AZKA-PPZ
AKADEMI ZAKAT
AZJAF
AZKA INTERNATIONAL JOURNAL OF ZAKAT & SOCIAL FINANCE ISSN : 2735-1890 e-ISSN : 2716-6643
Vol. 6 No. 2 (2025)
azka.zakat.com.my
DOI: 10.51377/azjaf.vol6no2.213

DIGITAL ZAKAT MANAGEMENT IN MUSLIM COUNTRIES: A COMPARATIVE ANALYSIS THROUGH A LITERATURE-BASED LENS

MONIRUZZAMAN
Research School of Social Sciences, Australian National University (ANU)
Email: monir.iium@gmail.com

A PEER-REVIEWED ARTICLE
(**RECEIVED** – 21ST FEB. 2025: **REVISED** – 16TH AUG. 2025: **ACCEPTED** – 4TH SEPT. 2025)

ABSTRACT

Digitalization of Zakat management has become a landmark change in most Muslim-majority nations, facilitating efficiency, transparency, and financial inclusion. A qualitative, literature-based research design was used in this study, with secondary data obtained from academic journals, institutional reports, and online platforms. The data gathered were subjected to thematic content analysis to determine the emerging trends, strategies, and issues in digital Zakat implementation. Four major themes were identified: technological platforms, regulatory frameworks, digital literacy, and emerging tools like blockchain. Comparative results show that nations such as Malaysia and Saudi Arabia have made significant advancements through state-driven programs and fintech collaborations, while countries such as Bangladesh and Indonesia need to address issues of infrastructure, awareness, and regulatory support. The research adds to knowledge on the changing face of digital Zakat and provides practical lessons for policymakers, institutions, and researchers.

Keywords: Digital Zakat Management, Muslim Countries, Comparative Analysis.

INTRODUCTION

Zakat, being one of the five pillars of Islam, is very important in ensuring the financial and social welfare of Muslim societies all over the world. This obligatory act of charity is supposed to cleanse wealth and redistribute the

resources to those who are in need. With societies rapidly advancing towards digital technologies, the way zakat is collected, managed, and distributed has been changing significantly. Digitalization of zakat management is assisting in streamlining these procedures, improving efficiency, promoting transparency, and making zakat more convenient for payers and recipients (Zaimah, 2017; Hudaefi et al., 2020). As the world moves into the digital age, zakat institutions are being pressured to innovate and implement digital solutions in order to remain abreast of technological developments and the demands of an evolving society (Rohim, 2019; Santoso, 2019).

These digital solutions include a range of technology facets related to zakat administration, including both the distribution and collecting processes. In order to increase efficiency and expand access, several zakat institutions now employ web-based and mobile platforms, QR-code payments, automated zakat calculators, and online portals that allow real-time donations (Susanto et al., 2024). Systems on the distribution side include blockchain-enabled ledgers to provide accountability and traceability, centralised databases to identify qualified beneficiaries, and payout through digital wallets or bank transactions (Mohamed et al., 2023). A phased digital transformation framework that emphasises accessibility, efficiency, transparency, and traceability is driving these developments. It begins with digital payments, moves on to data management, and ends with complete integration with national financial or welfare systems (Hadi et al., 2024).

The move from conventional, manual zakat administration to digital platforms has been a reaction to the demand for improved financial inclusion and more effective allocation of resources. The dawn of the Fourth Industrial Revolution (IR 4.0), which is characterized by the pervasive application of digital technologies and the internet, has touched several aspects of life, including zakat management. Zakat institutions have begun adopting fintech solutions to improve the efficiency of zakat collection and dissemination. This adoption spans from simple digital record-keeping and online payment systems to more complex applications like data analytics for zakat eligibility and distribution trend identification, risk assessment tools for ensuring compliance and minimizing fraud, and artificial intelligence systems that facilitate strategic planning and resource allocation optimization (bin Syed Musa, 2025). These technologies allow zakat institutions not just to achieve operational streamlining but also to

improve transparency, accuracy, and responsiveness to the needs of beneficiaries.

These reforms, while gradual in certain areas, are viewed as critical to the long-term sustainability of zakat management systems (Rohim, 2019; Santoso, 2019). In nations like Malaysia and Saudi Arabia, advanced digital systems have been implemented to manage zakat funds, whereas countries like Indonesia and Bangladesh lag in terms of technological infrastructure, regulations, and societal uptake (Ibrahim & Zakaria, 2021; Lukman, 2020).

The use of technology in the management of zakat has risen to the forefront in the issue of enhancing the efficiency, accessibility, and transparency of zakat institutions. Zakat institutions have started utilizing e-commerce and online fundraising platforms as a means of accessing a wider audience and enhancing zakat compliance (Zaimah, 2017). The utilization of electronic payment systems in the collection of zakat has been an effective method of tackling the problem of financial exclusion. Yet, the adoption of such digital systems has its own challenges, especially in nations where infrastructure is limited or where people have little knowledge of the prospective advantages of digital technology in zakat management (Amarodin, 2020).

Adoption is made more difficult by worries about cybersecurity and e-commerce fraud, in addition to infrastructure and knowledge limitations. Platforms for digital zakat may be susceptible to identity theft, phishing attempts that pose as trustworthy organisations, data breaches, and illegal transactions that damage user confidence. Payers may be discouraged by these concerns, which also place donors and zakat organisations at risk of financial and reputational damage. Strong encryption, multi-factor authentication, fraud-detection algorithms, and unambiguous legislative frameworks to reduce online fraud are all necessary for the security of these systems (Oktavendi & Mu'ammal, 2022; Hamsin et al., 2024).

Though there are Muslim-majority countries that have progressed in digital zakat administration, there are others that are still trying to deal with how to incorporate technology into their conventional systems. For example, the Malaysian and Saudi Arabian experiences in having well-established digitized zakat systems provide valuable lessons regarding scalability, regulation, and the development of public trust (Ibrahim & Zakaria, 2021; Lukman, 2020). Those nations have instituted mechanisms that ensure openness in the dissemination

and collection of zakat funds in a way that both givers and recipients are able to monitor the channelling of the resources. In contrast, other nations like Indonesia and Bangladesh experience enormous challenges that range from lack of developed digital infrastructure, uneven regulation, to inadequate digital literacy of the masses (Marhanum & Chowdhury, 2020; Akram & Djafri, 2019). Technological developments in the digital era have also introduced new forms of financial transactions, with blockchain and fintech becoming central components of the evolving zakat ecosystem (Ibrahim & Zakaria, 2021; Lukman, 2020).

Fintech plays a role in zakat management through the digitalization of the whole zakat cycle—from collection to distribution—using mobile applications, online payment gateways, and cloud-based systems. Such technologies bring about improved efficiency in operations, greater reach for both zakat payers and recipients, and less human error and administrative expenses. They also enable real-time data monitoring and communication with donors, thereby promoting trust and transparency (Forward et al., 2022).

Blockchain technology, in particular, is being explored as a means to improve accountability and traceability in zakat transactions. Zakat funds are precisely tracked from collection to disbursement thanks to its decentralised and tamper-proof transaction recording capabilities. By further automating zakat distribution according to predetermined, shariah-compliant procedures, smart contracts lower the possibility of mismanagement and delays. When it comes to administering charitable donations, blockchain's openness upholds public confidence and is consistent with Islamic values of justice and honesty (Ikhsan, 2023).

By utilizing this technology, zakat institutions can offer a higher level of transparency, ensuring that funds are distributed efficiently and in accordance with the requirements of Islamic law (Ibrahim & Zakaria, 2021; Marhanum & Chowdhury, 2020). Despite these advancements, the majority of zakat institutions around the world still rely on traditional methods of collection and distribution, which lack the transparency and efficiency offered by digital solutions (Akram & Djafri, 2019).

Besides the technological issues, there are also concerns related to the regulatory environments of digital zakat systems. These systems are destined to comply with Islamic teachings as well as the legal stipulations of the nations they

are based in. The zakat institutions thus need to balance the necessity to innovate and the desire to comply with Islamic law (Shari'ah) (Hudaefi et al., 2020).

Muhammad et al. (2025) offer a Shari'ah-compliant e-payment system in Malaysia, noting the following requirements for digital zakat platforms: maintenance of the payer's intention (niyyah), data security and auditability, and avoidance of gharar (uncertainty) through strong transactional traceability and regulatory governance. Moreover, Mohd Nor et al. (2022) report the Federal Territories' fatwa committee officially released guidance in late 2021 that zakat on digital assets—including cryptocurrencies—is obligatory at the 2.5% rate if the asset surpasses nisab and a full year (haul) has elapsed, subject to appropriate valuation and transparency in collection. These rulings highlight growing recognition and regulatory attention towards digital zakat systems.

As the digitalization of zakat proceeds, the contribution of financial technologies like mobile payment systems, online crowdfunding platforms, and e-wallets is becoming more significant. These technologies help zakat institutions increase their outreach and thereby enhance the overall efficiency of zakat collection and distribution (Muhamad & Khaliq, 2019). It is necessary to carefully weigh the risks and opportunities associated with implementing digital zakat systems. Digital technologies have the potential to improve zakat management efficiency and promote financial inclusion. However, in nations with poor levels of digital literacy or restricted access to digital infrastructure, they may worsen already-existing disparities (Rohim, 2019; Utami et al., 2020).

A similarly important but often neglected aspect is the psychological preparedness of muzakki—particularly in relation to the transition from customary in-kind zakat (e.g. crops harvested) to cash-based digital payments. Research indicates that the muzakki decision-making process is shaped by emotional and cognitive influences, such as the "psychology of money" and emotional quotient, that impact how zakat is understood and discharged. For example, when plantation owners used to set aside a share of crops as zakat, the cash conversion might make them think in terms of monetary value instead of spiritual obligation, potentially compromising sincerity and compliance. Digital zakat education must thus extend beyond platform training to values and mindset—reaffirming the religious and communal intent of zakat, cultivating emotional awareness, and shaping perceptions so that muzakki are spiritually grounded even in the digital environment (Julita et al., 2023). Zakat institutions

must fund training and capacity-building initiatives for zakat payers (muzakki) and beneficiaries (mustahik) in order to reduce these dangers. This will guarantee that all parties involved can interact with digital platforms efficiently and comprehend the significance of their involvement in the zakat system (Amarodin, 2020; Utami et al., 2020).

The method zakat is gathered and disbursed is changing due to digital technology, which offers zakat institutions both benefits and difficulties. Adopting digital technologies can increase accountability and openness, but it's crucial to make sure that the requirements and capabilities of the local populace are taken into consideration during the design process. This entails tackling the issues brought on by poor infrastructure, restricted technological access, and low levels of digital literacy. Additionally, as digital zakat systems expand further, it will be critical for zakat institutions and politicians to work together to create regulatory frameworks that guarantee the efficacy and integrity of digital zakat systems (Zaenuddin, 2019).

In the end, digitising zakat involves more than merely adding technology to pre-existing frameworks. It involves revaluating the whole zakat distribution and collecting process with an emphasis on accessibility, efficiency, and openness. Zakat institutions can better tackle the issues of poverty and social injustice while maintaining the values of Islamic generosity by utilising technology (Corsini et al., 2019; Hudaefi et al., 2020). In addition to changing how zakat is administered, the development of digital zakat systems might further the larger objectives of social justice and financial inclusion in the Muslim world.

In addition, digitisation also includes integrating zakat data within national big-data ecosystems to provide evidence-based policy for poverty eradication and inequality alleviation. For instance, household classification systems in Malaysia (B40/M40/T20, or the new B20/M50/T30 schema) are driven by datasets from government agencies like the Inland Revenue Board (LHDN), Department of Statistics Malaysia (DOSM), and the Economic Planning Unit (EPU). The question is whether zakat institutions are willing and ready to connect their internal data with these larger national datasets (Meerangani et al., 2022).

Such connectivity may enable targeted channelling of zakat from richer states to poorer ones—for example, re-distributing zakat amassed in Selangor,

Kuala Lumpur, and Johor to under-provided states such as Kedah, Kelantan, and Perlis. Electronic consolidation of zakat data may even lead to the re-categorisation of Malaysia's income group classifications (T20/M40/B40), founded on real-time, need-based markers taken from zakat applications and eligibility records (Salleh & Chowdhury, 2020). Additionally, policy makers at institutions like MAIS, MAWIP, and MAINS may utilize such knowledge to create more successful localised poverty programs, informed by actual zakat data.

However, for this to take place, zakat institutions need to show institutional preparedness—both organizational and technical—to be part of national data-sharing platforms and be interoperable with government systems (Meerangani et al., 2022). Literature shows that although Malaysian zakat agencies have been successful in using digital platforms for payment and rudimentary management, there is as yet limited integration into broader national databases for distribution and impact assessment purposes (Salleh & Chowdhury, 2020). It is thus necessary to widen the discussion from operational effectiveness to strategic alignment with national poverty reduction initiatives through big-data cooperation.

The purpose of this study is to investigate how digital technologies are changing zakat systems, with an emphasis on Bangladesh's benefits and difficulties. The study looks at existing digital zakat projects to assess how well they work to promote financial inclusion and increase zakat management transparency. Furthermore, this study will look at how cutting-edge technologies like blockchain and mobile payment systems could improve the effectiveness of zakat distribution and collection. The study's ultimate goal is to offer suggestions to zakat organisations and legislators on how to improve digital systems while making sure they satisfy both contemporary demands and Islamic ideals.

METHODOLOGY

Research Design and Approach: This research follows a qualitative study, mainly employing a literature-based design in understanding the digitalization of Zakat management in chosen Muslim nations. The aim is to contrast digital Zakat programs, reveal best practices, and indicate challenges and opportunities in their implementation. This exploratory design is appropriate for capturing emerging themes and contextual nuances, particularly in varied national contexts where levels of digitalization differ. The qualitative character of the research

lends itself to an interpretive paradigm, allowing the researcher to get closely involved with extant knowledge and extract conceptual insight. It allows for freedom to examine not only what is being adopted, but how and why such projects are faring or failing in various socio-political and technological contexts.

Data Collection Procedures: Data were collected by conducting a comprehensive review of secondary sources such as academic journal articles, conference proceedings, institutional reports, and credible online websites. Literature was searched using strategic keywords on Google Scholar, Scopus, JSTOR, and institutional repositories with terms like "digital Zakat," "Zakat technology," "Islamic fintech," "blockchain Zakat," and "Zakat management in Muslim countries."

Peer-reviewed and authoritative sources within the previous five years only were given priority to provide relevant and timely data. Official government websites and institutional sites like BAZNAS, The Zakat Foundation™, and Qatar Charity were utilized to obtain official digital Zakat tools, platforms, and project reports. This literature-based approach was used since it allows a comparative overview of a wide range of countries, where direct stakeholder access or primary data gathering was either logistically limited or beyond the scope of the study.

Data Analysis Procedure: Thematic content analysis was employed to integrate findings in the literature. Data gathered were coded and aggregated into major themes on an inductive basis, permitting themes to surface naturally from the materials considered. Broad themes uncovered are: (1) Technological Tools and Platforms, (2) Regulatory and Institutional Frameworks, (3) User Adoption and Literacy, and (4) Integration of Emerging Technologies (e.g., blockchain, AI). Every theme reflects how various nations are managing digital Zakat, with cross-sectional and comparative insights. In doing so, the research reveals similarities, variations, and contextual factors influencing digital Zakat initiatives throughout the Muslim world. The thematic analysis facilitated the creation of a conceptual model of digital Zakat adoption and uncovered avenues for enhancing efficiency, accountability, and inclusiveness.

DIFFERENT MUSLIM COUNTRIES' DIGITAL ZAKAT TECH ADOPTION

Malaysia: To ensure seamless and effective Zakat management, Malaysia has developed a variety of digital tools and has been conducting numerous digital Zakat initiatives. In Malaysia, many fin-tech zakat channels have been created. Muslims can make digital Zakat payments using the relevant Zakat centre online, such as fitrah.com.my, online payment such as MyEG, an e-wallet such as Boost, or 14 Internet banking, such as Maybank2u (Muzamir, M. Y., 2020). To educate people about Zakat, 'Zakat.X.Kit' was created as an app. It has several tools to help users, especially students enrolled in Zakat courses, with their educational endeavours (Adanan et al., 2020). Muslims can pay their Zakat throughout the year more securely, easily, and quickly with TheNoor, a well-known mobile app in Malaysia. TheNoor app provides a transparent method utilizing electronic transactions, allowing Zakat contributors more comfort that their contributions reach the right people and increasing their sense of security. Donors can quickly calculate their Zakat with the in-app calculation option and send payments (Business Today, 2023).

Remarkably, Malaysia has certain Zakat apps operating on the blockchain platform, such as e-Zakat, i-Zakat, and Zakat Tech, which manage Zakat funds. These Zakat apps have been developed with the cooperation of Malaysian scholars and specialists (Ahmed, T. A. I., & Zakaria, M. S. B., 2021). Apart from the above-mentioned digital Zakat tools and platforms, there are many more tools and platforms being used and many more advanced digital initiatives are under process to develop an effective digital Zakat management system in Malaysia.

Nonetheless, a crucial point to consider is how state official Islamic councils (SIRCs), which have legal oversight of zakat administration, interact with private digital zakat platforms. Zakat in Malaysia is regulated under state-level enactments—like the Kedah Darul Aman Zakat Enactment 2015—and is administered legally by SIRCs under the auspices of respective state rulers. These councils license and oversee any platform or institution taking part in zakat collection or distribution.

Private entities and fintech developers can only function in partnership with SIRCs. For instance, in Selangor, the collection of zakat by unlicensed private individuals is sanctioned under Section 37 of the Syariah Criminal

Enactment (Selangor) 1995. This helps ensure adherence to the rule of law and integrity within the digital zakat environment (Salleh & Chowdhury, 2020).

In addition, some SIRCs have engaged in active collaborations with private companies to establish integrated digital zakat platforms. Such collaborations are regulated through memoranda of understanding (MoUs) and Shariah-compliant agreements. It is remarkable that institutions such as PPZ-MAIWP have embraced digital impact evaluation tools and cooperated with private technology companies to execute centralized systems that enhance transparency, data sharing, and beneficiary monitoring (Meerangani et al., 2022). At the federal level, the Islamic Financial Services Act 2013 supplements these structures by governing Islamic financial transactions, such as online zakat payments, so that they conform to Shariah principles and standards of financial integrity (BNM, 2013). This double structure of state and federal regulation is intended to provide assurance of accountability and safeguard against mismanagement risks or online fraud.

Indonesia: The digitalization progress of Zakat management in Indonesia has been tremendous. The Indonesian National Zakat Agency, or BAZNAS, has broadened the scope of its online platform to collect Zakat through a website (https://baznas.go.id/bayarzakat). Three payment options are available on the website: bank transfer, PayPal payment, and QR code payment. 'Muzaki Corner' is a mobile application that BAZNAS has created in addition to its official website (Ahmed, T. A. I., & Zakaria, M. S. B., 2021). Eight Zakat payment methods are available through BAZNAS: virtual account, T-cash, Doku wallet, E-cash Mandiri, EDC, and Internet banking. Additionally, BAZNAS works with eight e-commerce firms such as JD.ID, Elevania, Shopee, Bibli, Lazada, Tokopedia, MatahariMall, and Bukalapak, thirteen fintech applications including those that accept payments using QR codes for zakat, and two social media platforms like Line (Zaki) and Oy Indonesia (Putri, C. A., 2021).

Apart from BAZNAS, Organisasi Pengelola Zakat (OPZ) works with e-wallet services including OVO, LinkAja, and Gopay, to offer non-cash Zakat payment features (Wardhianti et al., 2022). Additionally, Dompet Dhuafa implemented digital Zakat collection tactics including mobile applications, digital wallets, digital campaigns, and collaboration with e-commerce (Fachmi, F. A., & Fatwa, N., 2023). Further to the digital Zakat, tools and platforms described above, numerous other tools, and platforms are being used, and more cutting-

edge digital initiatives are being taken to establish an effective digital Zakat management system in Indonesia. However, Indonesia still lagging behind in developing blockchain-based Zakat management systems due to some constraints like budget, knowledge, infrastructure, and so on (Putri, C. A., 2021).

Brunei: Brunei's National Zakat Collection and Distribution Unit (BAKAZ) have developed a Zakat online platform named 'Zakat Harta Online'. Through the BIBD mobile application's Quick Pay capabilities or DST e-Zakat, there is an accessible online platform for Zakat payers to use to make payments with ease (Matahir, M. F., 2023). Tabung Amanah Islam Brunei (TAIB) offers an online Zakat calculation service to make the process easier for Zakat payers. They have developed an online calculator named 'TAIB Zakat Calculator' that indicates to Zakat payers how much Zakat should be paid on savings money (TAIB, 2023). The Zakat Foundation™, a well-known non-governmental Zakat organization in Brunei, also developed an online Zakat platform to pay Zakat online, and an online Zakat calculator to inform people about Bruneian Zakat calculation regulations and to address any issues concerning Zakat in Brunei (The Zakat Foundation™, 2022).

Saudi Arabia: Saudi Arabia developed a method for collecting taxes and Zakat online. The Zakat and Tax division is assisted by ICT equipment and has a thorough database. As a result, Saudi Arabia is regarded as a nation with advanced Zakat administration (Altawyan, A., 2020). The Saudi Arabian government launched 'ZAKATY' as an online Zakat platform. People can pay their Zakat via the Internet or a mobile app due to this digital payment mechanism, which is making the Zakat collection high (Bin-Nashwan, S. A., 2022). Besides, the Saudi Arabian Zakat, Tax, and Customs Authority (ZATCA) have launched an app for smartphones named 'ZATCA'. Zakat payers can inquire about the payment procedures and check their account statements using this application without having to visit the authority's branches. Notably, it enables Zakat payers to send safe online payments using its electronic payment capability (Nair, A. M., 2022).

Turkey: A crowdfunding portal has been launched in Turkey to distribute Zakat and humanitarian aid online. In Turkey, Zakat is paid to the Red Crescent through debit and credit cards and other digital means of payment. Similar to this, the Zakat Foundation in Turkey receives Zakat through digital payment channels and distributes funds to support refugee education (Khan, F., &

Servinc, N., 2021). Online Zakat calculation services are available through the well-known Zakat website "Kizilay Zekat". Its Zakat calculation tool allows users to enter their cash assets (in any currency like the Turkish Lira, Euro, and USD) that are subject to the Zakat they are required to pay within a year to determine the amount of Zakat they need to pay (KIZILAY ZEKAT, 2023). A renowned mobile application named 'insha' developed by Albaraka Türk Bank also offers a Zakat calculation service (Fintech Futures, 2018).

In Turkey, the Presidency of Religious Affairs (Diyanet İşleri Başkanlığı) has a vital supervisory and consultative function, even though the government does not directly oversee a centralised Zakat authority like in certain Muslim-majority nations (such Malaysia or Saudi Arabia). Diyanet gives religious judgements (fatwas) on Zakat, sets yearly rates, and informs the public about its responsibility and distribution. Diyanet has formally confirmed that Fitre and Zakat can be paid electronically via mobile banking and the internet, deeming such payments to be religiously acceptable in the modern world (Bozkurt, 2021). Law No. 633 on the Organisation and Duties of the Presidency of Religious Affairs (Republic of Turkey, 2018) governs these functions. Even though Zakat is collected voluntarily and is mostly managed by non-governmental organisations like the Turkish Red Crescent and Zakat Foundation, these organisations frequently adapt their procedures to Diyanet's religious precepts in order to preserve compliance and public confidence.

Additionally, the Law on Associations (Law No. 5253) and the Law on Foundations (Law No. 5737), which govern the distribution and fundraising operations of nonprofit organisations, including those in charge of Zakat, provide a more comprehensive regulatory framework for these activities (T.C. Mevzuat, 2023).

Qatar: Qatar offers online Zakat payment alternatives as well as Zakat calculation services (Muhammad, I., 2019). Through the Zakat Fund e-Service offered on the Qatar E-Government (Hukoomi) portal, anyone can pay Zakat online. People can use this online tool to send in their Zakat donations. This transaction requires a credit card to be completed (HUKOOMI, 2023). Through the official website and mobile apps, particularly the "Zakaty website, and app", Qatar Charity (QC) has made it easier for people to calculate their Zakat and make payments. The Zakat calculator makes it possible for individuals to determine the amount of Zakat due on their savings, stocks, gold, and livestock.

Zakaty, provides a list of frequently occurring and widespread Fatawas on the payment of Zakat along with comprehensive information concerning Zakat for businesses (Qatar Charity, 2023).

UAE: The UAE has begun using cutting-edge technology to manage the enormous number of beneficiaries and reach out to those who actually need assistance in society when administering the Zakat fund. The Zakat fund is open to applicants via the website. The website offers a helpful tool that is interactive. It offers 15 Zakat payment options, including internet banking, mobile apps (such as the Dubai Now app), and ATMs, for online Zakat payments. Additionally, it offers details on Zakat distributions and collecting so that the public may easily access them. The UAE government offers payment gateways in advance, primarily to collect Zakat money, ensuring easier access to payment methods for both existing and new Zakat payers (Saputri, O. B., & Hamzah, M. Z., 2021). Besides the government portal, people can make Zakat contributions digitally through Awqaf.ae, SCHS.ae, TBHF.ae, and 1billionmeals.ae (Money Smart., 2022). Furthermore, they have launched a digital Zakat calculation platform named 'Zaki Platform' that enables Muslims to calculate and pay Zakat on WhatsApp in just a couple of minutes (Husain, Z., 2023).

Oman: To create a digital Zakat system, the Omani government launched a global digital initiative called 'OMAN'. Its main goal was to make innovative, contemporary services more accessible to the larger groups of Zakat beneficiaries and to use cloud-based technology to make the procedure of providing Zakat to the whole Muslim world simpler. It significantly contributed to the modernization of the Zakat management in the country (ZAWYA, 2020). Oman's Ministry of Endowments and Religious Affairs have created an online gateway for Zakat donations. It offers a number of Zakat services online, such as calculating Zakat using a smart calculator, paying Zakat, requesting Zakat collection, applying for Zakat, checking Zakat application, inquiring by Zakat beneficiaries, and so on (MARA, 2023).

Kuwait: The national Zakat system of Kuwait facilitates the use of a digital platform (Samatar, F. A., 2021). People can calculate their Zakat on assets including cash, stocks, gold, and silver by using its online calculator and pay Zakat digitally on this platform in total privacy (KGO, 2023). By putting the "Zakat al-Fitr" emblem on its ATMs, Ahli United Bank (AUB), in collaboration with the government Zakat House introduced paying Zakat through its ATMs in

a simple and convenient manner. With the use of this service, clients may pay their Zakat al-Fitr at any of the AUB ATMs, which can be found across Kuwait. Customers may easily pay Zakat al-Fitr by putting their credit or debit card into the ATM, selecting the account, entering the amount, and hitting the "Zakat al-Fitr" button (AUB, 2022). Msa3ed, a tool provided by Boubyan Bank, makes it simple and quick to calculate Zakat, and the Boubyan App makes it simple and quick to send payments to Kuwait's major charitable organizations (Boubyan, 2023). Furthermore, Kuwait Finance House (KFH) created an online Zakat calculator to streamline the total process of calculating Zakat on money, gold, silver, shares, and currencies (KFH, 2023).

Bahrain: the Ministry of Justice and Islamic Affairs (MJIA) offer online Zakat services, such as a calculator for calculating Zakat and an online payment option. In order to improve the Zakat payment services, the Ministry began accepting payments online in 2018 via the e-government Islamiyat smartphone app (Muhammad, I., 2019). With the use of this app, users may immediately pay the Zakat, assist the Zakat and Charitable Funds, and give to the causes of their choice. In order to make the procedure of computing the Zakat amount easier, it also includes the 'Zakat Calculation' service linked with gold's current market pricing (Ayaz, Z., 2023). Y2 Calculate offers a Zakat calculator for Bahrain that facilitates the entire Zakat calculating procedure. It determines the appropriate Zakat amount based on the user's total assets after determining if it satisfies the *nisab* requirement. It gives the user an easy way to calculate their Zakat requirement based on their level of wealth in Bahrain (Y2calculate, 2023). Additionally, a calculator for estimating annual due Zakat assets, such as gold, silver, loans, shares, general obligations, and agricultural products, has been launched by Bahrain Islamic Bank (Bahrain Islamic Bank, 2023).

Bangladesh: The current context of Bangladesh shows that most of the private Zakat organizations have developed online Zakat platforms and adopted a few digital tools to manage Zakat. In particular, they have started collecting Zakat money through MFS, Visa & Master credit cards, debit cards, and e-wallets. In addition, some private Zakat organizations like the Centre for Zakat Management (CZM), Anjuman Mufidul Islam (AMI), Dhaka Ahsania Mission (DAM), and MASTUL Foundation have developed online Zakat calculators to facilitate Zakat computation (CZM, 2023; AMI, 2023; DAM, 2023; Mastul Foundation, 2023). Additionally, the digital tool is being used to verify deserving

Zakat recipients in a particular sector. For instance, CZM chooses qualified Zakat recipients from among the disadvantaged students who submit online applications for Genius scholarships (CZM, 2023).

It should be noted that Zakat management in Bangladesh is a dual system with the existence of both public and private institutions. The government officially introduced the Zakat Board under the Islamic Foundation through the Zakat Fund Ordinance of 1982, which gives the state the legal mandate to collect and distribute voluntary Zakat. However, due to limited public trust and administrative constraints, various private and non-governmental organizations have emerged as effective and officially approved institutions for Zakat collection.

These private organizations—such as CZM, AMI, DAM, and Mastul Foundation—operate within the legal framework set in Bangladesh as government-approved non-profit organizations, thus playing an ever-significant role in Zakat collection and disbursement. Current scholarly research attests to the validity and efficacy of such private Zakat institutions, demonstrating that they are frequently more trustworthy than the government agency and achieve more impact in income-generating assistance to beneficiaries. Therefore, while the Islamic Foundation serves as the official state institution, privately run Zakat institutions are legalized by law and are widely accepted in practice (Rahman, 2024; Rahman, 2025; Mastul Foundation, 2023).

Thus, it could be stated that Zakat organizations in Bangladesh are in the initial stage of digital Zakat management. Therefore, Bangladeshi Zakat organizations should follow the effective strategies used by pioneering Muslim countries like Malaysia and Indonesia in order to establish efficient digital Zakat management.

DISCUSSION

The digitalization of Zakat administration in different Muslim nations is a huge leap towards greater access, transparency, and efficiency of operations. The application and uptake of digital Zakat platforms differ according to the robustness of legal frameworks, governmental support, institutional mandates, and infrastructure for technology. A comparative legal review of the nation's brings to light the fact that the legislative framework governing Zakat collection and management has a pivotal role in shaping how digital Zakat systems are

established, who can manage Zakat, and how successfully digital tools are utilized.

In nations such as Malaysia, Zakat collection is governed by special state-level legislations such as the Kedah Zakat Enactment 2015 that gives legal mandate to State Islamic Religious Councils (SIRCs). These councils exclusively deal with the collection and disbursement of Zakat, and private fintech developers and digital service providers are required to formally collaborate with SIRCs under government-approved arrangements. This legal framework reduces unauthorized Zakat collection and ensures private actors act under formal Shariah-compliant agreements. In Saudi Arabia, the scenario is not different. Zakat administration is completely centralized under the Zakat, Tax and Customs Authority (ZATCA), and digital platforms such as ZAKATY are directly rolled out by the government. Such regulatory clarity leads to a safe, transparent, and standardized Zakat process.

Conversely, Indonesia has a hybrid system wherein the government agency BAZNAS (Badan Amil Zakat Nasional) is the national Zakat authority, yet private institutions like Dompet Dhuafa and Rumah Zakat are also legally allowed to collect Zakat under official registration and oversight. These private institutions are run under formal governmental recognition, and their integration with fintech players has enabled Indonesia to offer digital Zakat services broadly. Brunei, Qatar, and the UAE also have robust government control over Zakat, with centralized systems supported by regulatory mandates. For instance, Brunei's BAKAZ conducts Zakat through official portals, and Qatar's Hukoomi e-government portal allows legally compliant online Zakat payments. These portals are not only secure but also publicly trusted because of their legal standing and oversight arrangements.

Turkey offers another model. Despite not having a centralized government Zakat authority similar to Malaysia or Saudi Arabia, it has a system in which non-governmental organizations like the Turkish Red Crescent and the Zakat Foundation conduct Zakat collection and distribution. These institutions are regulated by law through national legislation, e.g., the Law on Associations (Law No. 5253) and the Law on Foundations (Law No. 5737). The Presidency of Religious Affairs (Diyanet İşleri Başkanlığı) offers theological guidance and issues religious rulings (fatwas) on Zakat obligations and digital compliance. This

framework, though decentralized, guarantees legal and religious legitimacy for digital Zakat operations in Turkey.

In Bangladesh, the management of Zakat is conducted by both private and public institutions. Even though the government ordained the Zakat Fund Ordinance of 1982, making the Islamic Foundation the state Zakat agency, this institution has failed to achieve extensive public confidence due to administrative flaws. Consequently, numerous private non-profit organizations, including the Centre for Zakat Management (CZM), Anjuman Mufidul Islam, Dhaka Ahsania Mission, and MASTUL Foundation, have appeared to fill this gap. Such private organizations are legally registered under government regulations and operate effectively within the legal framework of Bangladesh. Nevertheless, the lack of a centralized digital Zakat authority and enforcement weaknesses provide opportunities for unlicensed individuals or spurious entities to collect Zakat funds illegally, particularly during Ramadan, which is a peak time for donations. This situation calls for further legal clarity and enforcement activities against unauthorized Zakat collection.

Digital zakat tactics can be quite effective in reducing underreporting and illicit zakat collecting. Using blockchain technology, which provides complete traceability from donor to beneficiary and unchangeable transaction records, is one of the most efficient strategies. Blockchain-enabled Zakat systems that manage funds using smart contracts and guarantee that distributions adhere to Shariah rules have already been used by nations like Malaysia. Additionally, centralised digital databases and artificial intelligence may be used to identify irregularities, avoid duplicate claims, and guarantee that only certified recipients receive assistance. Furthermore, the use of encrypted donor verification, real-time payment notifications, and multi-factor authentication enhances confidence and lowers the possibility of identity theft or illegal access to Zakat funds. When backed by laws, these technologies can plug the gaps that let criminals take advantage of Zakat systems.

Underreporting is a problem in nations without digital traceability as well. There is less opportunity for control or audit when zakat contributions are paid in cash or through unlicensed middlemen. Legally mandated digital systems, on the other hand, particularly those linked to national tax, welfare, or biometric databases, provide a degree of accountability that is unmatched by manual methods. One notable example of how digital integration may support targeted

distribution and stop resource leakage is Malaysia's alignment of Zakat data with national statistics and income categories, such as the B40/M40/T20 framework.

It is essential to think about enhancing the legislative frameworks controlling digital Zakat in light of the comparative data. Comprehensive laws that define digital zakat, acknowledge blockchain and artificial intelligence (AI) capabilities, and punish unauthorised collectors are still lacking in many nations. Laws that explicitly authorise digital platforms, establish digital security standards, define the legal bounds of private Zakat actors, and control fintech's role in religious finance are all examples of future policy initiatives. For nations like Bangladesh and others with disjointed Zakat arrangements, Malaysia's dual-tiered regulatory model—which combines national financial laws with state religious authority—could be a useful benchmark.

In a nutshell, even though digital transformation has improved Zakat management's accessibility, efficiency, and transparency, these gains can only be maintained with solid institutional legitimacy and legal underpinnings. The benefits of government-driven digital agendas are exemplified by nations like Malaysia, Saudi Arabia, and Qatar that combine technical innovation with clear regulations. To create safe, open, and efficient digital Zakat ecosystems throughout the Muslim world, it is essential to guarantee the legitimacy of both public and private actors, use technology to prevent unlawful collection and underreporting, and set standards for legislative change.

CONCLUSION

The digitization of Zakat management in most Muslim nations is a welcome move towards greater efficiency and transparency. Malaysia and Indonesia are at the forefront, showing how effective financial technology solutions are, combined with the use of blockchain technology. Saudi Arabia, Qatar, and the United Arab Emirates are some other countries that developed strong digital platforms that enhance Zakat collection and distribution systems. Bangladesh, while taking the initial steps, must replicate best practices of leading nations to create digital Zakat management. The inclusion of blockchain technology, recipient identification through AI, and Zakat mobile apps can significantly improve efficiency. Government support, regulation, and awareness are needed to drive digitalization in Bangladesh's Zakat sector.

Adoption of digital Zakat, in general, improves accountability and transparency in the distribution of funds while also guaranteeing convenience. As technology develops further, new developments in digital Zakat management will increase the impact of Zakat donations and guarantee that money is sent to worthy recipients in an efficient and effective manner. Continued cooperation between governments, fintech companies, and Islamic scholars is essential to the development of a standardised and safe worldwide digital Zakat ecosystem.

ACKNOWLEDGEMENT

The author gratefully acknowledges the contributions and support of all parties involved in this study. Their valuable input and cooperation are deeply appreciated.

REFERENCES

Amarodin, M. (2020). Modernisasi Penghimpunan Dana Zakat di Era Industri 4.0 (Upaya Strategis dalam Optimalisasi Potensi Dana Zakat di Indonesia). *Jurnal Eksyar (Jurnal Ekonomi Syariah)*, 7(1), 65-79.

Akram, L., and Fares, D. (2019). Islamic Finance in the Digital World: Opportunities and Challenges. *Journal of Islam in Asia*, 16(3): 283–299.

Adanan, S. A., Saidin, A., Bustamam, K. S., Sani, A., & Mamat, S. N. (2020). *Zakat*. X. kit.

Ahmed, T. A. I., & Zakaria, M. S. B. (2021). Using Blockchain for Managing Zakat Distribution: A Juristic Anlytical Study. *Al-Hikmah: International Journal of Islamic Studies and Human Sciences*, *4*(2), 1-25.

Altawyan, A. (2020). The tax and zakat appeal system in the Kingdom of Saudi Arabia: An overview. *Journal Sharia & Law*-(COL).

AUB. (2022). AUB launches paying "Zakat Al-Fitr" service through ATMs. Retrieved on December 7, 2024, from: https://www.ahliunited.com.kw/en/news/press-release/aub-launches-paying-zakat-al-fitr-service-through-atms.

Ayaz, Z. (2023). Call to donate "Zakat" Through Digital Platform Islamiyat App. *The Daily Tribune*. Retrieved on December 4, 2024, from: https://www.newsofbahrain.com/bahrain/89167.html.

AMI (2023). About Us. Retrieved December 17, 2024, from: https://www.anjumanmibd.org/.

Bin Syed Musa, S. Z. Harnessing Artificial Intelligence for Optimized Zakat and Waqf Management: Strategic Insights from Indonesia and Malaysia. *International Journal of Contemporary Issues (IJCI)*, 237.

Bank Negara Malaysia. (2013). *Islamic Financial Services Act 2013*. Kuala Lumpur: Bank Negara Malaysia. Retrieved **July 25, 2025**, from: https://www.bnm.gov.my/documents/20124/856383/isfa2013_en.pdf.

Business Today. (2023). Malaysian Grown Zakat Payment App TheNoor Expands into Indonesia. Retrieved December 1, 2024, from: https://www.businesstoday.com.my/2023/02/23/malaysian-grown-zakat-payment-app-thenoor-expands-into-indonesia/.

Bin-Nashwan, S. A. (2022). Toward diffusion of e-Zakat initiatives amid the COVID-19 crisis and beyond. foresight, 24(2), 141-158.

Boubyan. (2023). Calculate your Zakat through Msa3ed. December 6, 2024, from: https://boubyan.bankboubyan.com/en/ways-to-bank/msa3ed/zakat-calculation-2021/#initiative.

Bozkurt, İ. (2021, May 4). *Fitre veya Zekât internet bankacılığı üzerinden dijital ortamda ödenebilir* [Zakat and fitre can be paid digitally via internet banking]. Onedio. Retrieved July 25, 2025, from https://onedio.com/haber/diyanet-fitre-veya-zekat-internet-bankaciligi-uzerinden-dijital-ortamda-odenebilir-980315.

Bahrain Islamic Bank. (2023). Zakat Calculator. Retrieved December 4, 2024, from: https://www.bisb.com/en/zakat-calculator.

CZM. (2023). About CZM. Retrieved November 28, 2024, from: https://czm-bd.org/about/.

Corsini, L., Aranda-Jan, C. B., & Moultrie, J. (2019). Using digital fabrication tools to provide humanitarian and development aid in low-resource settings. Technology in Society, 58, 101117. https://doi.org/10.1016/j.techsoc.2019.02.003.

DAM. (2023). About Us. Retrieved November 28, 2023, from: https://www.ahsaniamission.org.bd/about-us/.

Forward, P., Hassan, M. K., & Rabbani, M. R. (2022). Islamic Fintech, Blockchain and Crowdfunding: Current Landscape. *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*, *307*.

Fachmi, F. A., & Fatwa, N. (2023). A collective strategy in digital zakat collection by Dompet Dhuafa via e-commerce. *Indonesian Journal of Multidisciplinary Science, 2*(10), 3432-3442.

Fintech Futures. (2018). Albaraka Türk bank targets Europe with insha app launch. Retrieved November 26, 2024, from: https://www.fintechfutures.com/2018/08/albaraka-turk-bank-targets-europe-with-insha-app-launch/.

Hadi, R., Shafrani, Y. S., Hilyatin, D. L., & Riyadi, S. (2024). Digital zakat management, transparency in zakat reporting, and the zakat payroll system toward zakat management accountability and its implications on zakat growth acceleration. *International Journal of Data & Network Science*, *8*(1).

Hamsin, M. K., Halim, A., & Anggriawan, R. (2024). Securing Digital Zakat Transactions from Fraud in a Smart Society: Legal Insights and Recommendations. In *E3S Web of Conferences* (Vol. 594, p. 07001). EDP Sciences.

HUKOOMI. (2023). Zakat fund e-service. Retrieved November 23, 2024, from: https://services.hukoomi.gov.qa/en/e-services/zakat-fund-e-service.

Hudaefi, F. A., Beik, I. S., Zaenal, M. H., Choirin, M., Farchatunnisa, H., & Junari, U. L. (2020). How does zakat institution respond to fintech? Evidence from BAZNAS Indonesia. *IJZIP: International Journal of Zakat and Islamic Philanthropy, 2*(1), 33-40.

Ibrahim, A. T. A., & Zakaria, M. S. (2021). Using blockchain for managing zakat distribution: A juristic analytical study. *Al-Hikmah International Journal of Islamic Studies and Human Sciences, 4*(2), 1-25.

Julita, J., & Soemitra, A. (2024). Understanding zakat payments in Indonesia: A psychological perspective on muzakki behaviour. *al-Uqud: Journal of Islamic Economics*, *8*(2), 271-286.

Khan, F., & Servinc, N. (2021). Role of zakat in strengthening social protection during COVID-19 and beyond: An evidence from Bangladesh and Turkey. In *The Proceeding* (p. 163).

KGO. (2023). Quick donation - Zakat House. Retrieved December 7, 2024, from: https://e.gov.kw/sites/kgoenglish/Pages/eServices/ZAKAT/QuickDonation.aspx.

KFH. (2023). Zakat calculator. Retrieved December 4, 2024, from: https://www.kfh.bh/bahrain/en/personal/tools-services/calculators/zakat-calculator.html.

KIZILAY ZEKAT. (2023). Calculate your zakat. Retrieved December 4, 2023, from: https://zekat.kizilay.org.tr/ZekatHesapla.

Lukman, H. (2020). Zakat blockchain: A descriptive qualitative approach. *Jurnal Ekonomi Dan Bisnis, 4*(2), 492-502.

Mohamed, D., Ahmed, M., Mohamed, M. A., & Mohamud, O. A. (2023). The role of blockchain technology on zakat institutions, a way forward: Literature review. *International Journal of Membrane Science and Technology, 10*(3).

Muhammad, M. Z., Mohd, F., Amboala, T., Amin, H., Yahya, W. F. F., Rahman, M. K., ... & Al-Rawashdeh, M. S. (2025). Shariah-Compliant E-Payment Framework in Malaysia: Integrating Fiqh, Digital Security and Regulatory Governance. *Journal of Fatwa Management and Research*, *30*(2), 34-54.

Meerangani, K. A., Sharipp, M. T. M., Hamid, M. F. A., Hashim, S. N. I., Rameli, M. F. P., & Rosele, M. I. (2022). Digitalisation of Zakat Management System in Malaysia: Potential and Challenges. *International Journal of Academic Reserach in Economics and Management Sciences*, *11*(2).

Mara. (2023). Zakat division. Retrieved December 2, 2024, from https://zakah.om/en?csrt=5752136550118852707.

Matahir, M. F. (2023). Issues and challenges of zakat al-mal collection in Brunei Darussalam. *International Journal of Zakat, 8*(1), 64-76.

MASTUL Foundation. (2023). About us. Retrieved December 5, 2024, from: https://www.mastul.net/about-us/.

Marhanum, C. M. S., & Chowdhury, M. A. M. (2020). Technological transformation in Malaysian zakat institutions. *International Journal of Zakat, 5*(3), 44-56.

Muhamad, H. Y., & Khaliq, A. (2019). Factors affecting the acceptance of financial technology among asnaf for the distribution of zakat in Selangor: A study using UTAUT. *Journal of Islamic Finance, 8*, 35-46. Retrieved February 3, 2025, from: https://journals.iium.edu.my/iiibfjournal/index.php/jif/article/view/34.

Muhammad, I. (2019). Analysis of zakat system in high-income Islamic countries. *The Journal of Muamalat and Islamic Finance Research*, 1-11.

Muzamir, M. Y. (2020). COVID-19: Pay zakat fitrah online. *Bharian*. Retrieved January 17, 2025, from: https://www.bharian.com.my/berita/nasional/2020/04/680266/covid-19-bayar-zakat-fitrah-dalam-talian.

Mastul Foundation. (2023). About Us. Retrieved July 28, 2025 from https://en.wikipedia.org/wiki/Mastul_Foundation.

Ikhsan, N. (2023). Blockchain zakat in zakat management organizations, is it necessary? *Journal of Enterprise and Development (JED)*, *5*(3), 317-330.

Nair, A. M. (2022). Saudi ZATCA launches new smartphone app to automate its services. *GCC Business News*. Retrieved January 20, 2025, from: https://www.gccbusinessnews.com/saudi-zatca-launches-new-smartphone-app-to-automate-its-services/.

Oktavendi, T. W., & Mu'ammal, I. (2022). Acceptance model for predicting adoption of Zakat, Infaq, and Sodaqoh (ZIS) digital payments in Generation Z. *Journal of Islamic Accounting and Business Research*, *13*(4), 684-700.

Qatar Charity. (2023). Digital portal for zakat. Retrieved January 8, 2025, from https://www.qcharity.org/en/qa/zakat.

Putri, C. A. (2021). Exploring the potential of blockchain technology for zakat administration in Indonesia. *International Journal of Zakat, 6*(3), 101-120.

Rohim, A. N. (2019). Optimalisasi penghimpunan zakat melalui digital fundraising. *Al-Balagh: Jurnal Dakwah Dan Komunikasi, 4*(1), 59. https://doi.org/10.22515/balagh.v4i1.1556.

Republic of Turkey. (2018). *Law No. 633 on the Organization and Duties of the Presidency of Religious Affairs*. Retrieved July 25, 2025, from https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=633&MevzuatTur=1&MevzuatTertip=5.

Rahman, M. M. (2024). Institutional Zakat Management in Bangladesh: Collection and Distribution Practices. *AZKA International Journal of Zakat & Social Finance*, 129-154.

Rahman, M. M. (2024). Role of Institutional Zakat Management of Bangladesh in Recipients' Income Generation. *Journal of Islamic Economics and Finance Studies*, *5*(2), 336-351.

Santoso, I. R. (2019). Strategy for optimizing zakat digitalization in alleviation poverty in the era of industrial revolution 4.0. *Ikonomika, 4*(1), 35-52. https://doi.org/10.24042/febi.v4i1.3942.

Susanto, A. A., Asya'bani, N., Rizal, C. F., & Oktari, M. (2024). Digital Transformation in Zakat Management: A Bibliometric Review on The Application of Blockchain Technology. *iBAF e-Proceedings*, *11*(1), 768-790.

Samatar, F. A. (2021). A web-based zakat collection and distribution system using K-nearest neighbors (Doctoral dissertation, Strathmore University).

Saputri, O. B., & Hamzah, M. Z. (2021). United Arab Emirates fiscal policy facing global economic crisis during the COVID-19 pandemic. In *Indonesian Conference of Zakat-Proceedings* (pp. 507-522).

Salleh, M. C. M., & Chowdhury, M. A. M. (2020). Technological transformation in Malaysian zakat institutions. *International Journal of Zakat*, *5*(3), 44-56.

TAIB. (2023). Basic zakat calculation. Retrieved December 15, 2024, from https://www.taib.com.bn/taib-web/services/basiczakatcalculation.

The Zakat Foundation™. (2022). Online zakat calculator. Retrieved December 22, 2024, from: https://donate.alzakat.org/contents/en-us/p3_Zakat-Calculator.html.

T.C. Mevzuat. (2023). *Law on Associations No. 5253* and *Law on Foundations No. 5737*. Retrieved July 25, 2025, from https://www.mevzuat.gov.tr/.

Wardhianti, N. N., Hisan, D. G., & Zaenal, M. H. (2022). The potential of the millennial generation in paying zakat through digital payment. In *Indonesian Conference of Zakat-Proceedings* (pp. 169-175).

ZAWYA. (2020). Oman launches initiative to develop digital zakat system. Retrieved December 12, 2024, from https://www.zawya.com/en/business/oman-launches-initiative-to-develop-digital-zakat-system-l827hsld.

Zaimah, N. R. (2017). Analisis progresif skema fundraising wakaf dengan pemanfaatan e-commerce di Indonesia. *'Anil Islam: Jurnal Kebudayaan dan Ilmu Keislaman, 10*(2), 285-316.

Zaenuddin, A. (2019). Bagaimana teknologi mengeksploitasi kelemahan manusia [How technology exploits human weaknesses]. *Tirto.id*. Diakses dari https://tirto.id/bagaimanateknologi-mengeksploitasi-kelemahan-manusia-eciG;