A Conceptual Framework on the Relationship between Artificial Intelligence Adoption, Data-Driven Decision-Making and Zakat Management Efficiency

Izatul Akmar Ismail[1]*, Mohd Adib Abd Muin[2], Norhasyikin Rozali[3], Noor Syahidah Mohamad Akhir[4], Daing Maruak Sadek[5], Amin Che Ahmat[6]

[1 4 5]Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA (UiTM), Cawangan Kedah, Kampus Sungai Petani, 08400, Kedah, Malaysia

[2]Islamic Business School (IBS), Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia

[3]Faculty of Business Management, Universiti Teknologi MARA (UiTM), Cawangan Kedah, Kampus Sungai Petani, 08400, Kedah, Malaysia

[6]Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA, Cawangan Perak, Kampus Tapah, 35400, Malaysia

***Corresponding author**

DOI: https://dx.doi.org/10.47772/IJRISS.2025.910000449

Received: 12 October 2025; Accepted: 20 October 2025; Published: 15 November 2025

ABSTRACT

Zakat plays a vital role in Islamic social finance, serving as a mechanism for poverty alleviation and social welfare. However, its management continues to face challenges including inefficiency, limited transparency, and low stakeholder trust. Conventional approaches often hinder timely collection and equitable distribution, underscoring the need for innovative, Shariah-compliant technological solutions. This study develops a conceptual framework that examines the relationship between Artificial Intelligence (AI) adoption, data-driven decision-making (DDDM), and zakat management efficiency. Drawing upon General Systems Theory (GST), the framework positions DDDM as a mediating mechanism that translates AI-driven technological capabilities such as predictive analytics, real-time monitoring, and machine learning into evidence-based, ethical, and transparent decision-making processes. Using a narrative review of Scopus-indexed literature (2019– 2024), the study synthesizes theoretical and empirical insights to demonstrate that AI adoption enhances institutional efficiency primarily through the mediating role of DDDM, which strengthens accountability, fairness, and governance in zakat administration. The study contributes theoretically by extending systems theory into Islamic social finance and practically by providing policymakers and zakat institutions with a Shariah-aligned model for responsible AI integration that promotes transparency, trust, and socio-economic justice.

Keywords— Zakat, Artificial Intelligence (AI), Data-Driven Decision-Making (DDDM), General Systems Theory (GST), Zakat Management Efficiency

INTRODUCTION

The integration of Artificial Intelligence (AI) into financial and social sectors has transformed traditional practices, introducing advanced mechanisms that enhance efficiency, transparency, and accountability. Within Islamic social finance, particularly zakat management, AI adoption presents transformative opportunities to address persistent challenges in fund collection, distribution, and governance. As one of the five pillars of Islam, zakat serves not only as a religious obligation but also as a socio-economic instrument for wealth redistribution and poverty alleviation. However, zakat institutions have long faced inefficiencies in identifying eligible recipients, ensuring transparency, and maintaining reliable reporting mechanisms. These

challenges underscore the urgent need for technological innovation that complements the principles of Islamic ethics and accountability (Beik et al., 2021).

Previous studies indicate that AI has significantly enhanced organizational efficiency across industries, including project management, strategic decision-making, and zakat operations by improving identification accuracy and institutional trust (Kozhakhmetova et al., 2024; Awang Abu Bakar et al., 2024). For example, BAZNAS in Indonesia has utilized AI technologies such as the Rice Automatic Telling Machine (ATM Beras) and structured digital identification systems to ensure more efficient zakat fund allocation (Beik et al., 2021). Similarly, Farrokhvar et al. (2018) demonstrated that predictive analytics and machine-learning models can effectively forecast charitable giving behaviour, suggesting similar potential for zakat institutions to anticipate donor intentions and optimise online collection strategies. These advancements underscore the potential of AI in reshaping zakat operations by embedding data-driven approaches into institutional practices.

Despite these positive developments, the adoption of AI in Zakat management remains limited and fragmented. Persistent challenges include issues of data quality, resistance to organizational change, and ethical considerations such as fairness and transparency in decision-making (Hangl et al., 2023). Furthermore, while studies acknowledge the broad advantages of AI in finance and management, here remains a lack of integrated frameworks exploring how AI adoption, when combined with data-driven decision-making, can systematically improve zakat management efficiency (Ashurov et al., 2020; Ashurov et al., 2022). This study addresses this gap by proposing a conceptual framework that illustrates the relationship between AI adoption, data-driven decision-making, and zakat management efficiency, thereby offering a structured pathway for enhancing institutional effectiveness.

The significance of this study lies in aligning technological innovation with the principles of Islamic social finance. By adopting AI-driven solutions, zakat institutions can enhance operational efficiency, foster greater transparency, and improve trust among stakeholders. These elements are particularly important because they represent key factors that contribute to strengthening governance and increasing the socio-economic impact of zakat distribution (Hadi et al., 2024). More importantly, the proposed framework emphasizes how datadriven decision-making mediates the link between AI adoption and improved efficiency, ensuring evidencebased, equitable, and Shariah-compliant fund allocation. This integration of technology with religious obligations strengthens the credibility of zakat institutions, thereby encouraging higher compliance among payers and maximizing contributions toward poverty alleviation and sustainable development goals.

Theoretically, this study adopts General Systems Theory (Von Bertalanffy, 1968) to explain how AI technologies and decision-making processes function as interdependent components of a larger sociotechnical system. The conceptual framework integrates predictive analytics, real-time monitoring, and machine learning as tools to optimize zakat collection, distribution, and reporting. The paper is structured as follows: the introduction outlines the context and research problem; the literature review synthesizes relevant studies on AI and zakat; the conceptual framework illustrates the relationships between AI adoption, datadriven decision-making, and zakat management efficiency; the methodology describes the research design; the findings and discussion present key implications; and the conclusion highlights the study's contributions and directions for future research. By doing so, this paper provides both theoretical insights and practical recommendations for leveraging AI in zakat management.

To address the identified research gaps, it is essential to examine previous studies that explore how technological innovations particularly Artificial Intelligence (AI) and data-driven decision-making (DDDM) influence the efficiency, transparency, and governance of zakat institutions. From an Islamic perspective, the integration of AI should not only optimise operational outcomes but also uphold the ethical principles of *maqaṣid al-shariʿah*, ensuring justice (*ʿadl*), fairness, and equitable wealth distribution. Accordingly, the following section reviews the theoretical foundations, empirical findings, and ethical considerations that underpin the development of the proposed Shariah-aligned conceptual framework for enhancing zakat management efficiency.

LITERATURE REVIEW

The adoption of Artificial Intelligence (AI) in zakat management is influenced by a combination of technological, organizational, and environmental factors. Prior studies applying the Technology Organization-Environment (TOE) framework highlight that relative advantage, system compatibility, technological complexity, top management support, and organizational readiness significantly shape AI adoption (Khan et al., 2024; Pathak & Bansal, 2024). In zakat institutions, these determinants are especially crucial given the dual requirement of ensuring both technological innovation and compliance with Shariah principles. For example, the implementation of AI tools for donor and recipient identification demonstrates the importance of organizational readiness and infrastructure support to achieve institutional goals efficiently.

Data-driven decision-making (DDDM) has emerged as a critical enabler of efficiency in zakat management. By leveraging advanced data analytics, predictive models, and machine learning algorithms, institutions can improve governance, optimize resource allocation, and enhance transparency in distribution (Awang Abu Bakar et al., 2024). In this context, DDDM strengthens institutional accountability by transforming raw data into actionable insights, supporting evidence-based strategies in collection and disbursement. Machine learning models, for instance, can predict zakat payer intentions with high accuracy, thereby streamlining online zakat collection and improving donor engagement. This illustrates how DDDM mediates the relationship between AI adoption and improved zakat management efficiency.

Nevertheless, integrating AI into zakat management is not without challenges. Issues related to data quality, employee resistance, lack of technical expertise, and limited institutional trust in AI remain persistent barriers (Hangl et al., 2023). Ethical concerns further complicate adoption, as biases in datasets, lack of transparency in automated decision-making, and fairness in fund allocation raise questions about accountability and legitimacy (Ferrell et al., 2024). Overcoming these barriers requires not only technical solutions but also organizational change management and strong regulatory frameworks to ensure that AI adoption aligns with both efficiency goals and Islamic ethical principles.

From a conceptual standpoint, the relationship between AI adoption, DDDM, and zakat management efficiency can be illustrated as an interdependent framework. AI adoption provides the technological infrastructure, while DDDM mediates by converting data into strategic insights that enhance operational transparency, trust, and efficiency. The synergy of these elements creates opportunities for zakat institutions to improve governance, reduce costs, and enhance stakeholder confidence (Panduro-Ramirez et al., 2023). However, realizing this potential requires addressing both structural and ethical challenges, ensuring that AIdriven zakat management not only improves efficiency but also upholds the fairness and justice central to Islamic social finance.

METHODOLOGY

Research Design

This study adopts a narrative review methodology to synthesize existing literature and propose a conceptual framework that illustrates the relationship between Artificial Intelligence (AI) adoption, data-driven decisionmaking (DDDM), and zakat management efficiency. Unlike systematic reviews that rely on rigid protocols, narrative reviews emphasize a broader and more flexible approach in analyzing, summarizing, and integrating findings from diverse sources (Snyder, 2019). The narrative review is particularly suited to this study as it enables the exploration of theoretical, empirical, and contextual insights regarding AI adoption and its applications in Islamic social finance.

The design of this narrative review is underpinned by a conceptual orientation, aiming to identify themes, relationships, and research gaps in the existing literature. The focus is not merely descriptive but also analytical, seeking to align technological developments in AI with the socio-religious requirements of zakat management. The narrative review design enables the integration of perspectives across domains such as

information systems, decision sciences, and Islamic economics, which is essential to build a comprehensive conceptual framework (Ferrari, 2015; Green et al., 2006).

Key Steps in Conducting a Narrative Review

The data collection for this study was conducted primarily using the Scopus database, selected due to its wide coverage of peer-reviewed and high-impact journals across multidisciplinary fields. Scopus is recognized for its comprehensive indexing of academic works, particularly in management, information technology, and Islamic finance, thereby ensuring access to credible and authoritative sources. The search strategy employed relevant keywords and Boolean operators such as "artificial intelligence adoption", "data-driven decisionmaking", "zakat management", "Islamic finance efficiency", and combinations thereof. To ensure relevance and rigor, only publications indexed between 2019 and 2024 were considered, aligning with the recency of AI applications in financial and social welfare contexts.

The narrative review process involved several key steps. First, identification of relevant articles was carried out using Scopus search strings, and duplicates were removed. Second, screening and eligibility checks were applied, focusing on journal articles, conference proceedings, and book chapters directly addressing AI adoption, data-driven approaches, and Islamic finance applications. Third, data extraction was conducted by coding key information such as study objectives, methodologies, findings, and implications. Finally, synthesis and interpretation were performed, whereby insights were compared, contrasted, and organized thematically to highlight determinants of AI adoption, the mediating role of DDDM, and its impact on zakat management efficiency. This multi-step process ensured that the review was comprehensive, coherent, and aligned with the aim of developing a conceptual framework (Snyder, 2019; Green et al., 2006).

The methodological approach thus provides a structured yet flexible means of consolidating knowledge, identifying research gaps, and developing theoretical propositions. Through the use of a narrative review with Scopus as the main data source, the study not only draws on robust academic literature but also contextualizes the findings within the framework of Islamic social finance. This methodology ensures that the conceptual framework proposed is grounded in scholarly evidence while addressing the unique requirements of zakat management. This process is illustrated in Figure 1, which summarizes the narrative review steps adopted in this study:

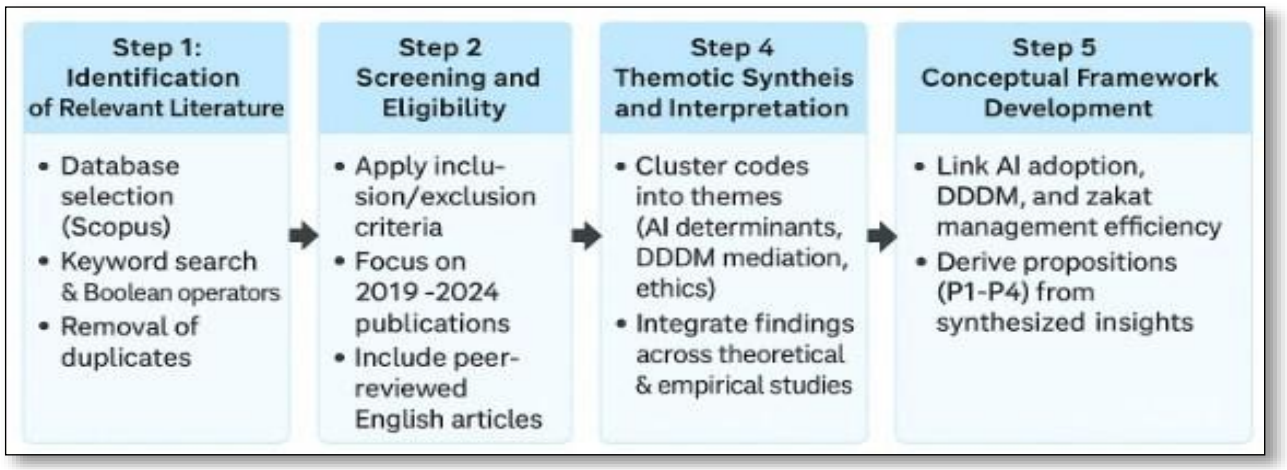

Figure 1: Narrative Review Process for Developing the Conceptual Framework

Data Collection and Review Strategy

The data collection for this study was carried out using the Scopus database as the primary source due to its comprehensive coverage of peer-reviewed journals, conference proceedings, and book chapters across multidisciplinary domains. A structured search strategy was employed, incorporating Boolean operators and a

carefully designed search string to ensure inclusivity of relevant literature. The following search string was applied:

("artificial intelligence" OR "AI" OR "machine learning" OR "deep learning") AND ("adoption" OR "implementation" OR "integration" OR "utilization") AND ("zakat" OR "charity" OR "almsgiving" OR "donation") AND ("management" OR "efficiency" OR "effectiveness" OR "performance")

This search string was designed to capture studies at the intersection of AI adoption, data-driven decisionmaking, and zakat or charity-related management practices. The terms ensured coverage of both technological concepts (e.g., AI, machine learning, deep learning) and institutional outcomes (e.g., efficiency, effectiveness, performance). To maintain academic rigor, the review was limited to studies published between 2019 and 2024, reflecting the recency of AI applications in financial technology and Islamic social finance. Only English-language publications indexed in Scopus were included to ensure quality and accessibility.

The review process followed three systematic steps: identification, screening, and synthesis. During the identification phase, all articles retrieved using the search string were compiled. In the screening phase, duplicates, non-academic sources, and studies irrelevant to the focus of AI adoption or zakat management were excluded. Articles were further assessed based on titles, abstracts, and keywords to ensure alignment with the study's objectives. Finally, full-text reviews were conducted on shortlisted articles, with data extraction focusing on author details, study context, methodology, findings, and theoretical perspectives.

To analyze the collected literature, this study employed an integrative thematic analysis approach. Unlike traditional thematic analysis that may be confined to qualitative studies, integrative thematic analysis allows for the synthesis of findings across diverse methodological traditions, including empirical, conceptual, and theoretical works (Snyder, 2019). The approach consisted of three phases: (1) familiarization and coding, (2) theme development, and (3) synthesis and interpretation. In the first phase, recurring patterns, keywords, and constructs related to AI adoption, data-driven decision-making, and zakat management efficiency were coded. In the second phase, these codes were clustered into higher-order themes, such as determinants of AI adoption, mediating role of DDDM, ethical considerations, and institutional efficiency outcomes. Finally, in the synthesis phase, themes were compared and integrated to construct a holistic understanding of how AI adoption, mediated by data-driven decision-making, influences zakat management efficiency.

The combination of a rigorous search strategy and integrative thematic analysis ensured that this narrative review was both comprehensive and conceptually robust. By drawing on a wide range of studies across information systems, management, and Islamic finance, the review identified key themes, conceptual linkages, and theoretical perspectives that inform the development of the proposed conceptual framework.

Key Findings from the Narrative Review

Table 1 Key Findings from the Narrative Review

Theme / Component	**Description of Findings**	**Key References**
AI Adoption in Zakat Management	AI technologies (e.g., predictive analytics, chatbots, realtime monitoring) enhance efficiency in zakat collection and distribution. BAZNAS uses AI to generate donor/recipient IDs and implement automated distribution such as ATM Beras.	Beik et al., 2021
Theme / Component	**Description of Findings**	**Key References**
Data-Driven Decision-Making (DDDM)	Predictive analytics and machine learning enable zakat institutions to analyze donor behavior, predict payer intentions, and optimize online zakat collection. Improved data management enhances transparency and	Awang Abu Bakar et al., 2024

	accountability.	
Efficiency Improvements	Integration of AI and DDDM increases efficiency by automating complex processes, ensuring timely reporting, and improving organizational performance. It also strengthens trust and enhances governance in zakat institutions.	Kozhakhmetova et al., 2024; Ashurov et al., 2020; Ashurov et al., 2022
Challenges of AI Integration	Barriers include poor data quality, resistance to organizational change, lack of expertise, and limited trust in AI-driven systems. These issues hinder effective adoption in zakat institutions.	Hangl et al., 2023; Mkhize et al., 2023
Integrating AI and DDDM within zakat institutions	The necessity for ethical governance in AI deployment, advocating for transparency, accountability, and fairness as guiding principles.	Khan et al., 2024; Ferrell et al., 2024
Ethical Considerations	Concerns include data bias, fairness, privacy, transparency, and accountability of AI-driven decisions. Ethical governance frameworks are needed to ensure Shariah compliance and just outcomes.	Ferrell et al., 2024; Panduro-Ramirez et al., 2023

The findings of the narrative review highlight that AI adoption in zakat management offers significant potential in improving both collection and distribution processes. Tools such as predictive analytics, chatbots, and real-time monitoring not only streamline operational tasks but also improve accuracy in identifying eligible recipients. A practical example can be seen in BAZNAS Indonesia, which utilizes AI for donor and recipient identification alongside innovative distribution technologies like ATM Beras (Beik et al., 2021).

Equally important, the role of data-driven decision-making (DDDM) emerges as a critical mediator between AI adoption and management efficiency. Advanced data analytics and machine learning models enable zakat institutions to analyze donor patterns, predict zakat payer intentions, and optimize online collection channels. These applications strengthen transparency, accountability, and evidence-based decision-making in zakat administration (Awang Abu Bakar et al., 2024).

The integration of AI and DDDM translates directly into efficiency improvements across zakat institutions. By automating complex processes and enabling real-time monitoring, these technologies enhance organizational performance, improve public trust, and ensure more equitable fund allocation (Kozhakhmetova et al., 2024; Ashurov et al., 2020, 2022). However, the review also underscores the challenges of AI integration, including poor data quality, organizational resistance, and lack of technical expertise, which remain significant barriers to implementation (Hangl et al., 2023; Mkhize et al., 2023).

Integrating Artificial Intelligence (AI) and data-driven decision-making (DDDM) within zakat institutions necessitates adherence to Islamic ethical principles to ensure justice (*ʿadl*) and the avoidance of bias or uncertainty (*gharar*). From a Shariah perspective, algorithmic fairness is essential to guarantee that automated systems do not inadvertently disadvantage specific groups of zakat recipients or donors. Bias in data collection, model training, or algorithmic outputs may lead to unjust allocation, contradicting the Qur'anic command to give everyone their due right (al-Qur'an, 16:90).

To ensure compliance, AI algorithms applied in zakat management should be designed to operate transparently, incorporating explainable AI (XAI) methods that allow for human oversight and ethical auditing. Such systems should use validated datasets that represent diverse socio-economic profiles of zakat

recipients to prevent discriminatory outcomes. Furthermore, Shariah governance frameworks can be embedded into the data lifecycle, from data acquisition to decision deployment ensuring that every analytical decision aligns with the maqaṣid al-shariʿah, particularly ḥifẓ al-mal (protection of wealth) and ḥifẓ al-ʿadl (preservation of justice).

Scholars such as Khan et al. (2024) and Ferrell et al. (2024) have emphasized the necessity for ethical governance in AI deployment, advocating for transparency, accountability, and fairness as guiding principles. Translating these principles into the Islamic context, zakat institutions can implement Shariah-supervised data protocols and algorithmic audits (hisbah al-taṭbiqat al-dhakiyyah) to ensure that decision outcomes remain equitable and free from gharar or ẓulm (injustice). This integration of AI ethics with Shariah values forms the foundation for a trustworthy, spiritually aligned technological ecosystem within Islamic social finance.

Finally, ethical considerations represent a crucial dimension in adopting AI for zakat management. Issues such as data bias, privacy, transparency, and fairness must be addressed to ensure the responsible use of AI. A robust governance framework is essential to align AI-driven decision-making with Shariah principles and guarantee fair, just outcomes for recipients and stakeholders alike (Ferrell et al., 2024; Panduro-Ramirez et al., 2023). Collectively, these findings provide the foundation for proposing a conceptual framework that links AI adoption, DDDM, and zakat management efficiency.

Theoretical Framework Development

The theoretical foundation of this study is grounded in General Systems Theory (GST), which posits that an organization can be understood as an interconnected system where technological, social, and organizational subsystems interact to achieve efficiency and balance (Von Bertalanffy, 1968). GST provides a lens to explain how the adoption of Artificial Intelligence (AI) technologies can influence organizational outcomes by functioning as a catalyst for systemic improvements. In the context of zakat institutions, GST helps to conceptualize zakat management as a complex socio-technical system in which AI adoption and data-driven decision-making (DDDM) interact to produce enhanced efficiency, transparency, and accountability. By employing GST, this study positions AI not merely as a technological tool, but as a subsystem that harmonizes with organizational processes, human decision-making, and ethical governance.

Applying GST in this study enables a holistic understanding of how AI adoption contributes to efficiency in zakat management through the mediating role of DDDM. The conceptualization of the framework illustrates that AI adoption (e.g., predictive analytics, machine learning, real-time monitoring) strengthens the capacity of zakat institutions to collect and distribute funds efficiently, while DDDM serves as the mechanism through which raw data is transformed into actionable insights for decision-making (Awang Abu Bakar et al., 2024). This mediating role bridges the technological input with organizational outcomes, ensuring that zakat distribution is not only operationally efficient but also ethically aligned with principles of transparency and fairness (Ferrell et al., 2024). By synthesizing literature across information systems, management, and Islamic social finance, the framework integrates technological determinants of AI adoption with socio-religious imperatives of zakat, offering a comprehensive theoretical model.

The integration of GST and empirical insights provides both theoretical and practical implications. Theoretically, the framework extends prior research on AI adoption by emphasizing its role in faith-based social finance, where efficiency is inseparable from ethical and religious considerations (Khan et al., 2024; Hangl et al., 2023). Practically, the framework offers zakat institutions a structured pathway to adopt AI responsibly, ensuring that efficiency gains are balanced with accountability, transparency, and trust. It provides policymakers with a model to design guidelines that facilitate responsible AI integration in zakat systems, while practitioners can utilize the framework to strengthen operational processes and enhance stakeholder confidence. In conclusion, the theoretical framework consolidates AI adoption, DDDM, and zakat management efficiency into a systemic model that not only advances scholarly discourse but also offers practical strategies for improving Islamic social finance management in the digital era.

The following figure illustrates the conceptual integration of these components, demonstrating how AI adoption interacts with data-driven decision-making to enhance zakat management efficiency:

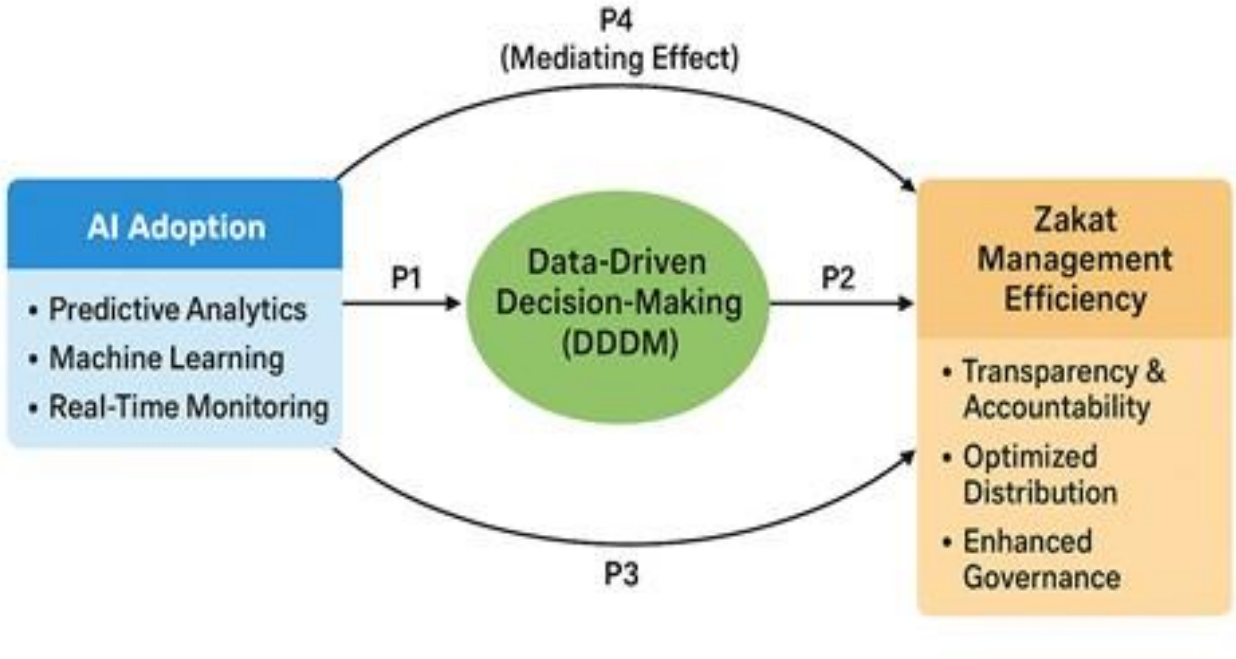

Figure 2: Theoretical Framework of the Relationship between AI Adoption, Data-Driven Decision-making and Zakat Management Efficiency

PROPOSITION DEVELOPMENT

Building upon the conceptual relationships established in Section 3.5, the following propositions are formulated.

Proposition Development: AI Adoption Affects Data-Driven Decision-Making

The adoption of Artificial Intelligence (AI) enhances the capacity of organizations to engage in effective datadriven decision-making. As shown by Ines et al. (2024), AI tools such as machine learning and data analytics enable enterprises to transform large volumes of data into actionable insights that improve strategic and operational decisions. In the zakat context, AI facilitates the accurate identification of donors and recipients, forecasts payer behaviour, and optimises collection processes, thereby strengthening evidence-based and transparent decision-making (Beik et al., 2021; Awang Abu Bakar et al., 2024). Hence, AI adoption is expected to positively influence DDDM in zakat institutions.

Proposition Development: Data-Driven Decision-Making Affects Zakat Management Efficiency

DDDM plays a pivotal role in enhancing zakat management efficiency by converting data into insights that support transparency, accountability, and optimal resource allocation. Effective data management practices, as highlighted by Bakar et al. (2024), underpin strategies that ensure accurate and equitable fund distribution. Consistent with findings in Malaysian zakat institutions, structured data utilisation improves governance and operational decision-making, leading to higher efficiency in collection and distribution (Awang Abu Bakar et al., 2024). Therefore, DDDM is proposed to have a positive effect on zakat management efficiency.

Proposition Development: AI Adoption Affects Zakat Management Efficiency

AI adoption contributes directly to zakat management efficiency through process automation, improved accuracy, and greater transparency. Empirical studies have demonstrated that AI-enabled systems enhance organisational performance and decision quality across multiple sectors (Kozhakhmetova et al., 2024; Xiao et al., 2024). Within zakat institutions, such technologies minimise administrative delays, strengthen public

trust, and maximise social impact in line with Islamic social finance objectives (Ashurov et al., 2020; Ashurov et al., 2022). Accordingly, AI adoption is proposed to have a direct positive influence on zakat management efficiency.

Proposition Development: AI Adoption Affects Data-Driven Decision-Making Affects Zakat Management Efficiency

The relationship between AI adoption and zakat management efficiency is mediated by DDDM. AI technologies enable institutions to collect and analyse large datasets, providing insights that guide fund allocation, donor engagement, and beneficiary identification (Awang Abu Bakar et al., 2024). When these insights are embedded into structured decision-making, operational efficiency and accountability improve. Prior research indicates that efficiency gains from AI depend on the presence of robust data-driven processes that translate technological inputs into actionable strategies (Usmani et al., 2023). Therefore, DDDM mediates the effect of AI adoption on zakat management efficiency.

CONCLUSIONS

This study has explored the relationship between Artificial Intelligence (AI) adoption, data-driven decisionmaking, and zakat management efficiency, resulting in the development of a conceptual framework that integrates these dimensions. The key findings indicate that AI adoption plays a critical role in automating processes, enhancing transparency, and providing real-time insights, while data-driven decision-making mediates this relationship by transforming technological inputs into actionable strategies that improve operational efficiency. Together, these elements contribute to more effective zakat collection, distribution, and reporting, ultimately strengthening trust and accountability in Islamic social finance institutions.

Theoretically, the framework enriches existing scholarship by demonstrating how technological innovation intersects with decision-making theories to improve institutional efficiency in the context of zakat management. It extends the application of systems theory by showing how AI functions as an enabler of structured decision-making, thereby advancing the understanding of technology's role in enhancing governance within faith-based financial institutions. This theoretical contribution provides a foundation for future empirical studies that seek to validate the mediating role of data-driven decision-making.

In terms of practical implications, the framework offers actionable insights for zakat institutions and policymakers. By adopting AI-enabled solutions and embedding data-driven decision-making practices, institutions can significantly enhance efficiency, reduce administrative bottlenecks, and improve donor and beneficiary satisfaction. Furthermore, this approach aligns technological adoption with the ethical and social objectives of zakat, ensuring that resources are distributed equitably and with greater transparency. The framework also provides a roadmap for practitioners to integrate emerging technologies consistent with the principles of Islamic social finance.

Despite these contributions, the study is not without limitations. The conceptual framework is developed primarily through a narrative review, meaning its propositions remain theoretical and require empirical validation across diverse contexts. Moreover, potential challenges such as data quality, institutional readiness, and ethical considerations in AI adoption remain areas of concern. Future research should therefore test the framework using quantitative and qualitative approaches, examine variations across countries and zakat institutions, and explore strategies for addressing ethical and operational challenges in AI-enabled zakat management.

In addition to enhancing operational efficiency, the integration of AI and DDDM within zakat institutions must be guided by Shariah-compliant principles to maintain ethical integrity. Future frameworks should incorporate algorithmic transparency, bias mitigation, and Shariah governance mechanisms that align with *maqaṣid al-shari'ah*. By ensuring fairness (*ʿadl*) and avoiding uncertainty or bias (*gharar*), AI-driven systems can strengthen trust among stakeholders and reinforce the moral foundations of zakat management,

transforming technological advancement into a means of achieving socio-economic justice in accordance with Islamic values.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to the Kedah State Research Committee, UiTM Kedah Branch, for the generous funding provided under the Tabung Penyelidikan Am. This support was crucial in facilitating the research and ensuring the successful publication of this article.

REFERENCES

1. Ashurov, S., Musa bin Syed Jaafar Alhabshi, S., Abdullah Othman, A. H., Habibullah, M., & Muhamad Yusof, M. S. (2020). Developing a conceptual framework for zakat collection and distribution impact on social welfare through implications of SDGs. In Impact of Zakat on Sustainable Economic Development (pp. 120–138). IGI Global. https://doi.org/10.4018/978-1-7998-3452-6.ch009
2. Ashurov, S., Abdullah Othman, A. H., Syed Jaafar Alhabshi, S. M. B., Habibullah, M., & Muhamad Yusof, M. S. (2022). Developing a conceptual framework for zakat collection and distribution impact on social welfare through implications of SDGs. In Research Anthology on Measuring and Achieving Sustainable Development Goals (Vol. 2, pp. 422–440). IGI Global. https://doi.org/10.4018/978-1-66843885-5.ch022
3. Awang Abu Bakar, N. S., Yahya, N., Abdullah, L. M., Abdul Aziz, M. S., Baharuden, A. F., Rosli, R., & Jumaan, I. A. (2024). Assessments of the data management practices in zakat institutions in Malaysia: A concept paper. In Proceedings of the 2024 10th International Conference on Computing, Engineering and Design (ICCED 2024). IEEE. https://doi.org/10.1109/ICCED64257.2024.10982882
4. Beik, I. S., Swandaru, R., & Rizkiningsih, P. (2021). Utilization of digital technology for zakat development. In Islamic FinTech: Insights and Solutions (pp. 231–248). Springer. https://doi.org/10.1007/978-3-030-45827-0_13
5. Farrokhvar, A., Ansari, S., & Kamali, M. (2018). Predictive models for charitable giving using machine learning techniques. PLOS ONE, 13(10), e0203928. https://doi.org/10.1371/journal.pone.0203928
6. Ferrari, R. (2015). Writing narrative style literature reviews. Medical Writing, 24(4), 230–235. https://doi.org/10.1179/2047480615Z.000000000329
7. Ferrell, O. C., Harrison, D. E., Ferrell, L. K., Ajjan, H., & Hochstein, B. W. (2024). A theoretical framework to guide AI ethical decision making. AMS Review, 14(1–2), 53–67. https://doi.org/10.1007/s13162-024-00275-9
8. Green, B. N., Johnson, C. D., & Adams, A. (2006). Writing narrative literature reviews for peerreviewed journals: Secrets of the trade. Journal of Chiropractic Medicine, 5(3), 101–117. https://doi.org/10.1016/S0899-3467(07)60142-6
9. Hangl, J., Krause, S., & Behrens, V. J. (2023). Drivers, barriers and social considerations for AI adoption in SCM. Technology in Society, 74, 102299. https://doi.org/10.1016/j.techsoc.2023.102299
10. Hadi, R., Shafrani, Y. S., Lamela, D., 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, 597-608. https://doi.org/10.5267/j.ijdns.2023.8.025
11. Ines, J. C., Tolentino, M. Q., Cruz, J. C. D., Estabillo, R., Madlambayan, A. M., Mirano, C. E., &
12. Vergara, J. A. (2024). The Role of AI in Enhancing Decision-Making in Small and Medium Enterprises (SMEs). In 2024 2nd International Conference on Computing and Data Analytics (ICCDA) (pp. 1-4). IEEE.
13. Khan, T., Emon, M. M. H., Rahman, M. A., Aziz, A., & Nath, A. (2024). Exploring key factors in predicting the adoption of AI technologies in e-commerce firms. In Proceedings of the 27th International Conference on Computer and Information Technology (ICCIT 2024) (pp. 2026–2031). IEEE. https://doi.org/10.1109/ICCIT64611.2024.11022486
14. Kozhakhmetova, A., Mamyrbayev, A., Zhidebekkyzy, A., & Bilan, S. (2024). Assessing the impact of artificial intelligence on project efficiency enhancement. Knowledge and Performance Management, 8(2), 109–126. https://doi.org/10.21511/kpm.08(2).2024.09

15. Mkhize, T., Oosterwyk, G., & Kautondokwa, P. (2023). Examining the barriers and enablers of AI adoption in a multimedia organization. EPiC Series in Computing, 93, 117–128. https://doi.org/10.29007/mgdl
16. Panduro-Ramirez, J., Damodaraswamy, A., Gehlot, A., Srinivas, D., Hussein, A., & Alazzam, M.
17. B. (2023). Exploring the technological barriers of AI in management decision making. In Proceedings of the 2023 3rd International Conference on Advance Computing and Innovative Technologies in
18. Engineering (ICACITE 2023) (pp. 828–832). IEEE. https://doi.org/10.1109/ICACITE57410.2023.10182882
19. Pathak, A., & Bansal, V. (2024). Factors influencing the readiness for artificial intelligence adoption in Indian insurance organizations. In IFIP Advances in Information and Communication Technology (Vol. 698, pp. 43–55). Springer. https://doi.org/10.1007/978-3-031-50192-0_5
20. Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. Journal of Business Research, 104, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039
21. Usmani, U. A., Usmani, M. U., & Usmani, A. Y. (2023). Enabling intelligent decision making: Harnessing advanced management strategies for enhanced organizational efficiency and effectiveness. In Proceedings of the 4th IEEE International Conference on Computing, Communication, and Intelligent Systems (ICCCIS 2023) (pp. 601–608). IEEE. https://doi.org/10.1109/ICCCIS60361.2023.10425257
22. Von Bertalanffy, L. (1968). General System Theory: Foundations, Development. New York: George Braziller.
23. Xiao, L., Xiao, Y., & He, R. (2024). The research and development investment management in technology enterprises under artificial intelligence. IEEE Access, 12, 190936–190944. https://doi.org/10.1109/ACCESS.2024.3518070