

Critical Assessment of Blockchain Applications in Zakat Literature: Lessons for Government and Future Directions

**Arva Athallah Susanto¹, Weni Hawariyuni², Wahyu Ario Pratomo³,
Widya Sartika Hasibuan³, Monika Andrasari³, Tika Widiastuti¹, Aryadimas Suprayitno¹**

¹Universitas Airlangga, Indonesia

²University of Buraimi, Oman

³Universitas Sumatera Utara, Indonesia

Corresponding Author: arva.athallah.susanto-2023@feb.unair.ac.id

ABSTRACT

Blockchain technology is revolutionizing the financial sector, including zakat management within Islamic Social Finance (ISF). This study critically assesses blockchain's potential to address zakat-related challenges, such as transparency, accountability, and efficiency. While blockchain's decentralized and secure nature offers promising solutions, its adoption remains limited due to obstacles like institutional readiness, public awareness, and regulatory issues. Using the PRISMA-based Systematic Literature Review (SLR) method, this study reviewed 22 documents from an initial 97 to evaluate the application of blockchain and other digital technologies such as AI and IoT in zakat management. These technologies provide new opportunities to improve zakat collection and distribution, but also face challenges in infrastructure and regulation, particularly in Muslim-majority countries. Governments play a key role in fostering the adoption of these technologies by aligning them with sharia compliance and creating supportive policies for digital transformation. This research contributes to the Islamic finance literature by offering insights into how blockchain and digitalization can enhance zakat's social impact. It also provides practical recommendations for policymakers to promote broader adoption of modern technologies in zakat management, helping optimize their effectiveness in poverty alleviation.

Keywords: *Blockchain Transparency, Zakat Digitalization, Efficiency. Regulatory Challenges, Technological Adoption*

INTRODUCTION

In recent years, blockchain technology has become one of the most transformative innovations across various sectors, including Islamic finance, particularly zakat. As a crucial instrument within Islamic Social Finance (ISF), zakat plays a vital role in poverty alleviation and improving social welfare in Muslim-majority countries. However, traditional zakat systems face significant challenges regarding transparency, accountability, and efficiency in distribution and management. This is where Islamic fintech, specifically blockchain technology, begins to show its

potential.

Blockchain, with its decentralized, transparent, and secure characteristics, can address several weaknesses in zakat management. This technology ensures that zakat funds are distributed fairly and accurately, reducing the risk of misuse or corruption. Therefore, the adoption of blockchain in zakat has become an increasingly discussed topic in Islamic finance literature. Furthermore, the digitalization of Islamic social finance (ISF), which includes zakat, extends beyond blockchain. Other technologies, such as artificial intelligence (AI), the Internet of Things (IoT), and digital

platforms, are also being adopted to enhance efficiency, transparency, and participation in zakat.

However, the adoption of these technologies is not without challenges. Despite their significant potential, the implementation of blockchain and other digital technologies faces several obstacles, ranging from inadequate regulation and low public trust to the incomplete readiness of digital infrastructure in many Muslim-majority countries. Therefore, a critical review of the literature on blockchain applications in zakat is essential to assess the extent to which this technology has been implemented and what lessons can be drawn. In this context, governments play a strategic role in ensuring supportive regulations and policies for the adoption of Islamic fintech. Moreover, the application of these technologies must align with the principles of *Maqāṣid al-Sharī'ah*, which aim to achieve social welfare and justice.

Given this background, it is clear that the adoption of blockchain technology and digitalization in zakat management is not merely an option but a necessity to address modern challenges. Although these technologies offer promising solutions to the weaknesses of traditional zakat systems, factors such as institutional readiness, public awareness, and regulatory support must be carefully considered. Therefore, this research will not only evaluate the current implementation of blockchain in the literature but also provide recommendations for governments and academics to optimize the utilization of these technologies in the future.

Beyond blockchain, the broader digitalization of Islamic social finance (ISF) also offers various opportunities through other technologies such as AI and IoT. These technologies have the potential to improve the distribution processes of zakat and enhance the efficiency of managing social funds. For instance, AI can be used to ensure that zakat funds

reach the right recipients, while IoT can improve the monitoring of zakat distribution in remote areas. However, research on the implementation of these technologies in zakat is still very limited, indicating a need for further studies to explore how these digital technologies can complement each other and enhance zakat's effectiveness.

This study presents a critical assessment through a Systematic Literature Review (SLR) of blockchain applications in zakat literature—a methodological approach not extensively applied in previous research. Unlike bibliometric analyses, this study systematically reviews and synthesizes current research on the role of blockchain technology in zakat management. It identifies gaps in the existing literature and provides in-depth insights into how blockchain can enhance transparency, efficiency, and accountability in zakat administration. Furthermore, the study offers crucial lessons for governments in formulating policies and strategies for implementing blockchain technology in the zakat sector, as well as guiding future research and practice. Consequently, this research makes a significant contribution to advancing the understanding of blockchain integration in zakat management and its implications for social justice and poverty alleviation.

In conclusion, the findings of this research are expected to contribute to the improvement of zakat's efficiency, transparency, and social impact through the application of modern technology. This study not only provides a critical evaluation of blockchain implementation but also outlines steps for governments and researchers to optimize the use of other technologies in the management of zakat and Islamic social finance, making it more effective in addressing various social and economic challenges in Muslim-majority countries.

METHODOLOGY

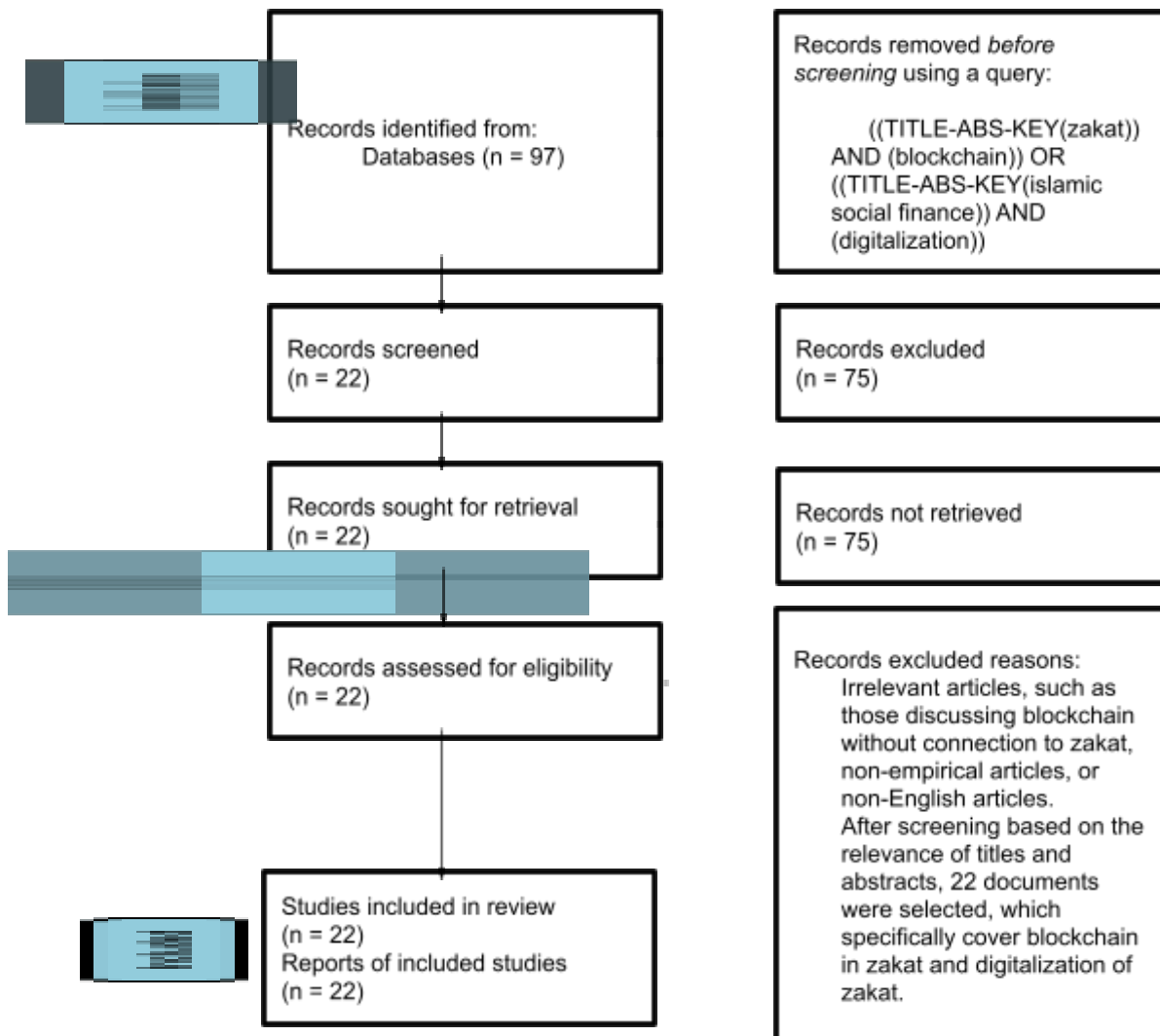
The Systematic Literature Review (SLR) methodology follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework, which provides a structured approach to the review process. The first stage is Identification, where relevant literature is gathered through a comprehensive search in academic databases such as Scopus. The search is conducted using two primary keyword sets: "zakat" and "blockchain" as

well as "Islamic social finance" and "digitalization." This process yields an initial total of 97 documents, which are identified for further screening. These documents are derived from a query structured as follows:

```

"((TITLE-ABS-KEY(zakat))      AND
(blockchain))                  OR
((TITLE-ABS-KEY(islamic      social
finance)) AND (digitalization))."
    
```

Figure 1. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework



In the Screening stage, the 97 documents are evaluated against inclusion and exclusion criteria. The inclusion criteria focus on documents that specifically discuss zakat in conjunction with blockchain or the digitalization of zakat within Islamic Social Finance (ISF). Exclusion criteria involve filtering out irrelevant articles, such as those that discuss blockchain without its application to zakat, non-empirical studies, or articles not published in English. After reviewing the relevance of the titles and abstracts, 22 documents are selected for a more thorough review. These selected papers are then further assessed for eligibility, ensuring that they provide evidence-based discussions on the use of blockchain in zakat or the digitalization of zakat within the ISF framework.

The final stage, Included, involves the full-text review of the 22 selected documents. These papers are confirmed to be directly aligned with the research focus,

specifically addressing blockchain implementation in zakat or zakat digitalization in the context of ISF. The documents are then analyzed based on key themes such as the role of blockchain in zakat processes, the implications of zakat digitalization, and lessons for policymakers and future research directions. The PRISMA flowchart visually summarizes the review process, illustrating the progression from the identification of 97 documents, through screening and eligibility assessment, to the final inclusion of 22 relevant studies. This PRISMA-based SLR ensures a transparent and systematic approach to reviewing literature on blockchain and digitalization in Islamic social finance.

DISCUSSION AND CONCLUSION EXISTING RESEARCH

1) Zakat Blockchain

Papers	Topic	Subtopic
Al-Okaily & Alsmadi (2024)	Metaverse and Blockchain in Islamic Finance	Cultural sensitivity, UX, financial transparency, and accountability
Khairi et al. (2024)	Blockchain in Zakat Collection	Efficiency, transparency, and economic impact in Malaysia and Indonesia
Kasmon et al. (2024)	FinTech in Islamic Social Finance	Transparency, trust, and regulatory challenges in waqf and zakat
Husain et al. (2023)	Blockchain-Based Zakat and Community Welfare	Zakat, welfare improvement, and self-reliance
Khairi et al. (2023)	Zakat Collection Blockchain System Development	Transparency, poverty reduction, and regional scaling of blockchain applications
Rosele et al. (2022)	Zakat on Cryptocurrency (Bitcoin)	Shariah compliance and government policy on Bitcoin for zakat
BASARUD-DIN & ABDULLAH (2023)	Bitcoin for Zakat Payment	Security, legal concerns, and integration of Bitcoin into zakat systems

Al-Okaily & Alsmadi (2024) explore the role of blockchain technology and the metaverse in Islamic finance, focusing on cultural sensitivity, user experience (UX), financial transparency, and accountability. In the Islamic finance framework, these factors are essential as they align with ethical considerations and Sharia principles. The integration of blockchain ensures a higher level of transparency, minimizing opportunities for fraud and ensuring that financial activities remain accountable, which is crucial for maintaining trust in religiously aligned financial systems.

Blockchain in Zakat Collection

Khairi et al. (2024) examine the potential of blockchain to enhance zakat collection in Malaysia and Indonesia, emphasizing its efficiency and economic impact. Blockchain can streamline the zakat process by creating a transparent and tamper-proof system where all transactions are recorded on a public ledger. This transparency can reduce corruption and mismanagement of funds, ultimately leading to a more efficient distribution of zakat and having a positive economic impact on local communities, particularly in poverty alleviation.

FinTech in Islamic Social Finance

Kasmon et al. (2024) delve into the role of financial technology (FinTech) in Islamic social finance, with a particular focus on transparency, trust, and regulatory challenges in waqf (Islamic endowment) and zakat. The implementation of FinTech in Islamic finance offers an opportunity to modernize the management of zakat and waqf funds. However, the researchers identify regulatory challenges, especially concerning Sharia compliance and the potential legal hurdles that could arise with the digital transformation of these traditional financial systems.

Blockchain-Based Zakat and Community Welfare

Husain et al. (2023) focus on the link between blockchain-based zakat systems and the improvement of community welfare. The authors argue that blockchain can enhance the efficiency of zakat distribution, ensuring that funds are allocated to the neediest in society. This, in turn, promotes self-reliance and reduces dependency on external aid, ultimately contributing to the long-term welfare of the community. By using blockchain, the distribution process becomes more streamlined and accountable, leading to better outcomes in poverty alleviation.

Zakat Collection Blockchain System Development

Khairi et al. (2023) analyze the development of blockchain systems for zakat collection, particularly in poverty reduction and scaling the application across regions. The research emphasizes that a blockchain-based zakat system can have a broad regional impact, improving transparency in financial transactions while also helping reduce poverty by ensuring that zakat reaches the intended beneficiaries efficiently. The scalability of these systems means that they can be adopted in multiple regions, creating a uniform platform for zakat distribution globally.

Zakat on Cryptocurrency (Bitcoin)

Rosele et al. (2022) explore the complexities of integrating cryptocurrency, such as Bitcoin, into zakat payment systems. The researchers focus on the Shariah compliance and government policies regarding Bitcoin's use for zakat. While cryptocurrencies offer security and ease of transactions, their volatile nature and lack of government regulation present challenges. The authors also examine how Bitcoin can be integrated into existing zakat frameworks, taking into account the need for legal and religious compliance.

Bitcoin for Zakat Payment

BASARUD-DIN & ABDULLAH

(2023) focus on examining its security, legal concerns, and integration into zakat systems. Bitcoin offers high security due to blockchain's tamper-proof nature, ensuring transparent and immutable zakat transactions. However, there are significant legal concerns, as many Islamic countries lack clear regulations on cryptocurrency use, creating a grey area for zakat payments. Integrating Bitcoin into zakat could improve cross-border

payments, making them faster and more cost-effective, but the volatility of Bitcoin presents a challenge, as the value of donations may fluctuate. The study suggests managing this risk through conversion to fiat currency and addressing regulatory gaps for its successful adoption.

Islamic Social Finance (ISF) in terms of Zakat Digitalization

Papers	Topic	Subtopic
Khan et al. (2023)	Islamic Social Finance and Technology	Crowdfunding, blockchain, Maqāṣid al-Sharī'ah, and model improvement
Rahman et al. (2023)	Digital Zakat Management	Transparency, efficiency, trust, and regional applications
Bin-Nashwan (2022)	Adoption of e-Zakat Services	Trust, user experience, and factors influencing adoption amid COVID-19
Alshehadeh et al. (2024)	Digital Zakat and Corporate Sustainability	Financial transparency, corporate sustainability, and long-term impact
Al-Taani et al. (2024)	Digital Accounting and Zakat	Business sustainability, stakeholder engagement, and financial transparency
Raza Rabbani et al. (2022)	Zakat Distribution System (ZDS)	AI, blockchain, machine learning, poverty alleviation, and financial inclusion
Hassan et al. (2021)	Islamic Social Finance and COVID-19	Sadaqat, Zakat, Takaful, microfinance, and crisis response
Musari & Sayah (2023)	Islamic Microfinance in the Maghreb	Quadruple Helix approach, financial inclusion, and digitalization
Beik & Arsyianti (2021)	Digital Platforms in Islamic Finance	Digital literacy, Zakat transactions, and financial inclusion
Ghofar et al. (2024)	Digital Zakat Payments	Technological and social factors, and digital infrastructure in Southeast Asia

Mohammed et al. (2021)	Islamic Social Finance and Poverty	Multidimensional Poverty Index (MPI) and poverty alleviation mechanisms
Santoso et al. (2023)	ICT and Zakat Management	Blockchain, IoT, AI, Fintech, and Zakat management transparency
Hadi et al. (2024)	Digital Zakat Management and Accountability	Transparency, Zakat payroll systems, and digital growth
Syarifuddin (2024)	Islamic Social Finance Digital Transformation	Cloud computing, digital platforms, and poverty alleviation strategies

Islamic Social Finance and Technology

Khan et al. (2023) focuses on the convergence of technology with Islamic Social Finance (ISF), particularly how crowdfunding and blockchain can improve the zakat collection and distribution processes. The authors emphasize that these technological advancements align with Maqāṣid al-Sharī'ah—the objectives of Islamic law—ensuring justice, fairness, and the equitable distribution of wealth. Blockchain, with its transparent and tamper-proof records, can address fraud and inefficiencies in zakat transactions. Moreover, the integration of crowdfunding platforms can engage a broader audience, allowing for a more robust community-based model for zakat collection.

Digital Zakat Management

Rahman et al. (2023) examines how digital zakat management systems can enhance transparency, efficiency, and trust. By implementing blockchain and digital platforms, zakat organizations can provide real-time visibility into the distribution of funds, which is critical for maintaining public trust. Additionally, the efficiency of digital systems reduces administrative costs and ensures timely disbursement of zakat to those in need. The researchers also explore regional applications, particularly in Southeast Asia, where

digital zakat management has the potential to revolutionize traditional practices.

Adoption of e-Zakat Services

Bin-Nashwan (2022) argue that the COVID-19 pandemic has accelerated the adoption of e-Zakat services, driven by a shift in user behavior toward digital platforms. This paper focuses on the factors influencing adoption, such as trust and user experience. The pandemic highlighted the need for remote and accessible zakat payment systems. The ease of use of digital platforms, coupled with secure and efficient transactions, has played a crucial role in promoting e-Zakat services. The research suggests that trust in these systems is critical for widespread adoption, especially in regions with limited digital literacy.

Digital Zakat and Corporate Sustainability

Alshehadeh et al. (2024) links digital zakat systems to corporate sustainability, emphasizing how financial transparency can enhance a company's long-term impact. The authors argue that corporations can incorporate zakat into their sustainability frameworks, using digital platforms to ensure that their contributions are managed transparently. This not only enhances a corporation's image but also aligns it with ethical Islamic financial practices, promoting

long-term social responsibility.

Digital Accounting and Zakat

Al-Taani et al. (2024) argue that the role of digital accounting in zakat is highlighted in this research, particularly regarding business sustainability and stakeholder engagement. The authors suggest that digital accounting systems can provide accurate and transparent financial records, ensuring that zakat payments are calculated and distributed correctly. Engaging stakeholders through transparent accounting practices builds trust and promotes the sustainability of businesses, which, in turn, benefits the broader zakat ecosystem.

Zakat Distribution System (ZDS)

Raza Rabbani et al. (2022) explores the development of a Zakat Distribution System (ZDS) using AI, blockchain, and machine learning to enhance poverty alleviation and financial inclusion. The ZDS aims to use technology to accurately identify individuals in need and distribute zakat in a manner that is both efficient and transparent. The use of machine learning allows for the automation of certain processes, while blockchain ensures that the distribution is tamper-proof, ultimately contributing to the system's effectiveness in poverty reduction.

Islamic Social Finance and COVID-19

Hassan et al. (2021) argue that the COVID-19 pandemic has had a significant impact on Islamic social finance, including sadaqat, zakat, takaful, and microfinance. This research looks at how these tools have been used to support crisis response efforts, particularly in vulnerable communities. The pandemic exposed the need for robust and digitalized Islamic finance systems that can quickly respond to crises. Zakat, in particular, played a crucial role in providing immediate relief to those affected by the economic fallout of the pandemic, demonstrating the need

for digital transformation in this area.

Islamic Microfinance in the Maghreb

Musari & Sayah (2023) analyzes Islamic microfinance in the Maghreb region using the Quadruple Helix approach, which involves collaboration between government, academia, industry, and civil society. The focus is on how financial inclusion can be improved through digitalization, making Islamic microfinance more accessible to marginalized communities. The research highlights the potential of blockchain and other digital tools to reduce costs, increase transparency, and expand access to financial services.

Digital Platforms in Islamic Finance

Beik & Arsyianti (2021) argue that the integration of digital platforms in Islamic finance is explored in this study, with a focus on how digital literacy can enhance zakat transactions and promote financial inclusion. The researchers argue that as digital literacy improves, more people will be able to access and engage with digital zakat platforms, thus broadening the reach of zakat and ensuring that it is distributed more efficiently and transparently. This will help bridge the gap between donors and recipients, particularly in underserved areas.

Digital Zakat Payments

Ghofar et al. (2024) explores the technological and social factors influencing digital zakat payments in Southeast Asia. The authors suggest that while technology plays a crucial role in enabling digital zakat payments, social factors such as trust, religious beliefs, and community engagement are equally important. The study emphasizes the need for strong digital infrastructure and community buy-in to ensure the success of digital zakat systems in the region.

Islamic Social Finance and Poverty

Mohammed et al. (2021) examines

the use of the Multidimensional Poverty Index (MPI) to assess the effectiveness of Islamic social finance, particularly zakat, in poverty alleviation. The MPI measures poverty in various dimensions, such as education, health, and living standards. By integrating this index with zakat distribution systems, policymakers can better target those in need and address the root causes of poverty. The research highlights the potential of digital zakat platforms to enhance this process by providing more accurate data and tracking.

ICT and Zakat Management

Santoso et al. (2023) examines the role of Information and Communication Technology (ICT) in zakat management, focusing on the integration of blockchain, IoT, AI, and fintech to improve transparency. The authors suggest that ICT can revolutionize zakat management by providing real-time data, enhancing accountability, and streamlining the collection and distribution process. This, in turn, builds trust among donors and ensures that zakat is used effectively.

Digital Zakat Management and Accountability

Hadi et al. (2024) argue that the focus of this research is on the accountability of digital zakat management systems, particularly regarding payroll systems and digital growth. By using digital platforms, zakat organizations can ensure that all transactions are transparent and accountable, which is critical for maintaining public trust. The research highlights the potential for digital zakat systems to grow and expand, particularly in regions with strong digital infrastructure.

Islamic Social Finance Digital Transformation

Syarifuddin (2024) explores the digital transformation of Islamic social finance, with a focus on cloud computing, digital platforms, and poverty alleviation strategies. The research emphasizes that cloud-based systems can enhance the scalability and efficiency of zakat platforms, allowing them to reach more people and respond more quickly to changes in demand. By leveraging digital platforms, Islamic social finance can better achieve its goal of reducing poverty and promoting social welfare.

LESSON FOR GOVERNMENT

1) Zakat Blockchain

Papers	Findings	What can be learned	Lessons for Governments	Further Study for Research
Al-Okaily & Alsmadi (2024)	The role of metaverse and blockchain in enhancing digital Islamic finance	Cultural sensitivity significantly impacts user experience (UX), which affects financial transparency and accountability in digital Islamic finance.	Governments must consider cultural expectations when adopting blockchain and metaverse technologies in Islamic finance.	Further research should explore the long-term effects of cultural sensitivity on tech adoption in Islamic finance.
Khairi et al. (2024)	Strategies and Applications of Blockchain Technology of Zakat Collection in Malaysia and Indonesia	Blockchain can enhance efficiency and transparency in zakat collection and distribution, impacting national economies positively.	Governments should promote blockchain technology to improve zakat systems and economic development.	Studies should assess the specific barriers to adopting blockchain in zakat management in various countries.
Kasmon et al. (2024)	FinTech Application in Islamic Social Finance	FinTech, including blockchain, has benefits like transparency and trust enhancement in Islamic social finance.	Governments must support the growth of FinTech solutions like blockchain to ensure transparency in waqf and zakat.	Research should address the regulatory challenges hindering FinTech adoption in Islamic social finance.
Husain et al. (2023)	Impact of Earning Zakat Based on Blockchain on Community Welfare	Productive zakat through blockchain improves community welfare but has no	Governments should design zakat programs that focus not only on welfare but also on	Research should investigate why productive zakat doesn't directly influence

2) *Islamic Social Finance (ISF) in terms of Zakat Digitalization*

Papers	Findings	What Can Be Learned	Lessons for Governments	Further Study for Research
Khan et al. (2023)	Islamic social finance remains under-researched, especially in terms of a practical framework, despite the potential of	Islamic social finance can benefit greatly from technological tools like crowdfunding to solve	Governments should encourage the use of technological innovations like crowdfunding and blockchain for efficient	Research could further investigate how to improve Islamic social finance models using blockchain technology

	crowdfunding and blockchain technologies.	current issues and align with Maqāsid al-Sharī‘ah.	Islamic social finance models.	and explore other technological innovations.
Rahman et al. (2023)	Technological advancements, especially digital zakat, have the potential to improve zakat collection and distribution.	The digital management of zakat could enhance transparency, efficiency, and trust in zakat institutions.	Zakat institutions need to adopt digital solutions for enhanced transparency and efficiency in zakat collection and distribution.	Future studies should explore how digital management systems can be enhanced, particularly in varying regional and institutional contexts.
Bin-Nashwan (2022)	UTAUT model effectively predicts the adoption of e-Zakat services, showing a 72% predictive capability, but effort expectancy was not significant.	Trust and user experience play crucial roles in the adoption of digital zakat systems, especially amid uncertainties like COVID-19.	Governments should focus on building trust and user-friendly e-Zakat platforms to maximize zakat funds collection.	Investigating further into factors affecting user engagement with e-Zakat systems, and refining models for different socio-economic conditions.
Alshehadeh et al. (2024)	Digital zakat and accounting adoption positively affect corporate sustainability, and financial transparency moderates this relationship.	Digital zakat can align philanthropy with sustainability goals, helping businesses enhance sustainability outcomes through better financial transparency.	Governments and zakat institutions should prioritize digital zakat systems and transparent financial reporting for enhanced corporate sustainability.	Research could delve into the long-term impacts of digital zakat on corporate sustainability and how to optimize financial transparency tools.
Al-Taani et al. (2024)	Digital accounting and zakat enhance corporate sustainability, and financial transparency strengthens their impact.	There’s a synergistic effect of combining digital zakat and accounting to improve business sustainability and stakeholder engagement.	Government policies should support digital technologies that enhance financial transparency and philanthropy, aligning business practices with sustainability goals.	Future research could explore how digital technologies optimize sustainability in different sectors, and the role of financial transparency in these processes.

<p>Raza Rabbani et al. (2022)</p>	<p>Zakat Distribution System (ZDS) using AI, blockchain, machine learning, and natural language processing can improve poverty alleviation and financial inclusion among Muslims in India. 70% of respondents agree that Zakat is an important tool to eradicate poverty.</p>	<p>ZDS can resolve issues in efficiency, transparency, and reaching the right beneficiaries. It is a modern tool that bridges religious values with technological advancements.</p>	<p>Governments should integrate technology into Zakat collection and distribution systems to ensure efficient poverty eradication and better financial inclusion.</p>	<p>More research is needed to test the effectiveness of ZDS in different countries, especially those with high poverty rates. Examine the integration of emerging technologies in Zakat systems across regions.</p>
<p>Hassan et al. (2021)</p>	<p>COVID-19 has escalated poverty, and Islamic social finance tools such as Sadaqat, Zakat, and Takaful were extended to assist.</p>	<p>Islamic social finance is adaptable in crises, providing relief through microfinance. Technology and institutions can quickly react to poverty spikes during unforeseen events.</p>	<p>Governments should incorporate Islamic finance tools as a part of national poverty alleviation strategies, especially in times of crisis.</p>	<p>Explore the long-term impacts of Islamic social finance tools during and post-pandemic. Investigate how digital tools support or enhance these financial methods.</p>
<p>Musari & Sayah (2023)</p>	<p>Islamic microfinance in the Maghreb region lags compared to Southeast Asia. The Islamic Quadruple Helix approach promotes a partnership model with digitalization to enhance financial inclusion.</p>	<p>Islamic finance partnerships and technology can drive microfinance success in regions with underdeveloped financial ecosystems.</p>	<p>Governments should encourage partnerships between Islamic finance institutions and tech firms to enhance financial inclusion. Promote financial literacy among marginalized populations.</p>	<p>Research should focus on mapping out digital financial inclusion ecosystems and assessing cross-regional variances. Analyze the success factors of Southeast Asian microfinance for possible replication.</p>

Beik & Arsyanti (2021)	Indonesia's middle-class population has shifted to digital platforms for financial transactions, with BAZNAS aiming for 30% of Zakat transactions to be digital by 2020.	Digital literacy and platforms are critical to boosting Islamic social finance participation. Simple digital transactions can dramatically increase financial inclusion.	Governments should support digital financial literacy programs and provide infrastructure to facilitate online Zakat transactions.	Further research on how digital platforms can increase participation and how Zakat institutions can improve digital literacy. Evaluate Zakat's role in achieving socio-economic equality.
Ghofar et al. (2024)	Young Muslims prefer digital platforms for Zakat payments in Indonesia and Malaysia. Performance Expectancy, Effort Expectancy, Social Influence, and Digital Infrastructure are key factors.	Adoption of digital platforms for religious practices is influenced by technological and social factors. Country-specific digital infrastructure plays a significant role.	Governments should tailor their digital financial services according to social and infrastructural conditions, supporting the seamless adoption of digital Zakat platforms.	Future research should explore longitudinal and cross-regional studies to better understand digital adoption in religious financial services.
Mohammed et al. (2021)	Poverty remains a critical issue globally, especially in Muslim-majority countries. Multidimensional Poverty Index (MPI) is used to measure poverty.	MPI provides a comprehensive understanding of poverty that includes health, education, and living standards. Islamic social finance can complement conventional poverty measures.	Governments in Muslim-majority countries should align Zakat and social welfare programs to the MPI framework for targeted poverty alleviation efforts.	Further studies should evaluate how MPI-based programs can enhance the effectiveness of Zakat. Explore country-specific poverty alleviation mechanisms through Islamic finance.
Santoso et al. (2023)	ICT-backed Zakat management, supported by blockchain, IoT, AI, and Fintech, can improve transparency, accountability, and trust in Zakat systems.	Digitalization, particularly blockchain, enhances trust and efficiency in Zakat systems. Incorporating multiple stakeholders	Governments should adopt blockchain and other technologies in Zakat and social finance	Research should focus on designing blockchain models specifically for Zakat management. Further analysis is needed

		ensures a comprehensive approach to Zakat management.	management to ensure transparency and trust.	to integrate multiple technologies effectively.
Hadi et al. (2024)	Digital Zakat management positively impacts Zakat growth and accountability. Transparency also improves accountability, but the Zakat payroll system does not significantly impact Zakat management.	Digitalization and transparency are critical to accelerating Zakat growth, but payroll systems need to be further optimized for impact.	Governments should promote transparency and digital Zakat management systems, focusing on accountability to increase Zakat collection and distribution efficiency.	Future research should investigate qualitative variables affecting Zakat management and growth. Examine how payroll systems can be optimized within Zakat frameworks.
Syarifuddin (2024)	Islamic Social Finance (ISF) in Indonesia requires digital transformation to meet poverty alleviation targets. Cloud computing and digital platforms are the most optimal technologies for this transformation.	Digital platforms and cloud computing improve ISF performance, but all factors—benefits, opportunities, costs, and risks—must be considered for successful implementation.	Governments should support the digital transformation of ISF through cloud computing and digital platforms, ensuring all stakeholders are considered.	Further research should explore the implementation of various technologies within ISF systems to enhance their effectiveness in poverty alleviation.

CONCLUSION

The study presented in the file critically assesses the role of blockchain and other digital technologies in improving zakat management and distribution within Islamic Social Finance (ISF). The key takeaway is that blockchain, with its transparent, secure, and decentralized features, holds significant potential to address the challenges of traditional zakat systems, particularly around transparency, accountability, and efficiency. Blockchain's ability to provide real-time, tamper-proof records ensures that zakat is collected and distributed with minimal risk of corruption or mismanagement.

However, the research highlights that the adoption of blockchain in zakat management is still in its early stages and faces various challenges. These include institutional readiness, public awareness, and inadequate regulatory frameworks in many Muslim-majority countries. To overcome these obstacles, governments play a crucial role in creating supportive policies, educating the public, and aligning the implementation of blockchain with the principles of *Maqāṣid al-Sharī'ah*, ensuring that it promotes justice and equitable wealth distribution.

Additionally, the study emphasizes that digital transformation in zakat management goes beyond blockchain. The use of Artificial Intelligence (AI), Internet of Things (IoT), and digital platforms offers additional benefits by improving the efficiency of zakat collection and distribution. These technologies can ensure that zakat reaches the right beneficiaries more effectively, enhancing financial inclusion and poverty alleviation efforts. AI, for instance, can automate beneficiary identification, while IoT can monitor the disbursement of zakat in remote areas.

While these digital tools present exciting opportunities, the research also cautions that their successful implementation depends on strong digital infrastructure and regulatory support, both of which are lacking in some regions.

Furthermore, public trust in these new systems remains a critical factor in their adoption. To foster this trust, transparency, user-friendly platforms, and clear communication of benefits are essential.

In conclusion, the findings suggest that the integration of blockchain and other digital technologies into zakat management can significantly enhance the effectiveness of Islamic social finance. Governments are encouraged to take proactive steps in promoting these technologies, ensuring they are aligned with Islamic ethical standards while addressing regulatory and infrastructural challenges. Future research should continue exploring how these technologies can be scaled and optimized for broader regional and global applications in poverty alleviation and financial inclusion.

LIMITATIONS OF THE STUDY

While this study provides valuable insights into the applications of blockchain in zakat management, it is not without limitations. The use of a Systematic Literature Review, though effective for synthesizing existing research, may not fully capture the rapidly evolving nature of blockchain technology due to the inherent time lag in academic publishing. Reliance on selected databases and predetermined inclusion criteria could introduce selection bias, potentially overlooking relevant studies from non-indexed journals, conference proceedings, or publications in languages other than English. This may result in an incomplete global perspective on the subject.

Moreover, the variability in the quality and depth of the included studies poses challenges in drawing definitive practical conclusions. Some studies may lack rigorous empirical evidence or be predominantly theoretical, limiting their applicability. There is also the possibility of publication bias skewing the overall assessment of blockchain's effectiveness in zakat management. Additionally, the SLR may not fully address practical challenges

such as technological accessibility, user literacy, and regulatory frameworks, which are critical for the successful adoption of blockchain solutions. These practical constraints are essential considerations for governments and organizations but may not be thoroughly explored within the academic literature reviewed.

Additionally, future research could benefit from employing phenomenological approaches or case studies that involve interviews with practitioners and stakeholders directly engaged in the implementation of blockchain in zakat management. Such qualitative methods would provide deeper insights into the practical challenges, user experiences, and organizational dynamics that are not fully captured in the existing literature. By understanding the perspectives of those on the front lines, researchers can identify specific barriers and facilitators to adoption, thereby informing more effective strategies for technology integration and policy development in the zakat sector.

REFERENCES

- Al-Okaily, M., & Alsmadi, A. A. (2024). The role of metaverse and blockchain in enhancing digital Islamic finance: empirical perspective. *Journal of Islamic Marketing*.
<https://doi.org/10.1108/JIMA-11-2023-0369>
- Alshehadeh, A. R., Al-Zaqeba, M. A. A., Elrefae, G. A., Al-Khawaja, H. A., & Aljawarneh, N. M. (2024). The effect of digital zakat and accounting on corporate sustainability through financial transparency. *Asian Economic and Financial Review*, 14(3), 228–249.
<https://doi.org/10.55493/5002.v14i3.5016>
- Al-Taani, A. H. M., Al-Zaqeba, M. A. A., Maabreh, H. M. A., & Jarah, B. A. F. (2024). Exploring the impact of digital accounting and digital zakat on improving business sustainability in the Middle East and Malaysia. *International Journal of Advanced and Applied Sciences*, 11(1), 56–67.
<https://doi.org/10.21833/ijaas.2024.01.007>
- BASARUD-DIN, S. K., & ABDULLAH, N. S. N. (2023). Can Bitcoin be used for Zakat Payment? *International Journal of Economics and Management*, 17(2), 273–285.
<https://doi.org/10.47836/ijeam.17.2.09>
- Beik, I. S., & Arsyianti, L. D. (2021). Digital Technology and Its Impact on Islamic Social Finance Literacy. In *Islamic FinTech: Insights and Solutions* (pp. 429–445). Springer International Publishing.
https://doi.org/10.1007/978-3-030-45827-0_23
- Bin-Nashwan, S. A. (2022). Toward diffusion of e-Zakat initiatives amid the COVID-19 crisis and beyond. *Foresight*, 24(2), 141–158.
<https://doi.org/10.1108/FS-08-2020-0082>
- Ghofar, A., Fawwaz, M., Prestianawati, S. A., Mubarak, M. F., Manzilati, A., & Imamia, T. L. (2024). Young muslim generation's preferences for using digital platforms for Zakat payments: A cross-country study of Indonesia and Malaysia. *Journal of Infrastructure, Policy and Development*, 8(6).
<https://doi.org/10.24294/JIPD.V8I6.3249>
- Hadi, R., Shafrani, Y. S., Hilyatin, D. L., Riyadi, S., & Basrowi. (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 and Network Science*, 8(1), 597–608.

- <https://doi.org/10.5267/j.ijdns.2023.8.025>
- Hassan, M. K., Muneeza, A., & Sarea, A. M. (2021). Impact of COVID-19 on Islamic social finance. *COVID-19 and Islamic Social Finance*, 9–23. <https://doi.org/10.4324/9781003121718-3>
- Husain, M. K., Marianti, T., & Huzaifah, M. L. (2023). Impact of Earning Zakat Based on Blockchain Technology on Community Welfare. *2023 11th International Conference on Cyber and IT Service Management, CITSM 2023*. <https://doi.org/10.1109/CITSM60085.2023.10455425>
- Kasmon, B., Ibrahim, S. S., Daud, D., Raja Hisham, R. R. I., & Dian Wisika Prajanti, S. (2024). FinTech application in Islamic social finance in Asia region: a systematic literature review. In *International Journal of Ethics and Systems*. <https://doi.org/10.1108/IJOES-07-2023-0155>
- Khairi, K. F., Laili, N. H., Sabri, H., Ahmad, A., Pham, V. H., & Tran, M. D. (2023). The Development and Application of the Zakat Collection Blockchain System. In *Journal of Governance and Regulation* (Vol. 12, Issue 1 special issue, pp. 294–306). [virtusinterpress.org. https://doi.org/10.22495/jgrv12i1s1art9](https://doi.org/10.22495/jgrv12i1s1art9)
- Khairi, K. F., Rafiki, A., Rahmadhani, S. N., & Ananda, R. F. (2024). Strategies and Applications of Blockchain Technology of Zakat Collection and Distribution in Malaysia and Indonesia. In *Contributions to Management Science: Vol. Part F3298* (pp. 19–33). Springer. https://doi.org/10.1007/978-3-031-61778-2_2
- Khan, A., Sukmana, R., & Mahmood, A. (2023). Islamic Social Finance Ecosystem and the Role of Crowdfunding: a Proposed Model. *Hamdard Islamicus*, 46(3), 91–111. <https://doi.org/10.57144/hi.v46i3.876>
- Mohammed, M. O., Robbana, A., & Bedoui, H. (2021). Zakat Digital Management Techniques. *Islamic FinTech: Insights and Solutions*, 299–317. https://doi.org/10.1007/978-3-030-45827-0_17
- Musari, K., & Sayah, F. (2023). Islamic quadruple Helix: Social finance partnership for developing digital financial inclusion in Maghreb region. In *Strategies and Applications of Islamic Entrepreneurship* (pp. 67–82). IGI Global. <https://doi.org/10.4018/978-1-6684-7519-5.ch005>
- Rahman, A. A., Nor, S. M., & Yaacob, S. E. (2023). Technological Integration within Zakat Institutions: A Comprehensive Review and Prospective Research Directions. In *International Journal of Islamic Thought* (Vol. 24, Issue 1, pp. 31–43). [ukm.my. https://doi.org/10.24035/ijit.24.2023.268](https://doi.org/10.24035/ijit.24.2023.268)
- Raza Rabbani, M., Hassan, M. K., Khan, S., & Muneeza, A. (2022). A Fintech-Based Zakat Model Using Artificial Intelligence. *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*, 49–63. https://doi.org/10.1007/978-3-031-14941-2_3
- Rosele, M. I., Muneem, A., Seman, A. B. C., Abdullah, L. H., Rahman, N. N. A., Sukor, M. E. A., & Ali, A. K. (2022). Imposing zakat on cryptocurrency (Bitcoin): a Shariah appraisal. *Global Business and Economics Review*, 28(1), 91–111.

<https://doi.org/10.1504/gber.2023.127550>

Santoso, B., Wijayanti, P., & Austriani, F. (2023). Zakat Management Model Based on ICT. In *Lecture Notes on Data Engineering and Communications Technologies* (Vol. 161, pp. 85–97). https://doi.org/10.1007/978-3-031-26281-4_9

Syarifuddin, F. (2024). Fostering inclusive welfare and Islamic financing through Islamic social finance digitalization strategy. *Edelweiss Applied Science and Technology*, 8(4), 583–619. <https://doi.org/10.55214/25768484.v8i4.1438>