

The Transformation of Zakat Management Via Fintech: Issues and Challenges

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Abstract

The use of technology in zakat management has brought a significant transformation in how zakat funds are collected and distributed. However, there are several key issues and challenges in transforming zakat management through fintech, which is increasingly used in human life. Therefore, the objective of this study is to identify the main issues and challenges in the implementation of zakat management via fintech. This is a qualitative study using content analysis. The data obtained are from previous studies and websites. The study identifies six main challenges faced in this issue. First, the influence of technology in fintech on zakat; second, security measures; third, the challenges faced by zakat via fintech institutions in the collection and distribution of zakat; fourth, awareness and understanding of zakat via fintech; fifth, the use of blockchain technology in zakat management; and sixth, the use of artificial intelligence (AI) and big data analytics in determining zakat recipients. This study suggests that the public and official institutions involved in zakat should be more widely exposed to zakat management through fintech to enhance the efficiency and effectiveness of zakat collection and distribution.

Keywords: Zakat, Fintech, Challenge, Digital Finance, Transformation

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Introduction

Fintech or financial technology refers to the technological innovations used to enhance and automate the delivery of financial services. Fintech combines technology with software applications to provide more efficient and accessible financial solutions. This includes digital banking, mobile payments, online investments, and digital insurance. The main goal of fintech is to improve efficiency, reduce costs, and provide a better user experience in the financial sector. With technological advancements such as blockchain, artificial intelligence (AI), and big data analytics, fintech continues to grow rapidly and influence various aspects of global finance (Bin-Nashwan et al., 2023).

Various start-up organizations have been established to meet the needs of online financial applications globally. Among the financial services that have gone digital are e-payments, mobile wallets, cryptocurrency, crowdfunding, wealth/investment, blockchain,

lending, Insurtech, comparison technology, Know Your Customer (KYC/REGTECH), marketplace, Islamic FinTech, AI, remittance, currency exchange, and personal finance. According to a report released by www.fintechnews.my for the year 2018, there were 166 FinTech companies operating in Malaysia. This proves that the previously traditional financial system has rapidly evolved towards a digital system (Johari & Yusoff, 2019).

In the context of zakat management, fintech plays an important role in facilitating the collection and payment processes of zakat. This technology can connect zakat payers directly with zakat institutions through digital platforms, reducing the need for intermediaries and speeding up the payment process. Fintech platforms can also be used to track zakat payments in real-time, ensuring transparency and accuracy in zakat fund management. Additionally, this technology can simplify the monitoring of Shariah compliance, ensuring that the collected funds are distributed to the rightful beneficiaries (*asnaf*) fairly and efficiently. With the convenience of online payments, more individuals can fulfil their zakat obligations without facing logistical difficulties (Fadilah et al., 2023).

The use of fintech in zakat management has shown significant development in several countries. For example, Badan Amil Zakat Nasional (BAZNAZ) has launched a digital application that allows Muslims to calculate and pay zakat via smartphones. In the Middle East, applications like Zakat Fund UAE enable easy and fast zakat payments through digital platforms. Additionally, some international non-governmental organizations (NGOs) use blockchain platforms to distribute zakat more transparently and efficiently. The use of this technology not only increases the amount of zakat collected but also ensures fairer and more accurate distribution to those in need (Saro et al., 2023).

In the context of Malaysia, several fintech initiatives have been introduced to facilitate zakat payment and management. For example, The Federal Territories Islamic Religious Council - Zakat Collection Centre (PPZ-MAIWP) has launched a mobile application that allows users to pay zakat fitrah and zakat on wealth online. Additionally, several state zakat institutions have partnered with e-wallet platforms like Boost and Touch 'n Go e-wallet to offer digital zakat payment options. These initiatives have made it easier and faster for Muslims in Malaysia to fulfil their zakat obligations while ensuring transparency and accuracy in zakat fund management.

Studying zakat via fintech is important to understand the potential and challenges in transforming zakat distribution through financial technology. The use of fintech in zakat management can enhance efficiency, transparency, and information access in the collection and distribution processes. However, some several issues and challenges need to be addressed due to the rapid pace of technology. By understanding these issues, zakat institutions can optimize the use of technology to improve the effectiveness of zakat distribution, ensuring that funds reach the *asnaf* most efficiently and transparently. Therefore, this study will analyse the issues and challenges in the transformation of zakat distribution using fintech.

Literature Review

In the last decade, fintech has revolutionized various aspects of daily life. It includes how payments and financial management are conducted. One area that has also felt the impact of

this transformation is the zakat distribution system. Zakat, as one of the five pillars of Islam, plays a crucial role in reducing economic inequality and helping those in need. The use of technology in zakat distribution promises increased efficiency and effectiveness, but it also brings various issues and challenges that need to be addressed.

The purpose of this literature study is to examine the concerns and obstacles associated with using fintech to transform zakat management. The primary goal is to explore how fintech technology may be used to improve the zakat collecting and distribution process, as well as to identify the challenges that may arise during its implementation. Understanding these problems allows stakeholders, such as Malaysian zakat institutions to improve the application of fintech and the zakat system. Table 1 summarises the literature review for the past six years (2018-2023) on the obstacles of employing fintech in zakat management.

Table 1: Literature Review

No.	Author	Title	Objective	Finding
1.	Esrati, Mohd Nor & Abdul Majid (2018)	Financial Technology and Zakah Management in Malaysia	Studying the role of Fintech, specifically blockchain in zakat institutions.	The use of technology by zakat management can further strengthen the management system and benefit users (recipients and payers). However, blockchain technology has its challenges.
2.	Yahaya & Ahmad, (2018)	Financial Inclusion Through Efficient Zakat Distribution for Poverty Alleviation in Malaysia: Using Fintech & Mobile Banking.	Evaluating the acceptance of fintech in zakat usage among zakat payers.	Fintech increases confidence and convenience in zakat payments.
3.	Rachman & Nur Salam (2018)	The Reinforcement of Zakat Management through Financial Technology Systems.	Strengthening zakat management through financial technology systems.	Fintech enhances zakat management effectiveness, requiring regulation and standardization for sustainability.
4.	Yahaya & Ahmad (2019)	Factors Affecting the Acceptance of Financial Technology among <i>Asnaf</i> for the	Studying factors affecting acceptance rates using mobile banking.	Fintech technology has increased zakat collection, but distribution aspects can still be improved with

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| | | Distribution of Zakat in Selangor- A Study Using UTAUT | | technology. |
| 5. | Che Mohd Salleh & Chowdhury (2020) | Technological Transformation in Malaysian Zakat Institutions | Analyzing zakat management systems in the context of <i>Maqasid Shariah</i> and SDGs. | Zakat management aligned with <i>Maqasid Shariah</i> and SDGs is important for transparency and accountability. Many zakat institutions use technology for zakat collection but are still lacking in distribution and reporting. |
| 6. | Ilyas & Salim (2020) | Challenges Facing Malaysia in Expanding its Islamic Fintech Landscape & Possible Remedies. | Evaluating the impact of mobile application usage in zakat payment. | Mobile applications enhance convenience and compliance in zakat payment. |
| 7. | Salleh et al., (2021) | Technology Perspectives of Zakat Collection and Distribution in Optimising Financial Inclusion. | Understanding the challenges and potential of fintech in enhancing the zakat distribution system. | Most zakat institutions have used technology for zakat payment, but the use of technology for zakat distribution is still lacking. |
| 8. | Ibrahim (2021) | Comparative Analysis of Zakat Payment Using Financial Technology (Fintech) by LZNK and MAIK. | Examining the personality and work performance of staff at the Kedah State Zakat Board. | Personality influences work performance, with the level of diligence having the highest positive. |
| 9. | Mohd Nor et al., (2021) | The Role of Blockchain Technology in Enhancing Islamic Social Finance: The Case of Zakah Management on Malaysia. | Exploring the perceptions of zakat institutions and public aspirations towards the application of blockchain technology in zakat management. | The study provides a positive view towards zakat institutions adopting blockchain in their management, but several challenges need to be addressed. |

10.	Rani et al., (2021)	A Viewpoint of Islamic Financial Technology (I-Fintech) In Malaysia.	Assessing the Islamic Fintech potential and challenges of Islamic Fintech in Malaysia.	the Islamic Fintech has great potential but faces challenges in integrating <i>Shariah</i> principles.
11.	Azman & Zabri (2022)	Shariah-Compliant Fintech Usage Among Microentrepreneurs in Malaysia: an Extension of UTAUT Model.	Studying the transformation of technology in zakat management.	Implementation of technology such as blockchain can enhance transparency and effectiveness in zakat management.
12.	Meerangani et al., (2022)	Digitalisation of Zakat Management System in Malaysia: Potential and Challenges	Exploring the potential and challenges of digital platforms to improve the quality of zakat institutions in Malaysia.	Digitization in zakat management has the potential to increase efficiency and effectiveness in the quality of zakat institution services in Malaysia.
13.	Saro et al., (2023)	Analysis of Digital Zakat Payment Implementation: A Comparison in Southeast Asia	Comparing the implementation of digital zakat in Southeast Asia.	There are similarities and differences in the implementation of digital zakat in these countries.
14.	Saro et al., 2023	The Level of Acceptance and Intent to Continue Using Digital Zakat Applications Among The Community: A Preliminary Study	Examining user acceptance and intention to continue using zakat applications developed in Malaysia.	The study found that the level of acceptance of zakat implementation through digital platforms is high. Several elements need to be refined to encourage and maintain public use of digital zakat platforms.

Table 1 above shows the analysis of the literature review, which found five primary topics. The themes are listed in Table 2 below.

Table 2: Literature Review Theme

No	Author	Themes
1.	Esrati, Mohd Nor & Abdul Majid (2018), Yahaya & Ahmad (2018), Ilyas & Salim (2020), Saro et al. (2023)	Use of technology and digital literacy
2.	Rachman & Nur Salam (2018), Mohd Nor et al. (2021), Rani et al. (2021)	Shariah compliance and standardization
3.	Yahaya & Ahmad (2019), Salleh et al. (2021), Ibrahim (2021), Meerangani et al. (2022)	Effectiveness of zakat distribution
4.	Che Mohd Salleh & Chowdhury (2020), Azman & Zabri (2022)	Transparency and accountability
5.	Saro et al. (2023)	Technology infrastructure

This study aims to provide a comprehensive overview of the issues and challenges faced in zakat management through fintech. The study's findings are expected to have a significant impact on attempts to improve the zakat system and accomplish the desired social and economic goals.

Issues and Challenges

In the rapidly growing digital era, the fintech industry has played a significant role in facilitating various financial transactions, including zakat payments. The use of technology in zakat via fintech has created new opportunities to fulfil religious and social responsibilities in contributing to those in need. However, along with its advantages, some challenges and questions need to be carefully examined (Meerangani et al., 2022).

This article has identified six other challenges faced in this issue. First, the influence of technology in fintech on zakat; second, the security measures taken; third, the challenges faced by zakat via fintech institutions; fourth, increasing awareness about zakat through technology; fifth, the use of blockchain technology in zakat management; and sixth, the use of AI and Big Data in determining zakat recipients.

Influence of Technology in Fintech on Zakat

One of the main challenges in zakat via fintech is the influence of technology on the way zakat is collected and distributed. The use of technology in the fintech industry facilitates the zakat payment process through various mobile and online platforms. While this technology offers

convenience and efficiency, it also brings several challenges (Friantoro & Zaki, 2019). As a result, users experience difficulties in using zakat applications due to a lack of technical knowledge. Advanced technology also requires stable infrastructure and strong technical support to ensure smooth transaction processes (Friantoro & Zaki, 2019). This factor occurs due to several reasons:

1. Lack of Digital Literacy:

Many users may not have basic skills in using digital technology, making it difficult for them to effectively access and use digital zakat applications.

2. User-Unfriendly Applications:

If the digital zakat applications designed are not appealing and user-friendly, users may face difficulties in using them, especially those unfamiliar with digital applications.

3. Education and Training:

The lack of educational and training initiatives related to the use of zakat applications can increase the technical knowledge gap among users.

4. Availability of Resources:

In some areas, especially rural ones, access to technology and the internet may be limited. This also affects users' ability to access and use digital zakat applications.

Additionally, there is a significant digital divide within the community, which can be a barrier to the effectiveness of zakat via fintech. Low-income groups and those living in rural areas have less access to advanced technology (Hasan, et al., 2023). This makes it difficult for them to use digital zakat platforms, causing an imbalance in zakat distribution. Therefore, it is important to ensure that the technology used in zakat via fintech is inclusive and accessible to all segments of society.

Security Measures

Concerns about the security of user data and finances are also significant issues (Tom Thimot, 2022). Zakat via fintech platforms must ensure that users' personal and financial data are well protected. Consequently, this may cause users to hesitate to use zakat applications due to fears of cybersecurity risks. Based on interviews conducted in The Edge Malaysia, forms of threats can occur due to unencrypted data, malware, insecure third-party services (such as public cloud), and fraud (Surin Murugiah, 2022). This indicates that although technology can enhance efficiency, there are security risks that need to be seriously addressed to ensure user trust in zakat via fintech platforms.

Even though zakat via fintech platforms take stringent security measures, security risks such as fraud and hacking still exist. Therefore, further research and development in security technology are crucial to ensure integrity and trust in the implementation of zakat via fintech. A study by Ahmad & Yahaya (2023) suggests using the "Unified Theory of Acceptance and Use of Technology (UTAUT)" to investigate the acceptance and adoption of technology, especially when it relates to religious matters like zakat. This verification is essential to ensure that only legitimate users can access information and conduct transactions. An example is the introduction of a new term, "ZakaTech," in the Islamic finance industry, adopted by zakat institutions to further strengthen digital zakat management (Bin-Nashwan et al., 2023).

Challenges Faced by Zakat Via Fintech Institutions in the Collection and Distribution of Zakat

Additionally, a challenge faced by zakat via fintech institutions is achieving a balance between operational efficiency and adherence to *Shariah* principles in the collection and distribution of zakat. For example, using technology to identify legitimate and needy recipients without neglecting Islamic values and principles (Paizin et al., 2022). It is undeniable that technology can enhance efficiency in the collection and distribution of zakat.

Therefore, zakat via fintech institutions need to ensure that these processes comply with *Shariah* principles, such as justice, trust, and compassion. A study conducted by Jalil & Puad (2023) specifically for those less skilled in using technology highlights the need for more targeted educational programs and technological assistance to ensure all groups can participate in the digital zakat system. Additionally, difficulties in using the technology within certain segments of society due to limited internet access or low digital skills also contribute to this issue (Jalil & Puad, 2023).

Awareness and Understanding of Zakat via Fintech

While technology can enhance awareness and understanding of zakat, attention must be given to the quality of the information delivered. Zakat via fintech institutions need to ensure that the information provided is accurate, easy to understand, and complies with *Shariah* principles. A study by Yahaya & Ahmad (2019) involving 470 *asnaf* respondents in the state of Selangor, based on the UTAUT model, showed that the systems or applications used in zakat via fintech are not user-friendly. This factor further reduces their understanding and interest in digital zakat payments. This is also driven by a lack of technological knowledge, complex systems, concerns about risks, distrust of digital technology, unclear benefits of zakat via fintech, legal issues, and the use of confusing language (Ahmad & Yahaya, 2023). Therefore, it is the responsibility of zakat institutions to refine and enhance performance and ensure that the developed zakat application systems are always of high quality (Saro et al., 2023).

Use of Blockchain Technology in Zakat Management

In the management of zakat via fintech using blockchain technology, several key challenges have been identified. These include technology acceptance, complex systems, and data protection. The acceptance of blockchain is often hindered by a lack of deep technological understanding among users. Additionally, zakat institutions in Malaysia are also seen as not yet ready to implement zakat management through blockchain technology. This is because blockchain technology requires high financing and advanced IT systems. Moreover, the lack of clear guidance from zakat institutions in Malaysia regarding zakat management through blockchain technology has somewhat stalled its implementation (Esrafi et al., 2018; Mohd Nor et al., 2021; Nazeri et al., 2023; Unal & Aysan, 2022).

Use of AI and Big Data in Determining Zakat Recipients

The use of AI and Big Data in determining zakat recipients refers to the application of advanced technology. It would enhance effectiveness and efficiency in identifying and distributing zakat to eligible individuals who may not be registered in traditional systems. AI and Big Data enable zakat institutions to process and analyse large amounts of data quickly and accurately (Nugraha et al., 2019). According to a study conducted by Nor Paizin (2021), the exploration of digital technology is still not very encouraging in the zakat management system in Malaysia. The study focuses on three elements: the zakat collection system (payment platform), the distribution system (application and status review methods), and public participation (information display and interactive media). For example, the Selangor Zakat Board, the Federal Territory Zakat Collection Center, the Negeri Sembilan Baitulmal Corporation, the Kedah State Zakat Board, and the Kelantan Islamic Religious and Malay Customs Council (MAIK) are among the leading zakat institutions currently incorporating zakat institutions. These four zakat institutions have utilized the zakat collection system through online zakat (Financial Process Exchange -FPX), internet banking, smart applications (Google Playstore or App Store), and others (Islamic Credit/Debit Card, JomPay, Shopee, Boost, and MyEG).

Referring to data obtained through smart applications, only five institutions have successfully developed their zakat payment applications, namely PPZ-MAIWP through MyZakat, LZS (ZakatSelangor), TBS (Tabung Baitulmal Sarawak), PBMaINS (MAINS), and MAIPs (Mobile Apps MAIPs). Several other institutions only offer this service through integration with e-wallet applications such as Tulus (MAIDAM and MAIJ), GoPAYZ (ZPP), PahangGo (PKZP), and SnapNPay (MUIS).

However, only two institutions provide online application access on their websites, namely the Zakat Application System (MAIDAM) and Asnaf Prihatin (LZS). Institutions like PPZ-MAIWP, LZS, and MAINS only provide specific access for IPT Scholarship zakat applications. The majority of zakat institutions are still tied to traditional methods, namely providing application forms which must be manually submitted to the nearest zakat counter (Nor Paizin, 2021). Therefore, this study suggests several AI and Big Data models that can be practiced according to suitability:

1. Facial Recognition System: Digitally verifies the identity of zakat recipients and reduces fraud.
2. Predictive Modelling: Predicts zakat needs based on economic and social trends using historical and real-time data.
3. Chatbots: AI systems that interact with zakat payers and recipients to provide information and answer questions automatically.
4. Natural Language Processing (NLP): Manages and understands incoming zakat requests through text or voice.
5. Fraud Detection: Identifies suspicious transaction patterns in zakat payments or receipts.
6. Data Processing Automation: Quickly and accurately processes and analyses zakat data from various sources.
7. IoT Integration with AI: Uses data collected from the Internet of Things (IoT) to monitor and manage zakat distribution practically.
8. Intelligent Decision System: Provides decision-making recommendations based on data and algorithms to prioritize zakat distribution.

Conclusion

In the study of issues and challenges in the transformation of zakat management via fintech, technology plays an important role in modernizing and simplifying the zakat distribution process. However, there are major challenges that zakat institutions in Malaysia need to face in optimizing zakat via fintech management, such as the influence of technology in fintech on zakat, the security measures taken, challenges faced by zakat via fintech institutions, increasing awareness of zakat via fintech, the use of blockchain technology in zakat management, and the use of AI and Big Data in determining zakat recipients.

Continuous research and development in fintech technology are essential to ensure that the zakat distribution system can function efficiently and effectively. Zakat institutions need to collaborate with technology providers to improve the platforms used, considering feedback from users. With a comprehensive and well-planned approach, the use of fintech in zakat distribution can provide significant benefits to the community and help enhance efficiency in zakat management.

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