

TOWARD INCLUSIVE ZAKAT ECOSYSTEMS: INTEGRATING ISLAMIC FINTECH INTO DIGITAL WELFARE INFRASTRUCTURE IN ASEAN

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Abstract

This conceptual article explores how Islamic financial technology (FinTech) can be mobilised to redesign zakat institutions into inclusive, digitally enabled welfare ecosystems. Using emerging practices in Malaysia and Indonesia, the paper proposes a strategic roadmap integrating blockchain, mobile applications, artificial intelligence (AI), and smart contracts within Shariah parameters. It highlights persistent challenges including regulatory fragmentation, limited interoperability, and trust deficits. The study ultimately advances an ethically grounded framework for harnessing Islamic fintech to enhance social welfare, transparency, and equity across the ASEAN region.

Keyword :

1. INTRODUCTION (Paraphrased)

Zakat is a core institution within Islamic economics, functioning as a structured mechanism for income redistribution and communal welfare (Kahf, 1999; Sarea & Hanefah, 2013). With the rise of digital governance, zakat authorities are increasingly compelled to modernise their operational models (Hudaefi, 2020). Malaysia and Indonesia, as regional leaders in Islamic finance, present fertile environments for experimenting with Islamic fintech innovations (Kamaruddin et al., 2023; Alief & Satibi, 2024). Their evolving ecosystems reflect a shift from traditional collection–distribution procedures toward digitally orchestrated welfare systems (Abu Seman et al., 2022).

Nevertheless, digitalising zakat requires more than migrating payments online. It involves embedding Shariah-oriented design, transparent processes, data integration, and user-friendly inclusion mechanisms (Omar & Khairil Faizal, 2022; Aziz et al., 2023). This paper frames digital zakat ecosystems as systems that (i) resonate with maqāṣid al-Sharī'ah, (ii) leverage emerging

fintech tools, and (iii) navigate regulatory and institutional frictions (Siraj et al., 2022; Shaharuddin et al., 2024).

The analysis contextualises developments in Malaysia and Indonesia, offering a five-pillar conceptual model and a phased policy roadmap. The objective is twofold: to enrich theoretical discourse by linking Islamic social finance with digital welfare design, and to provide actionable insights for policymakers and zakat authorities (Budiharjo et al., 2023; Al-Mubarak & Oseni, 2024).

CONCEPTUALISING DIGITAL ZAKAT ECOSYSTEMS (Paraphrased)

The incorporation of fintech into zakat administration signifies a major shift in Islamic social finance. As a divinely mandated redistribution tool, zakat helps reduce socio-economic disparities (Kahf, 1999). Digitalisation offers opportunities to improve efficiency, visibility, and outreach within zakat systems (Hudaefi, 2020). In ASEAN, digital growth has encouraged zakat authorities to test blockchain, AI, and integrated databases to strengthen accountability.

The literature acknowledges fintech as a catalyst for inclusion, particularly when applied to zakat and waqf management (Dusuki & Bouheraoua, 2022). Empirical findings suggest that digitalisation eases administrative burdens and enhances accountability through automation (Alief & Satibi, 2024). These developments strongly align with *maqāṣid al-Sharīʿah* principles of welfare and justice (Ishak & Mohammad Nasir, 2021).

However, technology also introduces governance and ethical risks. Artificial intelligence may raise privacy issues, while blockchain adoption depends on institutional capacity (Omar & Khairil Faizal, 2022). In Indonesia, blockchain trials demonstrate promise but also reveal fragmented regulatory structures (Ejournal UKSW, 2023). Therefore, a holistic ecosystem design—merging technology with Shariah oversight—is essential.

Data-driven integration with national welfare platforms like Malaysia's e-Kasih and Indonesia's Simpus can reduce duplication and improve targeting accuracy (Abu Seman et al., 2022). Yet meaningful integration must be balanced with data protection and ethical stewardship.

Inclusive design remains central. While digital tools can broaden access, they may unintentionally marginalise groups lacking digital literacy or connectivity (Aziz et al., 2023). Accessible interfaces, multilingual support, and community training can mitigate these gaps (Kamaruddin et al., 2023). Regulatory alignment, cross-sector collaboration, and Shariah governance are also indispensable for building credible digital zakat ecosystems.

3. CASE REFLECTIONS: MALAYSIA AND INDONESIA (Paraphrased)

3.1 Malaysia

Malaysia's zakat institutions, including LZNK, have progressively adopted digital systems. While online platforms have enhanced payment accessibility, issues persist such as partial integration with national poverty registries and lingering public concerns on transparency (Zafirah Zulkepli, n.d.).

3.2 Indonesia

Indonesia's decentralised zakat landscape includes fintech start-ups, NGOs, and regional bodies experimenting with digital solutions. Blockchain-inspired models highlight potential for integrated poverty alleviation (Millatina et al., 2024). However, jurisdictional fragmentation and regulatory inconsistencies challenge scalability (Pratama, 2025).

Common Barriers

- Absence of unified asnaf databases
- Weak coordination with government welfare systems
- Public trust deficits regarding Shariah and governance

4. FIVE PILLARS OF A DIGITAL ZAKAT ECOSYSTEM (Paraphrased)

A. Faith-Compliant Digital Tools

Digital systems must reflect Shariah norms, ensuring transparency, valid fiqh calculations, nisab/haul verification, and multilingual accessibility. Ethical digital design strengthens trust and delivers the maqāṣid values of justice and welfare (Ishak & Mohammad Nasir, 2021).

B. Blockchain for Trust Building

Blockchain can strengthen accountability through immutable ledgers that trace zakat transactions end-to-end. This reduces leakages and heightens donor confidence (Athallah Susanto, 2025; Millatina et al., 2024).

C. Smart Contracts

Smart contracts operationalise automated, rule-based disbursements—minimising human bias, enhancing accuracy, and ensuring timely support. Integration with digital ID systems further improves verification (Jauhari & Mohd Yusoff, 2024).

D. Data Integration with National Welfare Systems

Linking zakat databases with national welfare systems prevents duplication, sharpens targeting, and supports outcome monitoring. Ethical data practices and compliance with protection laws are essential.

E. Inclusion-Centered Architecture

Digital infrastructure must cater to marginalised groups through simple, mobile-first interfaces and assisted usage via community facilitators. Gender-sensitive and literacy-friendly features enhance equitable access (Kamaruddin et al., 2023).

5. POLICY ROADMAP (Paraphrased)

A phased approach is proposed:

Phase	Key Initiatives	Key Actors
1	Digital readiness assessments	Zakat boards, consultants
2	Establish Shariah-compliant fintech sandbox	Regulators, fintech firms
3	Pilot blockchain-enabled zakat systems	Banks, zakat bodies
4	Train users, community engagement	Mosques, local leaders
5	Integrate with national welfare and financial inclusion agendas	Gov't ministries, ASEAN bodies

6. DISCUSSION & STRATEGIC IMPLICATIONS (Paraphrased)

Fintech applications must be guided by rigorous Shariah governance to avoid riba, gharar, and exploitation (Mohd Najib et al., 2025). Digital literacy initiatives are critical to ensure inclusivity. Blockchain and automation can reduce trust barriers, but data integration demands careful ethical safeguards. For long-term viability, multi-agency collaboration and maqāsid-aligned policies are essential.

7. CONCLUSION

Zakat's future lies in its transformation into a transparent, digitally empowered welfare ecosystem rooted in Islamic ethical values. With coordinated strategies, robust governance, and inclusion-oriented design, ASEAN countries can champion an integrated Islamic fintech model that advances social justice and contributes to sustainable economic development.

REFERENCES

- Abu Seman, J., Jamil, N. N., & Che Mohd Hashim, A. (2022). *Development of integrated Islamic finance-based index of financial inclusion using zakat and cash waqf: A preliminary study in Malaysia*. *Journal of Muamalat and Islamic Finance Research*, 18(2), 101–120. <https://doi.org/10.33102/jmifr.v18i2.370>
- Alief, A., & Satibi, I. (2024). *Financial technology innovation in modernising zakat payment in the digital era*. *Journal of Business Management and Islamic Banking*, 3(1), 45–59. <https://doi.org/10.14421/jbmib.v3i1.2351>
- Al-Mubarak, T., & Oseni, U. A. (2024). *Islamic social finance and the digital economy: A maqasid-based roadmap*. *Muamalat Finance Journal*, 7(1), 22–35.
- Athallah Susanto, A. (2025). *Critical assessment of blockchain applications in zakat literature: Lessons for government and future directions*. *International Journal of Zakat*.
- Aziz, M. R. A., Jali, M. Z., Mohd Noor, M. N., Sulaiman, S., Harun, M. S., & Mustafar, M. Z. I. (2023). *Islamic digital banking based on maqāṣid al-Sharī'ah for financial inclusion: A proposed framework*. *I-iECONS E-Proceedings*, 10(1), 289–306. <https://doi.org/10.33102/iecons.v10i1.84>

- Budiharjo, A., Ismail, N. A., & Rahim, H. (2023). *Highlighting the convergence between the principles of Islamic finance and sustainable finance. International Journal of Islamic Economics and Finance Research*. <https://doi.org/10.53840/ijiefer177>
- Hudaefi, F. A. (2020). *How does Islamic fintech promote the SDGs? Qualitative evidence from Indonesia. Qualitative Research in Financial Markets*, 12(4), 353–366. <https://doi.org/10.1108/QRFM-05-2019-0058>
- Ishak, M. S., & Mohammad Nasir, N. S. (2021). Maqāṣid al-Sharī'ah in Islamic finance: Harmonising theory and reality. *Journal of Muamalat and Islamic Finance Research*, 18(1), 108–119.
- Jauhari, F. F., & Mohd Yusoff, S. S. (2024). Examining the utilisation of Islamic fintech credit by asnaf microentrepreneurs. *AZKA International Journal of Zakat & Social Finance*, 5(1), 135–156.
- Kahf, M. (1999). *The performance of the institution of zakat in theory and practice. International Conference on Islamic Economics, Finance and Banking*.
- Kamaruddin, M. I. H., Hanefah, M. M., Shahrudin, A., Ayedh, A. M. A., & Othman, N. A. (2023). *Development of FinTech in Islamic social finance in Malaysia. International Journal of Economics, Management and Accounting*, 31(1), 177–204. <https://doi.org/10.31436/ijema.v31i1.1143>
- Millatina, A. N., Budiantoro, R. A., Hakim, R., & Fitroh Sukono, F. I. (2024). Blockchain zakat: An integrated financial inclusion strategy to manage Indonesia's potential zakat funds. *Jurnal Ekonomi dan Bisnis*, 25(1).
- Mohd Najib, N. W., Basarud-din, S. K., & Fazial, F. (2025). Artificial intelligence (AI) in Islamic finance: A Maqāṣid al-Sharī'ah perspective. *International Journal of Law, Government and Communication*, 10(40).
- Omar, N., & Khairil Faizal, K. (2022). *Zakat and blockchain: A review. International Journal of Islamic Economics and Finance Research*, 4(2), 60–66. <https://doi.org/10.53840/ijiefer53>
- Pratama, M. A. R. (2025). *Evolving zakat: A systematic review of financial technology's impact. Proceedings of the Indonesian Conference of Zakat*.
- Ridhwan Ab. Aziz. (n.d.). Islamic digital banking framework in Malaysia: A practitioners' perspective. *International Journal of Islamic Economics and Finance Research*.
- Sarea, A., & Hanefah, M. M. (2013). *The significance of accounting information in Shariah decision making within Islamic financial institutions. International Journal of Economics, Management and Accounting*, 21(2), 45–63.
- Shahrudin, N., Wahab, M. H., Osman, A. A., & Shakrien, S. S. (2024). *Appraising the determinants of ESG towards Maqasid Shariah in enhancing financial inclusion. Information Management and Business Review*, 17(3[I]), 274–281. [https://doi.org/10.22610/imbr.v17i3\(I\).4663](https://doi.org/10.22610/imbr.v17i3(I).4663)

- Siraj, A. S., Ibrahim, M. F., & Mohd Dali, N. R. S. (2022). *Conceptual framework: Determinant factors for paying zakat fitrah via FinTech*. *Journal of Muamalat and Islamic Finance Research*, 19(1), 45–62. <https://doi.org/10.33102/jmifr.v19i1.465>
- Zafirah Zulkepli, S. (n.d.). Voluntary zakat disclosure of Islamic banks in Malaysia. *Journal of Emerging Economies and Islamic Research*, 11(3).
- Zulkifley, M., & Muneeza, A. (n.d.). Optimizing zakat distribution in Selangor using technology. *International Journal of Islamic Economics and Finance Research*.