship network visualised in Figure 5 provides the most compelling evidence of the field's fragmentation at the author level. Instead of a single, interconnected community, the map reveals a landscape composed of numerous small, isolated collaboration "islands" and many authors who are not connected to any network at all.

This visual finding is quantitatively confirmed by the Total Link Strength (TLS) data in Table 4. Several of the most productive and high-impact authors in the field are "isolated nodes" with a TLS of 0. For instance, Anthonysamy, Lilian, whose productivity likely stems from her sustained work on digital pedagogy, learning analytics, and technology-enhanced education within Malaysia's higher education reform is one of the most productive and influential authors. Her consistent publication record across Scopus-indexed journals and co-authored works on digital competence frameworks contributes to her strong citation impact despite limited cross-border collaboration. Other high-impact researchers like Chavez, Jason V., and Dewi, C. A., are not part of any collaborative cluster within this dataset.

Despite the overall fragmentation, the map does show several distinct collaboration groups. While the labels for some authors may be visually overlapped due to their proximity, the underlying data reveals several key clusters. The largest is the red cluster, an Indonesian research group centred on Hidayat, Hendra, and Anwar, Muhammad, who both have the highest collaboration score (TLS=7).

Other significant clusters include the green cluster, which connects the highly cited author Sin, Sei Ching Joanna, with Goh, Dion H., and the blue cluster, a Thai research group linking the productive author Tuamsuk, Kulthida, with the high-impact author Pimdee, Paitoon. The existence of these small, nationally focused clusters reinforces the finding that collaboration, when it does occur, is primarily local and does not bridge the different national or institutional silos.

Dominant Themes and Intellectual Clusters (RQ3)

Having mapped the social structure of the field, we now turn to its intellectual structure to answer RQ3. This analysis moves from the "who" to the "what," using keyword co-occurrence to identify the dominant research themes and author co-citation analysis to uncover the foundational theoretical pillars upon which the literature is built.

TABLE 5: TOP KEYWORDS AND THEMATICS

Cluster	Cluster name	Keyword	Occurrence
1	COVID-19 and media (mis)information	Covid-19	12
		Social media	10
		Fake news	5
		Media and information literacy	4
		Problem-based learning	4
		Digital media	3
		Internet	3
2	E-learning technologies and systems	E-learning	26
		Self-efficacy	7
		Education computing	6
		Learning systems	5
		Engineering education	4
		Learning strategies	3
		Mobile learning	3
3	Digital pedagogy and transformation	Digital competence	15
		Self-directed learning	7
		Educational technology	4
		Digital leadership	3
		Digital learning	3
		Digital transformation	3
4	Core literacies and foundational skills	Information literacy	45
		Media literacy	12
		21st century skills	6
		Critical thinking	6
		Motivation	4

		ICT	3
5	Student skills and outcomes	Students	32
		Digital skills	9
		Employability	3
		Perception	3
6	Digital literacy models and application	Digital literacy	67
		Blended learning	10
		Self-regulated learning	4
		Tpack	3
7	Learning design and library science	Academic libraries	3
		Instructional design	3

Source: Table by Authors

To identify the dominant research themes (RQ3), a keyword co-occurrence analysis was performed. After cleaning the data, 36 keywords met the 3-occurrence threshold. VOSviewer grouped these keywords into 7 distinct thematic clusters, which are detailed in Table 5. The analysis shows that the research is dominated by a few key concepts that form the hearts of the largest clusters:

- Cluster 6 (Digital literacy models & application): This is the largest and most central theme, built around the most frequent keyword, digital literacy (Occ=67);
- Cluster 4 (Core literacies & foundational skills): This is the second-largest theme, centred on information literacy (Occ=45) and media literacy (Occ=12);
- Cluster 5 (Student skills & outcomes): This is another major theme, anchored by the keyword students (Occ=32);
- Cluster 2 (E-Learning technologies & systems): This theme is led by e-learning (Occ=26); and
- Cluster 1 (COVID-19 & media (mis)information): This theme highlights the importance of the pandemic, led by COVID-19 (Occ=12) and social media (Occ=10).

The remaining clusters, Cluster 3 (Digital pedagogy & transformation) and Cluster 7 (Learning design & library science), represent more specific, niche research areas.

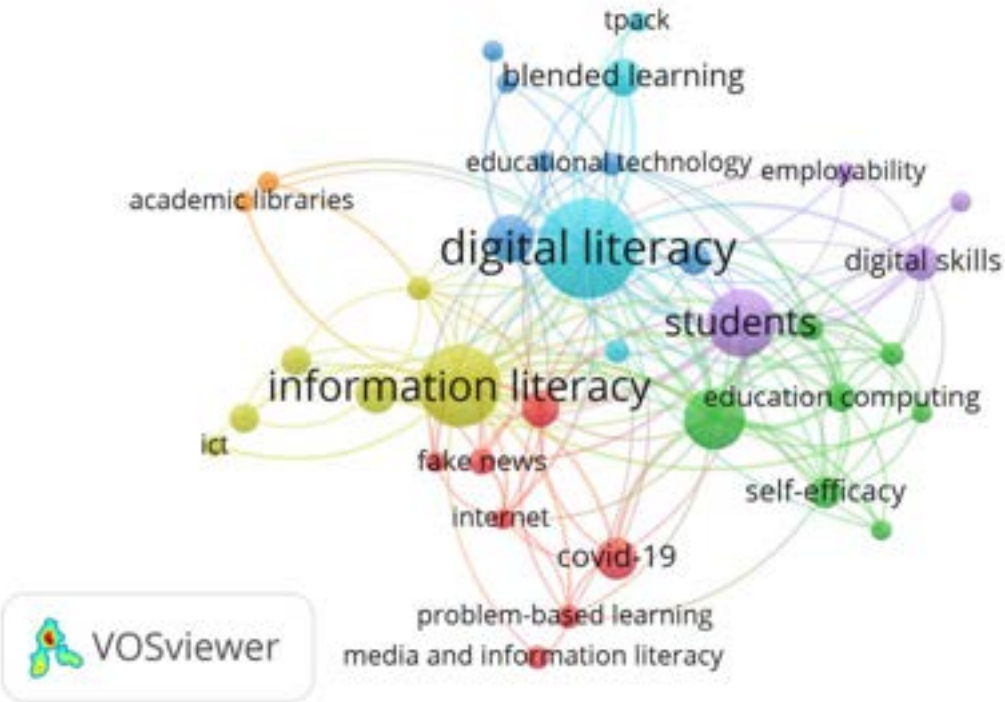

FIGURE 6: CO-OCCURRENCE OF KEYWORDS
Source: VOSviewer Analysis

Figure 6 provides a visual network map of these keywords. In this map, the size of each circle represents the keyword's frequency, and the lines represent their co-occurrence in the literature. While the detailed analysis in Table 4 identifies seven clusters, the visual map simplifies these into five main coloured groups for easier interpretation.

1. The light blue cluster in the map is the largest, corresponding to Cluster 6 (Digital Literacy Models & Application). Its central keyword, 'digital literacy' (Occ=67), acts as the primary bridge connecting all other research themes;
2. The yellow cluster visually groups keywords from Cluster 4 (Core Literacies & Foundational Skills), which is built around the second-most frequent keyword, 'information literacy' (Occ=45);
3. The green cluster represents Cluster 2 (E-Learning Technologies & Systems), led by the keyword 'e-learning' (Occ=26);
4. The purple cluster highlights Cluster 5 (Student Skills & Outcomes), which is anchored by the keyword 'students' (Occ=32) and its links to 'digital skills' and 'employability'; and
5. The red cluster clearly visualizes the recent and important theme of Cluster 1 (COVID-19 & Media (Mis) information), which is centered on 'covid-19' (Occ=12) and 'social media' (Occ=10).

The remaining clusters identified in Table 4, Cluster 3 (Digital Pedagogy & Transformation) and Cluster 7 (Learning Design & Library Science**)**, represent more specific, niche research areas that are visually grouped with the larger clusters in the network map.

In summary, the co-occurrence analysis reveals that digital literacy research in ASEAN is a well-structured field with a strong core (digital and information literacy) that has expanded to include distinct themes of e-learning technologies, student outcomes, and recent societal challenges like the COVID-19 pandemic.

FIGURE 7: CO-CITATION OF CITED AUTHORS
Source: VOSviewer Analysis

To identify the intellectual base of the field (RQ3), a co-citation analysis of cited authors was conducted. This method maps the foundational "pillars" of the research by visualizing which influential authors are cited together by the articles in the dataset. The resulting network of the most frequently cited authors is shown in Figure 7. The network visualizes the relationships between the most frequently cited authors in the dataset. Each node represents an author. The complete absence of links between the nodes indicates a fragmented intellectual structure, suggesting that the foundational authors are not cited together by researchers in the field.

The most significant finding from this analysis is the complete fragmentation of the field's intellectual base. As visualized in the map, there are no co-citation links connecting the most influential authors. The authors are positioned far apart as isolated nodes, each in their own cluster, indicating they are not cited together in the reference lists of the papers analysed in this study.

This suggests that digital literacy research in ASEAN higher education does not draw upon a single, unified theoretical foundation. Instead, researchers in the region are building their work upon several separate and distinct "intellectual pillars" that do not interact with one another. The map identifies several of these isolated foundational authors, including Davis, Philip M., Bernard, Robert M., Belland, Brian R., and Anderson, James C., among others.

This finding of a fragmented intellectual base is consistent with the fragmented collaboration networks observed among the publishing authors, institutions, and countries (answering RQ2), painting a picture of a research field that is siloed at both the social (collaboration) and intellectual (citation) levels.

5. DISCUSSION

This bibliometric review provides the first comprehensive map of digital literacy research in ASEAN higher education, and the landscape it reveals is one of profound paradox. While the field has experienced an explosive surge in publications, it remains deeply fragmented at its collaborative, thematic, and intellectual core. This discussion will now interpret these principal findings to explain the current state and trajectory of the field.

The first part of this story is about the field's growth (RQ1). Our analysis shows that this is a young area of study, powerfully catalysed by crisis. The dramatic acceleration of publications from 2020 onwards, which accounts for over 75% of all articles, is a direct consequence of the COVID-19 pandemic. The forced, large-scale shift to online learning across the region created an urgent, real-world laboratory for researchers, transforming the topic from a niche academic interest into a critical research priority. This suggests that the field's current momentum is largely a reaction to an external shock, rather than the result of a long-term, strategic research agenda.

The second major finding is that this rapid growth has not created a cohesive research community (RQ2). The co-authorship maps for countries, institutions, and authors all tell the same story of disconnection. While productivity is concentrated in three nations: Indonesia, Malaysia, and Thailand, the community is fractured into national and institutional silos with minimal collaboration between the most active hubs. The institutional network, for example, is split into a dense Indonesian cluster and a separate Malaysian cluster, with almost no collaborative bridges between them. This finding is critical, as it suggests that while research is booming within certain countries, the cross-border knowledge sharing needed for regional advancement is critically underdeveloped.

Finally, this social fragmentation is mirrored by a disconnected intellectual structure (RQ3). While our thematic analysis confirms a well-defined set of research topics, the co-citation analysis reveals that the intellectual base of this research is completely fragmented. There are no discernible connections between the field's foundational scholars, which suggests that researchers in the ASEAN region are not building upon a unified body of established theory. Instead, they appear to be drawing from separate, parallel "intellectual pillars," leading to the development of isolated "islands" of research that do not inform or build upon one another.

6. CONTRIBUTIONS

The findings of this study offer significant theoretical, practical, and methodological contributions to the understanding of digital literacy research in the ASEAN region.

Our primary theoretical contribution is the empirical validation of the field's structural fragmentation. By providing the first holistic map of the research landscape, this study moves beyond analysing individual papers to reveal a systemic weakness. It challenges the common assumption that a high growth rate in publications equals field maturity, demonstrating instead that a field can expand rapidly while failing to develop the collaborative and theoretical cohesion necessary for sustained scholarly impact.

From a practical standpoint, our findings have direct implications for key stakeholders across ASEAN. The clear visualization of national and institutional silos provides policymakers, university administrators, and funding bodies with an evidence base for targeted interventions aimed at fostering collaboration. For educators and curriculum designers, the identified thematic gaps, particularly the need to move beyond functional skills towards more critical and discipline-specific literacies, can inform the development of more strategic research agendas and highlight the need for a more integrated theoretical base when designing effective curricula.

Finally, the methodological contribution of this paper is a transparent and replicable bibliometric model for analysing a regional research field. Researchers in other regions or disciplines can adopt the multi-stage analysis used in this study to map their own fields, identify similar structural weaknesses, and develop their own evidence-based agendas for future research.

7. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

This study set out to map the landscape of digital literacy research in ASEAN higher education, charting its evolution over the last two decades. We began by tracing the concept of digital literacy itself, from its early focus on technical skills to its modern, holistic understanding as a core competency for life in a digital society. Our literature review confirmed that while this topic is critically important for the region's economic and social future, a comprehensive, long-term overview of the research field was a significant gap.

To fill this gap, we employed a rigorous bibliometric methodology, systematically collecting and analysing 248 articles from the Scopus database. Our findings reveal a fundamental paradox: the field is simultaneously experiencing explosive growth and profound fragmentation. The volume of research has surged, with over 75% of all publications appearing in just the last five years, largely driven by the COVID-19 pandemic. However, this rapid expansion has not led to a cohesive research community. Instead, our analysis uncovered a landscape fractured into national and institutional silos, with minimal collaboration between the most productive researchers and countries. This social fragmentation is mirrored by a disconnected intellectual base, where foundational theories are not shared across the community.

By providing the first empirical evidence of this structural weakness, our study concludes that the field's rapid growth has not yet translated into maturity. The urgent, defining challenge for the coming decade is to move beyond crisis-driven research and begin the deliberate work of building the collaborative and theoretical bridges needed to create a truly cohesive and impactful field of study for the ASEAN region..

Moreover, this study has clear boundaries that point the way for future work. First, our decision to use the Scopus database, while ensuring high-quality and comprehensive data, means that we have not included research from non-indexed regional journals or other platforms like Web of Science. A valuable next step would be a comparative analysis across different databases to create an even more complete map of the field. Second, our analysis was intentionally limited to English-language publications. We acknowledge that this may underrepresent the rich body of scholarship published in the national languages of Southeast Asia, and a future multilingual study, though complex, would be an important contribution..

Finally, to answer RQ4, we propose a future research agenda built directly from the structural gaps this study has identified. To move from a fragmented present to a cohesive future, we argue for three strategic priorities:

1. The most urgent priority is to dismantle the national and institutional silos that currently define the field. To forge a unified regional knowledge base, ASEAN must institutionalize cooperation, moving beyond ad-hoc projects to build lasting collaborative structures. This requires two key actions. First, implementing effective network governance that brings together state and non-state actors is essential (Sundram, 2025). Second, developing a clear regional action plan to guide capacity building is needed, a strategy that has proven effective in other critical sectors (Trajano & Caballero-Anthony, 2020). The foundation for this already exists; successful mechanisms like the Initiative for ASEAN Integration (IAI) provide a model for pooling regional resources to tackle shared challenges (Bae, 2022). By leveraging these frameworks, both new and existing, the influential but isolated research communities in Indonesia, Malaysia, Thailand, and Singapore can finally be connected, creating the representative knowledge base the region needs;
2. Beyond connecting researchers, the field must deliberately weave together its fragmented themes and theories. This requires moving past siloed topics to undertake the challenging work of interdisciplinary synthesis. For instance, by applying established models of "digital literacy" to the modern fight against misinformation. However, such deep, transdisciplinary research cannot succeed without dedicated funding instruments designed to support long-term

investigation (Zscheischler *et al.,* 2017). While ASEAN's global scientific collaborations are growing, the crucial intra-regional partnerships needed to build a shared intellectual core are still lagging (Stek, 2024). To address this, the field needs a new wave of systematic reviews and meta-analyses. The goal of these should not be to simply map the landscape again, but to synthesize the different findings and construct the coherent theoretical framework that the ASEAN context currently lacks. For any of this to be successful, it must be supported by real efforts to build public awareness and acceptance for these regional initiatives (Miranda *et al.*, 2021); and

3. To mature, the field's research agenda must expand beyond its current focus on functional skills and crisis-driven technology adoption. Future studies should explore the broader implications of technology adoption (Nimanandh *et al.*, 2025) and develop tailored policy recommendations to guide the region's digital transformation (Derouez & Ifa, 2025). The agenda must also pivot towards two critical frontiers. The first is critical digital literacy, which involves equipping students with the skills to critically analyze digital sources and navigate ethical challenges (Milković *et al.,* 2025). The second is discipline-specific literacy. A significant gap exists in understanding what digital literacy means for professions like medicine, law, or engineering, which requires a combination of technical, cognitive, and socio-emotional competencies tailored to the unique context of Southeast Asia (Suranto *et al.*, 2025).

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EFFICIENCY OF *WAQF*-BASED SOCIAL ENTREPRENEUR MODEL BY BAITUL WAKAF INDONESIA: SOCIAL RETURN ON INVESTMENT (SROI) APPROACH

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ABSTRACT

This paper aims to demonstrate the efficiency of *waqf*-based social entrepreneurship as a model that has the potential to significantly increase the usefulness and productivity of *waqf*. The novelty of this study lies in its approach towards integrating social entrepreneurship principles with the traditional Islamic *waqf* system, which has rarely been explored in existing literature. This research addresses the urgent need for a sustainable and productive *waqf* development model by focusing on the implementation and social impact efficiency of Baitul Wakaf's *waqf*-based social entrepreneurship initiative. Primary data were collected through interviews and field studies, and analysed using the Social Return on Investment (SROI) method to determine the ratio of investment to social impact. The resulting SROI ratio of 1:2.01369848 indicates a high level of efficiency, suggesting that for every unit of investment, more than two units of social value are created. Compared with other similar SROI-based studies, this result highlights the relative effectiveness of the Baitul Wakaf model in delivering measurable social impact, thus offering a replicable framework for future *waqf*-based development initiatives.

KEYWORDS: SOCIAL ENTERPRISE, WAQF, RETURN ON INVESTMENT, BAITUL WAKAF, INDONESIA

ABSTRAK

Kajian ini bertujuan untuk membuktikan tahap kecekapan keusahawanan sosial berasaskan wakaf sebagai satu model yang berpotensi tinggi dalam meningkatkan keberkesanan dan produktiviti instrumen wakaf. Keaslian kajian ini terletak pada pendekatannya yang mengintegrasikan prinsip keusahawanan sosial dengan sistem wakaf Islam tradisional, satu bidang yang masih kurang dirungkai teroka dalam karya-karya sedia ada. Penyelidikan ini menangani keperluan mendesak terhadap model pembangunan wakaf yang mampan dan produktif dengan memberi tumpuan kepada pelaksanaan serta keberkesanan impak sosial inisiatif keusahawanan sosial berasaskan wakaf oleh Baitul Wakaf. Data primer dikumpulkan melalui temu bual dan kajian lapangan, dan dianalisis menggunakan kaedah Social Return on Investment (SROI) bagi menentukan nisbah pelaburan kepada impak sosial yang terhasil. Hasil kajian menunjukkan nilai SROI sebanyak 1:2.01369848, yang menggambarkan tahap kecekapan yang tinggi, yakni setiap satu unit pelaburan menghasilkan lebih dua unit nilai sosial.

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Berbanding dengan kajian-kajian SROI lain yang sejenis, keputusan ini menyerlahkan keberkesanan relatif model Baitul Wakaf dalam menghasilkan impak sosial yang boleh diukur, sekali gus menawarkan satu kerangka pelaksanaan yang boleh dicontohi untuk inisiatif pembangunan wakaf berasaskan keusahawanan pada masa hadapan

KATA KUNCI: PERUSAHAAN SOSIAL, WAKAF, PULANGAN KE ATAS PELABURAN, BAITUL WAKAF, INDONESIA

1. INTRODUCTION

Waqf, as a *malliyah* or wealth worship, has an important role in improving the welfare of society. *Waqf* plays a role in overcoming social problems, especially poverty, by improving the economy through the construction of public facilities such as schools, hospitals, and mosques (Munawar & Mufraini, 2021). In addition, *waqf* emphasises the aspect of sustainability and encourages the distribution of wealth widely so as to improve the welfare of society in the long run (Fauziah & El Ayyubi, 2019). To further enhance the role of *waqf*, a productive *waqf* scheme was created. This scheme emphasises the transformation of the function of consumptive assets into something more productive or productive (Fauziah & El Ayyubi, 2019). This scheme is carried out by investing *waqf* assets in productive businesses to generate profits, which are then redistributed to the community in accordance with the intention of the person who endowed (Abiba & Suprayitno, 2023). The implementation of productive *waqf* itself in Indonesia has been supported by the government by issuing Law Number 41 of 2004 to provide clear legal certainty for productive *waqf* management (Ascarya *et al*, 2022).

Despite having a legal basis, the reality is that *waqf* is still not very productive in Indonesia. The lack of productivity of *waqf* is inseparable from the general public's understanding that *waqf* is only used to build mosques or religious schools (Ardiyansyah & Kasdi, 2021). The lack of optimisation of *waqf* is unfortunate considering its enormous potential. Based on the *Waqf* Information System (SIWAK), the potential of land *waqf* in Indonesia reaches 55,259 hectares while cash *waqf* reaches 180 trillion but only 1.4 trillion has been realised. Meanwhile, according to Indeks Wakaf Nasional (IWN), the value of the ratio of productive *waqf* and the reach of *waqf* recipients is around 0.130, which indicates less success (Indeks Wakaf Nasional, 2023).

Therefore, it is very important to develop a *waqf* empowerment model so that it can continue to be productive, meaning that the *waqf* assets are actively managed to generate sustainable economic and social returns, rather than remaining idle or limited to traditional charitable uses (Ascarya *et al*., 2022). One of the models that can increase the productivity of *waqf* is the social entrepreneur model. Through investment, social entrepreneurs can solve problems in society through innovative entrepreneurship. With this model, *waqf* can have a wider social impact because it is supported by an entrepreneurial foundation that increases the value of *waqf* sustainably (Fauziah & Kassim, 2022). One institution that has implemented a *waqf*-based social entrepreneur model is Baitul Wakaf. Baitul Wakaf is a *waqf nazir* institution owned by Hidayatullah Foundation located across the Indonesian Region. Although still relatively new, Baitul Wakaf has succeeded in realising productive *waqf* development in various fields such as agriculture, animal husbandry, and retail. In addition, Baitul Wakaf shows better performance efficiency than the average of other *nazir* institutions in Indonesia, where with only half the operational costs, Baitul Wakaf is able to collect and distribute *waqf* as much as 3-5 times compared to the national average (Table 1). This advantage is inseparable from the network of Hidayatullah *Pesantren* or dormitory school branches spread throughout Indonesia, which is able to gather many donors and facilitate the distribution of *waqf* benefits (Qolbi *et al*., 2022).

TABLE 1: COMPARATIVE FINANCIAL PERFORMANCE OF BAITUL WAKAF AND OTHER *NAZIRS* IN INDONESIA (IN RUPIAH)

	Baitul Wakaf	Other *Nazirs*[1]
Operational	8.219.688	15.741.345.077
Assets	4.061.971.964	25.577.107.301
Reception	12.789.196.139	4.479.932.459
Distribution	11.524.302.922	2.255.376.809

Source: Baitul Wakaf financial report, Herindar and Rusydiana (2022*)*

Unfortunately, it is still difficult to measure the success of the model run by *waqf* board due to the absence of a standardised technique to assess *waqf* impact. This measurement is essential as a form of transparency and accountability in *waqf* management. To address this gap, this study aims to evaluate the success of the *waqf*-based social entrepreneurship model implemented by Baitul Wakaf using the Social Return on Investment (SROI) method. This research differs from previous studies in three significant ways. First, unlike most *waqf*-related studies that present impact abstractly, this research quantifies social impact in monetary terms, allowing for clearer assessment of efficiency. Second, while previous SROI studies have primarily focused on ZISWAF institutions (especially *zakat*) and single-type businesses, this study applies the SROI method to a *waqf* institution with diverse business sectors (agriculture, retail, and animal husbandry) like in Table 2. Third, this study provides a replicable framework for applying SROI in *waqf*-based projects, which has not been widely adopted in prior research. These contributions offer practical implications for *waqf* managers and policymakers seeking to enhance the impact and transparency of *waqf* programs.

TABLE 2: SELECTED SROI RESEARCH

Model	Funding type	Ratio	Source
Agriculture	CSR	1:1.37	Matoati *et al.* (2023)
Retail, sport centre, infrastructure	CSR	1:2.98	Lombardo *et al.* (2019)
Education	*Zakat*	1:32	Nusapati *et al.* (2020)
Agriculture	CSR	1:2.34	Suryani *et al.* (2022)
SMES	*Waqf*	1:1.95	Abdusalam and Aditya (2024)

Source : Table by Author

2. LITERATURE REVIEW

Waqf Productive

In language, *waqf* comes from the Arabic *waqafa*, which means to hold, stop, or be silent. In terms, there are several differences of opinion among the scholars. The Shafi'iyah scholars consider *waqf* as utilising the property given while maintaining its integrity, without the intervention of the *waqif* and the results are given for the good so that the *waqif* can get closer to Allah. Meanwhile, according to the opinion of contemporary scholars such as Mundzir Qahaf, *waqf* is giving productive property without personal intervention and utilised in accordance with the purpose of *waqf* either for individuals, groups, or religion. Based on several definitions from scholars, it can be concluded that the definition of *waqf* is the giving of property by someone to be utilised for purposes in the way of Allah(Latifah and Jamal, 2019). *Waqf* itself can be divided into several types. Based on its use, *waqf* is divided into two types, namely direct *waqf* where the principal is used to achieve the purpose of the waqif which tends to be social and directly given (Latifah & Jamal, 2019). The second is productive *waqf*, which is the development of fixed or movable assets with agriculture, production, trade, or other investment models where the profits will be distributed in accordance with the designation of the *waqif* (Halomoan *et al.*, 2022). According to Muhaimin (2022), the implementation of productive

[1] Other *nazir* data were obtained from the average values of several large *nazir* institutions in Indonesia including Yayasan Dompet Dhuafa, Inisiatif Zakat Indonesia, Griya Yatim and Dhuafa, LAZ Muhamadiya, Yayasan Lembaga Manajemen Infaq (Infaq Management Institute), and Yayasan Lembaga Manajemen Infaq.

waqf is an implementation of the *waqf* mandate itself which requires that *waqf* assets should not be left without results so as to reduce the benefits felt by *mauquf alaihi*. Productive *waqf* management can have a great impact on society because with optimal management, *waqf* can be a solution to problems in society such as poverty, unemployment, and inequality (Abiba & Suprayitno, 2023).

Waqf-Based Social Entrepreneur

Social entrepreneurship is a form of entrepreneurship. According to the definition of the Decree of the Minister of Cooperatives and Small Business Development, entrepreneurship is the spirit, attitude, behaviour, and ability of a person in handling a business or activity that leads to efforts to find, create, and apply new ways of working, technology, and products by increasing efficiency in order to provide better services and or obtain greater profits. Meanwhile, social entrepreneurship itself has actually developed in many forms such as foundations or other philanthropic institutions without a standardised reference on the definition of social entrepreneurship. However, there is a common understanding in which *social* entrepreneurship is a model of entrepreneurship to address social problems in society (Nieuwenhuizen & Tselepis, 2022)**.** At least, there are 9 models of social entrepreneurship as shown in Table 3.

Table 3: Types of social entrepreneurs

Business model	Explanation
Entrepreneur support model	Support for community businesses either as consultants, funding, or other forms of support
Marketing intermediary model	Selling products made by the community
Employment model	Employing people where the profits from the work are given to the needy
Fee-for-service model	Charging for social services provided such as schools or hospitals
Low-income service	Social services for people with low income
Cooperative model	The business is run like a cooperative where the *social entrepreneur* will offer membership benefits.
Market linkage model	Connecting sellers and buyers, especially for bulk purchases.
Service subsidisation model	Funding of social programmes from profits earned through business operations
Organisational model	This model allows *social entrepreneurs* to secure external funding

Source: Fauziah and Kassim (2022)

Based on the model of *social entrepreneurs*, it can be understood if there is an alignment of values that allows the two can work together. *Waqf* offers social capital which is an enduring value of the trust relationship between *wakif*, *nazir*, and *mauquf alaihi*. The utilisation of this social capital is very important to develop social entrepreneurship in order to provide sustainable benefits. This alignment makes social entrepreneur an alternative to productive *waqf* development (Ridwan, 2021). To implement this, underprivileged people can apply for their business to be financed by the *nazir*. The *nazir* can also create a company that uses the social entrepreneur model. Then the profits are channelled out as operational capital for businesses and social welfare projects such as education, health, and other facilities (Fauziah & Kassim, 2022).

3. METHODOLOGY

Research Type and Data Source

The type of research used is quasi-qualitative or pseudo-qualitative research. It is said to be pseudo because it is considered similar to quantitative research, especially in placing theory on the data obtained. This research also uses data triangulation to qualitatively analyse the effect of the data. This approach will help in explaining the results of the SROI calculation which has its own framework (Gunawan *et al*., 2021). This research also uses a field study approach in business entities owned by the *waqf* board. The selection of business entities to be studied pays attention to information from the *waqf* board, including programme sustainability, social impact clarity, benefits obtained, and the ease of contacting related informants. These factors were the main considerations in determining the research subjects. The data sources for this research are divided into two, namely primary and secondary data. Primary data are a source of data obtained directly from sources without intermediaries. Primary data in this study were obtained through interviews and observations. An interview is a data collection technique that is carried out with questions and answers with sources (Trivaika *et al*., 2022). Meanwhile, observation is a direct observation in the field with all five senses (Abiba & Suprayitno, 2023). Interviews were conducted in three stages. First, an interview was held with the Director of Baitul Wakaf as the person in charge of the programmes and funding. This aimed to gain a general overview and to help identify further informants. Second, interviews were conducted with the Head of Hidayatullah Bekasi Islamic Boarding School and the Operational Manager of Sakinahmart Surabaya as programme implementers to explain how the programmes operate and what benefits are achieved. Third, interviews were conducted with programme beneficiaries (e.g., *santri* and local workers) to confirm whether the intended benefits were received effectively. In addition to interviews, field observations were carried out to directly observe the operational activities of the businesses and verify whether the programmes were running effectively.

Meanwhile, secondary data is a source of data obtained indirectly or by intermediaries. Secondary data sources in this study were obtained through documentation studies or document reviews by collecting information from existing sources such as institutional profiles and financial reports (Abiba & Suprayitno, 2023). Secondary data in this study also included reference journals related to *waqf*, data from the Badan Wakaf Indonesia (BWI), and internal reports from Baitul Wakaf. These were used to gain a broader understanding of the *waqf* landscape in Indonesia and to support the identification and initial assessment of the programmes being studied.

Data Analysis

This research used the SROI approach in analysing the social impact of the *waqf*-based social entrepreneur model run by Baitul Wakaf. SROI or social return on investment works by measuring the efficiency of an investment given to a programme to deliver social impact (Kim & Ji, 2020). The magnitude of the impact is then defined in economic and financial terms with a *cost-benefit* analysis based on the changes that occur (Basset, 2023). The SROI method is widely used by companies and charities to measure the success of their social programmes. SROI was chosen because of its ability to measure the long-term effects of the programme, provide evidence of the impact produced, and become material in determining financial decisions (Lombardo *et al.,* 2019). This is what makes SROI very suitable for use by social institutions, especially in conducting evaluations and also as a consideration in determining the next programme (Rahman Allawi *et al*., 2021).

To conduct an SROI analysis, several steps must be taken. According to Nicholls *et al.* (2015) in the SROI Guidebook, SROI analysis is carried out in the following stages:

1. Identify the programmes and parties involved in the model under study. In this case, the research will begin by identifying what *social entrepreneurial* programmes Baitul Wakaf has and how the business is managed;
2. Furthermore, mapping the impact so that the relationship between input, output, and outcome is obtained. The research will begin to identify what benefits are felt by *mauquf alaihi* as the target of the Baitul Wakaf programme both directly and indirectly;
3. Monetising all impacts. In this study, all impacts or benefits felt by the community will be converted into monetary values with a benchmark as in Table 5. For economic impacts that do have a monetary value, the value will be used directly, while for social impacts, another approach will be used, namely the value that would have been spent in the absence of the programme;
4. To further validate the calculations, several estimates will be used, including *deadweight* (benefits not affected), *displacement* (impacts that reduce benefits), *attribution*

(contribution value), and *drop off* (reduction in benefit value over time). Among these estimates, only attribution was used because all programmes were fully contributing benefits, so there was no deadweight value. All programmes also do not provide losses so there is no displacement. Also, all programmes showed no reduction in value so there was no drop off;

5. Next, calculate the SROI value with the SROI ratio formula, namely:

$$\frac{\textit{Net present value of outcome}}{\textit{Net present value of investment}}$$

   A programme can be considered successful if the ratio obtained is more than 1:1. In this research, the programme run by Baitul Wakaf can be said to be successful if the total impact value is greater than the value of the *waqf* given;

6. After obtaining the SROI value, the next step is to compare the value with the SROI value of other institutions to find out how successful the programme is. This research will use studies that have similar business types or financing models as a comparison; and
7. Provide evaluation and suggestions to related parties. In this study, the evaluation and suggestions are aimed primarily at Baitul Wakaf as the institution that funds the programme by considering the various advantages and benefits of the programme as well as some weaknesses that can be improved.

4. FINDINGS

Baitul Wakaf Profile

Baitul Wakaf is one of Hidayatullah's *nazir* institutions. *Nazir* itself can be defined as a person or group trusted by the *waqf* or the person who endowed the *waqf* to manage the *waqf* property so that it can be given to the community. Although scholars do not include *nazir* as a pillar that must be fulfilled, in this day and age, the role of *nazir* is needed to maximise the benefits of *waqf* assets (Halomoan *et al.*, 2022). Baitul Wakaf was formerly part of Baitul Mal Hidayatullah (BMH) which is owned by Hidayatullah, one of big muslim organisation in Indonesia. BMH focuses on collecting, managing, and distributing Ziswaf funds. However, it was felt that there was a great need to have an institution that focuses on managing *waqf*, considering that there are quite a lot of *waqf* assets owned by Hidayatullah. Hence, starting in 2018, a special division was formed to take care of *waqf* in BMH. This division later developed into Baitul Wakaf.

One of the main focuses of the *waqf* board is to develop the *waqf* assets owned by Hidayatullah. This development is very important because most of the *pesantren* assets are not very productive even though there are many demands for *pesantren* financing. With the productivity of these *waqf* assets, it is hoped that the proceeds will be able to support the operations of Hidayatullah *Pesantren*. The empowerment of *waqf* assets is done by financing businesses owned by Hidayatullah's *pesantren* or other business entities where the profits will be channeled back to the community through Baitul Wakaf's social programmes or directly enjoyed by the *pesantren* residents.

Program Overview

This research focuses on the *waqf*-based *social entrepreneurship* programme developed by Baitul Wakaf. However, from Baitul Wakaf's programmes of agriculture, livestock, fisheries, and retail, this research will only focus on agriculture and retail. This determination was made based on recommendations from Baitul Wakaf and corroborated by information from other business entities that stated that the programmes with consistent impacts were productive rice field *waqf* and retail *waqf* while several other programmes had less consistent results, making it difficult to conduct research on the impact of these programmes. There are also obstacles in contacting sources that make this research only focused on productive rice field *waqf* and retail *waqf*.

The social entrepreneur model studied is the entrepreneur support model, where Baitul Wakaf funds Hidayatullah-owned businesses. In addition, Baitul Wakaf also uses the *employment model* and *subsidisation service model* where the businesses funded employ the surrounding community and the profits from the businesses are used for social purposes. The two businesses funded by Baitul Wakaf are:

Productive rice field *waqf*

In this programme, Baitul Wakaf distributed *waqf* assets in the form of a 1-hectare plot of land and seeds worth 1.1 billion to Hidayatullah Bekasi Foundation located in Karangpatri Village, Pabuyaran District, Bekasi Regency, Indonesia to be cultivated as rice fields to meet the consumption needs of *santri* and ustadz's families. The seeds used are *Cihereung* seeds which are widely used in Karawang, one of the main rice production region in Indonesia. For the fertiliser itself, using homemade liquid fertiliser from natural ingredients such as fruit peels and given 3 times a week. Likewise, pesticides are made from tobacco and other plants. The use of natural ingredients in addition to preserving the ecosystem also significantly reduces production costs. This means that in managing the rice fields, almost no costs are incurred other than the initial capital in the form of seeds and land. Therefore, this programme does not require additional funding from the *waqf* board. In fact, the *pesantren* can then improve its management by purchasing water pumps and ploughing machines.

The management of this rice field is carried out independently by Hidayatullah Bekasi by involving *santri*. The involvement of these *santri* also increases knowledge and skills, especially in agriculture. In addition, the *pesantren* also involves families around the *pesantren*, totalling 20 families, to participate in managing the rice fields, especially in the harvest season. In return, families who help will get profit sharing in the form of grain. From this rice field, a net harvest of 4 tonnes is obtained. One tonne is then sold while the rest is stored for consumption by *santri* and *pesantren* residents. In addition to large yields, the *pesantren* also gets husks as a by-product of rice milling. This husk is then processed again into vegetable fertiliser and also chicken feed.

The existence of this rice field has had a significant impact on the *pesantren* and the surrounding community. Previously, the biggest expense of the *pesantren* was rice. The majority of donor money was channelled to meet the needs of rice. When this programme has been running well, the *pesantren* can allocate the budget previously earmarked for rice to other financing posts such as financing the college of some *santri* who serve after graduation. In addition, the *pesantren* can allocate the budget to start new businesses such as chicken and goat farming so that it can be used as another source of food for *santri*.

This productive rice field *waqf*, although quite a large expenditure at the beginning, is very beneficial both socially and economically in the long run. The *pesantren* can become independent, especially in terms of food and even be able to establish various businesses as well as finance the education of its *santri*. It is planned that in the future the *pesantren* will finance a business that will be run independently by some of its *santri*. This model can also be said to be very risk-resistant where so far, the rice fields have been able to survive various pests with the use of natural pesticides and continue to produce rice consistently even in the dry season through good irrigation management. If there is any threat, it is the 7-year flood cycle of the Citarum River.

Waqf retail

In this programme, Baitul Wakaf collaborates with Sakinahmart which is a network of cooperatives spread mainly in Surabaya. Sakinahmart itself is a retail business previously owned by *Pesantren* Hidayatullah Surabaya and established in the late 90s. However, but then Sakinahmart began to stand on its own as an independent business entity that has more than 20 branches and spread in various regions such as Surabaya, Kediri, and also Depok. Sakinahmart is one of the fastest-growing retail chains. Within a year, Sakinahmart can establish 3-4 branches. The profit of each branch is also large, reaching up to 100 million per month and visiting up to 1000 people. This growth is inseparable from the consumer base that Sakinahmart has, especially in Surabaya where many *santri* have been shopping at Sakinahmart for a long time. Not to mention the network of suppliers owned by Sakinahmart allows it to supply a complete range of products at low prices.

The cooperation carried out by Baitul Wakaf by purchasing land and buildings on Jl. Tambak Deres and Jl. Gunung Anyar, Surabaya worth 1 billion. The scheme is a profit-sharing system plus principal repayment where the principal will be paid off in 5 years. Meanwhile, profit sharing is done with a portion of 50% of the monthly profit. The income from the *waqf* board's investment is then used by the *waqf* board to fund various other social programmes. In addition, Sakinahmart also has its social programme by providing basic food assistance to the community around the branch.

Monetisation value calculation

Based on the impact felt after the two programmes, the value of the impact was converted into monetary units. Impacts that have a financial measure such as asset value and income, the value will be directly included. Whereas non-financial impacts, such as training, are monetised using a price approach that would be paid if implemented by other organisations. The monetisation results are in Tables 4 and 5.

TABLE 4: CALCULATION OF MONETISATION OF PRODUCTIVE RICE FIELD *WAQF* PROGRAMME

Impact	Monetisation Formula	Calculation	Attribution	Total
Fulfilment of food needs of 70 *santri* and families of ustadz in *pesantren*	Average rice price x amount of rice consumed (3 tonnes) x number of harvests (11)	11,144 x 3000 x 11	100%	377.520.000
There are 4 *santri* who can continue their studies for free	Tuition fee + Semester fee (for 4 *santri*)	25.500.500+ 20.000.000	100%	45.500.000
People who participate in managing rice fields get profit sharing in the form of grain	Average price of dry grain at farm level x Ration given (900 kg) x number of harvests (11)	5,732 x 900 x 11	100%	56.746.800
Santri gain increased skills because they are involved in the management of rice fields	Price of training at an outside institution (*sentratani*) x number of *santri* attending training (50)	1.600.000 x 50	100%	80.000.000
Pesantren get capital for livestock business	Goat seed capital + Chicken seed capital	18.000.000 + 2.000.000	100%	20.000.000
Pesantren gains additional assets and profit from rice sales	Total sales per harvest x number of harvests (11) + Increase in boarding school land assets	15.000.000x 11+1.000.000.000	100%	1.180.000.000
Pesantren gets chicken feed and vegetable fertiliser	Chaff price per kg at X amount of chaff produced (1000kg) x number of	5000 x 1000 x 11	100%	55.000.000

from the husks from the rice mill	harvests (11)			
Total				1.814.766.800

Source: Table by Author

TABLE 5: RETAIL *WAQF* PROGRAM MONETISATION CALCULATION

Programme	Monetisation formula	Calculation	Attribution	Total
Profit sharing	Profit per month x number of months running (48) + principal repayment	25.000.000 x 48+1.000.000.000	100%	2.200.000.000
Basic food assistance	Budget value per year for groceries x number of years in progress	100.000.000 x 4	5.5%	22.000.000
Consumer savings	Total value of discounts given per month x number of months running (48)	8.000.000 x 48	50%	192.000.000
Total				2.414.000.000

Source: Table by Author

Based on Table 4, the output value of the productive rice field *waqf* programme is Rp.1,814,766,800. When compared to the input value of Rp.1,100,000, an SROI value of 1: 1.6149788 will be obtained. Then from Table 5, the output value of the retail *waqf* programme is Rp.2,414,000,000 when compared to the input value of the programme of Rp.1,000,000,000, an SROI value of 1: 2.414 is obtained. Then by adding up the two input and output values and comparing them, the SROI value of Baitul Wakaf's *waqf*-based *social entrepreneur* programme will be obtained as follows:

$$Rasio\ SROI = \frac{1.814.766.800 + 2.414.000.000}{1.100.000.000 + 1.000.000.000}$$

Based on this formula, the SROI value of Baitul Wakaf's *waqf*-based *social entrepreneur* programme is 1: 2.01369848 or in other words, every investment of Rp.1 made by Baitul Wakaf on its programme will provide an impact value of Rp.2,01369848.

5. DISCUSSION

Comparison of SROI Outcomes for the Waqf Board

Based on the SROI calculation, the social value generated from the *waqf*-based social entrepreneur programme run by Baitul Wakaf is 1:2.01369848 This value is above the established threshold of 1:1 (Nicholls *et al*, 2015), so it can be said that this programme is running efficiently. This result also means that the *waqf* run by Baitul Wakaf has succeeded in providing benefits both from a social and economic perspective. When compared with the results of SROI research from *zakat* institutions such as research by Nusapati *et al* (2020) on the SMART Ekselensia programme of 1:32, the SROI value of Baitul Wakaf is much smaller. These results can occur because the subject of the research is education so the funds invested are entirely focused on having an impact on society. While the investment made by Baitul Wakaf also considers business sustainability. However, but when compared with the SROI value in *waqf* institutions such as Abdusalamand Aditya's research (2024), which examines MSMEs fostered by Rumah Wakaf, the SROI value of Baitul Wakaf is higher. This is inseparable from the nature of the capital owned by Baitul Wakaf is immovable assets whose value tends to be more stable. Moreover, in business terms, businesses funded by the *waqf* board tend to generate stable profits.

Meanwhile, when compared with the results of SROI research on agricultural programmes such as research by Suryani *et al* (2022) on PLN's CSR programme of 1:2.34 and Matoati *et al.* (2023) on CSR Pertamina worth 1.37 as much as the SROI value of Baitul Wakaf is almost the same and even more. This can happen because the Baitul Wakaf programme uses organic methods that do not require much expenditure on fertilisers or pesticides and produce more than ordinary rice fields. So that even though compared with processed products, the profit value of productive rice fields is greater. Meanwhile, when compared to research Suryani *et al.* (2022) the SROI value of productive *waqf* owned by Baitul Wakaf is smaller because most of the crops are used for self-consumption not for sale.

The SROI value of Baitul Wakaf's retail *waqf* programme is also smaller than the SROI value in research by Lombardo *et al* (2019) on Virtus Entella's store of 1:2.98. The difference may occur due to the research setting Lombardo *et al.* (2019) uses a Football club in Europe that has a wider capital and market reach than Sakinahmart. Moreover, the study also calculated the value of the impact of the community programme that was run.

Programme Evaluation
Based on several comparisons, Baitul Wakaf has shown its success in productive *waqf*-based social entrepreneurship programmes. This success can be achieved within 4 years with an increase in the value of *waqf* benefits by more than two times. Moreover, the investment made by Baitul Wakaf is only once, showing that social entrepreneurs can develop *waqf* sustainably. The success of Baitul Wakaf is inseparable from its risk management. Instead of financing businesses directly, Baitul Wakaf chooses to invest in immovable assets such as land and buildings that are then utilised as business capital. This is much safer because the value of the assets tends to remain and even increase so that even if there is a loss, the value of the *waqf* assets will still remain.

In addition, in its business process, the *waqf* board’s business partners have proven successful in increasing the value of *waqf*. Sakinahmart is a retail chain with many branches, especially in Surabaya, with 300-350 visits per branch. Sakinahmart also has many supplier networks so that it can provide competitive retail prices. Meanwhile, Hidayatullah Bekasi applies the concept of organic farming in managing rice fields. This means that from seeding, fertilisation, to pesticides, all use natural ingredients found around the fields. This method has proven to be effective in maintaining the fertility of rice fields and the resistance of rice to disease. In fact, the number of harvests can be many times more than that of ordinary rice fields.

Another factor in the success of the two programmes is the social commitment of both managers. Sakinahmart has always run a free food distribution programme for the poor and made it easier for Hidayatullah *Pesantren* residents to shop, thus forming a good image for the company. Sakinahmart has also developed a network with university *santri* to build customer loyalty over a long period of time.

Further, Hidayatullah Bekasi also has a high commitment to empowering its *santri*. For example, through scholarships and the involvement of *santri* in managing rice fields. This is an added value for donors who then become regular buyers of rice from Hidayatullah Bekasi. In addition, community empowerment by employing local residents also adds to the good image of the *pesantren*.

Unfortunately, the *waqf* board is still lacking in overseeing the performance of its business partners. Based on interviews, it was found that the *waqf* board lacks coordination with its business partners and tends to just wait for the final report. This can have a fatal impact if there are problems with business partners in the future. Baitul Wakaf. In addition, Baitul Wakaf also tends to be slow in developing this programme where within 4 years, there are only a few businesses invested. Baitul Wakaf is also still reluctant to add *waqf* assets to be managed by partners who have proven successful. Even though with the existing potential, Baitul Wakaf can have a higher social impact value.

6. IMPLICATIONS/CONTRIBUTIONS

Based on this research, the scope in SROI needs to consider the value of development assets and depreciation both in the current and future periods as well as measuring the added value and damage to the surrounding environment to get more accurate social impact value results. Researchers also hope that the use of *waqf* terminology is expanded so that the value of the impact of *waqf* can be obtained more broadly. This research is also expected to be a reference for Baitul Wakaf in evaluating the success of its program as well as for other *nazir* institutions as a consideration for creating similar programs. The research is also expected to initiate the assessment of the impact of *waqf* using the SROI method. This research aims to be an evaluation material for Baitul Wakaf in developing *waqf*-based social entrepreneurship programs. Furthermore, this research is expected to serve as a reference for a social impact measurement framework for similar programs run by other institutions so that it can have a greater social impact.

7. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

This research is based on the need for a tool that can prove the efficiency of a *waqf*-based social entrepreneur model that has the potential to increase the benefits of *waqf* and its sustainability. This research uses the SROI (Social return on investment) approach in consideration of its ability to define social impact in financial terms. This research also takes a case study of Baitul Wakaf which has a *waqf*-based social entrepreneur programme in the form of retail *waqf* by Sakinahmart, Surabaya and productive rice field *waqf* by *Pesantren* Hidayatullah Bekasi. Based on this research, it can be concluded that the *waqf*-based social entrepreneur programme run by Baitul Wakaf Hidayatullah runs efficiently in providing a positive impact on both the community, the *pesantren* residents, and the institution itself. The SROI value in the two models run by Baitul Wakaf is 1: 2.01369848. This value is greater than the SROI value in several other studies.

Based on the results of the research conducted, researchers recommend that Baitul Wakaf pay more attention to its productive *waqf*-based social entrepreneur programme by increasing capital and supervision on programmes that have proven successful and creating similar programmes elsewhere. For other *nazir* institutions, researchers recommend similar steps taken by Baitul Wakaf to improve the sustainability of *waqf* assets. As for the government, it is expected to pay attention to the development of *waqf*-based social entrepreneurs through training support and ease of licensing aspects.

Even then, this research is still limited to the work programmes of the *waqf* board that have been running effectively and is limited to two types and does not consider environmental impacts due to difficulties in determining the calculation approach. For future research, it is recommended to examine other forms of social entrepreneurship. Researchers also recommend calculating environmental impacts so that SROI calculations can be more accurate.

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TERMINOLOGIES
- *Malliyah = Property*
- *Mauquf alaihi = Beneficiary*
- *Pesantren = Boarding school*
- *Santri = Student*
- *Waqf = Endowment*
- *Waqif = Donor*

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MALAYSIAN PERCEPTIONS OF *SHARIAH* GOLD INVESTMENT IN THE DIGITAL ERA

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ABSTRACT

Malaysian perceptions are significantly influencing the proliferation of *Shariah* gold investments (SGI) in today's digital era. This study aims to assess the level of public exposure, engagement and perception of Islamic gold products. A descriptive quantitative approach was used through the distribution of questionnaire to 101 respondents who demonstrated investment propensity in gold. The study instrument consisted of three (3) sections including Section A on the respondents' exposure and involvement, Section B on the Malaysian perceptions of SGI characteristics and followed by demographic profile of respondents in Section C. The data were analysed using Statistical Package for Social Sciences (SPSS) version 30 to produce frequencies, percentages and mean scores to identify general patterns in investment behaviour. Derived from the findings, *Shariah*-compliance assurances and user-friendliness of digital platforms were the key drivers of investor adoption. However, despite growing awareness, actual engagement remains low. As a result, investor financial education, *Shariah* branding and operational transparency of investment platforms are needed to bolster SGI. Furthermore, this study is limited to descriptive analysis, non-probability purposive sampling and draws upon self-reported responses. Hence, it provides an important initial contribution to understanding investor preferences towards SGI and offers preliminary basis for further exploratory and explanatory studies in the future.

KEYWORDS: DESCRIPTIVE STUDY; DIGITAL PLATFORMS; INVESTOR PERCEPTION; ISLAMIC FINANCE

ABSTRAK

Persepsi rakyat Malaysia memainkan peranan penting dalam mempengaruhi percambahan pelaburan emas Syariah dalam era digital pada hari ini. Kajian ini bertujuan untuk menilai tahap pendedahan awam, penglibatan dan persepsi terhadap produk emas Islam. Pendekatan kuantitatif deskriptif telah digunakan melalui pengedaran soal selidik kepada 101 responden yang menunjukkan kecenderungan pelaburan dalam emas. Instrumen bagi kajian ini mengandungi tiga (3) bahagian iaitu Bahagian A adalah berkaitan dengan pendedahan dan penglibatan responden, Bahagian B menjelaskan persepsi rakyat Malaysia terhadap ciri-ciri pelaburan emas Syariah dan diikuti dengan maklumat demografi responden di Bahagian C. Data telah dianalisis menggunakan Pakej Statistik untuk Sains Sosial

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(SPSS) versi 30 bagi menghasilkan frekuensi, peratusan dan skor min untuk mengenal pasti corak umum dalam tingkah laku pelaburan. Berdasarkan dapatan kajian, jaminan pematuhan Syariah dan platform digital yang mesra pengguna merupakan pemacu utama penerimaan pelabur. Walau bagaimanapun, walaupun kesedaran terhadap pelaburan emas Syariah semakin meningkat, penglibatan sebenar masih rendah. Maka, pendidikan kewangan kepada pelabur, penjenamaan Syariah dan ketelusan operasi platform pelaburan adalah perlu untuk memperkukuh pelaburan emas Syariah. Selain itu, kajian ini terhad kepada analisis deskriptif, persampelan bertujuan bukan kebarangkalian dan menggunakan respons yang dilaporkan sendiri. Oleh itu, kajian ini memberikan sumbangan awal yang penting untuk memahami keutamaan pelabur terhadap pelaburan emas Syariah serta menawarkan asas awal untuk kajian penerokaan dan penjelasan lanjut pada masa hadapan.

KATA KUNCI: KAJIAN DESKRIPTIF; PLATFORM DIGITAL; PERSEPSI PELABUR; KEWANGAN ISLAM

1. INTRODUCTION

The convergence of Islamic finance and financial technology (FinTech) has promoted the emergence of innovative investment products including *Shariah* gold investment (SGI). Long ago, possessing gold typically involved a traditional approach where the individual buying it in physical form (e.g., jewellery, gold coin, gold bar) from physical gold shops, pawnshops or individual sellers. In simple terms, the gold buyers can pay in cash, instalment or gold savings circle; in local context known as "*kutu*" where a groups, often women participate the money-pooling group to afford gold. Upon payment, the gold buyers received their gold as exchange immediately (i.e., *bay' al-sarf* in the context of *Shariah*) depending on their preference and financial goals. Later in 2001, Bank Negara Malaysia introduced of Kijang Emas Gold Bullion as an initiative to foster Malaysians' investment in domestic gold products. Thereafter, Kelantan Gold Dinar was introduced in 2006 followed by Public Fine Gold International Sdn Bhd (Public Gold) in 2008. Remarkably, in 2010, Kuwait Finance House Malaysia launched the first *Shariah*-based gold investment account which portrays the evolution of innovation features for gold investment platforms. Owing to this, the methods of buying gold have shifted significantly with the emergence of digital technology.

In today's digital era, gold investment remains relevant in physical form, but is increasingly shifting towards digital platforms provided by financial institutions and private companies. For banking institutions, gold account commonly known as gold savings account (GSA) or gold investment account (GIA). Maybank Investment Gold Account (MIGA-*i*), Bank Rakyat eGold Account-*i* and Bank Muamalat EasiGold are among Banks in Malaysia that provides gold account avenue. The investment landscape continued to change, driven by technological advancement and the growing popularity of mobile apps and online platforms which ultimately bringing SGI into the age of digital convenience. Effortlessly, executing gold investments in FinTech practices means no longer visiting into a physical branch since its only require three things. First, tech gadgets (e.g., smartphone, tablet or laptop). Second, internet access for cashless transaction. Third, sufficient amount of capital. Going beyond, Figure 1 portrays eight steps investing in SGI. The potential investors may begin with gathering information, exploring platforms and its features through official websites, products disclosure sheet, social media and word of mouth for awareness and understanding.

Given the existing interest, comparing and verifying various SGI platforms is needed before deciding the chosen platform. When comparing, it including of product features, fees, ease of use and customer review. On the other hand, verifying the chosen platform involves checking their valid certification, transparency and compliance to *Shariah* rulings. Subsequently, potential investor can sign up and register online via apps or websites to complete a Know Your Customer (KYC) process. Once registered, the initial amount of money is transferred online to the gold service provider, usually via online fund transfer, Financial Process Exchange (FPX), instant transfer (e.g., DuitNow), Interbank GIRO (IBG) and E-wallet transfers. In Malaysia, most of gold service provider offer initial investment as low as RM10 to cater wider audience, making SGI highly accessible. Furthermore, through digital nature platform, investors are accessible monitoring their portfolio performance in real time including gold prices, buy, sell or redeem the gold anytime and anywhere with digital devices. Finally, the gold platforms often provide frequently ask questions (FAQ), learning tools or educational resources to help investors strengthen their investment knowledge and build long-term financial confidence in gold investment.

FIGURE 1: 8 STEPS INVESTING IN *SHARIAH* GOLD INVESTMENT (SGI)
Source: Figure by Author

Although SGI has gained awareness among Malaysians, actual involvement remains low. Obviously, this shows that greater awareness does not lead to action (Wan Jusoh & Harun, 2024). Given the limited empirical research on the actual adoption and public engagement with SGI, the present study conducting a preliminary descriptive study gathering 101 respondents from East Malaysia, Labuan. The preliminary study allows researchers to identify key patterns, investor behaviours and contextual variables before applying more complex analytical models (Saunders *et al*., 2016). Additionally, through preliminary studies, it contributes to discover knowledge gaps and serve as a foundation for theory-building (Bryman, 2012). Particularly, in studies relating to religious or investment decision-making that offer authentic viewpoints behaviour beyond theoretical assumptions. In the context of this study, this approach provides valuable perception into how investors perceive and interact with Islamic digital gold platforms nowadays. Hence, the research objectives of this study consist of three folds:

- To explore Malaysians' exposure and involvement in SGI;
- To examine Malaysians' perceptions towards SGI; and
- To explore the demographic characteristics of Malaysian investors.

2. LITERATURE REVIEW

Shariah compliance constitutes the cornerstone of *muamalat* in Islam that underpinning for fairness, transparency, accountability and ethical investment decision-making in financial dealings. Obviously, adherence to Shariah principles is embedded in robust Shariah governance frameworks and transparent reporting mechanisms in Islamic financial. In more details, the prohibition of *riba* (interest), *maysir* (gambling) and *gharar* (uncertainty) on SGI framework serves as an essential tenet in upholding *Shariah* requirement to be executed with utmost transparency, equal and ethical practices. According to Ghazali *et al*. (2015), *taqābudh* (immediate ownership and mutual delivery), valid evidence or certificates of entitlement are significant criteria to look for when investing in SGI. These criteria necessitate that investors secure possession of the physical gold that avoid *gharar* (uncertainty) in transactions. Ultimately, the evolving of SGI in Malaysia from physical gold holdings to innovative mechanisms of digital platforms allowing investors involve with gold investment conveniently and accessible through online systems. Besides, a study by Agha *et al*., (2015) asserted that various gold investment modalities (e.g., physical gold, gold account, blockchain-based and gold ETFs) within an Islamic framework, emphasizing the necessity of *Shariah* compliance alongside its diversification benefits.

Amin (2016) was earlier research on behavioural studies of gold investment employed behavioural models of Theory of Reasoned Action (TRA). In his study, attitude and subjective norm are significantly affect the willingness of Muslim male in East Malaysia, Labuan to open Islamic gold investment. Furthermore, this study extends three independent variables namely perceived financial benefit, consumer religiosity and consumer information. Additionally, a study in Penang, Malaysia was conducted using Islamic Theory of Consumer Behaviour (ITCB) (Juisin *et al*., 2023). Their study accentuates the components of faith, Islamic altruism and *Maqasid al-Shariah* when investing in gold. This indicate Malaysian perceptions of SGI are influenced by a mix of rational, cultural and emotional considerations. Moreover, Hamdan *et al.* (2025) examine Malaysian consumers' intention to use digital gold platforms extended the UTAUT model. The variables of performance expectancy, effort expectancy, trust and *Shariah* compliance results depicted as significant predictors, while facilitating conditions and social influence were less impactful.

On top of that, investors' actual participation on SGI has a limited empirical data that has been investigated, beyond their beliefs or theoretical assumptions. According to Wan Jusoh and Harun (2024) findings, awareness on SGI among young Muslim depicted a greater result revealing generational variances in financial literacy in Terengganu, Malaysia. Besides, many Muslim professionals are eager to participate in gold investment; however, they are often unaware of the SGI products that are available in the market. This highlights a scarce factor between investment interest and product awareness (Nadhirah *et al*., 2015). Conversely, Abas *et al*. (2023) study is not based on individual attitudes and perceptions. Their study has thoroughly deliberated the current SGI models specifically *bai' sarf, musawamah, qard, tawarruq, ujrah, wa'd, wadiah* and *wakalah* provided comprehensive documentation of contract types and analysing the structural design of related gold investment products. Correspondingly, Ezahar *et al*., (2020) research has analysed a digital gold platform from a *Shariah* contract perspective that emphasising the four pillars of the contract encompasses of price, offer and acceptance, subject matter and involved parties.

Nevertheless, this study is based on descriptive analysis. Several behavioural theories such as Theory of Planned Behaviour (TPB), Innovation Diffusion Theory (IDT), Technology Acceptance Model (TAM) can provide wider context of actual behaviour and intentions towards SGI. The extended predictors for instance *Maqasid al-Shariah* can be included in future research emphasizing the factors on welfare, fairness and security in SGI transactions. Undenied, theories provide a framework for comparison. In contrast, current study excluded the use of inferential models and structural equation modelling (SEM). As a result, the current study conducted preliminary descriptive studies that quantitatively assess general consumer perceptions, compare awareness with actual investment intentions, test perceptions based on demographics and provide initial data as the basis for further models. This study filling these gaps and adding important data to the literature of SGI in Malaysia setting. Furthermore, this study underlines *Shariah* compliance through contracts, digital systems or behavioural theory. Hence, this preliminary finding provides a foundation for future research employed exploratory and explanatory study in the context of SGI.

3. METHODOLOGY

A preliminary survey was conducted in East Malaysia, Labuan involving of 130 respondents. An online and offline self-administered questionnaire is used for the purpose of data collection. The use of both online and offline approaches enabled flexible participation to complete the questionnaire. Furthermore, non-probability purposive sampling technique is employed, targeting individuals who met three (3) specific criteria to be included as respondents: First, Malaysian citizen. Second, an individual who are 18 years old or above. Third, currently invest or intend to invest in gold. Following, the data collection was complete within three (3) weeks period. Upon completion of data collection, a total of 101 respondents were validated and deemed suitable for descriptive statistical analysis. Statistical Package for Social Sciences (SPSS) software version 30 was used in conducting the analysis including data cleaning, computation of frequencies, percentages, means and standard deviations. These data are used to summarize of the findings and provide preliminary insights. Thus, all respondents participated in this study voluntarily and their responses were kept strictly confidential throughout the study.

TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS

Profile	Description	Frequency (n)	Percentage (%)
Gender	Male	43	42.6
	Female	58	57.4
Age	18 – 28 years	27	26.7
	29 – 44 years	60	59.4
	45 – 60 years	13	12.9
	61 – 79 years	1	1
Marital status	Single	47	46.5
	Married	54	53.5
Level of education	SPM	28	27.7
	Diploma / STPM / STAM	30	29.7
	Bachelor's Degree	32	31.7
	Master Degree	10	9.9
	PhD	1	1
Employment status	Government sector employee	75	74.3
	Private sector employee	11	10.9
	Self-employed	2	2
	Student	6	5.9
	Retired	1	1
	Others	6	5.9
Monthly income	Below RM1,000	13	12.9
	RM1,000 – RM2,999	35	34.7
	RM3,000 – RM4,999	41	40.6
	RM5,000 – RM6,999	8	7.9
	RM7,000 – RM10,999	4	4
Religion	Muslim	92	91.1
	Non-muslim	9	8.9
Ethnicity	Malay	39	38.6
	Chinese	3	3
	India	1	1
	Bumiputera Sabah	56	55.4
	Bumiputera Sarawak	2	2

Source: Table by Author

Besides, the questionnaire comprised of three (3) sections; Section A: exposure and involvement that best reflects their level of exposure and involvement related to SGI. Section B: perception on gold investment based on respondents' level of agreement. For this part, perception items measured using a 5-point Likert scale where the indicators as such 1- strongly disagree, 2-disagree, 3-slightly agree, 4-agree and 5-strongly agree. Section C of the questionnaire capturing the demographic profile of respondents. As depicts in Table 1, the data representing a diverse demographic profile in terms of age, education, employment status, monthly income and ethnicity. From the total of 101 respondents, most of them were female which is 57.4% (n = 58) and 42.6% (n = 43) were male. The respondent's age was classified into four categories: 26.7% (n = 27) have an age 18 – 28 years old. Respondents aged 29 – 44 years constituted the largest age group, representing 59.4% (n = 60) of the total sample. Following, 12.9% (n = 13) aged 45 – 60 years old and 1% (n = 1) have an age 61 – 79. Furthermore, the respondents' marital status profile shows that 46.5% (n = 47) were single, while 53.5% (n = 54) were married.

Next, the respondents were grouped into five tiers of educational attainment. The highest proportion held a Bachelor's degree (31.7%, n = 32), followed by Diploma/Sijil Tinggi Pelajaran Malaysia (STPM)/Sijil Tinggi Agama Malaysia (STAM) holders (29.7%, n = 30), Sijil Pelajaran Malaysia

(SPM) holders (27.7%, n = 28), Master's degree holders (9.9%, n = 10) and Doctor of Philosophy (PhD) holders (1.0%, n = 1). In terms of employment status, the highest number of respondents were government sector employees at 74.3% (n = 75), followed by private sector employees at 10.9% (n = 11), students and others at 5.9% (n = 6), self-employed at 2% (n = 2) and retired at 1% (n = 1). Subsequently, the respondents' monthly income depicted that the majority of respondents (40.6%, n = 41) earned between RM3,000 and RM4,999, while respondents who earning between RM1,000 and RM2,999 shows 34.7% (n = 35). Respondents who earnings below RM1,000 (12.9%, n = 13) reported as a smaller proportion. On the other hand, the higher income brackets of RM5,000 to RM6,999 and RM7,000 to RM10,999 were represented by 7.9% (n = 8) and 4.0% (n = 4) respectively. Obviously, Muslim respondents were the majority at 91.1% (n = 92), while non-Muslims made up 8.9% (n = 9). With regard to ethnicity, most respondents were Bumiputera Sabah (55.4%, n = 56), followed by Malays (38.6%, n = 39), while smaller groups included Chinese (3.0%, n = 3), Bumiputera Sarawak (2.0%, n = 2) and Indian (1.0%, n = 1).

4. FINDINGS AND DISCUSSION

This preliminary study reveals the findings derived from Section A and Section B of the questionnaire. In Section A, the study explores the extent of respondents' exposure and involvement on gold investment designed with six (6) questions. Began with first question: *Do you invest or intend to invest in Shariah-compliant gold?* Based on the responses, 63 respondents indicated a positive inclination to engage in SGI both current and in the future endeavours. Unlike, 28 respondents were uncertain and 10 expressed no intention to invest in SGI. The responses discovered a mixed level of engagement, with a notable portion of them indicating that they are already investing or plan to invest in the near future. As a result, it shows a positive sentiment and awareness on SGI as an investment option among retail investors. Conversely, respondents who expressed ambivalence may indicated low financial awareness, limited exposure to Islamic financial instruments or apprehension the gold security as an investment vehicle. Thus, awareness efforts and education initiatives are needed to support turn interest into actual investment action.

TABLE 2: RESPONDENTS' PREFERRED FORM OF GOLD INVESTMENT

No	Gold investment platform	Frequency (n)	Percentage (%)
1	Physical gold (bars/coins)	46	38
2	Gold investment account at the bank	34	28.1
3	Digital gold / e-wallet	41	33.9
	Total	121	100

Source: Table by Author

Building on this interest, the findings in second question are essential in exploring the preferred forms through which investors choose to engage with gold investment. According to Table 2, expose the respondents' preferred forms of gold investment where; physical gold such as gold bars and coins was selected as the most preferred form of gold investment with 38%. For Malaysian investor, physical gold remains critically important, it is preferred due to its tangible nature, high liquidity, cultural significance and the emotional trust it evokes. Following this, digital gold or e-wallet platforms was the second most preferred by the respondents (34%) which is slightly lower from the physical gold. Subsequently, 28% of them choose gold investment accounts at banks. The engagement in digital technology and institutional gold investment channels continues to grow, reflecting investors' evolving preferences toward convenience, accessibility and technological integration. Furthermore, in question two, each of the respondent was allowed to select more than one choice of preferred forms of gold investment. The selection of multiple options shows a multi-channel investment behaviour where individuals diversify their gold holdings based on factors such as trust, platform accessibility and perceived *Shariah* compliance.

The presence of intention alone is insufficient; investors also require accessible and reliable platforms to act upon it. The third question highlights the top choice of several gold investment platforms selected by the respondents. As shown in Table 3, With 27.1% of the responses, physical gold shops were identified as the leading platform of choice. The outcomes are slightly difference from Public Gold (26.4%) as one of the well-established gold investment platforms in Malaysia. Evidently, Maybank Investment Gold Account (MIGA-*i*) (10.7%), Bank Rakyat eGold Account-*i* (6.4%), Bank Muamalat EasiGold App (5.7%) and Bank Islam Gold Account (BIGA-*i*) (5.7%) received significant mention, reflecting the broadening range of institutional offerings. These signifying a strong presence of both non-bank institutions and Islamic financial institutions in gold market segment in Malaysia. Owing to these patterns imply trust in Islamic branding and financial reputation in platform selection, while lesser-known platforms may struggle with visibility and consumer trust.

TABLE 3: RESPONDENTS' SELECTION OF GOLD INVESTMENT PLATFORM(S)

No	Gold investment platform	Frequency (n)	Percentage (%)
1	Physical Gold Shop	38	27.1
2	Public Gold (GAP)	37	26.4
3	Maybank Investment Gold Account (MIGA-i)	15	10.7
4	Bank Rakyat eGold Account-i	9	6.4
5	Bank Muamalat EasiGold App	8	5.7
6	CIMB Bank e-Gold Investment Account (eGIA)	7	5
7	YaPEIM SERY Account	3	2.2
8	Bank Islam Gold Account (BIGA-i)	8	5.7
9	Bank Simpanan Nasional MyGold Account-i	5	3.6
10	Others	10	7.2
	Total	140	100

Source: Table by Author

On the other hand, one of the most significant findings was the millennials (59.4%) and Gen Z (26.7%) preference on digital platforms when investing in gold products out of convenience, mobility and low entry costs, among others. Obviously, for the others option (7.2%), a few respondents indicated a preference for investing in e-Mas by TNG eWallet as this platform perceived security, user convenience and the ability to monitor gold holdings in real time which makes gold investment simple and accessible to a broader audience. However, the platform is currently not *Shariah*-compliant, as it does not fully allocate physical gold to back the investment as fundamental requirement under *Shariah* principles. For younger cohort, in today's investment landscape enables instant transaction through digital platforms that means no longer necessitates physical store visits. The observed shift signals a wider change in investment behaviour emphasizing the alignment of convenience with ethical financial values. The development of digital gold or e-wallet shows a significant potential catering both tech-savvy and value-driven investors.

Besides, in the fourth question of Section A, respondents were asked to evaluate the accessibility of SGI, the question is: *In your opinion, is Shariah-compliant gold investment easy to access?* From the findings, it depicted that 21.8% found it is very easy to access SGI and 39.6% selecting easy. It shows that most respondents perceived it as accessible. Unlike, 33.7% of them were not sure and a 5% found it difficult. Overall, the perceptions of the accessibility to SGI are significantly positive. However, among respondents who perceived uncertainty and difficult in accessing SGI as platform could reported challenges in navigating the platforms, insufficient *Shariah* compliance information and cumbersome onboarding process. Despite broader access of gold investment in this digital era, improvements are still needed in onboarding processes and enhancing investor education for exposure.

To better understand what influences investors' choice of SGI platform, the survey included various motivational factors to be asked in the fifth question: *What are the main factors that motivate you to choose Shariah-compliant gold investments?* From the respondents' responses, the top three contributing factors in choosing SGI are compliance with *Shariah* principles (26.9%), long-term savings (24.2%) and the potential increase in gold prices (16.7%). Apart from that, other notable motivating factor including gold as safe and stable investment (14%), ease of access to digital platforms (9.7%) and recommendations from one's personal network (8.5%). Clearly, *Shariah* compliance as a primary motivation, signifying the high importance of religious alignment in financial decision-making among the individuals surveyed. In addition, gold as potential for long-term savings and potential capital gains from gold price appreciation were included as a strong motivator for them investing in gold. These factors of motivations convey of religious commitment and financial prudence in driving investor behaviour, with digital accessibility becoming an increasingly important enabler.

The final question of section A, respondents were asked their views on the strategies to boost public engagement with SGI. The most frequently endorsed strategies included increasing awareness campaigns (23%). The awareness campaign through social media, mainstream and Key Opinion Leader (KOL) enhancing transparency in *Shariah* certification and transaction processes while improving the overall user-friendliness of gold platforms. Furthermore, 21.1% of responses exhibited safe and transparent transactions as the approach to promote SGI. Undeniable, security and trust influence investment decisions, given the investors need assurance of their funds and the credibility of the gold service provider. Subsequently, attractive incentives such as rebate or discount (18.6%), user-friendly platform (14.3%), ads on social media (13%) and free investment advice (9.9%) were among the strategies that could be undertaken for SGI to continue gaining traction. Hence, it is crucial to note that educating the public, building consumer trust and providing clear and accessible information about the product's mechanism in accordance with *Shariah* principles, enabling individuals to make informed and wise investment decisions.

TABLE 4: PERCEPTION ON GOLD INVESTMENT

Item	M	SD
PGA 1: To what extent do you agree with the following statement: "*Shariah*-compliant gold investments provide fairness to investors in terms of profit and risk."	4.16	.771
PGA 2: I understand the difference between investment gold and jewellery.	4.16	.845
PGA 3: I think that *Shariah*-compliant gold investment products are available in the Malaysian financial market.	4.08	.845
PGA 4: I think investing in gold can give good returns in the long term.	4.42	.778
PGA 5: I am willing to invest if given clear information and I am confident that it is *Shariah*-compliant.	4.35	.793
PGA 6: I think investing in gold provides justice and long-term benefits from an Islamic perspective.	4.3	.794

Source: Table by Author

Going beyond in Section B. This section evaluates respondents' perceptions towards SGI which consists of six (6) items measured using a 5-point Likert scale. The respondents indicated their level of agreement for each statement about gold investment by selecting a number from 1 to 5, where: 1-Strongly Disagree, 2-Disagree, 3-Slightly Agree, 4-Agree and 5-Strongly Agree. Discernibly, findings in Table 4 of the mean scores ranging from 4.08 to 4.42 shows that the respondents have a significantly positive perceptions on SGI. This suggests that, overall, respondents agreed with the statements presented in the questionnaire. Owing to the findings, Figure 2 depicts thematically categorized into three (3) areas of respondents' perceptions on SGI:

- Investment confidence and willingness;
- Islamic values and ethical assurance; and
- Knowledge and product awareness.

Investment confidence and willingness theme denotes respondents' trust and readiness to invest within the Malaysian market. In Table 4, PGA4 statement: *I think investing in gold can give good returns in the long term* demonstrates a strong consensus among the respondents. It was reported as the highest mean values where (M = 4.42, SD = 0.778). Obviously, gold's perceived stability in long term returns due to its intrinsic value, stable and reliable store of value particularly during financial turbulence or inflation period. Owing to these reasons, gold is broadly accepted across various investment circles. This shows that SGI has the potential in generating stable returns and reduce exposure to systemic risks. The second highest of mean score is (M = 4.35) and (SD = 0.793) of PGA 5: *I am willing to invest if given clear information and I am confident that it is Shariah-compliant.* Based on the results, it underscores the importance of investor education and transparent communication by the financial institutions. This highlights that transparency and trust are key drivers of investor readiness.

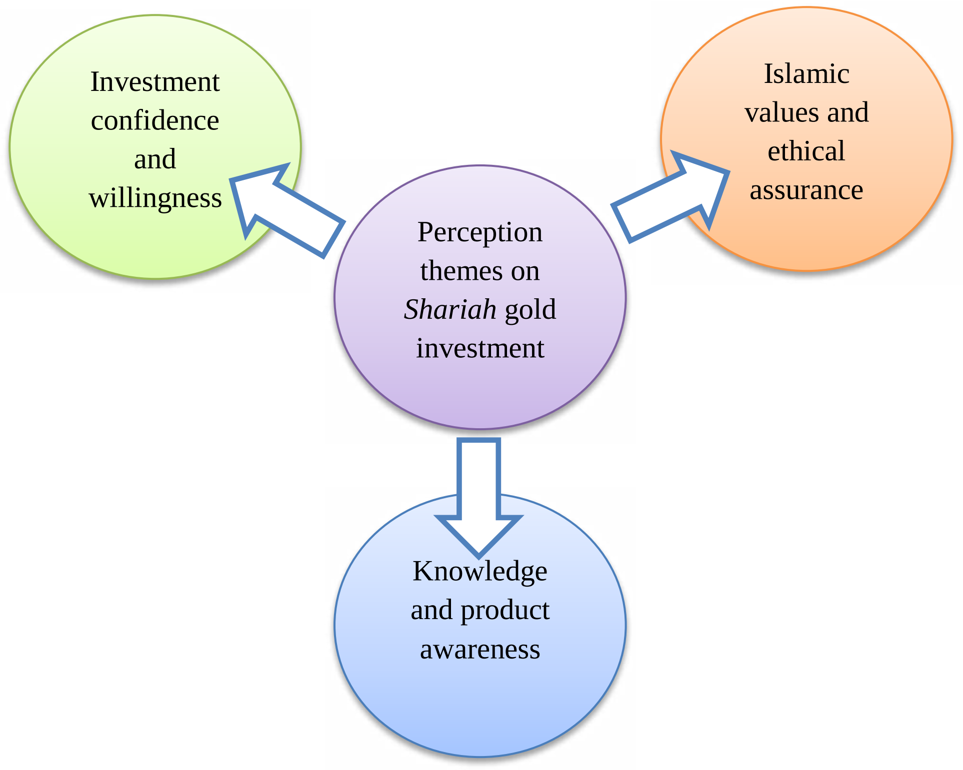

FIGURE 2: PERCEPTION THEMES ON *SHARIAH* GOLD INVESTMENT
Source: Figure by Author

Moreover, Islamic values and ethical assurance theme includes perceptions rooted in Islamic ethical and financial principles. The statement from PGA1 and PGA6 depicts as justice, fairness, and long-term Islamic benefits as important factors. The perceptions reinforcing the relevance of *Maqasid al-Shariah* in investment behavior. In more details, PGA 6 statement: *I think investing in gold provides justice and long-term benefits from an Islamic perspective* provide the findings of mean score of 4.30 and SD = 0.794. Although, gold investment is believed as a profitable long-term return, it also reflects in upholding Islamic ethical principles, which are inherently fair and value-based as preservation of wealth (*hifz al-mal*). This perception supports the integration of religious principles with financial planning. On the other hand, PGA 1 measure respondents' level of agreement about fairness in profit and risk of SGI. The outcomes are (M = 4.16, SD = 0.771). Thus, it reinforces the notion of justice (*'adl*) and balanced risk-sharing, emphasizing the importance of fairness and transparency.

Furthermore, the third theme, knowledge and product awareness capture the extent of respondents' awareness regarding types of gold investment and the availability of SGI products in the market. Among all the statements in Section B, PGA2 and PGA3 show relatively lower mean scores, indicating that most respondents possess limited understanding, highlighting the needed for improved financial literacy and greater exposure to SGI products. To comprehend the respondents understanding on the difference between investment gold and jewellery, PGA 2 statement is asked and exposed the results (M = 4.16, SD = 0.845). Though, responses align closely with PGA1, the greater variability reflects uneven levels of understanding among respondents. The confusion and misconception between investment gold and jewellery could impede sound financial decisions. Next, PGA 3 statement was: *I think that Shariah-compliant gold investment products are available in the Malaysian financial market.* With the lowest mean and highest variance (M = 4.08, SD = 0.845), this points to uncertainty or limited awareness regarding the accessibility of *Shariah*-compliant gold products in Malaysia. In a similar vein, this finding aligns with Wan Jusoh and Harun (2024). The existing literature associate weak uptake among younger or less financially informed groups with limited visibility and insufficient coverage of Islamic gold offerings which potentially influenced by geographic location or platform availability.

To encapsulate, the findings in Section A of this preliminary study discovered the exposure and involvement on gold investment of respondents. Majority of the them shows a positive response and aware towards SGI in Malaysian market. Additionally, the findings exposed the factors motivating respondents to invest in SGI, along with strategies to increase their participation and engagement. On the other note, in Section B the results revealed that investment confidence and willingness was the strongest theme followed by Islamic values and ethical assurance and knowledge and product awareness. In general, the respondents understand about *Shariah* ethics that value Justice (*'Adl*), trustworthiness (*Amanah*) and transparency which in turn fostering investor trust and confidence in SGI platform. Therefore, greater efforts to improve investor financial education, outreach and platform accessibility could significantly enhance participation in SGI products.

5. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

Malaysians' perceptions of *Shariah* gold investments (SGI) are progressively shaped by the dynamics of today's digital era which significantly influenced by accessibility, technology and ethical considerations. This preliminary study was conducted in East Malaysia, Labuan with 101 respondents through a descriptive quantitative approach. The results of the study showed that the assurance of *Shariah* compliance and the convenience of digital technology were among the main drivers of investor interest in SGI products. Response from the respondents disclosed that confidence in Islamic principles and the ease of accessing digital platforms influencing their investment decisions, this in line with the findings of Amin *et al*. (2023) which emphasize the critical factors in Islamic investment decisions were system accessibility and trust in *Shariah* compliance. Although awareness of SGI is increasing, the outcomes of the study exhibited that the level of actual engagement is still low. This aligns with Wan Jusoh and Harun (2024) study where high awareness does not necessarily translate into actual investment behaviour.

Owing to study findings, several implications were identified relevant for gold service providers and Islamic financial institutions in Malaysia. First, financial education initiatives focus on enriching investors' knowledge of *Shariah* principles is essential to empower them to make ethical investment decisions, understand how the products mechanism function and recognize the *Shariah* principles that guide these investments. Initiatives such as the financial literacy campaign by Bank Negara Malaysia (BNM) and the Securities Commission (SC) could be extended to the digital gold investment segment. Second, the financial institutions could strengthen *Shariah* branding visibility in the market in building investor trust by including the use of Islamic branding, transparent contractual terms and clear validation from a recognized *Shariah* board. These elements play a vital role in elevating trust among Muslim consumers (Juisin *et al*., 2023). Third, making investment structures more understandable and ensuring operational transparency are equally important in fostering investor trust and encouraging wider participation in SGI. Gold investment platforms should provide user-friendly content including real time gold price, investment procedures, *Shariah* principles used and product disclosure sheet. Failure to disclose may fade the trust and lead to confusion among investors.

Furthermore, as a preliminary study, this study has several limitations that should be taken into account when interpreting the results and their implications. Descriptive analysis was employed in this study which inferential analysis or behavioural modelling techniques such as Structural Equation Modelling (SEM) were not undertaken. The cause-and-effect relationship between variables and consumer behaviour could better elucidate the findings to a certain extent. Future research can develop theoretical models based on these findings to strengthen both the explanations and overall conclusions. Besides, the sample size selection of this study is limited to 101 respondents through purposive sampling from East Malaysia, Labuan setting. Though, the findings cannot be generalized to the national population. Moreover, data collected obtained is based on the respondents' self-reports. For this reason, the possibility of social desirability bias cannot be discounted. The answers provided from the respondents might be difference from their actual investment behaviour which based on their socially or religiously accepted norms.

Moving forward, future research should employ theoretical models to provide empirical findings of hypothesis testing. These models of Innovation Diffusion Theory (IDT), Theory of Planned Behaviour (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT), among others is applicable in predicting gold investor behaviour. In addition, further studies can assess the differences in perceptions between Muslim and non-Muslim investors, age group, gender, education level, employment and marital status towards SGI. This holds relevance as these products are generally offered by the financial institutions to the public which is not exclusively to Muslims. Such studies can provide insights of shared values and cultural distinctions, ethnic differences and beliefs on *Shariah*-based products. Furthermore, qualitative approaches such as interviews or focus group discussions with the experts and participants can offer deeper insights into the real motivations behind investment decisions including religious values, emotional drivers, and trust in financial institutions. While there is still much to explore both empirically and theoretically, the current findings lay an important groundwork for both industry and academia to build a more transparent, inclusive and values-driven Islamic investment ecosystem, at best.

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APPENDIX A

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APPENDIX A: QUESTIONNAIRE SURVEY

Section A: Exposure and Involvement

Instructions: This section contains 6 questions. Please select the option that best reflects your level of exposure and involvement related to *Shariah*-compliant gold investment.

1. Do you invest or intend to invest in *Shariah*-compliant gold?

☐ Yes ☐ Not sure ☐ No

2. What is your preferred form of gold investment? (You can choose more than one)

☐ Physical gold (bars/coins) ☐ Gold investment account at the bank ☐ Digital gold / e-wallet

3. What gold investment platform do you plan to use, are using or have used? (You may choose to answer more than one if applicable)

☐ Physical gold shop
☐ CIMB Bank e-Gold Investment Account (eGIA)
☐ Bank Muamalat EasiGold App
☐ Bank Islam Gold Account (BIGA-i)
☐ Bank Rakyat eGold Account-i
☐ Bank Simpanan Nasional MyGold Account-i
☐ KAB Gold (Uncang Emas)
☐ Maybank Investment Gold Account (MIGA-i)
☐ Public Gold (GAP)
☐ YaPEIM SERY Account
☐ lain-lain: ____________

4. In your opinion, is *Shariah*-compliant gold investment easy to access?
☐ Very easy ☐ Easy ☐ Difficult ☐ Very difficult ☐ Not sure

5. What are the main factors that motivate you to choose *Shariah*-compliant gold investments?
☐ Compliance with *Shariah* principles
☐ Potential increase in gold prices
☐ Long term savings
☐ Safe and stable investment
☐ Ease of access to digital platforms
☐ Recommendations from friends/family

6. In your opinion, what can be done to increase public interest in *Shariah*-compliant gold investments?
☐ More awareness campaigns
☐ Safe and transparent transactions
☐ Ads on social media
☐ User-friendly platform
☐ Free investment advice
☐ Attractive incentives (exp: rebate or discount)

Section B: Perception on Gold Investment

Instructions: This section contains 6 questions. Please indicate your level of agreement with each statement about gold investment by selecting a number from 1 to 5, where:

1= Strongly disagree
2= Disagree
3= Slightly agree
4= Agree
5= Strongly agree

1. To what extent do you agree with the following statements?

"*Shariah*-compliant gold investments provide fairness to investors in terms of profit and risk."

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

2. I understand the difference between investment gold and jewelry.

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

3. I think that *Shariah*-compliant gold investment products are available in the Malaysian financial market.

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

4. I think investing in gold can give good returns in the long term.

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

5. I am willing to invest if given clear information and I am confident that it is *Shariah*-compliant.

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

6. I think investing in gold provides justice and long-term benefits from an Islamic perspective.

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

Section C: Demographic Information

Instructions: Please provide your background information. Your responses will be kept confidential and used for research purposes only.

1. Gender
☐ Male ☐ Female

2. Age
☐ 18 – 28 years ☐ 29–44 years ☐ 45–60 years ☐ 61–79 years

3. Marital status
☐ Single ☐ Married

4. Level of Education
☐ SPM ☐ Diploma / STPM / STAM
☐ Bachelor's Degree ☐ Master Degree ☐ PhD

5. Employment status

☐ Government sector employee ☐ Private sector employee ☐ Self-employed
☐ Student ☐ Retired ☐ Others: ___________

6. Monthly income
☐ Below RM1,000 ☐ RM1,000 – RM2,999 ☐ RM3,000 – RM4,999
☐ RM5,000 – RM6,999 ☐ RM7,000 – RM10,999 ☐ RM11,000 and above

7. Religion
☐ Muslim ☐ Non-Muslim

8. Ethnicity:
☐ Malay ☐ Chinese ☐ Indian
☐ Bumiputera Sabah ☐ Bumiputera Sarawak ☐ Others: ___________

*****THANK YOU*****

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EXAMINING THE POST-COVID-19 COST OF LIVING SURGE IN TAWAU, SABAH, MALAYSIA

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ABSTRACT

This study aims to identify the factors influencing the increase in consumers' cost of living in Tawau, Sabah, after the COVID-19 pandemic era. The study involved 300 respondents selected using simple random sampling techniques. Data were collected through an online questionnaire covering three independent variables: the increase in raw material prices, the excess demand for goods and services in the market, and the increase in production costs. Data analysis was conducted using Pearson correlation and multiple linear regression methods through SPSS version 25. The findings show that the most dominant factor identified is the increase in production costs, followed by the increase in raw material prices and the increase in demand and production of goods and services in the market. The R^2 value = .461, indicating that 46.1% of the variance in the increase in the cost of living can be explained by the combination of all independent variables. These findings accentuate the need for price control strategies, supply chain management, and more effective economic policies to reduce the burden of consumers' cost of living in the study area. This study provides important insights for public policy and contributes to the academic literature related to post-pandemic economic issues.

KEYWORDS: COST OF LIVING, CONSUMER ECONOMICS, POST-PANDEMIC, PRODUCTION COST, PRICE CONTROL.

ABSTRAK

Kajian ini bertujuan untuk mengenal pasti faktor-faktor yang mempengaruhi peningkatan kos sara hidup pengguna di Tawau, Sabah selepas era pandemik COVID-19. Kajian ini melibatkan 300 responden yang dipilih menggunakan teknik persampelan rawak mudah. Data dikumpul melalui soal selidik dalam talian yang merangkumi tiga pemboleh ubah bebas iaitu kenaikan harga bahan mentah, lebihan permintaan barangan dan perkhidmatan di pasaran, serta peningkatan kos pengeluaran. Analisis data dilakukan menggunakan kaedah korelasi Pearson dan regresi linear berganda melalui SPSS versi 25. Hasil kajian menunjukkan bahawa faktor paling dominan yang dikenal pasti ialah peningkatan kos pengeluaran diikuti dengan kenaikan harga bahan mentah dan peningkatan permintaan serta pengeluaran barangan dan perkhidmatan di pasaran. Nilai R^2 = .461, menunjukkan

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sebanyak 46.1% varians dalam peningkatan kos sara hidup dapat diterangkan oleh gabungan semua pemboleh ubah bebas. Dapatan ini menekankan keperluan untuk strategi kawalan harga, pengurusan rantaian bekalan, dan dasar ekonomi yang lebih berkesan bagi mengurangkan beban kos sara hidup pengguna di kawasan kajian. Kajian ini memberikan pandangan penting untuk dasar awam serta menyumbang kepada literatur akademik berkaitan isu ekonomi pasca-pandemik.

KATA KUNCI: KOS SARA HIDUP, EKONOMI PENGGUNA, PASCA-PANDEMIK, KOS PENGELUARAN, KAWALAN HARGA

1. INTRODUCTION

The cost of living is the cost incurred by households to meet basic needs such as food, beverages, shelter, clothing, education, vehicles, and daily utility bills (Abdul Ghani, 2017). The increase in the cost of living puts pressure on the well-being and quality of life of households when basic needs cannot be met (Shahar *et al*., 2021). However, the cost of living varies according to location, economic status, household size, and lifestyle (Rahman *et al*., 2020). In the context of Tawau, Sabah, these general dynamics have been compounded in the aftermath of the COVID-19 pandemic. While state- and national-level data may not always isolate Tawau specifically, trends in Sabah and Malaysia overall help shed light on the underlying pressures facing Tawau households.

The recent post-pandemic period has seen significant shifts in Malaysia's cost-of-living landscape, with clear implications for consumers in Tawau, Sabah. National inflation has moderated, registering 1.4% year-on-year in March 2025, yet households continue to feel pressure due to rising prices in key categories such as housing, water, electricity, and food as reported by the Department of Statistics Malaysia (2024a). In Sabah, inflation stood at 1.2% in 2024, slightly below the national average of 1.8%, but still indicative of sustained increases in essential goods, according to reporting by Warta Oriental. Consumer Price Index trends further highlight that costs associated with Housing, Water, Electricity, Gas & Other Fuels, along with Food & Beverages, remain the primary contributors to household burden. Correspondingly, the latest Household Expenditure Survey shows that Malaysia's mean monthly household consumption expenditure increased to RM5,566 in 2024, up from RM5,150 in 2022, with spending heavily concentrated on necessities. For instance, households allocated 23.5% of their monthly budgets to housing and utilities, 17.0% to restaurant and accommodation services, 15.7% to food and beverages, and 11.0% to transport, based on data compiled by the Malay Mail (2024).

In Sabah, household characteristics further intensify vulnerability to rising living costs. The state recorded an average household size of 4.3 persons in 2022, with Tawau specifically averaging 5.0 persons per household, according to state-level reporting by the Ministry of Economy Malaysia (2023). Notably, 41.8% of Sabah households consist of five or more members, and 47.5% rely on a single income earner—both factors that reduce financial resilience when prices rise. Post-pandemic income pressures are evident as well, with urban absolute poverty climbing to 4.5%, and high levels of EPF withdrawals among low-income earners eroding long-term financial buffers, as highlighted by Daily Express Malaysia (2023). Although the state's Basic Expenditure of Decent Living level stands at RM1,080 per capita, based on the 2023 *Perbelanjaan Asas Kehidupan Wajar* (PAKW) report (Department of Statistics Malaysia, 2024b). This amount remains challenging for larger households facing simultaneous increases in food, utilities, and transportation costs. Collectively, these trends underscore the heightened cost-of-living pressures experienced by consumers in Tawau after the COVID-19 pandemic.

The increase in the cost of living becomes a challenge for consumers when there is an increase in the price of basic goods and services in the market. Price changes are influenced by the increase in production costs due to the increase in the price of raw materials such as oil, fuel, and transportation. The imbalance between demand and supply also affects the price of goods and services (Ali &Abdul-Rahman, 2020). The COVID-19 pandemic that began in late 2019 has had a major impact on the global economy. In Malaysia, the implementation of the Movement Control Order (MCO) on 18

March 2020 affected the economic sector as businesses were forced to close, including the tourism and manufacturing sectors (Ahmat *et al*., 2022). Disruptions in global supply chains and rising shipping costs have caused prices of essential goods to increase (Abdullah *et al*., 2020). After the pandemic, the recovery of supply chains has been slow, with logistics costs remaining high.

The post-pandemic cost of living crisis has become a worrying issue, especially in the Tawau district (Abdul Rahman, 2022). Supply chain disruptions, food inflation which rose to 6.8% in 2022 (Department of Statistics Malaysia, 2023a), and Tawau's remote location from the economic centre have increased logistics costs (Suruhanjaya Persaingan Malaysia, 2021). Other factors include rising raw material prices, volatile commodity prices, high transportation costs (Lim & Liow, 2021), and reliance on imports which has affected consumer purchasing power (Rahman *et al*., 2022). In addition, excess demand after the movement restrictions were eased also worsened the situation when market capacity could not accommodate the high demand.

Overall, these various factors affected price stability in Tawau and increased the cost of living for consumers. Therefore, the objective of this study is to analyse the factors that influenced the increase in the cost of living for consumers in Tawau after the COVID-19 pandemic era, by focusing on three aspects, namely the increase in raw material prices, excess demand for goods and services, and the increase in production costs. This study also aims to identify the most dominant factors in influencing the increase in the cost of living for consumers in the district.

2. LITERATURE REVIEW

Supply and Demand Theory

Supply and demand theory is a fundamental principle in economics that explains the process of determining the price and quantity of goods in the market through the interaction of consumers and producers (Mankiw &Taylor, 2020). Demand refers to the amount of goods that consumers need at a certain price, while supply is the amount of goods that producers provide at a certain price (Karl *et al*., 2020). Market equilibrium is achieved when there is a meeting point between demand and supply. After the Covid-19 pandemic, global and local markets have changed significantly. Consumers prioritise basic goods such as food, medicine and hygiene, while producers face supply chain disruptions, movement restrictions and increased logistics costs (Nicola *et al*., 2020). The Tawau area of Sabah, which relies heavily on imported goods, has experienced supply shortages and price increases due to excess demand over supply (Bank Negara Malaysia, 2023). The phenomenon of panic buying also occurs when consumers are concerned about their family's safety during the pandemic (Arafat *et al*., 2020). This situation has depressed the prices of basic goods and increased the cost of living in Tawau.

Price Theory

Price theory explains that prices are determined by the interaction between supply and demand (Baldwin, 2021). Prices increase if demand exceeds supply, and vice versa. Pricing is also influenced by production factors such as labour, capital, raw materials, and services. Companies need to assess costs, risks, and sunk costs in setting prices (Artameviah, 2020). After the COVID-19 pandemic, dynamic pricing strategies have become important due to market uncertainty. This theory helps companies adjust prices according to current inventory, competitiveness, and demand. It also explains the phenomenon of inflation, whether cost-push inflation (production costs increase) or demand-pull inflation (demand exceeds supply) (Mankiw, 2021). In Malaysia, inflation after the pandemic has been influenced by disruptions in the global supply chain, rising raw material prices, and currency weakness. In Tawau, import dependence on basic goods has further increased price pressures (Abdullah & Ali, 2020). The increase in the price of basic goods has affected the purchasing power, especially of low-income households (Kamaluddin *et al*., 2024).

Increased Cost of Living

The cost of living is the amount of basic expenses to support daily life such as food, housing, utilities, taxes and education (Mohd Noor *et al*., 2020). When household income is low compared with the cost of living, the standard of living declines (Sabstu, 2014). The Covid-19 pandemic increased the incidence of absolute poverty from 5.6% in 2019 to 8.4% in 2020, before decreasing to 6.2% in 2022 (Department of Statistics Malaysia, 2023b).

The rising cost of living in Malaysia has disproportionately affected lower-income households, reduced their purchasing power and contributed to a decline in overall living standards as essential expenses such as food, housing, and energy consume a large share of their income. Research highlights a clear causal link showing that the cost of living strongly predicts standard of living, with increased essential spending forcing families to cut back on other critical needs—a “crowding-out effect” evident in reduced spending on food, transport, and non-essential goods. External shocks, including the Covid-19 pandemic and global supply chain disruptions, further intensified financial pressures and increased poverty rates, especially among vulnerable communities. In response, the 11th and 12th Malaysia Plans emphasise strengthening the “people economy” through strategies to raise income, enhance social protection, and control inflation. Under RMK-11, efforts focused on inclusiveness, affordable housing, improved human capital, and reducing inequality, while RMK-12 builds on this by promoting high-value employment, increasing the Compensation of Employees share of Gross Domestic Product (GDP), expanding healthcare and welfare systems, and implementing targeted subsidies and price controls through the Ministry of Domestic Trade and Costs of Living (KPDN) to ensure essential goods remain accessible and support is directed to those most in need.

The government focused on the issue of cost of living through the 11th and 12th RMs with measures to increase people's income, control inflation, increase job opportunities, and strengthen the social support system (Ministry of Economy, 2020). This strategy aims to reduce the pressure on people's lives and improve the well-being of society.

Increased Raw Material Prices

After the pandemic, the cost of raw materials increased due to disruptions in the global supply chain, labor shortages and high shipping costs (Ahmad & Zulkifli, 2023). Global inflation has also caused commodity prices to rise (BERNAMA, 2024). In Tawau, the prices of basic foods such as eggs, meat and cooking oil have increased (The Edge, 2024). Furthermore, the Institute for Food Agriculture Policy Studies (IKDPM) study found that the cost of imported raw materials has a major impact on food prices, especially vegetables and fruits. The increase in global commodity prices and supply chain disruptions led to significant cost-push inflationary pressures in Malaysia during 2022, which was documented as the primary driver behind the surge in domestic food prices (Bank Negara Malaysia, 2022).

Excess Demand for Goods and Services in the Market

Excess demand occurs when demand exceeds supply. After the pandemic, spending patterns changed with a surge in demand for basic goods (Haron & Zainuddin, 2023). This imbalance has led to price increases, inflation and affected consumer purchasing power.

Spending patterns changed after the pandemic due to a combination of economic, behavioural, and lifestyle shifts. Many households faced income uncertainty or job losses, forcing them to prioritise essential goods over discretionary items. Heightened health and safety concerns also increased demand for necessities such as food, cleaning supplies, and medical products. At the same time, global supply chain disruptions created shortages, prompting consumers to engage in precautionary or panic buying, which further intensified demand. Lockdowns reshaped daily life as more people stayed, worked, and cooked at home, increasing spending on groceries and household essentials while reducing expenditure on travel and entertainment. When restrictions were lifted, delayed or postponed purchases triggered a wave of pent-up demand. Together, these factors led to a structural shift in consumption behaviour, causing demand for basic goods to surge beyond supply and contributing to excess demand and rising prices in the market.

In Sabah alone, economic recovery has also been accompanied by the challenge of rising shipping and raw material costs (Sabah Housing & Urban Development Authority, 2025). Although cooperatives have tried to stabilize prices, these efforts have only partially reduced the impact of inflation (Parlimen Malaysia, 2024). In Tawau, the increase in Indonesian migrants has also increased competition for scarce resources, thus increasing the cost of living (Juda, 2021). Consequently, the combined pressure of limited market intervention and growing population demand has strained local supply systems, leading to higher prices for food, housing, and basic services. This situation disproportionately impacts lower-income households, who already spend a large share of their income on essential goods. As affordability worsens, families are forced to adjust their consumption patterns, often reducing nutrition quality, delaying healthcare, and compromising overall well-being. In the long run, persistent pressure on local resources without adequate policy intervention—such as enhancing supply-chain efficiency, expanding affordable housing, or strengthening social safety nets—can further deepen socioeconomic inequalities and undermine Tawau’s community resilience and economic stability.

Increased Cost of Production

The increase in the cost of living is directly linked to the volatility of global energy markets, particularly the rising prices of crude oil and natural gas, intensified by the government's policy of subsidy rationalization. Malaysia is implementing a phased rationalization of fuel subsidies, which increases the risk of inflation (Rafizi, 2021). The reliance on imported materials has significantly increased production costs in Malaysia, a finding consistently reported across various economic analyses, particularly those addressing the post-pandemic period and its impact on the cost of living (FMM Business Conditions Survey, 2023). This cost escalation is further compounded by increased non-fuel related operational expenses for logistics, such as vehicle spare parts, which are subsequently passed on to consumers. These rising prices accelerate food price inflation, which disproportionately affects the lower-income B40 and M40 households as a higher percentage of their income is spent on essential items, thereby diminishing their purchasing power and heightening the risk of them falling into urban poverty (Department of Statistics Malaysia, 2022).

Sabah’s economy is beginning to recover with GDP growth of 3.7% in 2022, but the increase in production costs in the agricultural and industrial sectors continues to pressure the prices of basic goods (Sabah Budget, 2024).

The Most Dominant Factors Affecting the Cost of Living

The two dominant factors are the increase in the cost of raw materials and excess market demand. The increase in the price of crude oil as a major input has resulted in increased production costs and soaring prices of goods (Rodzi, 2022; Tee, 2021). At the same time, the surge in demand without sufficient supply support has also pushed up prices (Wahab, 2024). Both factors have a direct impact on consumers, causing them to face financial pressure, reduced purchasing power, and a decline in quality of life (Mohd Aqmin *et al*., 2018).

Conceptual Framework

The conceptual framework of a study is an important tool in research because it can help describe the relationships between the variables being studied. Based on Figure 1, the independent variables consist of three factors of increasing cost of living, namely, increasing prices of raw materials, excess demand for goods and services in the market and increasing production costs. There is one dependent variable, namely increasing cost of living, which is used in this study.

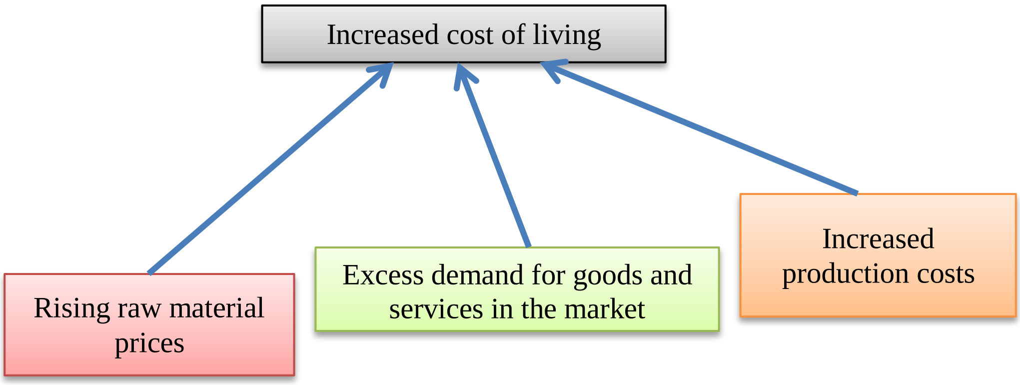

FIGURE 1: CONCEPTUAL FRAMEWORK
Source: Figure by Authors

3. METHODOLOGY

Research Design
This study uses quantitative research methods based on the positivism paradigm that combines deductive approaches and empirical observations (Bryman, 2016). This assumes that reality is objective, measurable, and independent of human perception. Under this paradigm, knowledge is generated through systematic observation, measurement, and the use of scientific methods to test hypotheses. Positivism highlights empirical evidence, numerical data, and causal relationships, allowing researchers to make generalizable conclusions about social phenomena. Consistent with this approach, the study combines deductive reasoning, where theories guide the development of hypotheses, with empirical observations collected through structured instruments to verify or refute those hypotheses.

The study design focuses on collecting, interpreting and analysing data to answer questions related to factors that contribute to the increase in the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic, namely the increase in raw material prices, excess demand for goods and increased production costs. Data were collected through an online questionnaire using Google Form distributed to selected respondents. Descriptive analysis was used to describe the demographic background of the respondents, while Pearson correlation analysis was carried out to assess the relationship between the independent variables and the dependent variables. Next, multiple linear regression analysis was used to identify the most dominant factors influencing the increase in the cost of living. All analyses were conducted using SPSS version 25 software.

Population and Subjects
The study was conducted in Tawau, Sabah, an important district in the economic and agricultural sectors and is known as an international trade hub due to its strategic location near Indonesia and the Philippines. The study was conducted in Tawau, Sabah, an important district in the economic and agricultural sectors and known as an international trade hub due to its strategic location near Indonesia and the Philippines. Tawau has a population of 372,462 people as of 2023 (Department of Statistics Malaysia, 2023), comprising a diverse mix of ethnic groups including Malay, Chinese, and indigenous communities, alongside a significant number of foreign migrants, particularly from Indonesia and the Philippines. This population diversity contributes to a vibrant local economy but also intensifies demand for housing, food, and public services, which can influence household spending patterns and the overall cost of living in the district.

The district is a major producer of palm oil and cocoa, but the COVID-19 pandemic has put significant pressure on the supply chain and economic activities (Ismail & Rahim, 2019; Hashim *et al*., 2021). The study population includes Tawau residents aged 25 years and above from various occupational, racial and religious backgrounds. For the study, a total of 300 respondents were selected using the simple random sampling method to ensure that everyone has an equal chance of being selected, thus reducing bias (Kumar, 2019). These respondents were distributed evenly across six villages in one mukim, with 50 people from each village.

Questionnaire Survey

The primary instrument used in this study was a questionnaire, which was adopted and adapted from previous empirical research on inflationary pressures, cost-of-living determinants, and post-pandemic consumer experiences. Items related to raw material price increases were adapted from existing cost-push inflation frameworks and Malaysian household cost studies (Shahar *et al.*, 2021; Wong & Ming, 2022). Measures for excess demand were adopted from established instruments examining demand-pull inflation and consumer spending behaviours in post-COVID-19 recovery (Ali & Abdullah, 2022; Narayan *et al.*, 2021). Items assessing rising production costs were adapted from studies investigating increases in operating, transportation and labour costs and their effects on consumer prices (Roslan & Karim, 2022; Lee & Othman, 2020). Section E items involving dominance ranking were adapted from consumer decision frameworks and factor-priority methods (Idris & Rahman, 2021). Minor adjustments were made to ensure contextual suitability for consumers in Tawau, Sabah. All items in Sections B to E used a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Data Analysis

SPSS Version 25 was employed to analyse the data in this study because it provides enhanced statistical capabilities, improved data management, and clearer visual output that support robust and accurate quantitative analysis. The use of SPSS Version 25 is well established in contemporary research, with methodological sources such as Pallant (2020) and Field (2018) detailing its analytical strengths. This offers upgraded procedures for regression, ANOVA, and categorical data analysis, along with an intuitive interface that facilitates efficient interpretation and reporting of results.

The data obtained are processed through descriptive statistics to describe the basic characteristics of the respondents and the distribution of data including minimum, maximum, average, percentage and standard deviation. The next analysis uses multiple linear regression to determine the extent to which the independent variables, namely rising raw material prices, excess demand and rising production costs, can explain the variance in the dependent variable, namely the cost of living. The R^2 coefficient is used to measure the strength of the regression model in explaining changes in the cost of living. This method was chosen because it is suitable for assessing the effects of multiple factors simultaneously on a single dependent variable.

4. FINDINGS AND DISCUSSION

Reliability Coefficient

Table 1 shows the reliability coefficients for each scale used in the pre-test data collection (N=30) and actual data collection (N=300). For the pre-test, the Cronbach's alpha value for the variable of increasing production costs was 0.888, indicating a very high level of internal reliability. The variable of increasing raw material prices reached a value of 0.765, which reflects high internal reliability. Meanwhile, the variable of increasing cost of living obtained a value of 0.735, indicating satisfactory reliability. For the variable of excess demand for goods and services in the market, a value of 0.716 was recorded, which although good, still indicates that there is room for improvement. Overall, despite the limited pre-test sample size, the measurement instruments used proved to be capable of producing consistent and relevant results, thus confirming the accuracy and reliability of this study.

For the actual data collection with a total of 300 respondents, it was found that the variable of increasing production costs continued to record the highest Cronbach's alpha value of 0.830, which indicates very good reliability. The variable of increasing raw material prices obtained a value of 0.749, indicating high reliability in assessing changes in raw material costs. For the variable of increasing cost of living, a value of 0.730 indicates satisfactory reliability, while the excess demand for goods and services in the market recorded a value of .748, which although slightly lower, is still within the range of good reliability. Overall, the results of the analysis with a sample of N=300 further strengthen the reliability of the measurement instrument used, further confirming that the findings of this study are consistent and reliable even in the context of a larger sample size.

TABLE 1: RELIABILITY COEFFICIENT

Variables	Cronbach's alpha		No. of Items
	Pre (N=30)	Actual (N=300)	
Increasing raw material prices	.765	.749	5
Excess demand for goods and services in the market	.716	.748	5
Increasing production costs	.888	.830	5
Increasing cost of living	.735	.730	5

Source: Table by Authors

Respondents Demographic Profile

Table 2 details the demographic information of the respondents which includes gender, age, ethnicity, type of employment, household income and monthly expenses which include utility bills, food and beverages, vehicles, housing, education, clothing, and savings.

Out of a total of 300 respondents, 57% were male while 43% were female. In terms of ethnicity, less than half respondents were Bugis (35%), followed by Bajau (16.7%), Suluk (13.3%), Sungai (11%), Iban (9.3%), Toraja (5%), Chinese (3.3%), Malay (4%), others (2.3%), while there were no respondents from Indian ethnicity.

Based on the type of employment, almost half of the respondents (48.7%) worked in the private sector, followed by self-employed (28.3%) and the government sector (23.0%). In terms of household income, the highest category was recorded in the range of RM1,600 to RM2,500, which was 51.3%. Next, 22.3% were in the range of RM2,600 to RM3,500, followed by RM1,000 to RM1,500 (12.7%), RM3,600 to RM4,500 (4.3%), RM4,600 to RM5,000 (3.7%), RM6,000 and above (2.7%), RM5,000 to RM5,500 (2.0%) and less than RM1,000 (1%).

In addition, analysis of monthly expenditure showed that the largest expense was on utility bills with an average of 25.20%. Food and beverage expenses recorded an average of 23.20%, followed by vehicles (14.64%), housing (12.61%), education (9.40%), clothing (4.70%) and savings (10.34%). Overall, the respondents' spending patterns reflected their priorities towards basic needs such as utilities, food, housing and vehicles, in addition to allocations for education, clothing and savings.

TABLE 2: RESPONDENTS DEMOGRAPHIC PROFILE (N = 300)

Item	Category	n	%
Gender	Male	171	57.0
	Female	129	43.0
Age	25 – 35 years	176	58.7
	36 – 45 years	89	29.7
	46 years and above	35	11.7
Ethnicity	Bugis	105	35.0
	Iban	26	9.3
	Sungai	33	11.0
	Toraja	15	5.0
	Chinese	10	3.3
	Bajau	50	16.7
	Indian	0	0.0
	Suluk	40	13.3
	Malay	12	4.0

	Others	7	2.3
Occupation	Government Sector	69	23.0
	Private Sector	146	48.7
	Self-employed	85	28.3
Household Income (MYR)	Less than 1000	3	1.0
	1000 –1500	38	12.7
	1600 –2500	154	51.3
	2600 –3500	67	22.3
	3600 –4500	13	4.3
	4600 –5000	11	3.7
	5000 –5500	6	2.0
	5501 and above	8	2.7
Monthly Expenditure (MYR)	Utilities Bill	461.05	25.20
	Food & Beverages	423.67	23.20
	Transportation	267.80	14.64
	Housing	230.80	12.61
	Education	171.40	9.40
	Clothing	85.70	4.70
	Savings	182.90	10.34

Source: Table by Authors

Increase in Raw Material Prices

Based on Table 3, the mean scale analysis shows that the statements “I am aware of the increase in raw material costs lately” and “The increase in raw material costs has caused my cost of living to rise” obtained the highest mean of 4.70 (Std. Dev = 0.651). This finding illustrates that consumers in Tawau, Sabah, after the Covid-19 pandemic significantly realized the increase in raw material costs and felt its impact on the cost of living.

On the other hand, the statement with the lowest mean was “I had to look for cheaper raw material alternatives to reduce costs” with a value of 4.27. This shows that although consumers are aware of the increase in raw material prices in the market, they are less inclined to look for cheaper alternatives. This result can be attributed to other factors considered by consumers when making purchasing decisions, such as quality, needs and comfort.

Overall, the mean average value was 4.50 with a standard deviation of 0.860. This result shows that there is a clear relationship between the increase in raw material prices and the increase in consumer cost of living. This finding is in line with a study by Abdul Wahab *et al*. (2021), which explained that the increase in the cost of living in Malaysia is due to the imbalance between household income growth and the increase in the price of raw materials, thus reducing consumer purchasing power. Furthermore, Cheong and Hassan (2022) emphasised that changes in the price of raw materials, especially oil and food items, increase the burden on households, especially among the B40 group, and are even more challenging for those living in urban areas.

In summary, the increase in the price of raw materials is a major factor contributing to the increase in the cost of living of consumers in Tawau, Sabah. This assessment is based on calculating the mean score compared to the set scale levels, which are low (1.00–2.33), medium (2.34–3.67) and high (3.68–5.00). Therefore, the mean score that is in the high range proves that the issue of increasing raw material prices is significant to consumer well-being.

TABLE 3: FREQUENCY DISTRIBUTION OF RAW MATERIAL PRICE INCREASES

Statement	Mean	Std. Dev
I am aware of the increase in raw material costs lately.	4.70	0.702
The increase in raw material costs has caused my cost of living to rise.	4.70	0.651
I must reduce daily expenses due to the increase in raw material costs.	4.47	0.860
I must look for cheaper raw material alternatives to reduce costs.	4.27	1.112
The increase in raw material costs has reduced my purchasing power.	4.38	0.979
Overall mean and standard deviation	4.50	0.860

Source: Table by Authors

Excess Demand for Goods and Services in The Market

Based on Table 4, the statement "I am willing to pay more to obtain the goods and services I need" recorded the highest mean score (M = 4.47), suggesting that consumers are inclined to pay a premium to secure goods and services amid excess demand in the market. Conversely, the lowest mean was observed for the statement "The quantity of goods and services I obtain in the market is small" (M = 4.37), indicating a perceived shortage in supply, albeit not substantially significant compared to other items. Moreover, the overall mean (M = 4.40, Std. Dev = 0.537) further demonstrates a correlation between excess demand in the market and the rising cost of living among consumers in Tawau, Sabah, during the post-COVID-19 period. These findings are consistent with Norashidah (2020), who highlighted that heightened demand without a corresponding increase in supply contributes to inflationary pressures, thereby exacerbating the cost of living.

TABLE 4: FREQUENCY DISTRIBUTION OF EXCESS DEMAND FOR GOODS AND SERVICES IN THE MARKET

Statement	Mean	Std. Dev
I believe that the increase in demand for goods and services causes prices to rise.	4.40	.498
I am willing to pay more to obtain the goods and services I need	4.47	.507
have to seek alternatives because the goods or services I want are not available.	4.40	0.498
The quantity of goods and services I obtain in the market is small.	4.37	0.619
I face difficulties in obtaining the goods and services I need because the stock offered is limited.	4.40	0.563
Overall mean and standard deviation	4.40	0.537

Source: Table by Authors

Increased Production Costs

Based on Table 5, the statement with the highest mean is "I have found that the increase in the price of goods has changed my monthly spending plan" with a mean value of 4.50 (Std. Dev = 0.777). This finding shows that consumers most strongly agree that the price increase due to the increase in production costs directly affects their monthly spending plans, indicating this is the most immediate impact felt. Meanwhile, the statements with the lowest mean are "I feel that the increase in production costs puts pressure on my finances" and "I must change my lifestyle due to the increase in the price of goods and services", each recording a mean of 4.27 (Std. Dev = 0.944). This shows that changes or increases in the price of goods and services in the market do not immediately affect consumer spending patterns, indicating that consumers do feel financial strain and have made lifestyle changes, but this effect is agreed upon less strongly than the impact on spending plans. Overall, the average mean of 4.36 with a standard deviation of 0.923 shows that there is a relationship between the increase in production costs and the increase in the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era. This study also supports previous findings by Razman (2023), which stated that the increase in production costs was influenced by global factors during the COVID-19 pandemic and subsequently contributed to the increase in the cost of living in Malaysia.

TABLE 5: FREQUENCY DISTRIBUTION OF PRODUCTION COSTS

Statement	Mean	Std. Dev
I have found that the price of goods has been increasing lately due to the increase in production costs	4.33	1.028
I have found that the increase in the price of goods has changed my monthly spending plan	4.50	.777
I feel that the increase in the cost of production has put a strain on my finances	4.27	1.048
I must change my lifestyle due to the increase in the price of goods and services	4.27	.944
I am more careful in planning my monthly budget due to the increase in the price of goods and services	4.43	.817
Overall mean and standard deviation	4.36	9.23

Source: Table by Authors

Increase in the Cost of Living

Based on Table 6, the highest mean statement "The high cost of living burdens low-income consumers" at 4.77 (Std. Dev = 0.504), shows that consumers in Tawau Sabah admit that low-income groups are more burdened by the increase in the cost of living. The statements with the lowest mean are "The high cost of living encourages consumers to adopt a debt attitude" and "Increasing cost of living makes consumers unable to practice saving practices," respectively at a mean of 4.20 (Std. Dev = 0.976). This shows that although the increase in the cost of living affects the tendency to borrow and save, the effect is stressful as in the issue of the burden of the cost of living on low-income groups. The overall mean and standard deviation are 4.42 and 0.827, respectively. This study is in line with the study highlighted by the Organisation for Economic Cooperation and Development (Organisation for Economic Co-operation and Development, 2022) which states that the COVID-19 pandemic has caused high costs of living, especially for low-income families.

TABLE 6: FREQUENCY DISTRIBUTION OF THE INCREASE IN THE COST OF LIVING

Statement	Mean	Std. Dev
The increase in the price of grocery items causes household expenses to increase	4.33	1.093
The increase in the cost of living puts pressure on consumers	4.60	.675
The high cost of living burdens low-income consumers	4.77	.504
The high cost of living encourages consumers to adopt a debt attitude	4.20	.887
Increasing cost of living makes consumers unable to practice saving practices	4.20	.976
Overall mean and standard deviation	4.42	.827

Source: Table by Authors

Multiple Linear Regression Analysis

Based on Table 7, the ANOVA results show that there is a statistically significant relationship between the factors tested and the increase in the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era [$F = 84.192$, $p = 0.001$]. Overall, the regression model is strong with an R^2 value of 0.461, which explains that 46.1% of the variation in the increase in the cost of living can be explained by this model. The adjusted R^2 value is 0.456, confirming that 45.6% of the variation in the dependent variable can be attributed to the independent variables, namely the increase in raw material prices, excess demand for goods and services in the market and the increase in production costs. Therefore, these findings prove that the model built can provide reliable predictions of the factors that influence the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era.

Multiple regression analysis was conducted to determine the relationship between the independent variables (increase in raw material prices, excess demand for goods and services in the market, and increase in production costs) and the dependent variable (increase in the cost of living). Referring to the regression data, the results of the study showed that the effect was statistically significant because the p value < 0.05, which is p = 0.000. The increase in raw material prices was found to be positively significant in influencing the increase in the cost of living with a β value = 0.223, t = 4.435, and p = 0.000. This occurs when the cost of raw materials increases, which in turn prompts manufacturers to increase the price of the final product (Krugman & Wells, 2020). This finding also supports Blanchard's (2021) study which states that high raw material costs have a major impact on various sectors, especially the manufacturing sector in an economy that relies on imports.

In addition, the variable of excess demand for goods and services in the market also showed a statistically significant relationship, but the effect was weak (β = 0.079, t = 1.577, p = 0.000). As argued by Mankiw (2021), when market demand exceeds supply, this situation leads to demand-driven inflation.

For the variable of increasing production costs, the results of the analysis showed a strong positive relationship (β = 0.490, t = 8.733, p = 0.000). This finding is in line with the study by Tan and Wong (2023), which found that economic pressure is caused by increasing production costs in the service industry. This proves that increasing production costs have a significant impact on consumers, especially since most consumers rely on the service industry to meet their basic needs.

Overall, the results of the study show that all independent variables contribute significantly to the increase in the cost of living of consumers in Tawau, Sabah. Among the factors tested, the increase in production costs was the most dominant, followed by the increase in raw material prices, while the excess demand for goods and services in the market had the smallest effect. Therefore, the alternative hypothesis (H1) is supported, namely that dominant factors such as the increase in raw material prices, excess demand for goods and services, and the increase in production costs have a significant influence on the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era.

TABLE 12: THE MOST DOMINANT FACTOR INFLUENCING THE INCREASE IN THE COST OF LIVING

Independent Variables	Unstandardized coefficient		Standardized coefficient	t	Sig(p)
	β	Std.error	Beta		
(Constant)	5.511	1.121		4.916	.000
Increase in raw material prices	.225	.051	.223	4.435	.000
Excess demand for goods and services in the market	.072	.046	.079	1.577	.000
Increase in production costs	.449	.051	.490	8.733	.000

Note: R^2 =0.461, Adjusted R^2 = 0.456, F = 84.192, p < 0.000

Source: Table by Authors

5. CONCLUSION AND POLICY IMPLICATIONS

This study investigated the factors influencing the rising cost of living among consumers in Tawau, Sabah, in the post-COVID-19 era. Based on survey data from 300 respondents and analyses using descriptive statistics, Pearson correlation, and multiple regression, the findings reveal that increases in raw material prices, excess demand for goods and services, and higher production costs significantly affect consumers' cost of living. The overall regression model was robust (R^2=0.461), with production costs emerging as the most dominant factor, followed by raw material prices, while excess demand contributed the least. These results are consistent with prior studies (Krugman & Wells, 2020; Blanchard, 2021; Tan & Wong, 2023), affirming that global and domestic cost pressures shape consumer welfare in import-dependent and service-oriented economies.

From a policy perspective, the findings highlight the urgent need for comprehensive and long-term strategies to mitigate the impact of rising costs on households, particularly in rural areas. Government interventions such as subsidies on essential goods, tax relief, and incentives for producers (e.g., subsidies for raw materials, energy, and logistics) can ease cost pressures. At the same time, strengthening social safety nets—such as financial literacy programs—can help households better manage their expenditures and maintain wellbeing.

The study also underscores the role of the private sector in alleviating consumer burdens by offering affordable products, ensuring competitive pricing, and engaging in corporate social responsibility (CSR) initiatives. Collaboration between government, private actors, and local communities is essential to stabilizing prices, ensuring access to affordable goods, and promoting sustainable consumption.

Theoretically, the findings reinforce demand-supply and price theory by showing how imbalances in raw material costs and production expenses influence both consumer demand patterns and market supply structures. Practically, the evidence provides valuable insights for policymakers, producers, and consumer advocacy groups in formulating adaptive strategies to safeguard household welfare.

Future research could expand on the current study by exploring additional factors that may influence the cost of living, such as household income variability, access to digital markets, and changing consumption behaviours in response to climate change and technological adoption. Longitudinal studies could also track how these factors evolve over time, particularly in response to government policies, global supply chain disruptions, or economic shocks, providing a more dynamic understanding of household expenditure patterns. Comparative studies between urban and rural districts in Sabah, or between different Malaysian states, could further illuminate regional disparities and the effectiveness of targeted interventions.

Additionally, future studies could employ mixed methods approaches, combining quantitative surveys with qualitative interviews or focus groups; to capture the lived experiences of consumers and the strategies households adopt to cope with rising costs. Research could also examine the role of informal economic activities, migrant labour, and cross-border trade in shaping local price structures. Such studies would offer nuanced insights into the complex interactions between market forces, policy measures, and household welfare, thereby informing more effective, evidence-based strategies for mitigating the impact of rising costs on consumers.

In conclusion, this study contributes to a deeper understanding of post-pandemic cost-of-living dynamics in Sabah, offering a foundation for future research and policy formulation to address consumer challenges across Malaysia.

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LJMS LABUAN E-JOURNAL OF MUAMALAT AND SOCIETY

DIMENSI BAHARU STRATEGI KUTIPAN SEDEKAH SEBAGAI ALAT KEWANGAN SOSIAL ISLAM DI ERA DIGITAL

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ABSTRACT

The development of Islamic social finance based on the concept of charity and donations has been in full accord with the Muslim community. The concept of assisting without expecting material rewards is not something unfamiliar among Muslims. The charity can help those in need to live a better life. Those who give alms also had been promised to gain benefits and reward in the life hereafter. From an economic standpoint, charity is one of the instruments of redistribution of wealth to social development activities in addition to *zakat* and *waqf* (endowment). Back to the days before the digital age, alms were accumulated through the movement of volunteers from house to house, from one location to another, but now the situation has been improved with the introduction of information technology platform. The unwillingness of some people to donate following the increasing crime of fraudulent syndicates through the conventional fundraising movement manipulated by some irresponsible parties has accelerated the need for more secure methods. Therefore, this study aims to analyse the effectiveness of charity as a social Islamic financial instrument in Malaysia through the explosion of information technology in the digital age. The study was conducted using qualitative methods through library research. The result shows that by using the concept of crowdfunding, several websites have been developed and managed specifically for charity. The donated funds can be managed structurally and channelled to charitable organizations or charities as well as to the real beneficiaries. Therefore, seeking for *al-falah* and *barakah* through charity is strongly encouraged in Islam.

KEYWORDS: DONATION, CROWDFUNDING, FUNDRAISING, DIGITAL AGE, SOCIAL FINANCE

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ABSTRAK

Pembangunan kewangan sosial Islam yang berasaskan konsep sedekah dan sumbangan telah sebati dengan masyarakat Islam. Konsep bantu membantu tanpa mengharapkan ganjaran material bukanlah sesuatu yang asing untuk disaksikan. Sedekah dapat membantu mereka yang memerlukan agar dapat menjalani kehidupan dengan lebih baik. Mereka yang mengeluarkan sedekah juga mendapat banyak manfaat yang dijanjikan Allah khususnya sebagai bekalan pahala pada kemudian hari. Dari sudut ekonomi, sedekah merupakan salah satu instrumen agihan semula kekayaan kepada aktiviti pembangunan sosial sebagai tambahan kepada zakat dan wakaf. Kalau suatu masa dahulu sebelum era digital berkembang pesat, sedekah dikumpul melalui pergerakan sukarelawan dari rumah ke rumah, dari satu lokasi ke satu lokasi, namun, kini keadaannya telah ditambah baik dengan

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penggunaan platform teknologi maklumat tanpa sempadan yang mudah dan berada di hujung jari sahaja. Keengganan segelintir masyarakat untuk menderma ekoran peningkatan jenayah sindiket penipuan melalui pergerakan pengumpulan dana secara konvensional yang dimanipulasi oleh sesetengah pihak tidak bertanggungjawab telah mencetuskan keperluan menyediakan kaedah yang lebih selamat dan dijamin. Justeru, itu, kajian ini ingin menganalisis keberkesanan strategi sedekah sebagai instrumen kewangan sosial Islam di Malaysia melalui ledakan teknolgi maklumat di era digital. Kajian yang dilakukan ini menggunakan kaedah kualitatif melalui kajian perpustakaan. Hasil kajian menunjukkan bahawa dengan menggunakan konsep pendanaan awam, beberapa laman sesawang telah dibangunkan dan diuruskan dengan teratur khusus untuk tabung sedekah. Dana sedekah yang dikumpulkan dapat diuruskan secara berstruktur dan disalurkan kepada organisasi atau yayasan kebajikan serta individu yang sebenarnya berkeperluan sekiranya kaedah bersedekah dalam era digital ini dapat ditadbir urus dengan jujur. Maka mencari al-falah dan barakah melalui sedekah sangat digalakkan dalam Islam.

KATA KUNCI: SEDEKAH, PENDANAAN AWAM, PENGUMPULAN DANA, ERA DIGITAL, KEWANGAN SOSIAL

1. PENGENALAN

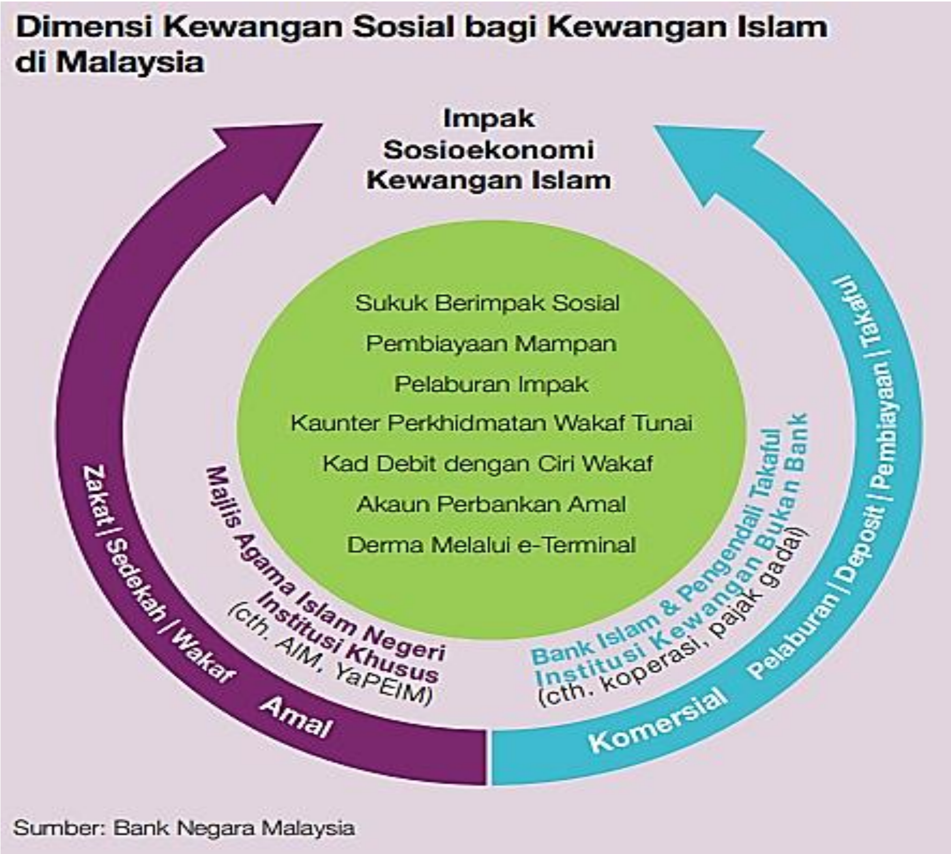
Kepesatan pembangunan sistem kewangan Islam bukan hanya menjana kekayaan material terhadap ekonomi Islam tetapi turut memberi impka yang baik terhadap instrument-instrumen yang bersifat kebajikan terutamanya sedekah. Sedekah yang merupakan salah satu instrumen bercirikan sukarela dan fleksibel tanpa ketetapan masa dan kadar tertentu menjadikannya sebagai pelengkap kepada pengukuhan kewangan sosial Islam. Dari sudut kerohanian pula, sedekah merupakan amalan yang mulia dan terpuji. Sedekah menunjukkan tanda kesyukuran kita kepada Allah yang telah mengurniakan segala nikmat terutamanya nikmat Islam melalui perkongsian sesama manusia. Sedekah juga dapat menyucikan harta dan menambahkan barakah dalam pendapatan dan kehidupan.

Instrumen zakat, sedekah, infaq dan hibah merupakan antara instrumen utama dalam kewangan sosial Islam di dalam ekonomi Islam kerana instrumen ini membantu melahirkan kesejahteraan masyarakat dengan penyusunan semula sosio-ekonomi mereka di Malaysia. Instrumen ini juga merupakan penghubung antara dua sektor utama dalam ekonomi Islam iaitu sektor pengeluar dan sektor pengguna di mana terdapat sektor ketiga (mereka yang memerlukan bantuan) yang terdiri daripada golongan fakir, miskin, geladangan, anak yatim, orang tua, pesakit-pesakit kronik dan merbahaya dan lain-lain.

Zakat ialah mengeluarkan sebahagian daripada harta apabila telah mencukupi nisab dan diberi kepada orang yang berhak menerimanya dan hukum berzakat adalah wajib. Zakat hanya wajib ditunaikan apabila melepasi beberapa syarat antaranya iaitu harta tersebut mencukupi kadar minima (*nisab*), dimiliki dalam tempoh setahun (*haul*) dan wajib ditunaikan atas kadar tertentu. Sedekah pula ialah suatu pemberian yang diberikan oleh seorang muslim kepada orang lain secara sukarela tanpa dibatasi oleh waktu dan jumlah (*haul* dan *nisab*) tertentu sebagai kebajikan yang mengharapkan pahala dan redha Allah SWT dan hukum bersedekah adalah sunat. Infaq pula ialah membelanjakan atau mengeluarkan sebahagian daripada harta atau pendapat/penghasilan yang diperolehi untuk sesuatu kepentingan pada jalan Allah secara umum dan juga berbentuk sunat.

Sedekah berbeza daripada hibah atau hadiah kerana objektif sedekah ialah untuk membantu orang yang memerlukan tetapi hadiah diberikan untuk memuliakan dan meneguhkan hubungan kasih sayang. Namun kecenderungan masyarakat di Malaysia yang melihat potensi sedekah sebagai alat yang membantu secara langsung kepada peningkatan kesejahteraan hidup golongan yang memerlukan bantuan telah menyebabkan kaedah kutipan sedekah ini telah melalui proses tranformasi yang drastik sesuai dengan perumahan masa dan zaman.

Melihat kepada dimensi kewangan sosial bagi kewangan Islam di Malaysia masa kini, ianya dapat digambarkan seperti dalam Rajah 1 seperti di bawah:



RAJAH 1: DIMENSI KEWANGAN SOSIAL BAGI KEWANGAN ISLAM DI MALAYSIA
Sumber: Laporan Kestabilan Kewangan dan Sistem Pembayaran 2016, Bank Negara Malaysia

Perkembangan sektor kewangan Islam dipacu oleh institusi perbankan Islam, institusi kewangan bukan bank seperti koperasi dan pajak gadai serta pengendali takaful, manakala sektor kewangan sosial Islam digerakkan oleh Majlis Agama Islam Negeri, institusi tradisional dalam Islam yang berasaskan konsep kebajikan seperti zakat, wakaf dan sedekah, dan juga institusi kewangan mikro Islam kontemporari seperti Yayasan Pembangunan Ekonomi Islam (YaPEIM) dan Amanah Ikhtiar Malaysia (AIM). Inovasi menggabungjalinkan dua sektor ini yang diperkenalkan seperti kad debit Islam baharu dengan ciri wakaf, platform untuk mendapatkan dana daripada orang ramai menerusi internet (*crowdfunding*), sukuk berimpak sosial dan sebagainya berupaya membuka satu ruang baharu yang mampu memberi impak kepada sosioekonomi kewangan Islam.

2. KONSEP AL-FALAH DAN SEDEKAH

Perkataan ‘Al-Falah’ berasal daripada *aflaha-yuflihu-fallah* yang didefinisikan dari sudut bahasa iaitu beruntung, memperoleh apa yang diinginkan/ kebahagiaan (M. Quraish, 2002). Dari sudut pandang Islam, konsep kejayaan yang ditekankan ialah mendapat keuntungan, kebahagiaan dan kejayaan bukan sahaja di alam dunia tetapi kejayaan tersebut berkesinambungan untuk dikongsi di alam akhirat. Dalam ketentuan ini, ia diistilah sebagai mencapai kebaikan di dunia dan akhirat. Meskipun begitu, kemuncak kepada pencapaian tersebut adalah untuk mendapat keredaan, keampunan, rahmat dan perlindungan daripada Allah S.W.T. Golongan manusia yang mendapat nikmat tersebut adalah kelompok manusia yang memperolehi kejayaan yang hakiki atau distilahkan sebagai *al-falah*.

Firman Allah dalam surah bermaksud: *Sungguh beruntunglah orang-orang yang beriman. (yaitu) orang-orang yang khusyu' dalam sembahyangnya, dan orang-orang yang menjauhkan diri dari (perbuatan dan perkataan) yang tiada berguna, Dan rang-orang yang menunaikan zakat, Dan orang-orang yang menjaga kemaluannya, kecuali terhadap isteri-isteri mereka atau budak yang mereka* *miliki; maka sesungguhnya mereka dalam hal ini tiada terceIa. Barangsiapa yang mencari dibalik itu, sungguh mereka itulah orang-orang yang meampaui batas. Dan orang-orang yang memelihara amanat-amanat (yang dipikulnya) dan janjinya. Dan orang-orang yang memeihara sembahyangnya, Mereka itulah orang-orang yang akan mewarisi, (yakni) yang akan mewarisi syurga Firdaus. Mereka kekal di dalamnya.*

Surah Al-Mukminun: Ayat 1-11

Perkataan 'sedekah' berasal daripada perkataan صدق yang mengandungi pengertian yang menunjukkan kepada pemberian atau bantuan yang dihulurkan kepada mana-mana orang dengan ikhlas kerana Allah SWT. Ia juga merangkumi sifat yang terpuji di sisi syarak (Omar, 2006). Sedekah menurut Kamus Dewan Edisi Keempat (Pustaka, 2010) ialah pemberian kepada fakir miskin dan lain-lain (dengan ikhlas). Sedekah menurut bahasa bermaksud kebenaran atau pemberian ikhlas dari hati yang bersih, manakala pada istilah pula, ulama' menyebut sebagai pemberian semata-mata untuk mendekatkan kepada Allah dan mencari keredhaan Allah SWT (Pejabat Mufti Wilayah Persekutuan, 2019).

Firman Allah dalam Surah Al-Baqarah Ayat 271 bermaksud: *Kalau kamu zahirkan sedekah-sedekah itu (secara terang), maka yang demikian adalah baik (kerana menjadi contoh yang baik). Dan kalau pula kamu sembunyikan sedekah-sedekah itu serta kamu berikan kepada orang-orang fakir miskin, maka itu adalah baik bagi kamu; dan Allah akan menghapuskan dari kamu sebahagian dari kesalahan-kesalahan kamu. Dan (ingatlah), Allah Maha Mengetahui secara mendalam akan apa yang kamu lakukan.*

Sedekah juga ditakrifkan sebagai segala amalan baik yang dilakukan oleh seseorang sepertimana yang diterangkan dalam hadith berikut:

Maksudnya: *Daripada Jabir menyatakan bahawa Rasulullah SAW bersabda: Setiap amalan makruf (baik) adalah sedekah.*

Fadhilat Sedekah

Dalam konteks ibadah, bersedekah menunjukkan pengabdian, kepatuhan kita sebagai hamba Allah terhadap perintah-Nya serta usaha menari keredhaan-Nya. Hal ini dapat dirujuk dalam firman Allah, Surah Al-Munafikun Ayat 10 bermaksud:

Dan belanjakanlah (dermakanlah) sebahagian dari rezeki yang Kami berikan kepada kamu sebelum seseorang dari kamu sampai ajal maut kepadanya, (kalau tidak) maka ia (pada saat itu) akan merayu dengan katanya: " Wahai Tuhanku! Alangkah baiknya kalau Engkau lambatkan kedatangan ajal matiku - ke suatu masa yang sedikit sahaja lagi, supaya aku dapat bersedekah dan dapat pula aku menjadi dari orang-orang yang soleh.

Perbuatan bersedekah ini adalah sebagai tanda pengharapan terhadap ganjaran pahala yang tidak terhingga. Allah telah menjanjikan pahala bersedekah yang berlipat kali ganda dalam Surah Al-Baqarah: Ayat 261

Maksudnya: *Bandingan (derma) orang-orang yang membelanjakan hartanya pada jalan Allah, ialah sama seperti sebiji benih yang tumbuh menerbitkan tujuh tangkai; tiap-tiap tangkai itu pula mengandungi seratus biji. Dan (ingatlah), Allah akan melipatgandakan pahala bagi sesiapa yang dikehendakiNya, dan Allah Maha Luas (rahmat) kurniaNya, lagi Meliputi ilmu pengetahuanNya.*

Faedah bersedekah meliputi dunia dan akhirat. Faedah di dunia ialah dimurahkan rezeki, menolak bala bencana, menghapuskan sifat bakhil, menghapuskan sikap tamak haloba, menghubungkan dan mengukuhkan silaturrahim dan kasih sayang, mencegah kematian yang buruk dan menghapuskan dosa, manakala faedahnya di akhirat pula ialah menjadi naungan dari panas terik di padang masyar dan menjadi pendinding dari api neraka (Sheikh 'Abdullah Basmeih, 1985).

Kategori Sedekah

Sedekah dikategorikan kepada dua iaitu sedekah wajib (zakat) dan sedekah sunat (derma dan khairat). Bentuk-bentuk sedekah yang lazim ialah:

- Sedekah harta benda seperti memberi makan dan minum kepada yang memerlukan, jiran teangga, haiwan, bersedekah kepada diri sendiri dan ahli keluarga yang ditanggung nafkahnya, memberi tempoh orang yang berhutang; dan
- Sedekah bukan harta benda seperti khidmat bakti dan buah fikiran, melakukan amal yang baik (makruf), tidak menyusahkan orang lain, memberi pertolongan kepada orang lain, bercakap dengan baik dan memberi kasih sayang kepada semua makhluk.

Konsep Dana Sedekah

Instrumen sedekah dalam sistem ekonomi dan kewangan Islam dapat dibentuk pada tiga bahagian dana iaitu dana *siasi*, *tijari* dan dana *ijtima'i*.

JADUAL 1: KONSEP DANA SEDEKAH

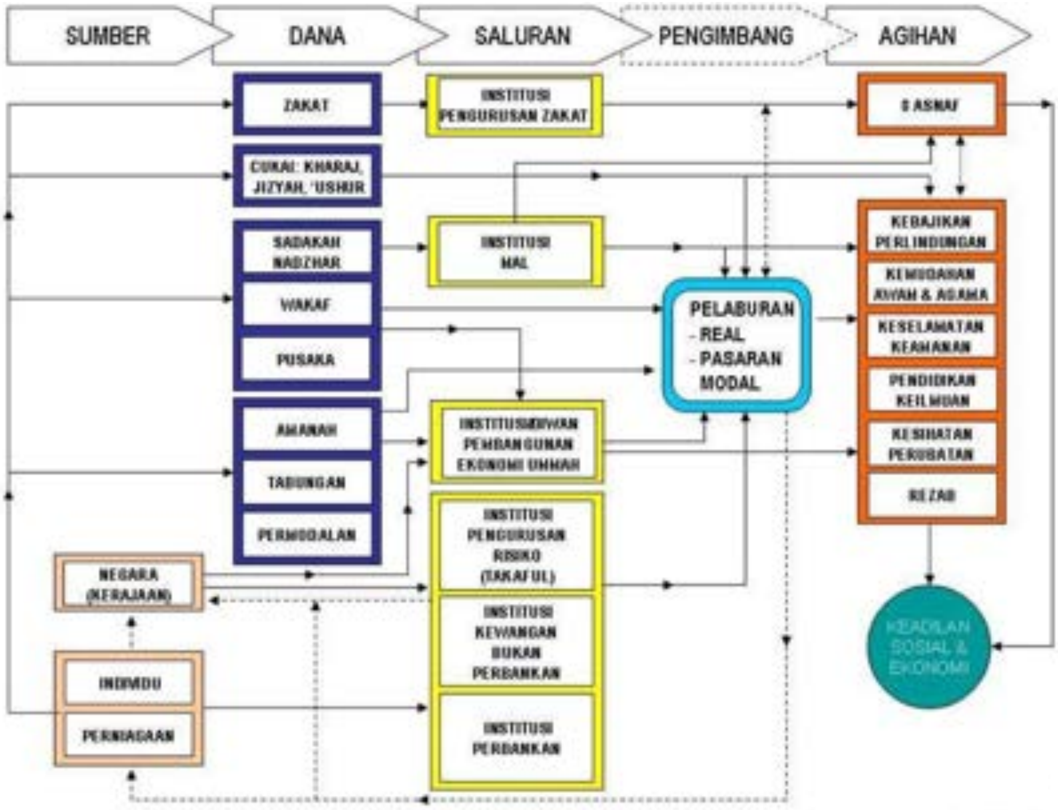
Dana *siasi*	Dana *tijari*	Dana *ijtima'i*
Dana yang melibatkan sektor kerajaan atau awam yang mempunyai ikatan dengan sektor swasta dan sektor kebajikan sosial yang merangkumi pentadbiran, pertahanan, penyelenggaran dalam undang-undang dan peruntukan, dan sebagainya.	Dana yang berkonsepkan keuntungan untuk pemiliknya. Contoh: dana pengurusan haji dan umrah	Dana yang tidak berkonsepkan kepada keuntungan kewangan bagi pihak-pihak iaitu pemilik dan pengurusnya. Contoh: zakat, wakaf dan sedekah

Sumber: Kerangka Perundangan Rumah Sedekah Sebagai Institusi Perbankan: Satu Tinjauan Awal (Markom *et al*., 2015)

Instrumen sedekah yang menerapkan prinsip ihsan, mempunyai fungsi dan peranan:

- Menyediakan skim pengagihan semula kekayaan secara sukarela dalam sistem ekonomi Islam;
- Menyediakan dana pelengkap yang mampu menampung kekurangan yang berlaku di dalam dana zakat atau dana-dana lain seperti wakaf;
- Menyediakan Dana yang fleksibel dan boleh digunakan dalam pelbagai bentuk;
- Menyediakan dana sebagai proses penyuncian harta haram dan subahat dalam ekonomi Islam; dan
- Menyediakan dana bagi kecemasan yang berlaku dalam masyarakat seperti bencana alam.

Dana kewangan sosial Islam secara umum dapat dilihat melalui Rajah 2. Dana sedekah merupakan satu-satunya instrumen yang pengagihannya ialah kepada asnaf, bidang kebajikan, kemudahan awam, keselamatan, pendidikan, kesihatan dan rizab.

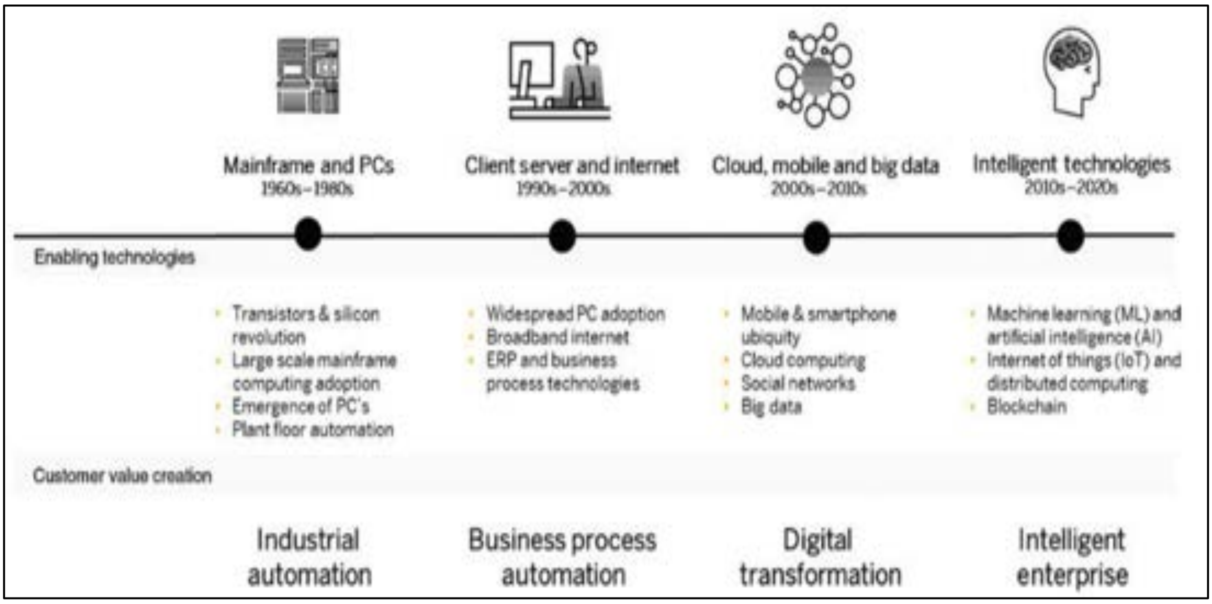


RAJAH 2: KEWANGAN SOSIAL ISLAM – ALIRAN DANA

Sumber: Pengurusan Dana Sedekah Secara Sistematik: Analisa Peranan Institusi Kerajaan Dan Swasta (Jalil & Muda, 2008)

Era Digital

Era digital yang juga dikenali sebagai era komputer atau era informasi bermula pada abad ke-20 dicirikan melalui anjakan daripada industri tradisional kepada revolusi industi yang berasaskan teknologi maklumat. Pengenalan komputer sebagai medium komunikasi dan penghantaran maklumat telah mewujudkan evolusi dalam kehidupan. Pelaksanaan pekerjaan juga dipermudahkan melalui automasi. Ditambah pula dengan pengenalan internet pada 1969 sebagai rangkaian komputer yang berhubungan melalui beberapa rangkaian sejagat mewujudkan perhubungan antarabangsa tanpa sempadan yang lebih efektif. Konsep pengkomputeran awan dan data raya mula mengisi ruang perkembangan teknologi. Namun, kritik terhadap kesahihan dan keselamatan maklumat mulai menggusarkan pengguna dan sebagai penyelesaiannya, pengenalan teknologi *blockchain* pada tahun 1991 yang dirangkaikan melalui *block* dan mempunyai ciri-ciri maklumat tidak boleh dipinda, berupaya meningkatkan tahap kepercayaan dan keselamatan data yang disimpan. Teknologi akan terus berkembang dengan pengadaptasian teknologi pintar dan Internet Benda. Secara ringkasnya, perkembangan ini dapat dilihat di Rajah 3:



RAJAH 3: EVOLUSI SISTEM MAKLUMAT

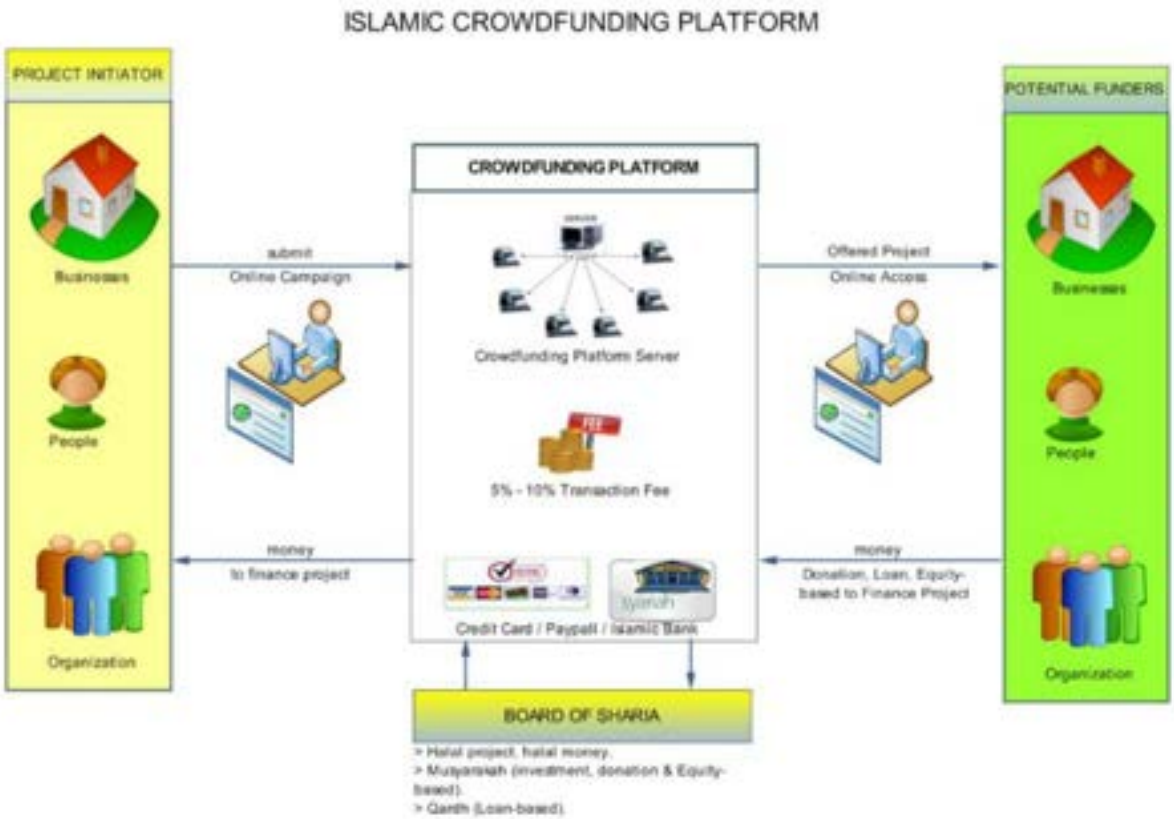
Sumber: Digital Transformation in Healthcare - Architectures of Present and Future Information Technologies (Glopal *et al*., 2019)

Era digital menyediakan ruang dan peluang yang luas kepada ekonomi untuk bertumbuh pada kadar yang lebih kompetitif. Peluang ini tidak hanya dilihat semata-mata untuk pencapaian ekonomi material, namun ia juga wajar dimanfaatkan dalam pembangunan sosial dan kemasyarakatan melalui pengenalan instrumen kewangan sosial Islam atas talian. Justeru, kajian awal ini akan melihat penggunaan dan keberkesanan teknologi dalam sedekah.

Konsep Pendanaan Awam dan Pengumpulan Dana

Pendanaan awam adalah penggunaan modal kecil daripada sebilangan besar individu untuk membiayai usaha perniagaan baharu. Pendanaan awam menggunakan kemudahan akses rangkaian orang ramai yang luas melalui media sosial dan laman sesawang pendanaan awam untuk membawa pelabur dan usahawan bersama-sama, dengan potensi untuk meningkatkan keusahawanan dengan memperluaskan kumpulan pelabur. Ia membolehkan pelabur memilih daripada ratusan projek yang dipaparkan, dengan nilai pelaburan yang minimum. Manakala pengumpulan dana adalah proses mencari dan mengumpulkan sumbangan kewangan secara sukarela dengan melibatkan individu, perniagaan, yayasan amal, atau agensi kerajaan. Walaupun pengumpulan dana biasanya merujuk kepada usaha untuk mengumpul wang untuk organisasi bukan keuntungan, ada ketika konsep ini turut merujuk kepada pengenalpastian dan permintaan pelabur atau sumber modal untuk perusahaan. Kedua-dua terma ini saling bertukar ganti dan merujuk kepada proses yang sama.

Semua aktiviti yang terlibat dilaksanakan secara atas talian berasaskan internet oleh pihak-pihak yang terlibat iaitu pencari dana, penyumbang berpotensi, pengendali pendanaan awam dan Jawatankuasa Syariah. Pencari dana akan memuat naik cadangan projek/ tujuan keperluan dana ke platform ini, penyumbang berpotensi akan memilih projek yang diminati dan seterusnya saluran dana akan dibuat. Caj transaksi akan dikenakan oleh pengendali platform ini. Perincian konsep dan proses diterangkan di Rajah 4:



RAJAH 4: PROSES PENDANAAN AWAM PATUH SYARIAH

Sumber: Islamic Crowdfunding: Alternative Funding Solution (Wahjono *et al.*, 2015)

2. KAJIAN LEPAS

Dana sedekah mempunyai potensi yang sangat tinggi untuk dibangunkan, terutamanya dalam sistem ekonomi dan kewangan yang berasaskan teknologi maklumat dan komunikasi pada masa kini (Jalil & Muda (2008). Sistem kewangan Islam Malaysia yang telah mencapai tahap kemajuan yang agak tinggi mampu menyediakan infrastruktur yang lengkap bagi penubuhan dana berasaskan sedekah. Masyarakat Islam Malaysia khasnya perlu mengambil peluang ini untuk melangkah lebih jauh lagi di dalam sistem ekonomi Islam. Namun, pengurusan yang telus dan terkawal amat perlu agar tidak dieksploitasi dan dikhianati. Di samping itu, garis panduan dan kaedah pembahagian yang munasabah dan relevan serta sistem laporan, penilaian dan penyelarasan yang mantap mampu menjamin objektif penubuhan dan pengurusan dana sedekah ini tercapai. Dalam penulisan Zaenal *et al.* (2022), pendidikan dan kesihatan merupakan dua faktor utama kebajikan individu yang menjadi tumpuan dalam pembangunan kesejahteraan yang dipengaruhi oleh filantropi Islam.

Karya daripada Hasan and Sulaiman, (2016) memperaku bahawa pengumpulan dana masyakarat berupaya menjadi salah satu mekanisme pembiayaan yang strategik dalam sistem kewangan Islam khususnya dalam membiayai aktiviti ekonomi yang melibatkan Industri Kecil Dan Sederhana (IKS) yang sering berhadapan dengan masalah mendapatkan pembiayaan daripada institusi perbankan. Sebarang isu shariah yang berbangkit perlu ditanggungjawabkan kepada penasihat Syariah untuk meneroka dan mencari penyelesaian. Wahjono *et al.* (2015) menyarankan pelaksanaan konsep penjanaan dana awam Islam oleh negara-negara Islam atau negara majoriti Muslim kerana kemudahan dana patuh shari'ah yang ditawarkan kepada pihak yang memerlukan khususnya dalam memulakan perniagaan tanpa melibatkan pembiayaan daripada sistem perbankan. Konsep mualamat yang boleh diapikasikan ialah *musyarakah* (perkongsian) dan *qard* (pinjaman). Saiti *et al.* (2018) dalam kajian perbandingan penjanaan dana awam konvensional dengan Islamik menyatakan kewujudan badan Syariah dalam penjanaan dana awam Islam merupakan faktor kekuatan yang memberi impak yang positif terhadap penerimaan awam kepada produk ini.

Selari dengan itu, Maliki *et al.* (2025) membincangkan kepentingan rumah sedekah terhadap pembangunan ekonomi ummah. Idea penubuhan rumah sedekah juga yang berteraskan konsep sedekah juga merupakan instrumen pelaburan yang mampu menjamin keuntungan di dunia dan akhirat selaras dengan konsep sedekah jariyah. Pendekatan ini juga mendukung aspirasi dualisme iaitu menjaga kemaslahatan ummah di dunia dan mencari ganjaran pahala yang berkekalan di akhirat. Markom *et al.* (2015) mencadangkan dua pendekatan dalam menyediakan kerangka rumah sedekah iaitu menggubal undang-undang yang baharu iaitu Akta Rumah Sedekah atau pengawalseliaan oleh Bank Negara Malaysia di bawah Akta Perkhidmatan Kewangan Islam 2013 dan Kerangka Governans *Shariah* Bank Negara 2012. Model Sadaqa House oleh Bank Islam Malaysia Berhad diperjelaskan oleh Musafar Hameed *et al.* (2018) dilihat mampu memberi kesan yang positif kepada kebajikan ummah melalui projek-projek sumbangan dari dana tersebut dalam tiga bidang iaitu kesihatan, pemerkasaan ekonomi melalui peluang pekerjaan, dan pemerkasaan masyarakat melalui penyediaan kemudahan asas. Lutfi and Ismail (2016) mengemukakan model pendanaan awam yang berfungsi sebagai platform untuk membiayai projek keusahawanan menerusi konsep mikro-kewangan dan pada masa yang sama mewujudkan dana bantuan untuk rawatan penjagaan kesihatan kepada yang memerlukan. Penggunaan teknologi *blockchain* mampu membawa konsep pendanaan awam kepada tahap yang lebih baik melalui pengukuhan keselamatan data (Muneeza *et.al.*, 2018)**.**

Ternyata sedekah mempunyai peranan yang sangat penting dalam ekonomi Islam kerana instrumen ini di anggap mampu menyusun masyarakat Islam dalam sesebuah negara. Ini disokong oleh Eni Devi Anjelina *et al.* (2020) dan Mukhid (2024) yang menyatakan bahawa zakat, infak dan sedekah mampu memainkan peranan penting dalam meningkatkan kesejahteraan perekonomian masyarakat dengan mengurangkan jurang kemiskinan dalam negara melalu tatakelola yang terbaik.

Jika dahulu kutipan sedekah hanya menggunakan pendekatan konvensional seperti kutipan melalui wang tunai di masjid, surau atau tabung bergerak yang akhirnya menyebabkan impak bantuan sedekah kepada golongan sasar ini adalah kecil kerana nilai kutipan sedekah adalah tidak besar. Namun sejauhmana perkembangan masa dan zaman serta teknologi telah mengubah corak kutipan sedekah dalam masyarakat.

Oleh itu dengan kewujudan platform terkini yang berkaitan sedekah dalam pelbagai bentuk khususnya dalam bentuk digital merupakan sesuatu yang tepat dan sesuai dengan perubahan masa dan seiring perkembangan teknologi yang canggih.

Strategi kutipan sedekah yang berorientasikan pendekatan konvensional dilihat masih wujud dalam pasaran kewangan sosial Islam namun terdapat arus perubahan dalam melakukan kutipan sedekah. Perubahan ini mungkin kerana pendekatan konvensional dilihat tidak mampu memberikan hasil yang tinggi yang akhirnya membataskan bantuan kepada golongan sasar berbanidng pendekatan baharu yang berbentuk digital yang dilihat mempunyai potensi pasaran yang sangat luas tanpa sempadan yang mampu menyumbang kutipan sedekah dalam jumlah yang tinggi dan akhirnya mampu memberi impak yang besar kepada golongan sasar.

3. METODOLOGI

Kajian ini menumpukan pendekatan deskriptif kualitatif. Jesteru itu jenis kajian yang digunakan dalam kajian ini adalah kajian perpustakaan yang melibatkan pengumpulan data yang sesuai dengan objek kajian atau pengumpulan data yang bersifat keperpustakaan kerana proses kajian perpustakaan yang sistematik yang melibatkan pencarian, analisis dan interpretasi membantu menghasilkan hujah penyelidikan yang lebih kukuh dan kurang berat sebelah serta lebih tepat (Chigbu *et al.*, 2023). Selain itu, kajian perpustakaan membolehkan penyelidik menyusun teori, model dan konsep dari kajian terdahulu sebagai kerangka teori untuk kajian baru (Snyder, 2024). Oleh itu bahan-bahan yang terlibat dalam pengumpulan data ini terdiri daripada buku, akhbar, jurnal, majalah dan juga laman sesawang beberapa institusi berkaitan sedekah. Kaedah penyelidikan ini memerlukan pengumpulan data berkaitan daripada dokumen tertentu dan menyusun data untuk menganalisis bahan dan memberi kefahaman yang lebih mendalam berkaitan dengan kutipan dan bayaran sedekah di Malaysia.

4. HASIL DAN PERBINCANGAN

Sedekah dalam Era Digital

Abad ke 21 menyaksikan perkembangan teknologi berlandaskan internet dan transaksi atas talian yang memuncak. Menurut Wearesosial (2019) yang menerbitkan Global Digital Report 2019 terbitan bulan Januari 2019, ditafsirkan Malaysia mendapat tempat kelima tertinggi dunia dan tempat paling atas di rantau Asia Tenggara dalam penggunaan media sosial mudah alih. Kini penggunaan internet di Malaysia pada tahap 80 peratus dengan purata pengguna meluangkan masa dalam talian lapan jam sehari (Wearesosial, 2019). Jaringan internet juga amat mudah didapati dan bervariasi mengikut keperluan dan kemampuan pengguna. Capaian internet percuma juga boleh didapati di mana-mana sahaja khususnya di kompleks kerajaan, tempat-tempat awam, kompleks beli belah dan sebagainya. Menurut Heimans and Timms (2019) dalam buku berjudul New Power, dalam era *hyper-connected* yang bermaksud capaian kepada rangkaian digital yang meluas di mana sahaja dan pada bila-bila masa, individu lebih cenderung bekerja dalam keadaan tidak terlalu formal dan kebanyakan organisasi diperkukuhkan berasaskan jaringan dan keterbukaan.

Senario ini sebenarnya menyediakan satu peluang dan kemudahan untuk menguruskan dana sedekah dengan lebih teratur, efektif dan efisien tanpa mengabaikan matlamat asal sedekah iaitu mencari Al-Falah dan Barakah. Buktinya, disenaraikan institusi sedekah yang menggunakan laman sesawang sebagai kaedah pengumpulan dana seperti dalam Jadual 2 di bawah:

JADUAL 2: PRODUK-PRODUK SEDEKAH DIGITAL

Bil.	Produk sedekah digital	Akses laman sesawang	Pemilikan
1.	Globalsadaqah	Globalsadaqah. (2025). Diakses daripada https://www.globalsadaqah.com/ (akses pada Oktober 11, 2025).	Ethis Group
2.	Sadaqa House	SadaqaHouse. (2025). Diakses daripada https://sadaqahouse.com/ (akses pada Oktober 11, 2025).	Bank Islam
3.	Dana Inspirasi Malaysia (Inspirasiku)	YAPEIM. (2025). *Dana Inspirasiku*. Diakses daripada https://www.yapeim.my/category/dana-inspirasiku/ (akses pada Oktober 11, 2025).	Yayasan Pembangunan Ekonomi Islam Malaysia (YaPEIM)
4.	Infaq Dakwah Infaq Kebajikan Infaq Bantuan pendidikan	YADIM. (2025). Diakses daripada http://www.yadim.com.my/v2/pilihan-infaq/ (akses pada Oktober 11, 2025).	Yayasan Dakwah Islam Malaysia (YADIM)
5.	Tabung Gaza Tabung Syria Tabung Rohingya	MAPIM. (2025). Diakses daripada https://www.mapim.org (akses pada Oktober 11, 2025).	Majlis Perundingan Pertubuhan Islam Malaysia (MAPIM)
6.	Dana Wakaf Air Somalia Winter Appeal Water & Health Emergency & Disaster Risk Reduction Education Food & nutrition	IslamicRelief. (2025). Diakses daripada https://islamic-relief.org.my/donateNow/donations/new (akses pada Oktober 11, 2025).	Islamic Relief Malaysia

	Livelihood Orphan Fund Care4Hunger MySedekah		
7.	Donation	National Cancer Society Malaysia. (2025). Diakses daripada https://cancer.org.my/donate/ (akses pada Oktober 11, 2025).	National Cancer Society Malaysia
8.	Give hope Enlighten parents Provide second chances Reuniting families Transforming lives	Orphancare. (2025). Diakses daripada http://orphancare.org.my/get-involved/donate/donate-to-a-good-cause/ (akses pada Oktober 11, 2025).	OrphanCare Foundation
9.	Giving UiTM	UiTMPay. (2025). Diakses daripada https://uitmpay.uitm.edu.my/giving/products (akses pada Oktober 11, 2025).	Universiti Teknologi MARA
10.	Tabung Bersamamu TV3	Media Prima. (2025). Diakses daripada https://www.mediaprima.com.my/impact-overview.html (akses pada Oktober 11, 2025).	Media Prima Humanitarian Fund (platform e-Wallet)
11.	Donate to Islamic Aid	Islamicaid. (2025). Diakses daripada https://www.islamicaid.com/sadaqah/ (akses pada Oktober 11, 2025).	Islamic Aid, United Kingdom
12.	Islamic Education New Muslim Program Income Generation Disaster Relief	Dompetdhuafa. (2025). Diakses daripada https://dompetdhuafa.org.au/get-involved/make-donation/ (akses pada Oktober 11, 2025).	Dompet Khuafa Australia Ltd, Australia
13.	Dakwah & Tarbiyyah Education & Rehabilitation Community Support Nutrition Health	Ummah Welfare Trust. (2025). Diakses daripada https://donate.uwt.org/Account/Index.aspx (akses pada Oktober 11, 2025).	Ummah Welfare Trust, Bolton, United Kingdom

Sumber: Pelbagai laman sesawang

Ulasan Laman-laman Sesawang Institusi Sedekah

Berikut diperjelaskan beberapa contoh laman sesawang sedekah mengikut bidang/ kluster terpilih iaitu syarikat *fintech*, perbankan, organisasi mikro-kewangan, institusi pengajian tinggi awam (IPTA), organisasi bukan kerajaan (NGO), media dan laman antarabangsa.

- Laman Sesawang Syarikat *Fintech*: Laman Sesawang Globalsadaqah (https://www.globalsadaqah.com)

Globalsadaqah berfungsi sebagai perantara untuk aktiviti sedekah atas talian dikendalikan oleh Ethis Ventures Sdn Bhd dengan cara menghubungkan penderma kepada penerima yang benar-benar memerlukan yang dibawa melalui badan-badan kebajikan atau rakan kebajikan. Sedekah tidak hanya terhad kepada keperluan Muslim tetapi terbuka kepada sesiapa yang memerlukan sama ada dalam dan luar negara. Setiap aktiviti dikenali sebagai 'Kempen' dan mempunyai tempoh tertentu untuk paparan di laman sesawang ini. 'Kempen' yang telah mencapai dana yang diperlukan dalam tempoh tersebut akan ditutup dan diserahkan sepenuhnya kepada rakan kebajikan. Walau bagaimanapun, sekiranya dana masih tidak mencukupi sehingga tempoh masa yang ditetapkan berakhir, ia akan diputuskan oleh Rakan Kebajikan sama ada dipanjangkan tempoh kempen, ditamatkan dengan dana yang ada atau dibatalkan dan dikembalikan sumbangan kepada penderma. Kos operasi Globalsadaqah dibiayai melalui caj perkhidmatan kepada rakan kebajikan dan sumbangan rakan strategik.

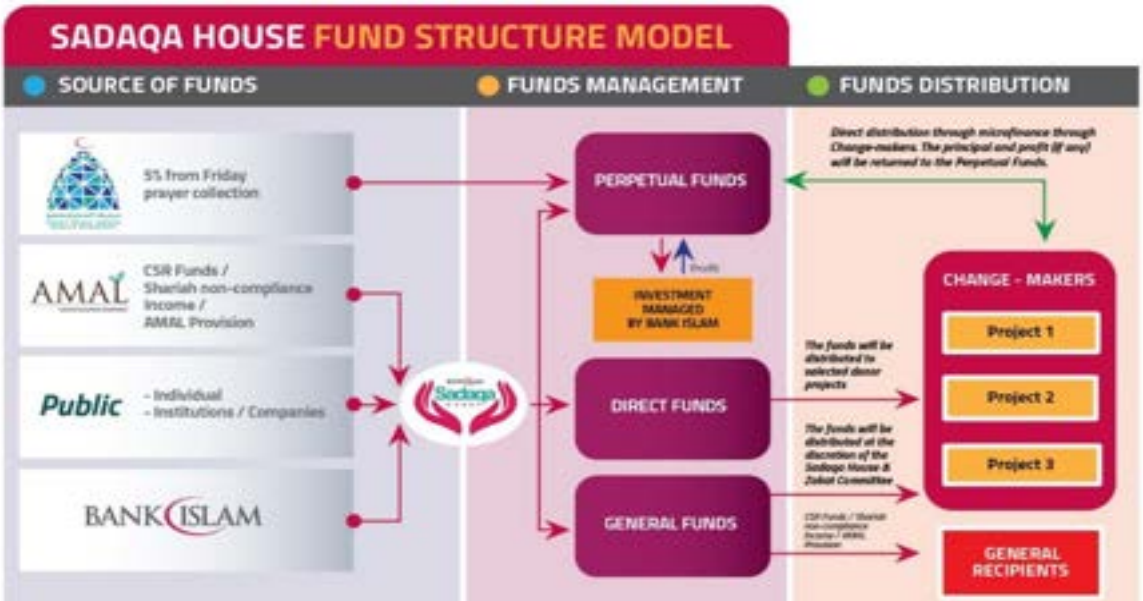
Globalsadaqah bekerjasama dengan beberapa Rakan Korporat (*Corporate Partners)* iaitu Alliance Islamic Bank, Al Rajhi Bank Malaysia, Kuwait Finance House Malaysia, Islamic Development Bank Saudi Arabia. Ia menyediakan saluran kepada rakan korporat untuk menyalurkan tanggungjawab sosial korporat atau dana penyucian.

Globalsadaqah juga mempunyai rakan kebajikan yang terdiri daripada badan-badan kebajikan seperti Yayasan Ikhlas, Mercy Mission, Khalifah Education Foundation, Yayasan Kebajikan Negara, An-Nada Educational Foundation dan banyak lagi.

Bagi memastikan transaksi adalah patuh Syariah dan bagi menjayakan platform pendanaan awam, Globalsadaqah mempunyai rakan strategik seperti Maybank QR Pay, Boost Pay, International Institute of Islamic Business and Finance, Kitabisa dan SalamWeb.

- Laman Sesawang Perbankan: Sadaqa House oleh Bank Islam Malaysia Berhad (sadaqahouse.com)

Sadaqa House adalah sebahagian daripada agenda strategik kewangan sosial Bank Islam iaitu dengan menggalakkan masyarakat melabur secara beretika bagi menyokong pembangunan ekonomi sektor yang kurang mendapat perhatian. Inisiatif ini membolehkan sumbangan daripada orang awam dibuat melalui platform digital pendanaan awam dengan kerjasama Ethis Ventures Sdn Bhd dan GlobalSadaqah.com. Sumbangan yang disalurkan adalah ke arah merealisasikan projek pembiayaan sosial untuk sektor yang kurang mendapat perkhidmatan seperti penjagaan kesihatan, pendidikan dan keusahawanan. Model Struktur Dana Sadaqa House Bank Islam adalah seperti di Rajah 4:



RAJAH 5: MODEL SADAQA HOUSE BANK ISLAM MALAYSIA BERHAD
Sumber: http://www.bankislam.com.my/home/bank-islam-sadaqa-house/

- Laman Sesawang Organisasi Mikro-Kewangan: Tabung Dana Inspirasi Malaysia – Inspirasiku (https://www.yapeim.my/category/dana-inspirasiku/)

Dana ini dikendalikan oleh Yayasan Pembangunan Ekonomi Islam Malaysia (YaPEIM) iaitu sebuah badan yang diwujudkan oleh Kerajaaan Persekutuan pada 13 Oktober 1976 dan diperbadankan di bawah Trustees (Incorporation) Act 1952. Bagi membangunkan potensi dan meluaskan peranannya, YaPEIM telah disusun dan dilancarkan semula pada 20 Julai 1984 oleh Perdana Menteri Malaysia pada ketika itu. Terdapat tiga teras utama YaPEIM iaitu bisnes, sosial bisnes dan pembangunan sosiekonomi and amal jariah. Khusus untuk program pembangunan sosiekonomi dan amal jariah, satu inisiatif baru telah diambil iaitu menubuhkan Dana Inspirasi Malaysia yang mensasarkan jumlah terkumpul sebanyak RM40 juta bagi memberi manfaat kepada hampir 40,000 pelajar seluruh negara dengan melibatkan penyertaan rakan strategik seperti Kementerian Pendidikan Malaysia (KPM), syarikat-syarikat korporat dan pihak-pihak yang dikenalpasti di negara ini. YaPEIM telah memperuntukkan RM1 juta sebagai dana awal untuk Dana Inspirasi Malaysia ini. Inisiatif ini selaras dengan gagasan RAHMAH di bawah Kerajaan Persekutuan iaitu menekankan kepada aspek menyantuni masyarakat dan memberi kesejahteraan hidup selaras dengan Sustainable Development Goals (SDG) yang disasarkan di bawah United Nations dalam memperkasakan masyarakat Malaysia melalui pendidikan yang saksama dan mampan. Sehingga kini (11 Disember 2019), dana yang terkumpul adalah sebanyak RM1,004,074.

- Laman Sesawang Institusi Pengajian Tinggi Awam (IPTA): *Giving UiTM* (https://uitmpay.uitm.edu.my/giving/products)

Dua jenis tabung kebajikan disediakan dan diuruskan oleh Unit Pengurusan Kebajikan Pelajar, Universiti Teknologi MARA (UiTM) iaitu Tabung Kebajikan Pelajar dan Tabung Kecemasan Pelajar. Tabung Kebajikan Pelajar menyediakan bantuan pinjaman, sara hidup, bencana alam, kes kecurian dan kehilangan, serta bantuan perjalanan kematian ibu bapa, manakala Tabung Kecemasan berfungsi memberi bantuan bagi kes kematian atau kecederaan. Sumbangan adalah terbuka kepada awam dan pembayaran boleh melalui platform JomPay.

Selain itu, Giving UiTM juga membuka ruang sedekah dengan manfaat pengecualian cukai kepada orang ramai, alumni dan warga UiTM untuk menyumbang kepada Perpustakaan UiTM bagi tujuan melengkapkan kemudahan perpustakaan dan membiaya pembelian buku dan kemudahan perpustakaan. Kaedah sumbangan boleh melalui cara manual di kaunter atau atas talian melalui aplikasi kod QR Affin Bank Islamic Berhad.

Sebagai contoh, Encik Hasbi mempunyai pendapatan tahunan RM100,000 dan beliau telah membuat sumbangan berbentuk sedekah kepada UiTM dalam beberapa projek kebajikan yang bernilai RM5,000 (layak pengecualian cukai). Beliau juga membuat potongan bayaran bulanan kepada KWSP dan takaful (pelepasan cukai oleh LHDN) berjumlah RM20,000 setahun. Memandangkan sumbangan sedekah Encik Hasbi masih dibawah 10% (Subseksyen 44(6) Akta Cukai Pendapatan 1967) daripada jumlah pendapatan argregat beliau, maka cukai pendapatan yang akan dikenakan oleh LHDN adalah sebanyak:

- RM100,000 – RM20,000 = RM80,000 (pendapatan boleh cukai)
- RM80,000 – RM5000 = RM75,000 (pendapatan akhir boleh cukai)

Ternyata potongan bayaran sedekah yang dilakukan di bawah akta Subseksyen 44(6) Akta Cukai Pendapatan 1967 membolehkan cukai pendapatan boleh cukai seseorang menjadi lebih rendah berbanding cukai sebenar.

- Laman Sesawang Organisasi Bukan Kerajaan (NGO): Tabung Islamic Relief Malaysia (https://islamic-relief.org.my/donateNow/donations/new)

Islamic Relief merupakan sebuah organisasi bebas berasaskan kemanusiaan dan pembangunan yang ditubuhkan oleh sekumulan pelajar lepasan ijazah yang prihatin di United Kingdom pada tahun 1984. Berasaskan kepada kepercayaan serta nilai-nilai Islam, Islamic Relief berhasrat mewujudkan dunia yang prihatin di mana komuniti diupayakan, tanggungjawab sosial dilaksanakan dan masyarakat bersatu meringankan penderitaan golongan yang memerlukan.

Kaedah yang boleh digunakan untuk menderma ke Tabung Islamic Relief Malaysia (IRM) ialah meliputi (i) Atas Talian melalui MOLPay, FPX atau perbankan internet; (ii) Luar Talian melalui pindahan dana ke akaun IRM; (iii) JomPay; (iv) Kad Kredit/ Kad Debit; (v) bayaran kepada wakil (IRM Partner Care); dan (vi) Kemudahan Auto-Debit yang disediakan oleh bank.

- Laman Sesawang Media: Tabung Bersamamu TV3 (https://www.mediaprima.com.my/impact-overview.html)

Aplikasi Boost diperkenalkan untuk sumbangan ke Tabung Bersamamu TV3. Aplikasi '*mobile wallet*' yang merevolusikan kaedah melakukan transaksi dalam dunia digital. *'Mobile wallet'* menjadikan transaksi lebih mudah, pantas, selamat dan pada masa yang sama mengembalikan ganjaran pada pengguna dalam pelbagai bentuk seperti promosi, diskaun dan pulangan wang ('*cashback*'). Di samping aplikasi ini, Tabung Bersamamu TV3 dan lain-lain tabung di bawah Tabung Media Prima masih menggunakan saluran perbankan atas talian dan kaedah manual iaitu melalui cek.

- Laman Sesawang Antarabangsa: Tabung Islamic Aid (https://www.islamicaid.com/sadaqah/)

Islamic Aid ditubuhkan pada tahun 2000 dan berpengkalan di London, United Kingdom. Tujuan penubuhan adalah untuk membantu kelangsungan hidup mangsa kemiskinan, peperangan dan bencana alam melalui pembekalan makanan dan air, kesihatan, pendidikan dan kehidupan di 12 negara yang terpilih. Dana diterima daripada individu, perniagaan, masjid dan organisasi bukan kerajaan. Sehingga kini, purata kutipan tahunan ialah sekitar £3.3 juta dengan penderma melebihi 90 ribu orang seluruh dunia.

Analisis Laman Sesawang Digital yang Menawarkan Instrumen Sedekah

- Laman sesawang Globalsadaqa

Satu contoh platform yang sedang meluas peranannya sebagai saluran dana sedekah di era digital ialah www.globalsadaqah.com. Berdasarkan penelitian pada paparan informasi di laman sesawang tersebut, penulis telah meringkaskan data statistik berkaitan jumlah kutipan dana sedekah yang diperoleh dan agihannya bagi tempoh 2018 sehingga 16 November 2019 iaitu seperti di Jadual 3 di bawah:

JADUAL 3: JUMLAH KUTIPAN DAN AGIHAN DANA SEDEKAH MELALUI PLATFORM WWW.GLOBALSADAQAH.COM BAGI TEMPOH 2018 SEHINGGA 16 NOVEMBER 2019

Bil.	Bidang Keperluan Dana	Bilangan Kempen*	Jumlah Dana Diperlukan (RM)	Jumlah Dana Dikumpulkan & Diagihkan (RM)	% Jumlah Dana Dikumpulkan / Diperlukan
			(a)	(b)	(c) = (a) / (b) x 100%
Keperluan dalam negara					
1.	Infrastruktur	3	96,250.00	78,628.00	82%
2.	Pendidikan	6	6,122.00	6,227.00	102%
3.	Perubatan	6	16,449.00	16,581.00	101%
4.	Kemiskinan (dana perniagaan)	13	22,128.00	21,364.00	97%
Jumlah kecil		28	140,949.00	122,800.00	87%
Keperluan luar negara					
5.	Bencana alam & kemanusiaan	8	108,450.00	18,100.00	17%

Bil.	Bidang Keperluan Dana	Bilangan Kempen*	Jumlah Dana Diperlukan (RM)	Jumlah Dana Dikumpulkan & Diagihkan (RM)	% Jumlah Dana Dikumpulkan / Diperlukan
			(a)	(b)	(c) = (a) / (b) x 100%
6.	Dakwah	11	61,130.00	49,650.00	81%
7.	Infrastruktur	1	3,600.00	423.00	12%
8.	Kesihatan	5	47,325.00	35,404.00	75%
Jumlah kecil		25	220,505.00	103,577.00	47%
Jumlah Keseluruhan		53	361,454.00	226,377.00	63%

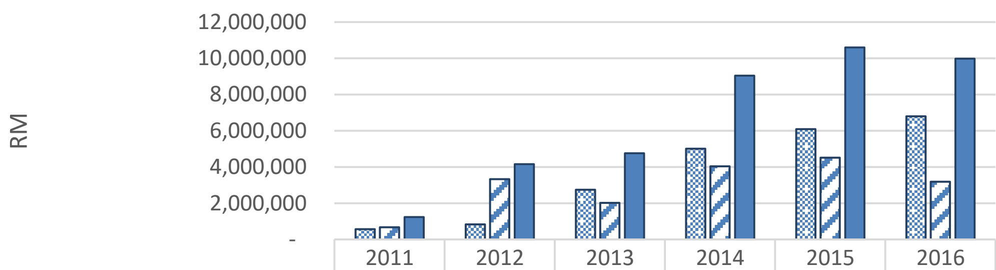
* Nota: 'Kempen' merujuk kepada akaun/ keperluan dana yang dinamakan kepada seseorang individu atau sesebuah organisasi sosial yang memerlukan bantuan

Sumber: https://www.globalsadaqah.com/campaigns (16 November 2019)

Data di atas menunjukkan dalam tempoh hampir dua tahun, sebanyak 53 kempen telah berjaya diiklankan di laman sesawang ini dan telah mendapat sejumlah bantuan daripada seluruh dunia dalam pelbagai bidang sosial. Ringkasnya, 63% keperluan bantuan yang diiklankan telah dapat dipenuhi dan sebaahagiannya telah pun disalurkan dan dimanfaatkan oleh benefesiari/ pihak yang memerlukan bantuan. Berdasarkan data ini, secara umumnya dapat dibuktikan bahawa platform digital sebagai alternatif atau kaedah termudah, terpantas dan terbaik untuk menemukan pemberi bantuan dengan pihak yang memerlukan, tanpa mengira sempadan negara dalam tempoh masa yang berkadaran dan munasabah.

- Laman sesawang Islamic Relief Malaysia

Melihat kepada jumlah kutipan terhad yang dilaporkan dalam penyata Penyata Kewangan Tahunan organisasi ini menunjukkan arah aliran peningkatan yang konsisten saban tahun bermula tahun 2011 hingga 2015 dan sedikit penurunan yang tidak begitu signifikan pada tahun 2016. Arah aliran ini diilustrasikan dalam Rajah 6. Namun, data untuk tahun kewangan yang lebih mutakhir tidak diperolehi semasa analisis ini dibuat.



	2011	2012	2013	2014	2015	2016
Program dan Bantuan Dalam Negara	560,313	839,204	2,740,217	5,003,453	6,087,235	6,801,443
Program dan Bantuan Antarabangsa	674,673	3,320,572	2,026,475	4,036,190	4,515,860	3,177,880
JUMLAH	1,234,986	4,159,776	4,766,692	9,039,643	10,603,095	9,979,323

RAJAH 6: GRAF JUMLAH PENDAPATAN TERHAD ISLAMIC RELIEF MALAYSIA BAGI TAHUN 2011 HINGGA 2016

Sumber: Penyata Kewangan Islamic Relief Malaysia yang telah diaudit Bagi Tahun Berakhir 31 Disember 2012, 2014 dan 2016

Walaupun penulis tidak dapat menentukan punca sebenar peningkatan jumlah kutipan sama ada didasari oleh pengenalan platform teknologi maklumat atau giatnya usaha-usaha kesedaran dan pemasaran, namun secara umumnya dapat dilihat pelaksanaan tanggungjawab dalam amalan filantropi yang semakin baik khusus dalam kalangan rakyat Malaysia. Peningkatan kesedaran ini mengisyaratkan potensi sedekah sebagai instrumen pengukuhan ekonomi sosial Islam yang semakin berkembang dan dikenali.

Jesteru itu adalah diharapkan di masa akan datang kutipan sedekah di Malaysia perlu diwujudkan satu akta yang khusus supaya kaedah kutipan sedekah yang semakin pelbagai dan dijangka jumlah kutipan sedekah juga akan meningkat dengan begitu tinggi akan dapat dikawal selia oleh badan khas supaya penyelewangan dan penyalahgunaan kutipan sedekah oleh pihak yang ingin mengaut keuntungan dengan cara mudah dapat dibendung.

5. KESIMPULAN

Sebagai kesimpulannya, terdapat perubahan ketara kaedah kutipan sedekah pada zaman sekarang berbanding zaman dahulu disebabkan oleh perubahan teknologi yang begitu pesat membangun. Pembangunan teknologi yang hebat ini telah menjadikan kaedah kutipan sedekah mula dipelbagaikan dalam bentuk digital supaya hasil kutipan sedekah mampu mencapai tahap maksimum dan impaknya mampu memberikan nilai tambah kesejahteraan hidup kepada mereka yang memerlukannya. Kesedaran pihak perbankan khususnya institusi perbankan Islam yang melihat potensi platform sedekah secara digital sebagai salah satu bentuk CSR kepada masyarakat masih kurang memuaskan kerana hanya beberapa institusi perbankan Islam sahaja yang terlibat seperti Bank Islam Malaysia Berhad berbanding jumlah keseluruhan institusi perbankan Islam di Malaysia sebanyak 16 buah. Keterbatasan penglibatan insitusi perbankan Islam dalam mempromosikan bayaran sedekah secara digital ini mungkin disebabkan oleh faktor-faktor tertentu. Jesteru melalui dapatan kajian ini diharapkan mampu memberi laluan kepada kajian-kajian lain di masa hadapan melihat peranan institusi perbankan Islam dalam memperkasakan kutipan sedekah melalui kaedah digital yang dilihat mempunyai potensi yang jauh lebih besar sekiranya semua institusi perbankan Islam bersatu padu menjayakannya.

Bagi memantapkan penggunaan teknologi sebagai wacana sedekah di era digital, beberapa perkara perlu diteliti oleh pelbagai pihak terumanya pihak Bank Negara Malaysia dan juga Kementerian Kewangan. Pertama ialah soal perlindungan data peribadi yang perlu dititikberatkan oleh pengendali platform, pihak berautoriti dan pengguna bagi mengelakkan risiko kebocoran maklumat dan penggodaman data. Kedua ialah kawalan industri pengendali platform pendanaan awam melalui pelesenan agar pengguna dimaklumi berhubung lawan sesawang yang sah bagi mengelakkan penipuan atas talian. Ketiga ialah tadbir urus organisasi atau syarikat pengendali platform digital yang lebih baik, telus dan berintegriti khususnya dalam ketelusan pendedahan maklumat yang bernilai dan berimpak tinggi di laman sesawang masing-masing. Pendedahan sebegini mampu menarik lebih ramai penyumbang atau pemilik modal. Akhirnya, keempat ialah galakan atau insentif yang lebih menarik dan meluas terhadap setiap amaun sumbangan sedekah seperti pengecualian cukai dan pengecualian caj bank. Justeru semua pihak perlu memainkan peranan dalam memastikan teknologi dapat dimanfaatkan dengan optimal demi maslahah umat Islam dan rakyat sejagat.

Platform sedekah digital dikhuatiri tidak berada di bawah pengawasan ketat pengawal selia yang sedia ada, menyebabkan risiko penyalahgunaan, tiada ketelusan, tiada amanah dan potensi penipuan. Walaupun sedekah digital berpotensi besar namun tanpa kerangka regulasi dan tadbir urus yang jelas, keberkesanan dan keselamatan sistem boleh terjejas. Oleh itu hasil kajian ini menyarankan sebuah kajian terhadap penilaian risiko termasuk kebocoran data, penipuan, *hacking*, manipulasi akaun, dan kemungkinan penyalahgunaan dana boleh dilakukan bagi memastikan sedekah secara digital dapat dioptimumkan di Malaysia. Selain itu kajian ini juga mencadangkan agar kajian mengenai penyediaan garis panduan dan standard nasional merangkumi pelesenan platform, audit, kewajipan pelaporan, pemisahan antara dana sumbangan dan operasi, serta mekanisma pengawasan berkala boleh dijalankan pada masa akan datang.

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