Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

Leveraging Artificial Intelligence for Efficient and Transparent ZISWAF Management: Comparative Insights from Indonesia and Malaysia

Dwi Fadilatul Mukaromah,[1]* Abdul Rahim,[2] Hasanah Abd Khafidz[3]
[1] Institut Miftahul Huda Al-Azhar, Banjar City, West Java, Indonesia
[2] STAI Asy-Syafi`iyah Nabire, Central Papua, Indonesia
[3] Universiti Kebangsaan Malaysia, Bangi, Malaysia

**Corresponding author:* Dwi Fadilatul Mukaromah
E-Mail : dwyfadilatulmukaromah@gmail.com

Article History:
Received: July 2, 2024 | Revised: November 2, 2024 | Accepted: May 21, 2025 | Published: June 30, 2025

Citation (APA Style):
Mukaromah, D. F., Rahim, A., & Khafidz, H. A. (2025). Leveraging artificial intelligence for efficient and transparent ZISWAF management: Comparative insights from Indonesia and Malaysia. *Munakahat: Journal of Islamic Family Law, 1*(2), 25–37.

Abstract

Background: Artificial Intelligence (AI) is increasingly transforming Islamic social finance by improving efficiency, transparency, and accountability. However, studies rarely integrate AI governance with *Maqāṣid al-Sharī'ah* in the management of Zakat, Infaq, Sadaqah, and Waqf (ZISWAF), particularly from a comparative perspective. This study addresses this gap by examining AI-supported ZISWAF governance in Indonesia and Malaysia.

Methods: This qualitative comparative case study investigated ZISWAF institutions in Banjar (West Java), Nabire (Central Papua), and Malaysia. Data were collected through semi-structured interviews, institutional documents, and field observations, then analyzed thematically using the perspectives of *Maqāṣid al-Sharī'ah* and Responsible AI governance.

Results: AI improves administrative efficiency, financial transparency, donor services, and evidence-based decision-making. Nevertheless, implementation differs according to institutional readiness, digital infrastructure, governance capacity, regulatory support, and human resource competence.

Discussion: Effective AI governance requires integrating Responsible AI principles with *Maqāṣid al-Sharī'ah*, particularly *ḥifẓ al-māl*, *maṣlaḥah*, *al-'adl*, and *amānah*. This integration enables technological innovation while maintaining ethical accountability and public trust.

Conclusion: Sustainable AI adoption in ZISWAF institutions depends on harmonizing technological capability, institutional governance, regulatory support, and Islamic ethical principles within an adaptive governance framework.

Novelty: This study proposes a *Maqāṣid al-Sharī'ah*-Based AI Governance Model integrating digital infrastructure, institutional governance, Responsible AI, *Sharia* governance, and stakeholder participation into a unified framework for ethical and sustainable AI implementation in ZISWAF institutions.

Keywords: Artificial Intelligence; ZISWAF Governance; *Maqāṣid al-Sharī'ah*; Responsible AI; Islamic Social Finance.

INTRODUCTION

Artificial Intelligence (AI) has emerged as one of the most transformative technologies driving digital governance, institutional innovation, and public service modernization across various sectors, including finance, healthcare, education, and public administration. Rather than functioning merely as an automation tool, AI increasingly supports evidence-based decision-making through predictive analytics, intelligent data processing, fraud detection, and real-time monitoring systems. As AI becomes more deeply embedded in institutional governance,

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

international policy frameworks emphasize that its implementation should not only improve operational efficiency but also uphold transparency, accountability, fairness, human oversight, and explainability to ensure trustworthy and socially responsible decision-making (*UNESCO*, 2021; Floridi & Cowls, 2019; David et al., 2024; Papagiannidis et al., 2025). These governance principles are particularly relevant for Islamic social finance because institutions managing *Zakat, Infaq, Sadaqah,* and *Waqf* (ZISWAF) are entrusted not only with financial resources but also with religious obligations, ethical accountability, and public confidence. Indonesia and Malaysia represent two of the world's largest Islamic social finance ecosystems, where ZISWAF institutions play an essential role in poverty alleviation, wealth redistribution, and sustainable socio-economic development. Nevertheless, many institutions continue to experience fragmented digital infrastructure, manual administrative procedures, limited transparency, and insufficient monitoring mechanisms that reduce operational effectiveness and weaken public trust. As AI technologies become increasingly accessible, integrating intelligent digital systems into ZISWAF governance presents an important opportunity to strengthen institutional performance while maintaining compliance with Islamic legal and ethical principles.

The digital transformation of Islamic social finance has attracted increasing scholarly attention over the past decade, although existing studies remain concentrated on digitalization rather than AI governance. Research on waqf digitalization demonstrates that technological innovation improves institutional efficiency, service quality, donor participation, and organizational sustainability while simultaneously creating new challenges related to governance, organizational readiness, and technological acceptance (Kasmon et al., 2024; Abdurrahman, 2024; Agarwal & Nene, 2025). Likewise, systematic reviews of FinTech in Islamic social finance conclude that digital innovation enhances financial inclusion and expands institutional capacity but highlight the absence of comprehensive governance models capable of integrating emerging technologies into Islamic philanthropic institutions (Amri et al., 2025). Studies on fintech-based zakat payment further indicate that users' intention to adopt digital services depends largely on institutional credibility, transparency, technological trust, and perceived security (Hadzovic et al., 2024; Al Mustofa et al., 2025). Meanwhile, recent research on AI in Islamic finance argues that intelligent technologies have considerable potential to improve operational efficiency, financial forecasting, fraud detection, and decision support; however, ethical governance, algorithmic accountability, and Sharia compliance remain insufficiently explored (Kholidah et al., 2024; Iqbal et al., 2025). Collectively, these studies suggest that digital innovation alone cannot guarantee institutional legitimacy without governance frameworks capable of ensuring responsible AI implementation.

From the perspective of Islamic legal theory, the implementation of AI should be guided by *Maqāṣid al-Sharī'ah*, which seeks to realize public welfare (*maṣlaḥah*), justice (*al-'adl*), transparency, accountability, and the protection of wealth (*ḥifẓ al-māl*). Previous scholarship consistently demonstrates that maqāṣid provides a flexible analytical framework for responding to contemporary technological developments while preserving the normative objectives of Islamic law. Alfiyanti et al. (2019) emphasize that Islamic financial governance should prioritize collective welfare through ethical institutional management. Fakhruddin et al. (2024) argue that contemporary zakat governance should evolve from conventional administrative practices toward socio-economic empowerment based on maqāṣid principles. Likewise, Hasan et al. (2024) identify *maṣlaḥah* as an ethical foundation for emerging financial technologies, whereas Aristoni (2021) and Sadiani et al. (2023) underline that transparency, regulatory certainty, and accountable governance are essential for strengthening public confidence in Islamic social finance (Lestianingsih et al., 2025). Despite these important contributions, previous studies generally discuss AI governance, digital transformation, and *Maqāṣid al-Sharī'ah* separately rather than integrating them into a comprehensive analytical framework capable of explaining how responsible AI can be institutionalized within ZISWAF governance. Consequently, theoretical understanding of the interaction between responsible AI governance and Islamic legal ethics remains limited, particularly within comparative institutional contexts.

This study addresses that research gap by comparatively examining AI-supported ZISWAF governance in Banjar (West Java, Indonesia), Nabire (Central Papua, Indonesia), and Malaysia. These cases were purposively selected because they represent different levels of institutional development, digital infrastructure, governance capacity, and socio-cultural characteristics within Islamic social finance. Banjar represents an area where ZISWAF institutions have relatively established administrative practices, Nabire illustrates the challenges of implementing Islamic philanthropy within geographically constrained and developing institutional environments, while Malaysia represents one of Southeast Asia's most advanced Islamic finance ecosystems supported by relatively mature digital governance. Comparing these three settings enables a more comprehensive understanding of how institutional readiness, regulatory environments, technological infrastructure, and socio-cultural contexts

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

influence AI implementation in Islamic philanthropic governance. Despite growing scholarly attention to digital transformation in Islamic social finance, comparative evidence examining responsible AI implementation across diverse institutional contexts remains scarce.

Accordingly, this study seeks to answer the following research question: How can Artificial Intelligence be responsibly integrated into ZISWAF governance to improve institutional efficiency, transparency, and accountability while remaining consistent with the objectives of *Maqāṣid al-Sharīʿah* across different socio-cultural contexts? To address this question, the study pursues three objectives: (1) to analyze existing ZISWAF governance practices and institutional readiness for AI implementation in Banjar, Nabire, and Malaysia; (2) to evaluate the opportunities and challenges associated with AI adoption within different regulatory, technological, and socio-cultural environments; and (3) to develop a comparative governance framework that integrates Responsible AI principles with *Maqāṣid al-Sharīʿah*. This study contributes to the literature in three important ways. First, it extends AI governance scholarship by incorporating Islamic legal and ethical perspectives into institutional digital transformation. Second, it enriches the literature on Islamic social finance by providing comparative empirical evidence from Indonesia and Malaysia, two countries representing different institutional configurations of ZISWAF governance. Third, it proposes an integrated governance framework that offers practical guidance for policymakers and Islamic philanthropic institutions seeking to strengthen efficiency, transparency, accountability, and sustainable digital transformation while preserving the ethical objectives of Islamic law.

LITERATURE REVIEW

Artificial Intelligence (AI) has fundamentally transformed organizational governance by enabling intelligent decision-making, predictive analytics, automated financial management, and transparent public services. *Contemporary literature emphasizes that AI should not merely improve operational* efficiency but also strengthen institutional accountability, explainability, fairness, transparency, and ethical responsibility through responsible governance frameworks supported by appropriate regulatory mechanisms and institutional oversight (Floridi & Cowls, 2019; Kanungo et al., 2024; Zhao, 2024; Herrera, 2025; Papagiannidis et al., 2025*).* Recent international policy developments further underline that effective AI governance requires robust data governance, continuous risk assessment, institutional oversight, and assurance mechanisms to ensure that AI systems remain trustworthy, reliable, and aligned with societal values (OECD, 2024; Department for Science, Innovation and Technology, 2024). These principles are particularly relevant for Islamic social finance because *Zakat, Infaq, Sadaqah,* and *Waqf* (ZISWAF) institutions simultaneously manage religious obligations, public trust, and socio-economic welfare. Unlike commercial financial institutions that primarily pursue economic performance, ZISWAF organizations are expected to uphold Islamic ethical values while ensuring efficient resource allocation and transparent financial administration. Consequently, AI implementation within ZISWAF requires a governance approach that integrates technological innovation with accountability, *Sharīʿah* compliance, institutional assurance, and public confidence. Although AI has increasingly been adopted in financial services worldwide, its institutional application within Islamic philanthropic governance remains relatively limited, especially regarding responsible AI governance, ethical decision-making, and governance assurance (Pusparini et al., 2024; Sagiyeva et al., 2025).

Recent studies have demonstrated that digital transformation has become a strategic priority in Islamic social finance, particularly through the adoption of financial technology (FinTech), digital payment systems, blockchain, and intelligent information management. A systematic review conducted by Kasmon et al. (2024) concludes that digital technologies significantly enhance institutional efficiency, financial inclusion, donor participation, and organizational sustainability within Islamic social finance across Asia. Similarly, research on waqf digitalization indicates that technology adoption is influenced not only by digital infrastructure but also by organizational readiness, innovation capability, institutional trust, and users' behavioral intentions toward digital services (Root, 2024; Harry et al., 2025; Siddiq et al., 2025; Nurbaeti et al., 2025; Mansouri et al., 2025). Complementing these findings, Al Mustofa et al. (2025) demonstrate that public willingness to utilize fintech-based zakat services depends largely on perceived security, transparency, trust, and institutional credibility. Furthermore, Iqbal et al. (2025) argue that AI possesses enormous potential to improve operational efficiency, fraud detection, financial forecasting, and decision support within Islamic finance; however, they also emphasize that AI adoption requires stronger governance mechanisms capable of addressing algorithmic accountability, ethical decision-making, regulatory compliance, explainability, and transparency. This observation is consistent with international AI governance frameworks, which emphasize that responsible AI implementation should incorporate data

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

governance, privacy protection, risk management, and assurance mechanisms throughout the AI lifecycle to maintain institutional trust and accountability (OECD, 2024; Department for Science, Innovation and Technology, 2024). Collectively, these studies establish that digital innovation represents an important opportunity for strengthening Islamic social finance institutions, yet they also reveal that technological adoption alone cannot guarantee institutional legitimacy without an integrated governance framework.

From the perspective of Islamic legal theory, the implementation of AI should be evaluated through the objectives of *Maqāṣid al-Sharī'ah*, which prioritize the realization of public welfare (*maṣlaḥah*), justice (*al-'adl*), accountability, transparency, and the protection of wealth (*ḥifẓ al-māl*). Previous studies consistently demonstrate that maqāṣid offers a flexible analytical framework capable of responding to technological developments while preserving the ethical objectives of Islamic law. Alfiyanti et al. (2019) emphasize that Islamic financial governance should be directed toward achieving collective welfare rather than merely improving administrative performance. Fakhruddin et al. (2024) further argue that contemporary zakat management should be repositioned from ritual administration toward socio-economic empowerment by integrating maqāṣid principles into institutional governance. Likewise, Hasan et al. (2024) highlight the importance of *maṣlaḥah* as the ethical foundation for emerging financial technologies, while Aristoni (2021) demonstrates that modern zakat governance requires institutional transparency and regulatory consistency to maintain public trust. Recent scholarship on *waqf* transactions further demonstrates that institutional governance within Islamic philanthropy requires adherence to classical legal principles governing evidence, legal certainty, and accountability, even when administrative procedures become increasingly digitalized (Maulidah et al., 2024). Supporting this perspective, Solehudin et al. (2024) explain that maqāṣid-based governance contributes to more accountable and sustainable zakat distribution while simultaneously advancing broader social development objectives. These studies collectively indicate that *Maqāṣid al-Sharī'ah* should function not merely as a normative legal doctrine but as an operational governance framework for evaluating AI-assisted decision-making within Islamic philanthropic institutions.

Despite these significant contributions, important theoretical and empirical gaps remain. First, studies on responsible AI governance predominantly discuss ethical principles, organizational accountability, and regulatory frameworks from secular institutional perspectives without considering the distinctive ethical foundations of Islamic social finance. Second, scholarship on Islamic social finance has concentrated primarily on digitalization, fintech adoption, and electronic payment systems while paying relatively limited attention to AI governance, algorithmic accountability, and intelligent institutional decision-making. Third, research employing *Maqāṣid al-Sharī'ah* generally adopts doctrinal or normative legal approaches and rarely operationalizes maqāṣid principles as measurable governance indicators for evaluating AI implementation. Consequently, previous studies remain fragmented, addressing technological innovation, Islamic legal ethics, and institutional governance as separate areas rather than integrating them into a coherent analytical framework. Moreover, comparative evidence regarding institutional AI readiness across different socio-cultural environments remains scarce, particularly between Indonesian local contexts and Malaysia, despite both countries serving as important references in Islamic social finance governance.

Building upon these limitations, this study develops an integrated conceptual framework that combines Responsible AI Governance with *Maqāṣid al-Sharī'ah* to examine AI implementation within ZISWAF institutions in Banjar (West Java), Nabire (Central Papua), and Malaysia. The comparative design enables systematic analysis of how institutional capacity, digital infrastructure, governance quality, regulatory environments, and socio-cultural characteristics influence AI adoption across different Islamic social finance ecosystems. Unlike previous studies that separately examine AI governance, Islamic philanthropy, or maqāṣid-based ethics, this research synthesizes these perspectives into a unified governance model capable of explaining both technological feasibility and ethical legitimacy. Accordingly, this study contributes theoretically by expanding discussions on responsible AI governance within Islamic social finance and operationalizing *Maqāṣid al-Sharī'ah* as an analytical framework for digital governance. Practically, the proposed framework provides policy guidance for ZISWAF institutions seeking to enhance efficiency, transparency, accountability, and public trust while ensuring that digital transformation remains consistent with the ethical objectives of Islamic law and the broader mission of sustainable Islamic social finance.

METHODS

This study employed a qualitative comparative case study design to examine how Responsible Artificial Intelligence (AI) can be integrated into the governance of Zakat, Infaq, Sadaqah, and Waqf (ZISWAF) institutions

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

while remaining consistent with the objectives of *Maqāṣid al-Sharī'ah*. A comparative qualitative approach was selected because the research seeks to understand institutional practices, governance dynamics, and stakeholder perceptions across different socio-cultural and regulatory environments rather than to measure causal relationships statistically (Ahyani, 2025). Three cases were purposively selected: Banjar City (West Java, Indonesia), Nabire (Central Papua, Indonesia), and Malaysia. These locations represent different stages of institutional development and digital readiness within Islamic social finance. Banjar was selected because of its relatively established ZISWAF administration and active institutional governance, Nabire represents a geographically constrained region where Islamic philanthropic institutions operate within more limited technological infrastructure and diverse socio-cultural conditions, while Malaysia provides an advanced benchmark for Islamic finance supported by comparatively mature digital governance and regulatory frameworks. This variation enabled analytical comparison regarding institutional readiness, governance capacity, technological adoption, and ethical implementation of AI across different contexts. Participants were selected using purposive sampling based on their direct involvement in ZISWAF governance and digital transformation initiatives. The study involved leaders of zakat and waqf institutions, Sharia scholars, information technology practitioners, government officials responsible for Islamic social finance, and community beneficiaries who had experience interacting with institutional digital services. Such participant diversity was intended to capture multiple perspectives concerning governance challenges, technological opportunities, transparency, institutional trust, and Sharia compliance.

Data were collected between March and June 2024 through three complementary techniques: semi-structured interviews, field observations, and document analysis. Semi-structured interviews explored participants' experiences regarding institutional governance, AI readiness, digital infrastructure, accountability mechanisms, regulatory challenges, and ethical concerns associated with AI implementation. Field observations were conducted at ZISWAF offices and service activities to understand operational procedures, beneficiary verification, fund distribution, financial reporting, and existing digital practices. Documentary evidence included institutional annual reports, internal governance guidelines, national zakat and waqf regulations, policy documents, digital transformation strategies, and relevant fatwas concerning Islamic financial governance. The integration of these three sources enabled methodological triangulation, thereby strengthening data credibility and reducing potential bias arising from reliance on a single source of evidence. Data analysis followed an inductive thematic analysis approach. Interview transcripts, observation notes, and documentary materials were coded iteratively to identify recurring themes related to institutional readiness, governance quality, AI implementation, transparency, accountability, public trust, and regulatory adaptation. Similar codes were subsequently grouped into broader analytical categories that reflected common patterns as well as contextual differences among Banjar, Nabire, and Malaysia. Cross-case comparison was then employed to identify both shared governance characteristics and location-specific institutional challenges.

The analytical framework integrated Responsible AI Governance with *Maqāṣid al-Sharī'ah*, enabling empirical findings to be evaluated through both contemporary governance principles and Islamic legal ethics. Rather than treating *Maqāṣid al-Sharī'ah* solely as a normative doctrine, this study operationalized its core objectives into analytical indicators for interpreting institutional practices. Specifically, *ḥifẓ al-māl* (protection of wealth) was used to evaluate financial transparency, fraud prevention, and accountability; *maṣlaḥah* (public welfare) assessed institutional effectiveness and equitable distribution of ZISWAF funds; *al-'adl* (justice) examined fairness in beneficiary identification and AI-assisted decision-making; and *amānah* (trustworthiness) measured institutional integrity, public confidence, and governance responsibility. These indicators were interpreted alongside internationally recognized principles of Responsible AI, including transparency, accountability, explainability, and fairness (Floridi & Cowls, 2019; Papagiannidis et al., 2025). Analytical rigor was further strengthened through investigator reflexivity, continuous comparison across data sources, and iterative validation of emerging themes throughout the coding process. This methodological design ensured that the proposed AI governance framework was developed from empirical evidence while remaining theoretically grounded in both Responsible AI Governance and *Maqāṣid al-Sharī'ah*, thereby directly addressing the study's objective of developing a comparative governance model for ethical, transparent, and accountable ZISWAF management across diverse institutional contexts.

RESULTS AND DISCUSSION

Comparative Institutional Readiness for AI Adoption in ZISWAF Governance

The comparative analysis reveals that the institutional readiness for Artificial Intelligence (AI) adoption differs considerably across Banjar (West Java), Nabire (Central Papua), and Malaysia, reflecting variations in

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

organizational capacity, digital infrastructure, governance maturity, and regulatory support. Interviews with managers of ZISWAF institutions indicate that all three jurisdictions recognize digital transformation as an important strategy for improving institutional performance; however, their levels of preparedness remain uneven. Banjar has gradually introduced computerized financial reporting and digital donor databases, while most operational activities continue to rely on manual verification and administrative procedures. In contrast, ZISWAF institutions in Nabire still experience limited digital infrastructure, constrained human resources, and geographical barriers that affect information management and service delivery. Malaysia demonstrates the highest degree of institutional readiness through the integration of centralized digital platforms, standardized governance procedures, and broader institutional investment in financial technology. These findings suggest that AI implementation cannot be approached through a uniform model because institutional readiness is strongly influenced by organizational capability, technological infrastructure, and local governance environments.

The empirical findings further indicate that institutional readiness extends beyond technological availability and includes governance quality, regulatory certainty, and organizational commitment to transparency. Respondents from Banjar emphasized that although digital financial reporting has improved administrative efficiency, the absence of integrated decision-support systems limits the ability of institutions to optimize beneficiary verification and resource allocation. Similarly, participants in Nabire highlighted that institutional challenges are primarily associated with data quality, limited digital literacy among staff, and insufficient technological investment rather than resistance toward innovation itself. Meanwhile, Malaysian institutions benefit from stronger coordination among zakat authorities, regulatory agencies, and digital service providers, allowing technological innovation to be incorporated into institutional governance more systematically. These findings are consistent with previous studies demonstrating that successful digital transformation within Islamic social finance depends not only on technological adoption but also on institutional governance, organizational readiness, and stakeholder acceptance (Kasmon et al., 2024; Al Mustofa et al., 2025). Another important finding concerns the relationship between institutional readiness and public trust. Across all three research locations, interview participants consistently identified transparency and accountability as the primary determinants of donor confidence. Institutions that provide accessible financial reports, systematic beneficiary databases, and transparent distribution mechanisms are perceived as more credible and trustworthy. Nevertheless, respondents also acknowledged that digitalization alone does not automatically increase public confidence unless supported by effective governance and clear ethical standards. This observation corresponds with contemporary discussions on Responsible AI, which argue that technological innovation should simultaneously promote transparency, accountability, explainability, and fairness rather than merely improving operational efficiency (Floridi & Cowls, 2019; Papagiannidis et al., 2025). Consequently, institutional readiness should be understood as a multidimensional concept encompassing technological capacity, governance quality, ethical oversight, and stakeholder participation.

The comparative evidence also demonstrates that differences in institutional readiness are closely associated with local socio-cultural and regulatory contexts. Banjar benefits from relatively established Islamic philanthropic networks and ongoing efforts to strengthen waqf governance through regulatory awareness and institutional development. Nabire, on the other hand, represents an emerging institutional environment where Islamic philanthropic organizations must simultaneously address infrastructural limitations and community capacity building before adopting more sophisticated AI applications. Malaysia presents a comparatively mature ecosystem characterized by stronger digital governance, wider integration of Islamic financial technologies, and greater institutional experience in managing digital transformation. Rather than representing superior or inferior governance models, these differences illustrate distinct stages of institutional digital maturity that require context-sensitive implementation strategies. Similar conclusions have been reported in previous studies on Islamic social finance, which emphasize that organizational readiness and contextual adaptation significantly influence the success of digital innovation initiatives (Aristoni, 2021; Fakhruddin et al., 2024; Iqbal et al., 2025).

To summarize the comparative findings, institutional readiness for AI adoption can be categorized into three complementary dimensions: technological readiness, governance readiness, and socio-ethical readiness. Technological readiness refers to the availability of digital infrastructure and information systems; governance readiness includes regulatory support, institutional coordination, and accountability mechanisms; while socio-ethical readiness concerns stakeholder trust, digital literacy, and the integration of Islamic ethical values into technological innovation. As presented in Table 1, Banjar demonstrates moderate readiness with improving governance capacity, Nabire exhibits emerging readiness constrained by infrastructural and human resource limitations, whereas Malaysia possesses relatively high readiness across all institutional dimensions. These

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

findings provide the empirical foundation for the next section, which examines how AI may be implemented to improve operational efficiency, transparency, and accountability within ZISWAF governance while considering the opportunities and constraints identified across the three comparative settings.

Table 1. Comparative Institutional Readiness for AI Adoption in ZISWAF Governance

Dimension	Banjar (Indonesia)	Nabire (Indonesia)	Malaysia
Digital infrastructure	Moderate	Emerging	High
Institutional governance	Moderate–High	Moderate	High
Human resource readiness	Moderate	Limited	High
Regulatory support	Moderate	Moderate	High
Transparency mechanisms	Developing	Developing	Well-established
Overall readiness for AI adoption	Moderate	Emerging	High

Source: Authors' analysis based on qualitative field data (2025).

Opportunities and Challenges of Artificial Intelligence Implementation in ZISWAF Governance

The comparative findings demonstrate that Artificial Intelligence (AI) offers substantial opportunities to improve the operational performance of ZISWAF institutions across Banjar, Nabire, and Malaysia. Interview data indicate that respondents consistently perceived AI not merely as a technological innovation but as an institutional instrument capable of strengthening administrative efficiency, improving transparency, and supporting evidence-based decision-making. AI-assisted data processing enables faster verification of beneficiaries, automated financial reporting, donor profiling, fraud detection, and predictive allocation of philanthropic resources. These capabilities reduce repetitive administrative workloads while allowing institutional personnel to focus on strategic planning and community engagement. Respondents from Banjar emphasized that the gradual digitalization of donor databases has simplified reporting procedures and increased organizational responsiveness. Similarly, Malaysian institutions reported that predictive analytics supports more accurate estimation of zakat distribution needs, thereby improving planning efficiency and reducing delays in financial disbursement. These findings support previous studies indicating that AI and financial technology significantly enhance institutional effectiveness within Islamic social finance while simultaneously strengthening organizational sustainability and service quality (Kasmon et al., 2024; Iqbal et al., 2025).

Beyond operational efficiency, AI also creates important opportunities for improving institutional transparency and accountability. Participants across the three case studies highlighted that digital technologies facilitate real-time financial monitoring, automated audit trails, and more accessible reporting systems, thereby strengthening donor confidence and institutional legitimacy. Such improvements are particularly important because public trust constitutes one of the most valuable assets of ZISWAF institutions. Respondents observed that transparent digital reporting enables donors to monitor the utilization of charitable funds more effectively, while institutional managers benefit from improved internal supervision and documentation. Nevertheless, the empirical evidence also suggests that transparency should not be interpreted solely as technological openness but rather as an organizational commitment supported by accountable governance structures. This finding is consistent with Responsible AI principles, which emphasize explainability, accountability, transparency, and fairness as essential components of trustworthy AI systems rather than optional technological features (Floridi & Cowls, 2019; Papagiannidis et al., 2025). Consequently, AI implementation becomes valuable only when technological innovation is accompanied by institutional mechanisms capable of ensuring ethical accountability and public oversight.

Despite these opportunities, the findings reveal several challenges that limit AI implementation across the three research locations. The most frequently identified obstacle concerns disparities in digital infrastructure and institutional capacity. Respondents in Nabire reported that unreliable internet connectivity, limited digital infrastructure, and shortages of technically skilled personnel constrain the effective utilization of AI-based management systems. Meanwhile, institutions in Banjar acknowledged that although digital reporting systems have improved administrative performance, the absence of integrated data platforms reduces opportunities for advanced AI applications such as predictive analytics and automated beneficiary assessment. Even within Malaysia, where technological infrastructure is relatively advanced, participants expressed concerns regarding data governance, cybersecurity, algorithmic accountability, and regulatory adaptation. These findings indicate that AI adoption should be understood as an organizational transformation process rather than a purely technological intervention. Similar observations have been reported in studies on digital transformation within Islamic social

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

finance, which emphasize that institutional readiness, technological capability, and governance quality collectively determine successful innovation outcomes (Kasmon et al., 2024; Al Mustofa et al., 2025).

Another critical challenge concerns the ethical implications of algorithmic decision-making within Islamic philanthropic institutions. Participants consistently argued that AI should function as a decision-support system rather than replacing human judgment in determining beneficiary eligibility or distribution priorities. Religious scholars interviewed during this study emphasized that decisions involving social justice, public welfare, and vulnerable communities require contextual interpretation that cannot be fully delegated to algorithmic systems. This concern becomes particularly significant within ZISWAF governance because Islamic philanthropy is guided not only by administrative efficiency but also by ethical obligations derived from Maqāṣid al-Sharī'ah. Respondents therefore recommended that AI applications incorporate mechanisms for explainability, human supervision, and Sharia compliance assessment before institutional implementation. These findings correspond with contemporary scholarship arguing that responsible AI governance requires continuous human oversight, ethical accountability, and context-sensitive regulatory frameworks to prevent algorithmic bias and preserve public trust (Floridi & Cowls, 2019; Papagiannidis et al., 2025; Iqbal et al., 2025). Overall, the comparative evidence indicates that AI implementation within ZISWAF governance presents a combination of strategic opportunities and institutional challenges that vary according to organizational maturity and socio-cultural context. Banjar demonstrates moderate progress through administrative digitalization, Nabire illustrates the importance of strengthening institutional capacity before implementing advanced AI applications, while Malaysia provides evidence of how integrated digital ecosystems can maximize the benefits of AI-supported governance. Rather than recommending identical implementation strategies, the findings suggest that AI adoption should follow a gradual and context-sensitive pathway aligned with institutional readiness, regulatory capacity, and Islamic ethical principles. Table 2 summarizes the principal opportunities and challenges identified across the three research settings. These findings provide the empirical basis for developing the integrated AI governance framework based on **Maqāṣid al-Sharī'ah**, which is elaborated in the following section.

Table 2. Opportunities and Challenges of AI Implementation in ZISWAF Governance

Dimension	Opportunities	Challenges
Operational management	Automated reporting, faster beneficiary verification, improved efficiency	Limited digital infrastructure and technical capacity
Financial governance	Real-time monitoring, audit trails, fraud detection	Data governance and cybersecurity risks
Public accountability	Greater transparency and donor confidence	Algorithm explainability and public acceptance
Decision-making	Predictive analytics and evidence-based planning	Potential algorithmic bias and over-reliance on automation
Sharia governance	Stronger compliance monitoring and documentation	Need for continuous human oversight and ethical review

Source: Authors' analysis based on qualitative field data (2025).

A *Maqāṣid al-Sharī'ah*-Based AI Governance Model for Sustainable ZISWAF Management

The comparative findings demonstrate that successful Artificial Intelligence (AI) implementation in ZISWAF governance cannot rely solely on technological capability but must be supported by an integrated governance framework that combines institutional accountability, ethical supervision, and Islamic legal principles. While Banjar illustrates gradual institutional digitalization, Nabire highlights the importance of strengthening organizational capacity before adopting advanced AI systems, and Malaysia demonstrates the advantages of integrating digital technologies within an established regulatory environment. These differences indicate that technological sophistication alone does not determine successful AI adoption. Rather, institutional legitimacy depends upon balancing operational efficiency with transparency, public accountability, and ethical responsibility. This finding supports contemporary Responsible AI governance literature, which emphasizes that AI systems should remain explainable, accountable, transparent, and subject to continuous human oversight rather than functioning as autonomous decision-makers (Floridi & Cowls, 2019; Papagiannidis et al., 2025). Accordingly, this study proposes an integrated AI governance model grounded in *Maqāṣid al-Sharī'ah*, enabling digital innovation while preserving the normative objectives of Islamic philanthropy.

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

The proposed governance model positions *Maqāṣid al-Sharī'ah* as the normative foundation for institutional AI governance. Rather than treating AI merely as an efficiency-enhancing technology, the model conceptualizes AI as an ethical decision-support instrument designed to realize public welfare (*maṣlaḥah*), justice (*al-'adl*), trust (*amānah*), and the protection of wealth (*ḥifẓ al-māl*). Within this framework, AI performs operational functions such as beneficiary verification, predictive resource allocation, financial reporting, fraud detection, and monitoring, whereas final institutional decisions remain under human supervision through Sharia boards and organizational governance mechanisms. This governance structure is particularly important because decisions concerning *waqf* administration and Islamic philanthropic transactions continue to require human legal judgment grounded in Islamic jurisprudence. Studies on *waqf* governance demonstrate that the legal validity of *waqf* transactions depends not only on procedural efficiency but also on compliance with Sharia principles, evidentiary requirements, and institutional oversight, highlighting that technological systems should support rather than replace human religious authority (Maulidah et al., 2024). Such an arrangement preserves the ethical flexibility required in Islamic philanthropy while minimizing the risks associated with algorithmic bias and automated decision-making. Previous studies similarly argue that digital transformation in Islamic social finance should integrate technological innovation with Islamic legal values to strengthen institutional legitimacy and public confidence (Aristoni, 2021; Fakhruddin et al., 2024; Solehudin et al., 2024; Iqbal et al., 2025).

Building upon the empirical evidence obtained from the three comparative cases, the proposed model consists of five interrelated governance components. First, digital infrastructure provides the technological foundation through integrated databases, secure information systems, and AI-supported analytics. Second, institutional governance establishes organizational procedures involving internal control, financial accountability, regulatory compliance, and operational standardization. Third, AI governance introduces principles of transparency, explainability, algorithmic accountability, cybersecurity, and continuous monitoring following Responsible AI standards. Fourth, Sharia governance ensures that AI-generated recommendations are evaluated through the perspectives of *maqāṣid al-sharī'ah*, involving Islamic scholars, institutional leaders, and ethical review mechanisms before implementation. Finally, stakeholder participation creates continuous interaction among donors, beneficiaries, regulators, technology developers, and local communities to maintain institutional legitimacy and strengthen public trust. The interaction among these five components transforms AI from a purely technical innovation into an integrated governance ecosystem capable of supporting sustainable Islamic social finance across diverse institutional settings. Beyond these five governance dimensions, effective implementation also requires an AI assurance mechanism to ensure that governance principles are consistently translated into organizational practice. Recent international policy developments emphasize that responsible AI should not stop at establishing ethical principles but should include continuous assessment, algorithmic testing, risk evaluation, transparency verification, and independent oversight throughout the AI lifecycle (OECD, 2025). Within ZISWAF governance, AI assurance may be operationalized through periodic audits of AI-supported decision-making, explainability assessments, cybersecurity monitoring, documentation of algorithmic performance, and regular Sharia compliance reviews conducted by institutional governance bodies. Such assurance mechanisms strengthen institutional accountability while ensuring that AI systems remain aligned with both Responsible AI principles and the objectives of *Maqāṣid al-Sharī'ah.*

Following the establishment of an AI assurance mechanism, implementation of the proposed governance model should proceed through a phased institutional approach rather than immediate full-scale automation. Institutions with emerging digital capacity, such as those observed in Nabire, should prioritize infrastructure development, digital literacy, and organizational capacity building before deploying advanced AI applications. Institutions demonstrating moderate readiness, such as Banjar, may expand existing digital reporting systems toward AI-assisted decision support while strengthening institutional governance and ethical oversight. More advanced institutions, represented by Malaysia, may integrate predictive analytics, automated auditing, blockchain verification, and interoperable digital platforms while continuously maintaining Sharia supervision and regulatory accountability. This staged implementation strategy recognizes that institutional readiness differs substantially across regions and therefore avoids imposing a uniform governance model regardless of organizational capability. Consequently, AI implementation becomes adaptive, scalable, and socially acceptable while remaining aligned with Islamic legal objectives.

The principal contribution of this study lies in developing a governance framework that integrates Responsible AI principles with *Maqāṣid al-Sharī'ah* into a single analytical model for ZISWAF management. Unlike previous studies that examine AI governance, Islamic philanthropy, or Islamic legal ethics separately, this research

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

demonstrates how technological governance and Islamic normative values can be systematically combined within institutional practice. The proposed framework therefore extends existing scholarship by offering both theoretical and practical contributions. Theoretically, it enriches discussions on AI governance by incorporating Islamic jurisprudential perspectives into digital governance studies. Practically, it provides policymakers, ZISWAF administrators, and Islamic financial institutions with an adaptable governance framework capable of strengthening transparency, accountability, public trust, and institutional sustainability. As illustrated in Figure 1 and summarized in Table 3, the model represents a scalable approach for responsible AI adoption in Islamic social finance that balances technological innovation with the higher objectives of Islamic law.

Table 3. Proposed AI Governance Model Based on Maqāṣid al-Sharī'ah

Governance Component	Primary Function	Expected Outcome
Digital Infrastructure	Integrated database, AI analytics	Efficient data management
Institutional Governance	Internal control and regulatory compliance	Good governance
Responsible AI Governance	Transparency, explainability, accountability	Trustworthy AI
AI Assurance	Algorithm audit, risk assessment, monitoring, certification, performance evaluation	Continuous compliance and trustworthy implementation
Sharia Governance	*Maqāṣid* evaluation, Sharia supervision	Compliance with Islamic legal principles
Stakeholder Participation	Public engagement and feedback	Institutional legitimacy

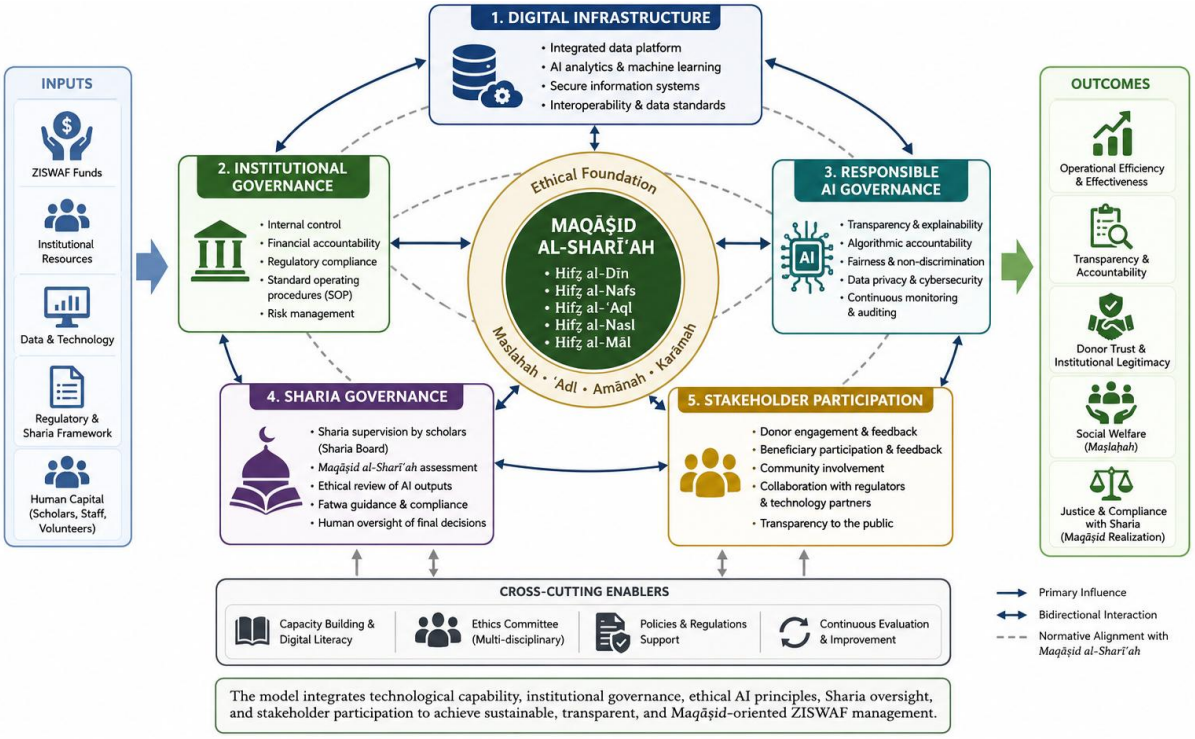
Source: Authors' conceptual analysis based on empirical findings (2025).

Based on the comparative findings presented in Sections 4.1 and 4.2, this study proposes an integrated governance framework that combines *Responsible Artificial Intelligence (AI)* principles with the objectives of *Maqāṣid al-Sharī'ah* to strengthen the governance of *Zakat, Infaq, Sadaqah,* and *Waqf (ZISWAF)* institutions. The proposed framework responds to the empirical evidence showing that successful AI implementation depends not only on technological capability but also on institutional readiness, governance quality, ethical accountability, and *Sharia* compliance. Rather than positioning AI solely as a technological instrument for improving operational efficiency, the model conceptualizes AI as an ethical governance ecosystem that supports transparent decision-making, accountable financial management, sustainable institutional development, and evidence-based policy formulation across diverse institutional contexts. In this regard, AI serves as a *decision-support mechanism* operating under continuous human supervision, ensuring that technological innovation remains aligned with the higher objectives of *Maqāṣid al-Sharī'ah*, particularly the realization of *maṣlaḥah* (*public welfare*), *al-'adl* (*justice*), *amānah* (*trustworthiness*), and *ḥifẓ al-māl* (*protection of wealth*). This integrated approach also reflects contemporary *Responsible AI* governance, which emphasizes transparency, explainability, accountability, human oversight, and ethical responsibility as essential conditions for trustworthy AI deployment (Papagiannidis et al., 2025; OECD, 2025).

Accordingly, the proposed governance model integrates six mutually reinforcing components: digital infrastructure, institutional governance, *Responsible AI* governance, *AI assurance*, *Sharia* governance, and stakeholder participation. These components operate as an interconnected governance ecosystem in which technological capability is continuously supported by regulatory oversight, organizational accountability, ethical review, and public participation. Within this framework, *AI assurance* functions as a cross-cutting mechanism that verifies the reliability, transparency, security, and compliance of AI systems through continuous monitoring, risk assessment, algorithmic evaluation, and institutional oversight. The interaction among these governance dimensions enables institutions to continuously evaluate AI performance, mitigate emerging technological risks, strengthen organizational resilience, and improve stakeholder confidence throughout the digital transformation process. Consequently, the model not only facilitates operational efficiency but also promotes institutional legitimacy, public trust, and sustainable digital transformation within Islamic social finance. Figure 1 presents the conceptual framework developed from the comparative empirical findings and theoretical synthesis of this study, illustrating the dynamic interaction among the six governance components in supporting *responsible* and *Sharia*-compliant AI implementation in ZISWAF management.

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

Figure 1. Maqāṣid al-Sharī'ah-Based AI Governance Model for Sustainable ZISWAF Management



Source: Developed by the authors based on empirical findings and conceptual synthesis (2025).

CONCLUSION

This study demonstrates that the integration of Artificial Intelligence (AI) into the governance of Zakat, Infaq, Sadaqah, and Waqf (ZISWAF) should be understood not merely as a technological innovation but as an institutional transformation requiring the harmonization of digital capability, organizational governance, and Islamic legal-ethical principles. Addressing the first research question, the comparative findings reveal that institutional readiness for AI adoption varies considerably across Banjar, Nabire, and Malaysia due to differences in digital infrastructure, governance capacity, regulatory support, and socio-cultural contexts. Banjar represents a moderately prepared institutional environment with ongoing digital transformation, Nabire illustrates the challenges of limited technological capacity and organizational resources, while Malaysia demonstrates a relatively mature ecosystem supported by integrated digital governance. Regarding the second research question, the study finds that AI creates significant opportunities to improve operational efficiency, transparency, accountability, donor confidence, and evidence-based decision-making. Nevertheless, these opportunities are accompanied by challenges related to digital inequality, data governance, algorithmic accountability, cybersecurity, human resource capacity, and the need to preserve Sharia compliance through continuous human oversight. Consequently, successful AI implementation cannot rely exclusively on technological advancement but requires adaptive governance that responds to institutional readiness and local socio-religious conditions.

Addressing the third research question, this study proposes a *Maqāṣid al-Sharī'ah-Based* AI Governance Model that integrates five interrelated governance dimensions: digital infrastructure, institutional governance, Responsible AI governance, Sharia governance, and stakeholder participation. The proposed framework positions AI as an ethical decision-support system operating under the normative objectives of *maqāṣid al-sharī'ah*, particularly the realization of *maṣlaḥah* (public welfare), *al-'adl* (justice), *amānah* (trustworthiness), and *ḥifẓ al-māl* (protection of wealth). The principal novelty of this research lies in the development of an integrated governance model that systematically combines Responsible AI principles with Islamic legal objectives within the context of ZISWAF governance. Unlike previous studies that examine AI governance, Islamic social finance, or *maqāṣid al-sharī'ah* independently, this research synthesizes these perspectives into a comprehensive analytical framework supported by comparative empirical evidence from Indonesia and Malaysia. Accordingly, the study contributes theoretically by extending the discourse on Responsible AI through the incorporation of Islamic

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

jurisprudential perspectives, while practically providing policymakers, ZISWAF institutions, and Islamic financial organizations with an adaptive governance framework for implementing AI in a manner that strengthens transparency, accountability, institutional legitimacy, and sustainable digital transformation without compromising the ethical objectives of Islamic law.

Despite these contributions, several limitations should be acknowledged. First, the study is based on a qualitative comparative case study involving three institutional settings, and therefore its findings should not be generalized to all ZISWAF institutions across Indonesia, Malaysia, or other Muslim-majority countries without considering contextual differences. Second, the proposed governance model remains conceptual and has not yet been empirically evaluated through large-scale quantitative testing or longitudinal implementation. Future research may validate the proposed framework using mixed-method approaches, structural equation modeling, or comparative policy analysis across broader institutional contexts. Further studies may also examine the integration of emerging technologies—including blockchain, explainable AI, predictive analytics, and smart contracts—within Islamic social finance while assessing their long-term implications for governance, regulatory compliance, institutional performance, and the realization of the higher objectives of *maqāṣid al-sharī'ah*. Such investigations will further strengthen the development of responsible, transparent, and sustainable AI governance for Islamic philanthropic institutions in the digital era.

REFERENCES

Abdurrahman, A. (2024). Investigating the impact of digital business ecosystem in enhancing Islamic mobile banking adoption through the TOE framework. *Digital Business, 4*(2), 100096. https://doi.org/10.1016/j.digbus.2024.100096

Agarwal, A., & Nene, M. J. (2025). A five-layer framework for AI governance: Integrating regulation, standards, and certification. *Transforming Government: People, Process and Policy, 19*(3), 535–555. https://doi.org/10.1108/TG-03-2025-0065

Ahyani, H. (2025). *Membumikan Syariah: Pendekatan Fikih Keluarga dan Ekonomi Menuju Kesejahteraan Sosial* (N. Mutmainah, Ed.). Widina Bhakti Persada.

Al Mustofa, M. U., Shophia, S. P., Muhibbin, Z., Ardiantono, D. S., Mawardi, I., Widiastuti, T., Fahmi, A., & Windiani, W. (2025). Risk perception on intention to pay zakat via financial technology (fintech). *Journal of Islamic Marketing, 16*(12), 3559–3590. https://doi.org/10.1108/JIMA-03-2024-0110

Alfiyanti, U., Firdaus, A., & Fatah, D. A. (2019). Hajj financial management in the *Maqāṣid Sharī'ah* perspective. *Al-Ahkam, 29*(2), 229–248. https://doi.org/10.21580/ahkam.2019.29.2.3893

Amri, M. C. E., Mohammed, M. O., & AlKhalili, M. M. S. (2025). Fintech Adoption and its Investment Impact in Islamic Social Finance: The Case of Zakat. *QIJIS (Qudus International Journal of Islamic Studies), 12*(2), 213–254. https://doi.org/10.21043/qijis.v12i2.17069

Aristoni, A. (2021). Integration of Sharia in zakat law. *ZISWAF: Jurnal Zakat dan Wakaf, 8*(1), 1–18. https://doi.org/10.21043/ziswaf.v8i1.9099

David, A., Yigitcanlar, T., Desouza, K., Li, R. Y. M., Cheong, P. H., Mehmood, R., & Corchado, J. (2024). Understanding local government responsible AI strategy: An international municipal policy document analysis. *Cities, 155*, 105502. https://doi.org/10.1016/j.cities.2024.105502

Department for Science, Innovation and Technology. (2024). *Assuring a responsible future for AI*. UK Government. https://www.gov.uk/government/publications/assuring-a-responsible-future-for-ai

Fakhruddin, F., Hasan, S., Firdaus, D. H., & Hidayat, H. (2024). From Fiqh al-Ibadat to Muamalat: Repositioning zakat management in Indonesia in the perspective of Maqāṣid Al-Sharī'ah. *Samarah, 8*(1). https://doi.org/10.22373/sjhk.v8i1.19637

Floridi, L., & Cowls, J. (2019). A unified framework of five principles for AI in society. *Harvard Data Science Review, 1*(1). https://doi.org/10.1162/99608f92.8cd550d1

Hadzovic, S., Becirspahic, L., & Mrdovic, S. (2024). It's time for artificial intelligence governance. *Internet of Things, 27*, 101292. https://doi.org/10.1016/j.iot.2024.101292

Harry, M., Fakhruddin, Rofiq, M. A., & Fajarani, M. (2025). Electronic Registration of Waqf Land under the PTSL Program from a Maslahah Perspective: A Study at the Indonesian Waqf Agency Office in East Java. *El-Mashlahah, 15*(2), 393–414. https://doi.org/10.23971/el-mashlahah.v15i2.9097

Hasan, N., Abubakar, A., Haddade, H., Kurniati, K., Nurjannah, N., & Sabbar, S. D. (2024). Maslahah Najmuddin Al-Thufi: A framework for fintech benefit realization in Indonesia. *Jurnal Ilmiah Al-Syir'ah, 22*(1). https://doi.org/10.30984/jis.v22i1.2100

Munakahat: Journal of Islamic Family Law
Vol. 1, No. 2, June 2025
ISSN (Online) 3090-9317
https://doi.org/10.5281/zenodo.21235737

Herrera, F. (2025). Reflections and attentiveness on explainable artificial intelligence (XAI): The journey ahead from criticisms to human–AI collaboration. *Information Fusion, 121*, 103133. https://doi.org/10.1016/j.inffus.2025.103133

Iqbal, M. S., Sukamto, F. A. M. S. B., Norizan, S. N. B., Mahmood, S., Fatima, A., & Hashmi, F. (2025). AI in Islamic finance: Global trends, ethical implications, and bibliometric insights. *Review of Islamic Social Finance and Entrepreneurship, 4*(1), 70–85. https://doi.org/10.20885/RISFE.vol4.iss1.art6

Kanungo, R. P., Liu, R., & Gupta, S. (2024). Cognitive analytics enabled responsible artificial intelligence for business model innovation: A multilayer perceptron neural networks estimation. *Journal of Business Research, 182*, 114788. https://doi.org/10.1016/j.jbusres.2024.114788

Kasmon, B., Ibrahim, S. S., Daud, D., Raja Hisham, R. R. I., & Dian Wisika Prajanti, S. (2024). FinTech application in Islamic social finance in Asia region: A systematic literature review. *International Journal of Ethics and Systems, 41*(1), 213–237. https://doi.org/10.1108/IJOES-07-2023-0155

Kholidah, H., Fianto, B. A., Herianingrum, S., Ismail, S., & Mohd Hidzir, P. A. (2024). Do Islamic fintech lending promote microenterprises performance in Indonesia? Evidence of difference-in-difference model. *International Journal of Islamic and Middle Eastern Finance and Management, 18*(1), 224–246. https://doi.org/10.1108/IMEFM-08-2023-0310

Lestianingsih, E. N., Ahyani, H., Muharir, Lathif, A. M. M., Lousada, S. A. N., Mutmainah, N., & Atiqoh, U. (2025). *Maqāṣid Al-Sharīʿah Al-Shatibi in the digital era: Contemporary perspectives on halal lifestyle and technology in Indonesia. Al-Mawarid Jurnal Syariah dan Hukum, 7*(1). https://doi.org/10.20885/mawarid.vol7.iss1.art4

Mansouri, O., Yusuf, N., & Kooli, C. (2025). Ethical frontiers and legal boundaries: Proposing a unified framework for AI regulation and accountability. *Next Research, 2*(4), 101087. https://doi.org/10.1016/j.nexres.2025.101087

Maulidah, T. A., Hasan, N., & Nurjannah. (2024). The Pledges as Alternative to Witnesses in Waqf and Grant Transactions: A Comparative Study of Fiqh Madhhabs. *Mazahibuna: Jurnal Perbandingan Mazhab, 198–214*. https://doi.org/10.24252/mazahibuna.vi.45732

Nurbaeti, Bakry, M., & Syatar, A. (2025). Digital Transformation of Fatwa Authorities: Comparative Analysis of MUI, Bahtsul Masail, and Muhammadiyah Tarjih. *Parewa Saraq: Journal of Islamic Law and Fatwa Review, 4*(2), 82–100. https://doi.org/10.64016/parewasaraq.v4i2.58

OECD. (2024). AI, data governance and privacy: Synergies and areas of international co-operation (Pt. 22). *OECD Artificial Intelligence Papers*. https://doi.org/10.1787/2476b1a4-en

OECD. (2025). *Introduction to AI Assurance*. https://oecd.ai/en/policy-initiatives/introduction-to-ai-assurance-9956

Papagiannidis, E., Mikalef, P., & Conboy, K. (2025). Responsible artificial intelligence governance: A review and research framework. *The Journal of Strategic Information Systems, 34*(2), 101885. https://doi.org/10.1016/j.jsis.2024.101885

Pusparini, M. D., Herianingrum, S., Bahari, Z., & Furqani, H. (2024). Scrutinizing a frugal lifestyle in spiritual dimensions: An Islamic ethical consumption framework. *International Journal of Ethics and Systems, 42*(3), 779–801. https://doi.org/10.1108/IJOES-01-2024-0027

Root, H. L. (2024). The religious origins of state capacity in Europe and China. *Journal of Economic Behavior & Organization, 218*, 456–469. https://doi.org/10.1016/j.jebo.2023.12.023

Sadiani, S., Emzaed, A. M., Amin, M., Mualimin, M., & Rosadhillah, V. K. (2023). Progressive Islamic Law and Misek Tradition of Dayak Ngaju in Central Kalimantan. *El-Mashlahah, 13*(2), 225–244. https://doi.org/10.23971/el-mashlahah.v13i2.7624

Sagiyeva, R., Kuanova, L., Ryskulov, A., Stambakiyev, N., & Doszhan, R. (2025). "Institutional traps" in the Islamic finance development: The experience of Kazakhstan. *Journal of Islamic Marketing, 17*(6), 2071–2097. https://doi.org/10.1108/JIMA-07-2024-0302

Siddiq, A., Hariyanto, Maula, I., Meidina, A. R., & Arafah, S. (2025). Reconstructing Waqf Share Policies: A Maqashid Sharia Approach with Insights from Indonesia. *El-Mashlahah, 15*(1), 79–100. https://doi.org/10.23971/el-mashlahah.v15i1.9029

UNESCO. (2021). *Recommendation on the Ethics of Artificial Intelligence*. https://www.unesco.org/en/legal-affairs/recommendation-ethics-artificial-intelligence

Zhao, J. (2024). Promoting more accountable AI in the boardroom through smart regulation. *Computer Law & Security Review, 52*, 105939. https://doi.org/10.1016/j.clsr.2024.105939