

The Impact of Blockchain Technology on Sharia Philanthropy: Enhancing Donation Transparency in Indonesia

Avid Leonardo Sari¹, Irwandi², Agusfian Saptayuda³, Yesika Yanuarisa⁴, Fitri Nurlaela⁵

^{1,2}Universitas Islam Negeri Sunan Gunung Djati Bandung, Indonesia

³GoAcademica CRP, Bandung, Indonesia

⁴Universitas Palangka Raya, Indonesia

⁵Politeknik Praktisi Bandung, Indonesia

Email: avidleonardo@uinsgd.ac.id

Abstract

The development of Islamic philanthropy in Indonesia has shown significant growth along with growing public awareness of religious-based donation practices. However, this increase has not been fully accompanied by a uniform level of transparency and open reporting among Islamic philanthropic institutions. This situation presents challenges in building public trust, especially amidst increasing demands for accountability and access to information in the digital environment. This study aims to analyze the role of blockchain technology in increasing transparency in the management and reporting of donations in Islamic philanthropy in Indonesia. The research method used is a qualitative approach, reviewing various scientific literature, institutional reports, and academic publications relevant to the research topic. The results indicate that limitations in reporting systems and fragmented data management remain major obstacles to achieving transparency in Islamic philanthropy. The use of blockchain technology has the potential to strengthen the traceability of fund flows, the reliability of transaction recording, and the ongoing access to donation information for the public. Increased transparency through this technology-based system has implications for strengthening public trust, sustainable donor participation, and the institutional legitimacy of Islamic philanthropy in Indonesia.

Keywords: *Blockchain, Sharia Philanthropy, Transparency.*



A. INTRODUCTION

The development of Islamic philanthropy in Indonesia exhibits increasingly complex dynamics along with growing public awareness of the practice of social solidarity based on religious values. The growth in the number of philanthropic fund management institutions, both formal and community-based, reflects the substantial economic and social potential inherent in Islamic donation activities (Anoraga, 2024). However, amidst this increased participation, there are also growing public expectations for trustworthy, transparent, and accountable fund management that is sustainable. Public trust is increasingly determining the sustainability of philanthropic institutions, especially in a context where society is increasingly critical of the management of social and religious funds (Jaiswal et al., 2025).

As the volume of funds raised increases, the issue of transparency and accountability in the management of Islamic philanthropy has become a significant concern. Numerous cases of inconsistent reporting, delayed distribution, and limited

access to information for donors have raised doubts about the integrity of some fund management institutions (Akhyar, 2024). This situation has the potential to hinder the growth of Islamic philanthropy, as weakened trust can directly impact public participation. In the context of Indonesia, which has a high level of religiosity, failure to maintain public trust not only has implications for institutional aspects but also touches on broader moral and social dimensions (Herianingrum et al., 2024).

On the other hand, the massive digital transformation taking place across various sectors has shaped new patterns of social, economic, and institutional interactions. Digitalization is driving demands for faster, more accurate, and more accessible information disclosure for various parties. Sharia philanthropic institutions are not immune to this change, as donors are increasingly accustomed to digital systems that enable direct and continuous transaction monitoring (Van Veldhoven & Vanthienen, 2022). Philanthropic institutions' unpreparedness to respond to these demands has the potential to create a gap between public expectations and current fund management practices. This situation is reflected in differing zakat reporting patterns across different types of managing institutions, ultimately leading to inconsistent levels of information disclosure to the public. The following empirical overview of zakat reporting practices in Indonesia can be observed through the Zakat Reporting Graph for 2024 based on the type of zakat manager, which shows variations in reporting levels across managing institutions (Firdaus et al., 2025).

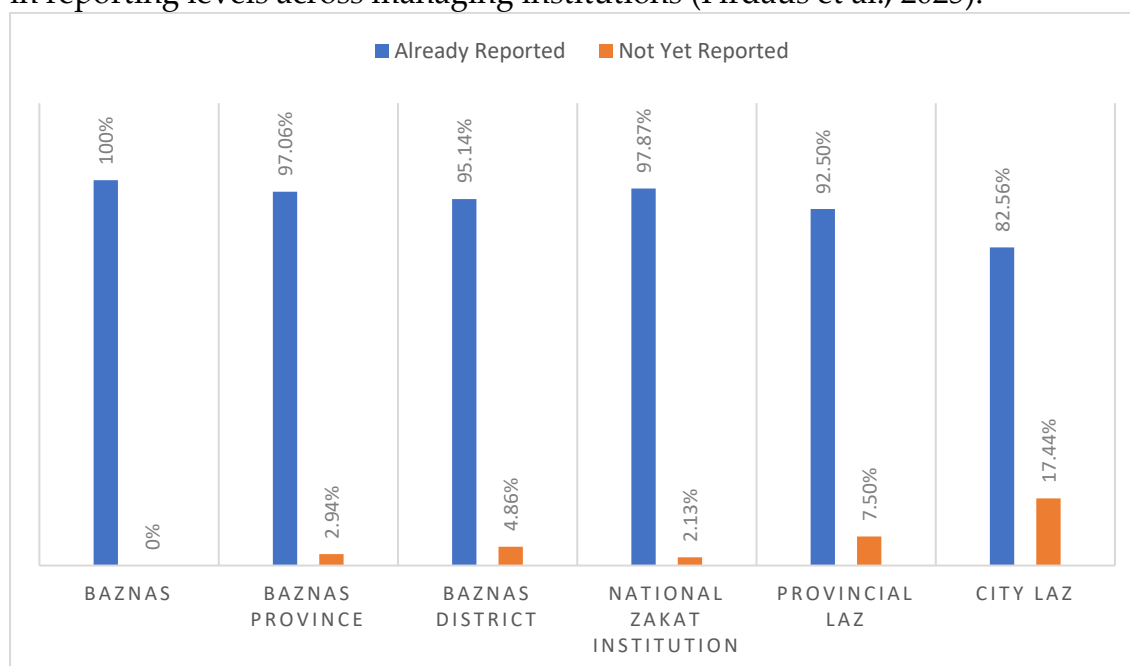


Figure 1. Zakat Reporting Graph for 2024 by Zakat Management Type

The data indicate striking differences in the patterns and intensity of zakat reporting across different types of managing institutions. This variation reflects disparities in institutional capacity and the recording systems used, resulting in varying levels of information disclosure to the public. This heterogeneity in reporting practices reinforces the argument that current mechanisms are not fully capable of

meeting the growing demands for transparency and accountability in the management of Islamic philanthropy.

In this context, there is growing pressure to adopt technology that can address the challenges of transparency and trust more systematically. The effectiveness of conventional, closed-off, and centralized reporting mechanisms is increasingly questionable, especially when faced with the ever-increasing scale of fund management. Limited access to information for donors often reinforces the perception of distance between managing institutions and the public, weakening the trust that should be the foundation of Islamic philanthropy (Santolo & Filatotchev, 2025).

Indonesia, as the country with the largest Muslim population in the world, holds a strategic position for developing sustainable Islamic philanthropy practices. Its enormous financial potential opens up opportunities for philanthropy to become a crucial instrument in supporting social development, poverty alleviation, and improving public welfare. However, this substantial potential will not be optimally realized without a management system that ensures transparency and fair distribution. When public trust is compromised, potentially mobilized funds are at risk of being misused (Faizi et al., 2024).

In recent years, attention has increased on the use of digital technology in managing social and religious funds. Various technology-based initiatives have been introduced to improve the efficiency of fundraising and disbursement, but not all have addressed fundamental issues related to transparency and traceability of transactions (Bonang et al., 2026). This challenge demonstrates that technological innovation cannot simply focus on transaction convenience; it must also build a system that is trustworthy for all stakeholders. In the context of Islamic philanthropy, trust is not merely a technical issue but is closely linked to ethical values and social responsibility (Albshaier et al., 2024).

The debate over the relationship between technology and religious values is also a relevant issue in the development of digital-based Islamic philanthropy. On the one hand, technology is seen as a neutral tool with the potential to increase efficiency and transparency. On the other hand, there are concerns that inappropriate adoption of technology could shift the essence of Islamic philanthropy from a social orientation to a technocratic one. Therefore, it is important to critically examine how specific technologies can be integrated without neglecting the principles underlying Islamic philanthropy.

B. LITERATURE REVIEW

1. Blockchain

Blockchain is a distributed database shared across every node (system) connected to a computer network. As a database, blockchain stores information electronically in digital format. Blockchains are widely known for their use in cryptocurrency systems, such as Bitcoin, where they maintain secure and decentralized transaction records. The real innovation in blockchain is ensuring the

trustworthiness and security of data records, without the need for a third party to verify the data (Dong et al., 2023).

The main difference between a traditional database and blockchain lies in the data structure. Blockchains collect information together in groups, known as blocks, and then store these blocks within them. Blocks have a specific storage capacity, and as information is entered into a block, it stores, then closes, and then links it to the previous block, ultimately forming the chain of data we know as the blockchain.

While in a traditional database, data is organized into tables, blockchains organize data into chunks (blocks) that are then linked to each other. The data structure in blockchains is structured, creating an immutable data timeline when implemented in a decentralized system (Wei et al., 2022).

Based on blockchain developments in recent years, blockchains can be divided into several types with different characteristics, namely:

a. Public Blockchain

This blockchain is a distributed network, generally due to its public nature, meaning it is open to everyone who participates in it. It is open source, allowing the community to distribute it. This type of blockchain is widely used for cryptocurrency transactions, where anyone can view the list of transactions that have been made and validate them (Habib et al., 2022).

b. Private Blockchain

Private blockchains are a type of blockchain that is closed and typically only used for internal information exchange. This prevents unauthorized parties from viewing what is being done within the blockchain. According to Mukhopadhyay, there are access restrictions or special permissions for private blockchains. Companies or organizations typically use this type of blockchain to avoid the overly broad access controls provided by public blockchains, making private blockchains the solution (Madine et al., 2025).

c. Semi-Private Blockchain

Semi-Private Blockchains, commonly known as consortium blockchains, provide access to anyone authorized to use them and maintain closed source code. This type is similar to a private blockchain. However, data sent through transactions is always stored on the public blockchain network (Ohize et al., 2025).

2. Islamic Philanthropy

The word "philanthropy" is a new term in Islam, but recently several Arabic terms have been used as equivalents. Philanthropy is sometimes equated with al-'ata' al-ijtima'i, meaning social giving; al-takaful al-insani, meaning human solidarity; or "khayri," meaning giving for good; or sadaqah, meaning charity (Susdarwono & Arafat, 2024).

The word "philanthropy" originates from the Greek words philo and anthropos, meaning love and humanity. Philanthropy itself is more closely related to the Latin word "charity," meaning unconditional love. However, there are still

differences between the two words: charity tends to refer to short-term gifts, while philanthropy is more long-term.

The meaning of philanthropy has given rise to various definitions. Philanthropy is defined as a voluntary personal action driven by a desire to uphold the public good. The practice of philanthropy predates Islam, along with the development of discourses on social justice (Harkema, 2022).

There are several forms of philanthropy in Islam, such as Zakat, Infaq, and Sadaqah.

a. Zakat

Zakat is a key component of fiscal policy in Islamic economics. Zakat funds were the primary and most important source of state revenue since the early days of Islamic rule. The fundamental concept of zakat has not undergone significant change over time. The only difference is the method of collecting and utilizing zakat funds, as the concept of zakat jurisprudence states that the zakat system seeks to bring together surplus Muslims and deficit Muslims. This is hoped to achieve a projected income distribution between surplus and deficit Muslims or even turn deficit groups (mustahiq) into surplus groups (muzakki) (Mustamin et al., 2025).

b. Infaq

In linguistic terms, the word "infaq" means to spend, and also means to donate something (wealth) for the sake of something. According to Sharia terminology, infaq means to use a portion of one's wealth for good. Infaq is a voluntary expenditure made by someone whenever they receive sustenance, as much as they wish. Infaq means to give wealth without any compensation (Hughes & Siddiqui, 2024).

c. Alms

The word "sadaqah" comes from the Arabic word "sadaqa," meaning "righteous." According to Sharia terminology, the meaning of "sadaqah" is the same as "infaq," including its laws and provisions. The emphasis in infaq is on material things, while "sadaqah" has a broader meaning, involving non-material things (Akhter et al., 2025).

Table 1. The Difference Between Zakat, Infak, and Alms

	Definition	Law	Form	Time
Zakat	Assets that must be issued to certain groups under certain conditions.	Mandatory, if the nisab is met.	Material	There is a limit (haul)
Infaq	Donate something to someone else.	Obligatory, including zakat, expiation, and vows. Sunnah, including almsgiving to the poor	Material	Any time without any limitations.

		and those affected by disasters.		
Alms	Donate something to someone else.	Sunnah	Material and Non-Material	Any time without any limitations

C. METHOD

This research was conducted using a qualitative approach to gain a deep understanding of the issues studied in the context of Islamic philanthropy and the use of digital technology. This approach was chosen because it allows researchers to comprehensively examine the dynamics, patterns, and implications arising from the use of technology in philanthropic governance. Research data were obtained from various relevant written sources, including previous research results, scientific journal articles, and other academic publications directly related to the research topic. Data sources were selected selectively, considering their credibility, relevance, and contribution to strengthening the research analysis. After the research data was successfully collected, the next stage focused on systematic data processing and analysis. The collected data were reviewed in depth through a process of review, grouping, and interpretation to identify interrelationships between findings and patterns emerging in the literature. This analysis process was aimed at producing a coherent understanding of the role of technology in enhancing transparency and accountability in Islamic philanthropy, while also placing the research findings within the context of broader academic discourse. With these stages, this research is expected to produce valid and relevant findings in accordance with the research objectives (Purwanza, 2022).

D. RESULT AND DISCUSSION

1. Dynamics of Transparency in Sharia Philanthropy

Transparency practices in the governance of Islamic philanthropy in Indonesia are changing the expansion of fundraising activities and the increasing number of managing institutions operating across multiple levels. This development is not uniform, as each institution has a different approach, capacity, and governance orientation in disseminating information to the public. These differences in the level of information disclosure are reflected in the varying content, frequency, and detail of reports provided to both donors and the wider public. This situation indicates that transparency has not been fully understood and implemented as a common standard, but is still heavily influenced by the internal policies and institutional capabilities of each Islamic philanthropy manager.

The disparity in information disclosure levels across institutions has direct implications for inconsistent donation reporting patterns. Some institutions tend to submit brief and periodic reports, while others provide more detailed information on the flow of fundraising and distribution (Schmelzer et al., 2025). This variation creates a significant information gap, especially for donors who channel funds through more

than one institution. When reporting standards are not consistently established, the public faces difficulties in comparing performance and accountability across institutions, thereby reducing the role of transparency as a tool for evaluation and social oversight.

In this context, donor access to information is a crucial aspect that contributes to shaping perceptions of the credibility of Islamic philanthropic institutions. Donors no longer merely serve as financial contributors but also as stakeholders with a vested interest in ensuring the transparency of the use of disbursed funds. Limited access to information regarding the fundraising, management, and distribution processes has the potential to create distance between the institution and its donors. This distance does not always arise from indications of irregularities, but is often triggered by a lack of adequate communication channels and transparency in conveying information openly and continuously.

This difference in access to information ultimately impacts the level of public trust in Islamic philanthropic institutions. Limited transparency can create a perception of secrecy, even if fund management is carried out in accordance with applicable regulations. Conversely, consistent and easily accessible information disclosure tends to strengthen the institution's legitimacy in the public eye. The relationship between transparency and public trust is dynamic, as trust is built not only through administrative compliance but also through the institution's willingness to open its internal processes to social scrutiny. In the context of Islamic philanthropy, this belief has a broader dimension because it is related to the moral and social responsibilities inherent in the management of religious funds.

As digital literacy increases, expectations for transparency are also shifting. Donors are increasingly accustomed to information systems that enable rapid and continuous monitoring of financial activities. When Islamic philanthropic institutions fail to meet these expectations, trust is at risk, even though this is not always accompanied by concrete evidence of irregularities. This situation demonstrates that transparency is no longer understood as passive, periodic reporting, but rather as an active communication process that builds long-term relationships between institutions and donors.

The impact of transparency on the sustainability of donor participation becomes increasingly relevant in the context of competition among Islamic philanthropic institutions. Donors tend to maintain relationships with institutions perceived as providing clarity and a sense of security in fund management. Good transparency not only encourages repeat donations but also strengthens long-term donor loyalty. Conversely, unclear information can encourage donors to switch to other institutions perceived as more open, even if the differences are merely perceived.

In the long term, this transparency dynamic has implications for the sustainability of the Islamic philanthropic ecosystem as a whole. When transparency is applied unevenly, the collective potential of Islamic philanthropy to contribute to social development is suboptimal. Fragmentation of information disclosure practices

risks creating a disparity in trust between institutions, ultimately impacting the distribution of funds and the effectiveness of social programs. Therefore, transparency dynamics cannot be viewed as merely a technical issue, but rather as a strategic factor determining the resilience and relevance of Islamic philanthropy amidst increasingly rapid social and digital changes.

2. Challenges in Donation Reporting and Data Management

The difficulties encountered in donation reporting and Islamic philanthropy data management in Indonesia stem from disparities in institutional capacity to systematically document and communicate relevant information. In practice, zakat management organizations differ in the maturity of their human resources and administrative systems, leading to uneven capabilities in recording and reporting donation data. These institutional gaps influence not only the depth and regularity of information disclosed to the public but also result in inconsistent reporting standards across organizations. Consequently, such conditions shape stakeholder perceptions regarding an institution's accountability in managing collected funds, which may ultimately affect its public legitimacy.

Fragmentation in the reporting system is a clear manifestation of this unequal capacity. Although a regulatory framework mandates comprehensive zakat reporting by all zakat managers, reporting still occurs in varying formats and scopes across institutions, resulting in inconsistent data that is difficult to integrate into a single framework. The latest data on zakat reporting shows variation in the number of reports received by relevant authorities from zakat administrators in 2024, illustrating the fragmentation of reporting practices in the field (Ibnu Sabi, 2025). The following summarizes information from zakat reporting:

Table 2. Zakat Reporting Indicators

Zakat Reporting Indicators	Total
Number of zakat reports in 2024	677 reports
Number of zakat reports in 2023	667 reports

Data shows that despite an overall increase in the number of reports, reporting formats and content still vary and lack adequate uniformity. Limited integration of data on fund collection and disbursement is another challenge that complicates comprehensive monitoring and evaluation efforts. Data collected in the initial collection phase is often not automatically linked to data documenting the disbursement process to beneficiaries. This disconnect creates substantial information gaps, making it difficult to trace the source of funds through to their full utilization. This disconnected data chain poses significant challenges in presenting a holistic picture of the donation management cycle, further limiting the ability of both institutions and the public to comprehensively evaluate the effectiveness of fund use.

Consistency and comparability of donation reports become increasingly important when fragmented reporting systems and limited data integration persist without adequate solutions. The lack of consistent standards between the reports of

institution A and institution B makes it difficult for external parties to objectively compare reporting performance and fund use. This limits stakeholders' ability to conduct cross-institutional analysis, resulting in available information serving more as administrative documentation than as an informative evaluative tool. This lack of comparability also reduces the strategic value of reports for those seeking to understand national trends in zakat collection and distribution.

The implications of these reporting limitations are particularly evident in the context of public oversight. When the data provided is inconsistent, unintegrated, and fragmented, the scope for external oversight is severely limited. The public can only access snippets of information that are sometimes incomplete or in different formats, making it difficult to conduct effective oversight of the reporting practices and use of Islamic philanthropic funds as a whole. In the long term, these limitations not only impact public perception of the transparency of Islamic philanthropic institutions but also potentially limit external accountability, a crucial component of effective institutional governance.

3. Role of Blockchain in Enhancing Donation Transparency

Blockchain technology has gained increasing significance in enhancing donation transparency, particularly as traceability of fund flows emerges as a core requirement in the governance of Islamic philanthropy. In fund management systems involving multiple stages and stakeholders, the capacity to track financial movements from collection through distribution becomes central to institutional accountability. By recording transactions in a sequential and interconnected manner, blockchain enables fund flow information to be consolidated into an integrated data structure rather than dispersed across fragmented manual reports. This level of traceability strengthens the ability of philanthropic institutions to demonstrate alignment between collected and disbursed funds, while simultaneously minimizing informational ambiguity that has historically contributed to public skepticism.

The reliability of donation transaction recording is also an important dimension in this discussion. In conventional practice, transaction recording often relies on internal systems that can vary in quality and accuracy across institutions. This dependency opens the possibility of recording errors, delays in data updates, or inconsistencies in information communicated to the public (Ellahi et al., 2024). With a permanent and chronologically documented recording mechanism, the reliability of transaction data is better maintained. Every change or update to the data can be traced, so the integrity of donation information depends not only on trust in the administrator but also on a verifiable recording system.

This aspect of record-keeping reliability has direct implications for efforts to reduce the potential for reporting data manipulation. When donation data is compiled in a system that is difficult to change unilaterally, the scope for manipulative intervention becomes increasingly limited. This is crucial in the context of Islamic philanthropy, where accountability is assessed not only by administrative compliance but also by the moral integrity of fund management. Reducing the potential for data

manipulation does not eliminate the risk of misuse, but rather increases structural barriers to practices that could undermine public trust. Thus, transparency is no longer declarative but rather built through a recording mechanism that can be continuously tested.

In addition to strengthening internal data management, the role of blockchain is also reflected in expanding access to donation information for donors. Donors increasingly demand information transparency that is not temporary or limited to periodic reports. Continuous access to information allows donors to more actively monitor the use of funds, without having to rely solely on summary reports provided by the institution. This shifts the position of donors from being merely passive recipients of information to being more consciously involved in the philanthropic process. Continuous access to information also has the potential to reduce the information gap between institutions and the public, which has been a major challenge in building long-term trust.

These changes in information access have also shaped new relationship patterns between philanthropic institutions and donors. Technology-based transparency fosters a more equal relationship, where trust is built through data transparency, rather than solely through institutional reputation. Donors no longer judge institutions solely on performance narratives or public image, but also on the consistency of accessible and verifiable information. Furthermore, philanthropic institutions face demands to manage communication and accountability more systematically, as any discrepancies in information can be easily identified by the public.

In the long term, this shift in relationship patterns has the potential to strengthen the sustainability of Islamic philanthropy. Transparency, underpinned by a reliable and traceable recording system, creates a more stable foundation of trust, which in turn encourages continued donor participation. When donors feel they have adequate access to information on the use of funds, they are more likely to maintain their involvement in philanthropic activities. Thus, the role of blockchain goes beyond improving the technical aspects of reporting, but also contributes to the formation of a more open, accountable, and responsive Islamic philanthropic ecosystem that meets public expectations in the digital age.

4. Implications for Public Trust and Sharia Philanthropy Sustainability

The significance of transparency for fostering public trust in Islamic philanthropy has become increasingly evident alongside rising societal expectations for openness in the management of socio-religious funds. Beyond functioning as a channel for information disclosure, transparency operates as a mechanism through which perceptions of institutional integrity and credibility are constructed. When data on fund flows are made accessible and consistently disclosed, public trust is formed through an ongoing process of verification rather than reliance on normative beliefs alone. Within this framework, transparency constitutes a relational basis that

harmonizes the interests of philanthropic institutions and donors through a more open system of accountability.

Changes in the digital landscape have also influenced donor behavior in assessing and interacting with Islamic philanthropic institutions. Donors are increasingly accustomed to digital environments that offer fast, real-time access to information, leading to rising expectations for institutional reporting and transparency. Donor behavior is no longer driven solely by emotional attachment or the institution's historical reputation, but also by the institution's ability to provide relevant and traceable information. This shift marks a transformation in the relationship between donors and philanthropic institutions, with transparency becoming a key factor in donation decision-making.

In the long term, these changes in donor behavior have direct implications for the sustainability of their participation in Islamic philanthropy activities. Donors who feel they have adequate access to information on the use of their funds tend to demonstrate more stable and sustained levels of engagement. Consistent transparency contributes to the development of a sense of security and long-term trust, which encourages repeat donations and loyalty to a particular institution. Conversely, unclear information can fuel uncertainty and encourage donors to shift their contributions to other institutions perceived as more open, thus impacting the overall stability of philanthropic fundraising.

Public trust built through transparency is also closely related to the legitimacy of Islamic philanthropic institutions. Legitimacy is determined not only by compliance with regulations or formal recognition, but also by social acceptance, reflected in the level of public trust (Bin-Nashwan, 2025). Philanthropic institutions that demonstrate transparency in their fund management tend to gain stronger legitimacy, as the public perceives them as responsible and trustworthy. This legitimacy serves as important social capital in expanding the reach of philanthropic programs and strengthening the institution's position within the broader social and religious ecosystem.

However, strengthening transparency through technology-based systems also presents significant institutional adaptation challenges. The shift toward a more open system requires adjustments in organizational structure, work patterns, and human resource competencies. Not all Islamic philanthropic institutions are equally prepared to meet these demands, so the adaptation process often proceeds gradually and faces various internal obstacles. These challenges include the need for technology investment, capacity building, and organizational cultural adjustments to align with the demands of digital transparency.

In the context of the sustainability of Islamic philanthropy, these adaptation challenges must be understood as part of a broader transformation process. Technology-based transparency not only changes the way institutions present information but also shifts public expectations regarding the roles and responsibilities of philanthropic institutions. When institutions can navigate these adaptation challenges effectively, transparency can serve as a key driver of sustainability, strengthening public trust and maintaining stable donor participation. Thus, the

implications of transparency for public trust and the sustainability of Islamic philanthropy are inextricably linked to the institution's ability to adapt institutionally in the evolving digital environment.

E. CONCLUSION

Transparency is a key factor in strengthening the governance of Islamic philanthropy in Indonesia, particularly in the context of increasing public expectations for information disclosure and accountability in the management of donation funds. The uneven dynamics of transparency, characterized by differences in institutional capacity, fragmented reporting systems, and limited data integration, have created structural challenges that impact the quality of reporting and the effectiveness of public oversight. This situation emphasizes that transparency issues are not merely administrative, but are closely related to public trust and the institutional legitimacy of Islamic philanthropy. The application of blockchain technology has strategic potential in strengthening donation transparency by improving the traceability of fund flows, the reliability of transaction recording, and reducing the risk of reporting data manipulation. More sustainable access to information for donors encourages a shift in the relationship between philanthropic institutions and the public, toward a more open and verification-based relationship. In this context, blockchain functions not only as a technical instrument but also as a mechanism that reshapes accountability and communication practices in Islamic philanthropy. The implications of this increased transparency are reflected in strengthening public trust, sustainable donor participation, and the long-term legitimacy of Islamic philanthropic institutions. However, this potential can only be realized if philanthropic institutions can institutionally adapt to technology-based systems and address the challenges of organizational transformation that accompany them. Therefore, the sustainability of Islamic philanthropy in the digital era is crucially determined by the institution's ability to integrate transparency, technology, and responsive governance to public demands.

REFERENCES

1. Akhter, A., Javed, M. Y., & Akhter, J. (2025). Research trends in the field of Islamic social finance: a bibliometric analysis from 1914 to 2022. *International Journal of Ethics and Systems*, 41(2), 455-483.
2. Akhyar, Y. (2024). Public Accountability in Financial Management Practice at Islamic Education Institutions: A Survey Research. *AL-ISHLAH: Jurnal Pendidikan*, 16(3), 4127-4142.
3. Albshaier, L., Almarri, S., & Hafizur Rahman, M. M. (2024). A review of blockchain's role in E-Commerce transactions: Open challenges, and future research directions. *Computers*, 13(1), 27.
4. Anoraga, B. (2024). A decade of charitable crowdfunding and its impacts on the social justice trajectory of Islamic philanthropy in Indonesia. *Advances in Southeast Asian Studies*, 17(1), 5-24.

5. Bin-Nashwan, S. A. (2025). Alms tax (zakat) law intricacies: an institutional and governance-based analysis. *Thunderbird International Business Review*.
6. Bonang, D., Sukmana, R., Alimusa, L. O., & Machfud, S. (2026). Exploring the socio-economic dimensions of Islamic charitable giving: a bibliometric review. *International Journal of Ethics and Systems*, 1-32.
7. Dong, S., Abbas, K., Li, M., & Kamruzzaman, J. (2023). Blockchain technology and application: an overview. *PeerJ Computer Science*, 9, e1705.
8. Ellahi, R. M., Wood, L. C., & Bekhit, A. E. D. A. (2024). Blockchain-driven food supply chains: a systematic review for unexplored opportunities. *Applied sciences*, 14(19), 8944.
9. Faizi, F., Kusuma, A. S., & Widodo, P. (2024). Islamic green finance: Mapping the climate funding landscape in Indonesia. *International Journal of Ethics and Systems*, 40(4), 711-733.
10. Firdaus, R., Anugrah, R., Hariyanto, A., & Yuniwati, E. D. (2025). The Role of Blockchain Technology in Strengthening Zakat Disclosure and Muzakki Trust: A Post-Adoption Perspective. *International Journal of Accounting and Economics Studies*, 12(8), 426-437.
11. Habib, G., Sharma, S., Ibrahim, S., Ahmad, I., Qureshi, S., & Ishfaq, M. (2022). Blockchain technology: benefits, challenges, applications, and integration of blockchain technology with cloud computing. *Future Internet*, 14(11), 341.
12. Harkema, B. (2022). Autonomy in philanthropy: A model for nonprofit organizations. *Public Integrity*, 24(7), 664-679.
13. Herianingrum, S., Widiastuti, T., Hapsari, M. I., Ratnasari, R. T., Firmansyah, F., Hassan, S. A., ... & Muzakki, L. A. (2024). Muzakki and Mustahik's collaboration model for strengthening the fundraising capacity of Islamic social finance institutions during COVID-19. *International Journal of Ethics and Systems*, 40(1), 175-188.
14. Hughes, M. A., & Siddiqui, S. A. (2024). From Islamic charity to Muslim philanthropy: Definitions across disciplines. *Religion Compass*, 18(10), e70002.
15. Ibnu Sabi, F. (2025, 17 November). *Isu pelaporan zakat di Indonesia: Di balik angka dan transparansi*. Aceh Online. <https://www.acehonline.co/news/isu-pelaporan-zakat-di-indonesia-di-balik-angka-dan-transparansi/index.html>
16. Jaiswal, R., Gupta, S., & Tiwari, A. K. (2025). Environmental, social and governance-type investing: a multi-stakeholder machine learning analysis. *Management Decision*.
17. Madine, M., Salah, K., Jayaraman, R., & Yaqoob, I. (2025). Zero-knowledge proofs for anonymous authentication of patients on public and private blockchains. *Array*, 100590.
18. Mustamin, S. W., Mansyur, F., Ridwan, M., Amri, U., & Fitrayani, F. (2025). The role of zakat in Islamic macroeconomics: A fiscal instrument for stability during global economic crises. *Journal of Islamic Economics Lariba*, 11(1).
19. Ohize, H. O., Onumanyi, A. J., Umar, B. U., Ajao, L. A., Isah, R. O., Dogo, E. M., ... & Ibrahim, M. M. (2025). Blockchain for securing electronic voting systems: a

- survey of architectures, trends, solutions, and challenges. *Cluster Computing*, 28(2), 132.
20. Purwanza, S. W. (2022). *Metodologi Penelitian Kuantitatif, Kualitatif dan Kombinasi*. Media Sains Indonesia.
 21. Santalo, J., & Filatotchev, I. (2025). Strategic governance of blockchain platforms: From centralized to open-source control systems. *Long Range Planning*, 102539.
 22. Schmelzer, A., Stott, F. A., Wilson, A., & Stott, D. M. (2025). The effect of disaggregated financial statements on potential nonprofit donors. *Journal of Applied Accounting Research*, 26(2), 451-466.
 23. Susdarwono, E. T., & Arafat, M. (2024). Philanthropy According to Elementary School Children's Thoughts Based on the Simplicity and Generosity of the Prophets and Apostles. *Journal of Islamic Economics and Philanthropy*, 6(3), 213-230.
 24. Van Veldhoven, Z., & Vanthienen, J. (2022). Digital transformation as an interaction-driven perspective between business, society, and technology. *Electronic markets*, 32(2), 629-644.
 25. Wei, Q., Li, B., Chang, W., Jia, Z., Shen, Z., & Shao, Z. (2022). A survey of blockchain data management systems. *ACM Transactions on Embedded Computing Systems (TECS)*, 21(3), 1-28.