BRIDGING THE GAP: A CONCEPTUAL FRAMEWORK FOR DIGITAL TAKAFUL ADOPTION AMONG GEN Z UNDERGRADUATES

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Abstract

The rapid advancement of financial technology (FinTech) has transformed the delivery of Islamic financial services, leading to the emergence of digital takaful as a more accessible and convenient form of Shariah-compliant financial protection. Despite being highly connected digital natives, Generation Z (Gen Z) undergraduates continue to exhibit relatively low participation in takaful schemes. This study adopts a conceptual approach to examine the factors influencing digital takaful adoption among Gen Z undergraduates. Drawing upon the Theory of Planned Behaviour (TPB), Diffusion of Innovations (DOI), and Technology Acceptance Model (TAM), the study synthesises existing literature to develop an integrated conceptual framework. The proposed framework identifies awareness, trust, religiosity, Shariah governance, technological enablers, and affordability as key determinants influencing digital takaful adoption intention. Trust is positioned as a central mediating variable linking individual perceptions and institutional factors to adoption behaviour, while religiosity and affordability are proposed as moderating variables that strengthen adoption intention. The framework further highlights the role of emerging technologies, including blockchain, artificial intelligence, smart contracts, and digital knowledge-sharing platforms, in enhancing transparency, operational efficiency, and consumer confidence. This study contributes to the growing body of literature on Islamic financial technology by offering a holistic framework that integrates behavioural, technological, governance, and religious perspectives. Practically, the proposed framework provides valuable insights for takaful operators, regulators, and policymakers in designing youth-oriented digital takaful solutions that promote greater financial inclusion and sustainable participation among future generations.

Keywords: *Digital Takaful, Generation Z, Trust, Shariah Governance, Technology Adoption, Islamic Finance, Conceptual Framework.*

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INTRODUCTION

The development of Financial Technology (FinTech) has changed the way financial services are delivered, including in the Islamic finance industry. Digital platforms now allow users to access financial products more easily, including takaful services through mobile applications and online systems. This has made digital takaful more convenient and accessible, especially for younger users who are familiar with technology (Lee & Shin, 2018; Haddad & Hornuf, 2019). Generation Z, in particular, is known as a digitally connected group that is comfortable using online platforms in their daily life (Francis & Hoefel, 2018). However, despite the growth of digital financial services, the participation rate of takaful among university students remains relatively low. Reports have shown that takaful penetration is still limited, especially among younger individuals who often view takaful as complex or not relevant to their current financial situation (Ernst & Young, 2014; Islamic Financial Services Board [IFSB], 2022).

To understand this issue, it is important to examine both technological and behavioural factors. The Unified Theory of Acceptance and Use of Technology (UTAUT) explains that users are more likely to adopt a system when they find it useful (performance expectancy) and easy to use (effort expectancy) (Venkatesh et al., 2003). In the context of digital takaful, students may be more willing to use the platform if it helps them manage financial protection easily and does not require much effort to understand. However, technology factors alone may not fully explain the adoption of Islamic financial products. Islamic finance is closely linked to religious values, which means users may also consider whether the product aligns with their beliefs.

One important factor is Islamic financial literacy. Individuals who have a better understanding of Islamic financial concepts, including takaful, are more likely to recognise its importance and benefits (Lusardi & Mitchell, 2014; Abdullah & Chong, 2014). Without sufficient knowledge, students may find takaful difficult to understand or unnecessary. Another important factor is perceived Shariah compliance. For Muslim users, confidence that a financial product follows Islamic principles plays a key role in their decision-making (Echchabi & Olaniyi, 2012). If they are unsure about its compliance, they may avoid using the product even if it is easily accessible. In addition, digital trust is also crucial. Users need to feel confident that the platform is secure, reliable, and protects their personal data. Studies have shown that trust is a key factor influencing the adoption of digital financial services (Gefen et al., 2003). Therefore, this study suggests that the intention of Generation Z to adopt digital takaful is influenced not only by technological factors, but also by their level of financial understanding, their trust in digital platforms, and their confidence in Shariah compliance.

In the Malaysian context, several factors have been identified as barriers to takaful participation among youths. Lack of knowledge and awareness is one of the main issues, as financial understanding plays an important role in shaping consumer behaviour. Studies have shown that knowledge, financial status, and social influence significantly affect takaful awareness and participation in Malaysia. In addition, research focusing on

Malaysian youths highlights that factors such as religiosity, product understanding, and perception also influence their intention to adopt takaful **(**Rusni Hassan, Syed Ahmed Salman, Syarah Syahira Mohd Yusoff, Nor Razinah Mohd Zain, Adnan Yusoff**).** Among students, although there is some level of awareness, gaps still exist in understanding the benefits and functions of takaful products, especially among younger age groups (IBAF). This suggests that even within a digitally connected generation, knowledge and perception issues remain key challenges.

To better understand this issue, both technological and behavioural factors need to be considered. The Unified Theory of Acceptance and Use of Technology (UTAUT) explains that users are more likely to adopt a system if they find it useful and easy to use. However, in Islamic financial services, additional factors are also important. Islamic financial literacy helps individuals understand takaful concepts and reduces confusion, while perceived Shariah compliance builds confidence that the product follows Islamic principles. At the same time, digital trust is important because users need to feel that the platform is safe and reliable before using it. Therefore, this study suggests that the intention of Generation Z in Malaysia to adopt digital takaful is not only influenced by technology, but also by their level of understanding, trust, and confidence in Shariah compliance.

Literature Review

Digital Takaful Adoption Among Gen Z Undergraduates

The rapid digitalisation of financial services has transformed the manner in which consumers access, evaluate, and purchase financial products. Within the Islamic financial services sector, digital takaful represents an important innovation that enables consumers to obtain Shariah-compliant protection through digital platforms. Despite the growth of Islamic finance globally, takaful penetration remains relatively low, particularly among younger consumers who often exhibit limited awareness and understanding of takaful products. Existing studies suggest that awareness, religiosity, trust, and perceived compatibility significantly influence consumers' intention to adopt takaful products (Hassan & Abbas, 2020; Shaikh et al., 2020).

Generation Z (Gen Z) represents the first generation of true digital natives. Their financial behaviour is heavily influenced by digital technologies, social media interactions, mobile applications, and peer networks. Unlike previous generations, Gen Z consumers expect seamless digital experiences, transparent transactions, rapid service delivery, and personalised offerings. Consequently, conventional takaful marketing approaches may not effectively address their expectations and consumption patterns. Research indicates that Gen Z consumers are technologically sophisticated, highly price-sensitive, and dependent on online information sources when making financial decisions (Abdullah et al., 2021; Mukhtar & Jallow, 2025). These characteristics make them an important target segment for digital takaful operators seeking future market expansion.

Recent bibliometric and systematic reviews have highlighted the lack of comprehensive studies examining how behavioural, technological, and governance factors jointly influence digital takaful adoption (Qadri et al., 2024). Although previous studies have examined individual determinants such as religiosity, trust, or awareness, few studies have integrated these factors into a unified framework specifically targeting Gen Z undergraduates. Consequently, a more holistic understanding of digital takaful adoption is required.

Behavioural Adoption Theories

Behavioural adoption theories provide a useful foundation for understanding consumers' intentions to adopt digital takaful. Three theories have been particularly influential in explaining financial technology adoption, namely the Theory of Planned Behaviour (TPB), Diffusion of Innovations (DOI), and the Technology Acceptance Model (TAM).

The Theory of Planned Behaviour proposes that behavioural intention is determined by attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). Within the takaful context, attitude refers to an individual's positive or negative evaluation of takaful participation, subjective norms reflect social pressures from family, peers, and religious communities, while perceived behavioural control captures perceptions regarding affordability, accessibility, and ease of participation. Empirical studies consistently demonstrate that these variables significantly influence takaful adoption intentions across different contexts (Raza et al., 2020; Rifas et al., 2023).

Diffusion of Innovations theory complements TPB by focusing on the characteristics of the innovation itself. Rogers (2003) identified relative advantage, compatibility, complexity, observability, and trialability as key determinants of adoption. Studies conducted in Pakistan and Somalia found that relative advantage, compatibility, and awareness significantly influence takaful adoption, whereas complexity often demonstrates limited explanatory power (Shaikh et al., 2020; Mukhtar & Jallow, 2025).

The Technology Acceptance Model emphasises perceived usefulness and perceived ease of use as the primary determinants of technology acceptance. In the context of digital takaful, perceived usefulness reflects consumers' beliefs that digital platforms provide convenience and efficiency, while perceived ease of use relates to the simplicity of platform navigation and transaction processes. Integrating TAM with TPB and DOI offers a more comprehensive explanation of digital takaful adoption among technologically oriented Gen Z consumers.

Trust, Awareness and Religiosity

Trust is consistently identified as one of the strongest predictors of takaful adoption. Unlike conventional insurance products, takaful products incorporate religious and ethical dimensions that require consumers to trust both the provider and its adherence to Shariah principles.

Research demonstrates that trust is positively influenced by awareness, social capital, financial inclusion, and subjective norms (Poan et al., 2022). Consumers who possess greater knowledge regarding takaful operations and Shariah compliance are more likely to develop trust in takaful providers. Trust frequently functions as a mediating mechanism through which awareness, religiosity, and social influence affect purchase intentions.

Religiosity also plays a significant role in influencing takaful adoption. Sarfraz et al. (2022) found that religiosity strengthens the relationship between personal values and takaful adoption intentions. Individuals with stronger religious commitment tend to perceive takaful participation as fulfilling both financial and religious obligations.

However, religiosity alone does not guarantee adoption. Product confusion and limited understanding may weaken the influence of religiosity on behavioural intentions. Therefore, takaful operators should complement religious appeals with educational programmes designed to improve understanding and reduce misconceptions.

Awareness similarly remains an important determinant. Numerous studies identify low awareness as a major barrier to takaful adoption. Limited knowledge regarding product features, benefits, contribution structures, and claims processes often discourages participation. Educational campaigns, social media engagement, and university partnerships may therefore contribute significantly to improving adoption among undergraduate students.

Technological Enablers of Digital Takaful

The emergence of digital technologies has introduced new opportunities to enhance takaful accessibility, transparency, and efficiency. Recent literature identifies blockchain technology, smart contracts, artificial intelligence (AI), and digital knowledge-sharing platforms as important technological enablers of digital takaful adoption.

Blockchain technology enhances transparency by providing immutable transaction records that reduce information asymmetry between operators and participants. Smart contracts automate claims processing and contribution management, thereby reducing administrative costs and improving operational efficiency. Studies indicate that blockchain-enabled takaful platforms can reduce fraudulent claims, improve transparency, and automate claim settlements (Zulaikha et al., 2024).

Artificial intelligence facilitates fraud detection, customer profiling, risk assessment, and personalised product recommendations. By improving operational efficiency and strengthening security mechanisms, AI contributes to greater consumer confidence and trust.

Digital knowledge-sharing platforms also play an important role in consumer education. Qazi and Husin (2026) demonstrate that e-knowledge sharing enhances perceptions of data privacy and fraud prevention while simultaneously increasing trust in digital platforms.

For Gen Z consumers, technological features such as mobile accessibility, platform usability, rapid onboarding, digital payment integration, and real-time communication are particularly important. Therefore, technological innovation should be considered both an operational and strategic determinant of digital takaful adoption.

Shariah Governance and Institutional Trust

Shariah governance represents a distinguishing feature of takaful operations. Effective governance mechanisms ensure compliance with Islamic principles while protecting participants' interests.

The literature highlights the importance of Shariah Supervisory Boards (SSBs) in influencing organisational performance and consumer trust. Board size, expertise, reputation, and qualifications contribute significantly to perceptions of governance quality (BenSaid, 2025). Strong governance structures signal credibility and enhance consumer confidence.

Corporate Social Responsibility (CSR) activities also influence stakeholder perceptions. Transparent CSR disclosures demonstrate organisational commitment to social welfare and ethical conduct, thereby strengthening institutional legitimacy. Research suggests that CSR initiatives positively influence trust and moderate the relationship between governance quality and consumer adoption intentions.

Transparency in fund management, participant fund segregation, and disclosure practices further enhances confidence among consumers. Studies examining fraud disclosure indicate that effective governance mechanisms can mitigate negative effects and strengthen long-term trust (Hemrit & Belgacem, 2024).

Micro-Takaful and Product Innovation

Affordability remains a major challenge in attracting younger consumers to takaful participation. University students often possess limited disposable income and therefore require affordable protection solutions.

Micro-takaful has emerged as a promising solution. Micro-takaful products provide basic protection at low contribution levels while maintaining Shariah compliance. Recent studies suggest that integrating Islamic social finance instruments such as zakat, waqf, and sadaqah can further enhance affordability and accessibility (Shamsudheen & Muneeza, 2024; Muhamed et al., 2025).

Waqf-based takaful models are particularly attractive because they combine risk protection with social welfare objectives. Through waqf subsidies, vulnerable groups such as students can access protection products at reduced costs.

Product simplicity is equally important. Products featuring straightforward contribution structures, transparent claims processes, digital onboarding, and clearly communicated benefits are more likely to attract adoption. Bundled products covering health, accident, and funeral benefits may further enhance perceived value among undergraduate populations.

Proposed Research Framework for Digital Takaful Adoption Among Gen Z Undergraduates

The proposed framework is grounded in three prominent behavioural theories, namely the Theory of Planned Behaviour (TPB), Diffusion of Innovations (DOI), and the Technology Acceptance Model (TAM). These theories have been widely applied in explaining consumers' adoption of financial products and technologies (Ajzen, 1991; Rogers, 2003; Davis, 1989).

According to TPB, behavioural intention is determined by attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). In the context of digital takaful, attitude refers to an individual's favourable or unfavourable evaluation of participating in digital takaful schemes. Subjective norms represent the influence of family members, peers, lecturers, and religious communities on the individual's decision-making process. Perceived behavioural control reflects consumers' perceptions regarding their ability to participate in digital takaful, including financial affordability, access to digital platforms, and understanding of product features. Previous studies have consistently found these variables to be significant predictors of takaful adoption intention (Raza et al., 2020; Rifas et al., 2023).

The DOI theory complements TPB by focusing on innovation characteristics. Rogers (2003) argues that innovations are more likely to be adopted when they provide a relative advantage, are compatible with users' values and lifestyles, and are perceived as easy to understand and use. Studies on takaful adoption indicate that relative advantage and compatibility significantly influence consumers' willingness to participate in takaful schemes (Shaikh et al., 2020; Mukhtar & Jallow, 2025).

Similarly, TAM explains technology adoption through perceived usefulness and perceived ease of use (Davis, 1989). Since digital takaful relies heavily on online platforms, mobile applications, and digital interfaces, consumers' perceptions regarding the usefulness and simplicity of these technologies are expected to influence their adoption decisions.

Trust as a Central Mediating Variable

Trust occupies a central position in the proposed framework. Trust has consistently been recognised as one of the most important determinants of Islamic financial product adoption because consumers must have confidence not only in the service provider but also in its compliance with Islamic principles (Poan et al., 2022; Sarfraz et al., 2022).

In digital environments, trust becomes even more important because consumers often face uncertainty regarding data security, privacy protection, transaction transparency, and provider credibility. Previous studies suggest that trust significantly influences consumers' willingness to engage in online financial transactions and adopt digital financial services (Poan et al., 2022; Qazi & Husin, 2025). Therefore, trust is proposed as a mediating variable that translates awareness, religiosity, governance quality, and technological factors into digital takaful adoption intention.

Awareness and Religiosity

Awareness remains one of the most commonly identified barriers to takaful participation. Numerous studies have reported that many consumers possess limited knowledge regarding takaful concepts, benefits, operational mechanisms, and differences from conventional insurance products (Shaikh et al., 2020). This lack of awareness often leads to misconceptions and low participation rates.

Consumers who possess greater awareness are more likely to understand the benefits of digital takaful and develop positive attitudes toward participation. Increased awareness also contributes to trust formation because consumers become more familiar with product features and operational processes.

Religiosity is another important determinant within the proposed framework. As a Shariah-compliant financial product, takaful appeals to consumers seeking financial solutions that align with Islamic teachings. Previous research has demonstrated that religiosity positively influences attitudes, trust, and adoption intentions toward Islamic financial products (Sarfraz et al., 2022; Poan et al., 2022). In this framework, religiosity is proposed as a moderating variable that strengthens the relationship between trust and digital takaful adoption intention.

Shariah Governance and Institutional Trust

Shariah governance represents a unique characteristic of Islamic financial institutions and serves as a critical source of institutional legitimacy. Effective governance mechanisms ensure that takaful operations comply with Islamic principles while safeguarding participants' interests (BenSaid, 2025).

The literature highlights the importance of Shariah Supervisory Boards, transparency, disclosure practices, corporate social responsibility initiatives, and participant fund segregation in enhancing governance quality (BenSaid, 2025; Hemrit, 2020). Strong governance mechanisms reduce concerns regarding Shariah non-compliance and increase consumers' confidence in the institution.

For Gen Z consumers, who generally place considerable importance on transparency, ethical conduct, and corporate responsibility, effective governance practices can significantly strengthen institutional trust. Therefore, Shariah governance is proposed as an antecedent of trust in the framework.

Technological Enablers

The emergence of blockchain technology, artificial intelligence, smart contracts, and digital knowledge-sharing platforms has created significant opportunities for improving digital takaful operations. These technologies enhance transparency, efficiency, customer experience, and operational effectiveness (Qazi & Husin, 2025; Zulaikha et al., 2024).

Blockchain technology enables immutable transaction records and greater transparency, while smart contracts automate contribution collection and claims settlement processes. Artificial intelligence supports fraud detection, risk assessment, customer profiling, and personalised product recommendations. Digital knowledge-sharing platforms facilitate consumer education and improve financial literacy.

These technological innovations are expected to increase consumers' perceptions of usefulness, ease of use, and trust toward digital takaful platforms. Consequently, technological enablers are proposed as important determinants of digital takaful adoption.

Affordability and Product Accessibility

Affordability remains a major challenge for university students and young adults. Limited financial resources often prevent them from subscribing to protection products despite recognising their importance. To address this issue, recent studies have proposed micro-takaful and waqf-supported takaful models that provide affordable protection solutions while maintaining Shariah compliance (Muhamed et al., 2025; Shamsudheen & Muneeza, 2024).

Micro-takaful products offer lower contribution rates and simplified coverage structures that are more suitable for younger consumers. Similarly, waqf-based models utilise Islamic social finance mechanisms to subsidise participation costs and improve accessibility. Therefore, affordability is proposed as a moderating variable that strengthens the relationship between perceived behavioural control and digital takaful adoption intention.

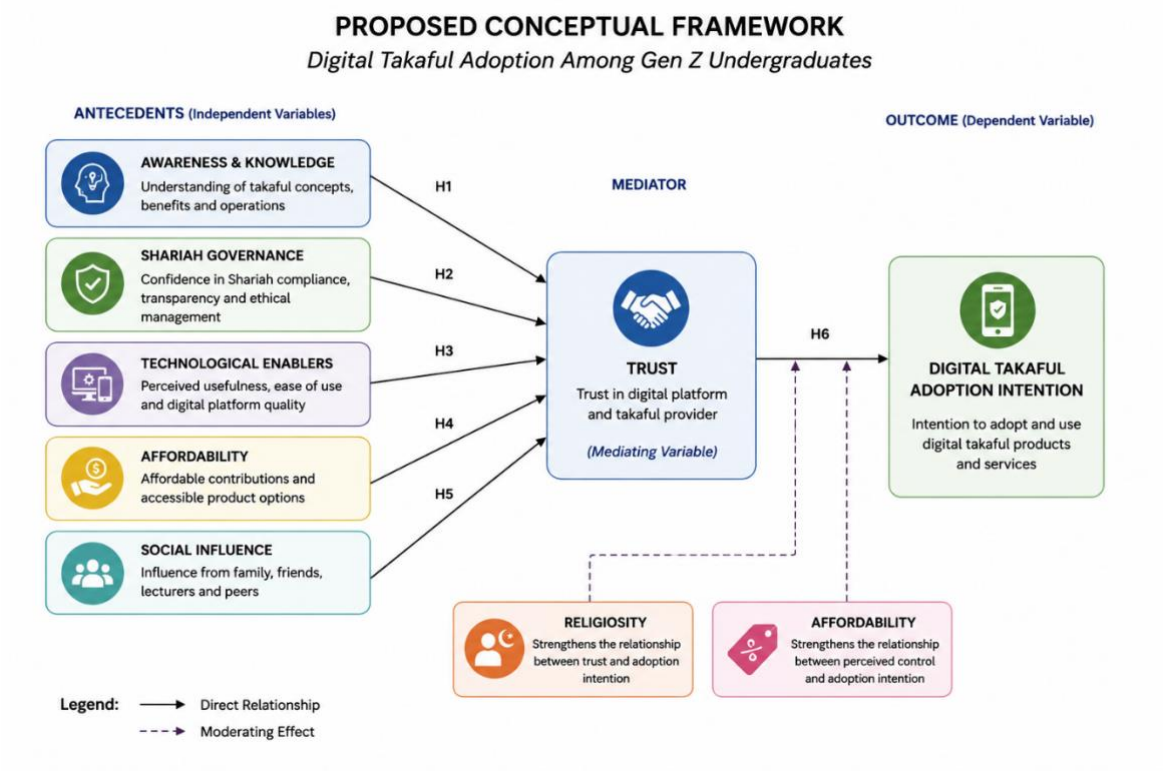


Diagram 1: Proposed Conceptual Framework

Conclusion

This conceptual paper has examined the factors influencing digital takaful adoption among Gen Z undergraduates and proposed an integrated framework to address the growing need for Shariah-compliant digital protection solutions. As digital natives, Gen Z consumers are highly dependent on technology, social media, and mobile platforms in making financial decisions. Despite the rapid growth of Islamic finance and digital financial services, takaful adoption among younger consumers remains relatively low due to limited awareness, affordability concerns, trust issues, and insufficient understanding of takaful products. These challenges highlight the need for a comprehensive framework that explains how behavioural, technological, governance, and religious factors collectively influence digital takaful adoption.

Drawing upon the Theory of Planned Behaviour (TPB), Diffusion of Innovations (DOI), and Technology Acceptance Model (TAM), this paper proposes a conceptual framework that integrates awareness, trust, Shariah governance, technological enablers, religiosity, and affordability as key determinants of digital takaful adoption intention. The framework positions trust as a central mediating mechanism linking individual perceptions and institutional factors to adoption behaviour. In addition, religiosity and affordability are proposed as moderating variables that strengthen consumers' willingness to adopt digital takaful products.

The review highlights that technological innovations such as blockchain, smart contracts, artificial intelligence, and digital knowledge-sharing platforms can enhance transparency,

operational efficiency, privacy protection, and consumer confidence. Simultaneously, strong Shariah governance practices, including effective Shariah Supervisory Boards, transparent disclosures, and ethical business conduct, contribute significantly to institutional credibility and trust. Furthermore, the emergence of micro-takaful and waqf-supported models offers practical solutions to affordability barriers faced by undergraduate students, thereby improving accessibility and financial inclusion.

This paper contributes to the existing literature by providing a holistic framework that integrates behavioural adoption theories with Islamic governance and digital innovation perspectives. The proposed framework offers valuable guidance for takaful operators, regulators, and policymakers seeking to develop effective strategies for engaging younger consumers in the digital era. Future research should empirically validate the framework using large-scale studies across multiple universities and geographical contexts. Ultimately, enhancing digital takaful adoption among Gen Z undergraduates will not only strengthen the sustainability of the takaful industry but also contribute to greater financial resilience and protection among future generations.

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