

TRANSFORMASI DIGITAL LEMBAGA KEUANGAN SYARIAH DENGAN TANTANGAN DAN PELUANG SISTEM AKUNTANSI SYARIAH

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ABSTRAK

Studi ini bertujuan untuk mengeksplorasi interaksi dinamis antara transformasi digital dan dimensi operasional, regulasi, dan etika dari sistem akuntansi yang sesuai dengan Syariah. Desain deskriptif-eksploratori digunakan untuk menyelidiki keadaan transformasi digital terkini di IFI dan menganalisis integrasi teknologi akuntansi digital dalam konteks kepatuhan Syariah. Teknik pengambilan sampel purposif akan digunakan untuk memilih partisipan dengan pengalaman dan keahlian yang relevan dalam keuangan Islam dan sistem digital. Data wawancara akan ditranskripsi dan dianalisis menggunakan analisis tematik. Temuan studi mengungkapkan bahwa sementara inovasi digital, seperti AI, komputasi awan, dan blockchain, dianut dalam layanan yang berhadapan dengan pelanggan, implementasinya dalam fungsi akuntansi inti dan tata kelola Syariah masih terbatas (Wati et al., 2024). Studi ini berkontribusi pada literatur yang berkembang tentang keuangan digital Islam dengan menyoroti perlunya kerangka teoritis yang berbeda yang mengintegrasikan prinsip-prinsip akuntansi Islam dengan model transformasi digital. Studi masa depan dapat menggunakan metode kuantitatif untuk mengukur dampak transformasi digital pada kinerja keuangan atau kepuasan pelanggan di bank-bank Islam.

Kata kunci: Transformasi Digital; Lembaga Keuangan Islam; Sesuai Syariah; Sistem Akuntansi; Akuntansi Islam

DIGITAL TRANSFORMATION IN ISLAMIC FINANCIAL INSTITUTIONS WITH CHALLENGES AND OPPORTUNITIES FOR SHARIA-COMPLIANT ACCOUNTING SYSTEMS

ABSTRACT

This study aims to explore the dynamic interplay between digital transformation and the operational, regulatory, and ethical dimensions of a Shariah-compliant accounting system. A descriptive-exploratory design was used to investigate the current state of digital transformation in IFIs and analyze the integration of digital accounting technologies in the context of Shariah compliance. A purposive sampling technique will be used to select participants with relevant experience and expertise in Islamic finance and digital systems. Interview data will be transcribed and analyzed using thematic analysis. The study findings reveal that while digital innovations, such as AI, cloud computing, and blockchain, are being embraced in customer-facing services, their implementation in core accounting and Shariah governance functions remains limited (Wati et al., 2024). This study contributes to the growing literature on Islamic digital finance by highlighting the need for a distinct theoretical framework that integrates Islamic accounting principles with digital transformation models. Future studies could use quantitative methods to measure the impact of digital transformation on financial performance or customer satisfaction in Islamic banks.

Keywords: Digital Transformation; Islamic Financial Institutions; Sharia-Compliant; Accounting Systems; Islamic Accounting

INTRODUCTION

Advances in digital technology have significantly transformed the global financial services landscape, including the domain of Islamic financial institutions (Fitria, 2025). As the world adopts Industry 4.0 and financial technology (FinTech) innovations, Shariah-compliant institutions must adapt to remain competitive, efficient, and compliant with Islamic ethical principles (Junaedi, Renaldo, Yovita, Augustine, et al., 2023). The digital transformation journey in Islamic finance presents both tremendous opportunities and significant challenges. On the one hand, digital tools such as blockchain, artificial intelligence, and cloud-based systems offer increased efficiency, real-time reporting, and improved customer experience. On the other hand, ensuring Shariah compliance in these digital platforms requires a deep understanding of Islamic jurisprudence, along with the integration of ethical, social, and religious values into financial and accounting systems.

In addition, the implementation of a Shariah-compliant accounting system must address the complexities of Islamic contracts such as *mudarabah*, *musharakah*, *ijarah*, and *murabahah*, which are fundamentally different from conventional financial instruments (Moosa, 2023). As these institutions seek to innovate digitally, they must simultaneously uphold the principles of transparency, trust, and risk sharing as mandated in Islamic finance. This study aims to explore the dynamic interplay between digital transformation and the operational, regulatory, and ethical dimensions of a Shariah-compliant accounting system. By identifying key challenges and uncovering new opportunities, this study contributes to the ongoing discourse on the modernization of Islamic financial institutions in the digital era.

LITERATURE REVIEW

The transformation of financial services through digital innovation has been widely studied across various banking and finance sectors. In the context of Islamic finance, several scholars have examined how digitalization intersects with the unique principles of Shariah-compliant operations. According to (Hidayat et al., 2025), digital transformation offers opportunities for Islamic financial institutions (IFIs) to improve operational efficiency, reduce transaction costs, and reach the unbanked population. However, they also emphasize that maintaining compliance with Islamic law remains a major challenge in adopting emerging technologies.

Shariah-compliant accounting systems differ from conventional systems in that they focus on ethical accountability, risk sharing, and the prohibition of *riba* (interest), *gharar* (excessive uncertainty), and haram (prohibited) transactions. As (Syahriani et al., 2024) note, Islamic accounting should reflect the religious and socio-economic objectives of Islamic finance, known as *Maqasid* al-Shariah. These objectives require accounting systems not only to report financial results but also to disclose social justice, equity, and ethical compliance.

A study by (Hassan et al., 2019) discusses the development of Islamic Accounting Standards such as AAOIFI (Accounting and Auditing Organization for Islamic Financial Institutions), which provides specific guidelines for Islamic financial products and transactions. However, studies have shown inconsistencies in the application of these standards due to differences in interpretation, lack of expertise, and varying levels of regulatory enforcement across countries.

The integration of digital technologies such as blockchain, AI, and cloud computing into IFIs has gained academic attention. (Dandi, 2025) highlight that blockchain has the potential to enhance transparency and trust in Islamic contracts by ensuring traceable and immutable records. However, they caution that the lack of Shariah-compliant validation protocols could undermine its religious legitimacy. Similarly, (Iqbal et al., 2025) emphasize that artificial intelligence can improve credit scoring and customer segmentation in Islamic banking but caution that algorithms must be designed with Islamic ethical considerations in mind.

A significant gap identified in the literature is the limited number of empirical studies evaluating the adoption of digital accounting systems in IFIs. Despite the growing theoretical discourse, practical case studies are still scarce, particularly in emerging economies where Islamic banking is growing rapidly. Furthermore, the alignment of digital transformation initiatives with Shariah governance frameworks remains underexplored.

In conclusion, the existing literature confirms the transformative potential of digital technologies in Islamic finance, while highlighting the critical challenges in maintaining Shariah compliance, standardization, and ethical integration. This study seeks to address these gaps by examining how digital transformation is shaping Shariah-compliant accounting practices and identifying strategic opportunities for innovation in Islamic financial institutions.

RESEARCH METHODOLOGY

Research Design

A descriptive-exploratory design was used to investigate the current state of digital transformation in IFIs and analyze the integration of digital accounting technologies in the context of Shariah compliance (Sekaran & Bougie, 2016).

This design allows the study to systematically describe real-world practices and explore emerging trends and challenges in a dynamic technological environment (Creswell & Creswell, 2023).

Data Collection Methods

Data will be collected from two main sources:

Primary Data

Semi-structured interviews will be conducted with key informants, including Shariah compliance officers, financial technology experts, accountants, and senior managers from selected Islamic banks and financial institutions in Indonesia and Malaysia. Interview questions will focus on digital technology adoption, perceptions of Shariah compliance, challenges in implementing digital accounting systems, and the role of regulatory bodies.

Secondary Data

Document analysis will be conducted using annual reports, financial statements, regulatory guidelines (e.g., AAOIFI, IFSB), digital transformation roadmaps, and scholarly publications relevant to Islamic finance and digital accounting. This triangulation ensures a richer understanding and validation of the findings.

Sampling Technique

A purposive sampling technique will be used to select participants with relevant experience and expertise in Islamic finance and digital systems. The sample will include representatives from different levels of the organization to obtain a holistic view of institutional practices.

Data Analysis

Interview data will be transcribed and analyzed using thematic analysis. The coding process will identify recurring themes, such as digital readiness, regulatory challenges, drivers of innovation, Shariah governance issues, and system implementation outcomes. NVivo or similar qualitative data analysis tools can be used to assist in organizing and analyzing the data.

Validity and Reliability

To ensure validity, data will be triangulated across sources and respondent categories. Member checking will be conducted by returning the synthesis results to participants for feedback and confirmation. Pilot interviews will also be conducted to refine the interview guide and ensure clarity.

Ethical Considerations

All participants will be informed about the purpose of the study, and their confidentiality will be assured. Consent will be given before data collection, and participants will have the right to withdraw at any stage.

RESULTS AND DISCUSSION

Digital Adoption Levels in Islamic Financial Institutions

The majority of participants reported that their institutions are actively engaged in digital transformation initiatives, particularly in customer-facing services such as mobile banking, digital enrollment, and online financing applications. However, digital transformation in core accounting systems and Shariah audit processes is still limited. While some banks have begun integrating automated reporting tools and cloud-based accounting systems, full-scale adoption is still in its early stages.

“Most of the focus is on front-end digitization. Back-office systems such as accounting and compliance have not been integrated with digital Shariah governance tools.” — (Respondent A, Shariah Compliance Officer)

This finding is in line with previous literature showing that digital investments in Islamic banks are skewed towards customer experience, while internal processes lag behind (Luqmansyah & Hati, 2021).

Challenges in Ensuring Shariah Compliance in Digital Systems

A recurring concern among respondents was the difficulty in ensuring that digital tools remain aligned with Shariah principles. Automated systems may not always take into account the nuances of Islamic contracts (e.g., *murabahah*, *ijara*, *mudarabah*), and developers often lack Shariah knowledge.

“Many fintech developers are not trained in Islamic finance. This creates a gap between what the system does and what the Shariah Board requires.” — (Respondent B, IT Manager at an Islamic Bank)

There is an urgent need for interdisciplinary collaboration between Shariah scholars, accountants, and software engineers to ensure proper coding of ethical and contractual rules into digital platforms (Junaedi, Renaldo, Yovita, Veronica, et al., 2023). This is consistent with Hasan et al. (2020), who identified Shariah compliance validation as a key gap in Islamic financial technology (Alsmadi, 2025).

Regulatory and Standardization Issues

Respondents highlighted the lack of standard digital accounting frameworks tailored to Islamic finance. While standards such as AAOIFI exist, they are not always updated for the digital context, and national regulations often vary. These inconsistencies create confusion during system implementation.

“Different banks interpret *murabahah* accounting differently. We need clearer, digital-ready guidance from regulators.” — (Respondent C, Senior Accountant)

This fragmentation impacts system compatibility and audit reliability, especially when institutions operate across multiple jurisdictions.

Opportunities for Innovation and Efficiency

Despite the challenges, respondents identified several promising opportunities. Automation of Zakat and Waqf accounting, AI-assisted risk profiling for Islamic financing, and blockchain-based contract validation were cited as future innovations that could improve compliance, reduce human error, and build customer trust (Zulkifli et al., 2023).

“Smart contracts and blockchain could revolutionize Islamic finance, if aligned with Shariah rules, they offer transparency and traceability.” — (Respondent D, Islamic Fintech Advisor)

Participants also noted that digitally integrated accounting systems could simplify regulatory reporting and reduce operational costs, thereby improving IFIs’ efficiency and competitiveness.

Need for Human Resource Development

A common theme was the lack of professionals who understand digital systems and Islamic accounting. Respondents called for targeted capacity building (Putra et al., 2024), certification programs, and collaboration between universities, regulators, and technology companies.

“We need more digital accountants who are also trained in Islamic jurisprudence. The talent gap is very real.” — (Respondent E, Islamic Bank Executive)

This is consistent with the literature highlighting the lack of qualified human resources as a critical barrier to Shariah governance and digital accounting transformation (Qimyatussa’adah & Sayeed, 2024).

These findings suggest that while Islamic financial institutions are gradually embracing digitalization, there is still a significant gap in aligning technological innovation with the unique ethical and legal demands of a Shariah-compliant accounting system (Junaedi, Panjaitan, et al., 2024). This discussion underscores the importance of developing a collaborative ecosystem involving regulators, educators, technologists, and financial practitioners to fully unlock the potential of digital transformation in Islamic finance.

CONCLUSION

Conclusion

This study explores the interplay between digital transformation and Shariah-compliant accounting systems in Islamic financial institutions (IFIs), focusing on key challenges and emerging opportunities. The study findings reveal that while digital innovations, such as AI, cloud computing, and blockchain, are being embraced in customer-facing services, their implementation in core accounting and Shariah governance functions remains limited. Key barriers include the lack of a Shariah-compliant digital framework, talent shortages, and inconsistent regulatory standards. Nonetheless, there is growing recognition of the transformative potential of digital tools to improve operational efficiency, financial transparency, and ethical accountability in line with Islamic principles.

Implications

The findings of this study have both theoretical and practical implications:

Theoretical Implications

This study contributes to the growing literature on Islamic digital finance by highlighting the need for a distinct theoretical framework that integrates Islamic accounting principles with digital transformation models.

Practical Implications

Practitioners in IFIs can use these insights to design more effective digital accounting solutions that are aligned with Shariah law. Financial regulators and Shariah supervisory boards should also take a proactive role in updating standards and ensuring consistent guidance for digital implementation.

Limitations

While this study provides valuable qualitative insights, several limitations should be acknowledged:

Limited Geographic Coverage: The sample was primarily drawn from IFIs in Indonesia and Malaysia, which may not reflect conditions in other Islamic financial markets such as the Middle East or Africa.

Qualitative Bias: The use of semi-structured interviews may introduce subjectivity and may not capture broader institutional trends.

Technology-Specific Limitations: This study focuses on general digital tools without examining specific technologies such as blockchain protocols or AI algorithms in depth.

Recommendations

Based on the findings, the following recommendations are proposed: (1) **Develop an Integrated Digital-Shariah Framework:** Regulatory bodies and standard-setting organizations (e.g., AAOIFI, IFSB) should develop up-to-date digital accounting standards specifically designed for Islamic finance. (2) **Invest in Human Resources:** Islamic financial institutions and academic institutions should offer interdisciplinary training programs that combine Islamic finance, accounting, and information technology. (3) **Collaborating Across Sectors:** Promote partnerships between Islamic banks, fintech startups, and academic researchers to jointly develop ethical and compliant digital financial tools. (4) **Embedding Shariah Logic in System Design:** Software developers should be equipped with Shariah knowledge or consult with Shariah boards during system development to prevent misalignment.

Future Research

This study opens up several avenues for future research: (1) **Quantitative Assessment:** Future studies could use quantitative methods to measure the impact of digital transformation on financial performance or customer satisfaction in Islamic banks (Junaedi, Renaldo, et al., 2024). (2) **Comparative Studies:** Cross-country analyses could be conducted to compare how digital adoption in IFIs differs across regulatory and cultural environments. (3) **Case Studies on Specific Technologies:** In-depth case studies could explore the use of blockchain or AI specifically in IFI accounting systems. (4) **Shariah Audit Automation:** Future research should investigate the feasibility and ethical considerations of automating Shariah audits using smart contracts and AI models (Dharmawati et al., 2023).

REFERENCES

- Alsmadi, A. A. (2025). Beyond compliance: exploring the synergy of Islamic Fintech and CSR in fostering inclusive financial adoption. *Future Business Journal*, 11(1), 7. <https://doi.org/10.1186/s43093-025-00430-z>
- Creswell, J. W., & Creswell, J. D. (2023). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE.
- Dandi, M. (2025). Blockchain and Islamic Finance: Innovating within tradition. *Journal of Islamic Economic Insights*, 1(1), 29–39. <https://journal.privietlab.org/index.php/JIEI/>
- Dharmawati, T., Bakri, A. A., Ningrum, E. P., Mahdi, & Renaldo, N. (2023). Improving Internal Audit Quality Through Self Efficacy and Professional Ethics with Top Management Support as a Moderation Variable. *International Journal of Economics, Business and Accounting Research (IJEBAAR)*, 7(3), 1–9.
- Fitria, T. N. (2025). Islamic Banking Digitalization: Challenges and Opportunities in the Era of Industrial Revolution 4.0. *Jurnal Ilmiah Ekonomi Islam*, 11(1), 1–19.
- Hassan, M. K., Aliyu, S., Huda, M., & Rashid, M. (2019). A survey on Islamic Finance and accounting standards. *Borsa Istanbul Review*, 19, S1–S13. <https://doi.org/10.1016/j.bir.2019.07.006>
- Hidayat, R., Syafirah, A., & Yuniar, A. (2025). Digital Transformation of Islamic Financial Institutions: Opportunities and Challenges in Reaching Unbanked Communities. *Jurnal Ilmu Perbankan Dan Keuangan Syariah*, 7(1). <http://jurnaljipsya.org/index.php/jipsya>
- 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*, 2025(1), 71. <https://doi.org/10.20885/RISFE>

- Junaedi, A. T., Panjaitan, H. P., Yovita, I., Veronica, K., Renaldo, N., & Jahrizal, J. (2024). Advancing Digital and Technology Literacy through Qualitative Studies to Bridging the Skills Gap in the Digital Age. *Journal of Applied Business and Technology*, 5(2), 123–133. <https://doi.org/https://doi.org/10.35145/jabt.v5i2.170>
- Junaedi, A. T., Renaldo, N., Yovita, I., Augustine, Y., & Veronica, K. (2023). Uncovering the Path to Successful Digital Performance through Digital Technology and Digital Culture as Moderation. *Proceeding of International Conference on Business Management and Accounting (ICOBIMA)*, 2(1), 71–81. <https://doi.org/https://doi.org/10.35145/icobima.v2i1.3959>
- Junaedi, A. T., Renaldo, N., Yovita, I., Veronica, K., & Jahrizal. (2024). Digital Culture Revolution in Improving Firm Performance in Indonesia. *Journal of System and Management Sciences*, 14(1), 452–470. <https://doi.org/10.33168/JSMS.2024.0126>
- Junaedi, A. T., Renaldo, N., Yovita, I., Veronica, K., & Sudarno, S. (2023). Peluang dan Tantangan Bank Syariah di Era Perbankan Digital dalam Perspektif Generasi Z. *Kurs: Jurnal Akuntansi, Kewirausahaan Dan Bisnis*, 8(2), 116–125.
- Luqmansyah, D. J., & Hati, S. R. H. (2021). Customer Experience on Islamic Banking Digital Branch in Indonesia. *Proceedings of the International Conference on Business and Engineering Management*.
- Moosa, R. (2023). An Overview of Islamic Accounting: The Murabaha Contract. *Journal of Risk and Financial Management*, 16(7), 1–15. <https://doi.org/10.3390/jrfm16070335>
- Putra, R., Renaldo, N., Purnama, I., Putri, N. Y., & Suhardjo, S. (2024). Enhancing Teacher Performance through Capacity Building: A Comprehensive Analysis of Professional Development, Mentoring, and Organizational Support. *Reflection: Education and Pedagogical Insights*, 2(1), 1–8. <https://doi.org/10.61230/reflection.v2i1.84>
- Qimyatussa'adah, & Sayeed, R. R. A. (2024). The Dynamics of Implementing Sharia Accounting Standardin Sharia Financial Institution. *International Journal of Islamic Banking and Finance Research*, 12(1), 1–12. <https://doi.org/10.46281/ijibfr.v12i1.2272>
- Sekaran, U., & Bougie, R. (2016). *Research Method for Business A Skill-Building Approach Seventh Edition* (Seventh Ed). John Wiley & Sons. https://doi.org/10.1007/978-94-007-0753-5_102084
- Syahriani, F., Fajri Mulyani, F., Fismanelly, F., Afifah, S., & Medani, A. (2024). Application of Maqasid Al-Shariah in Islamic Economics and Finance as the Development of Products of Islamic Value. *Hakamain: Journal of Sharia and Law Studies*, 2(1), 150–162. <https://doi.org/10.57255/hakamain.v2i1.322>
- Wati, Y., Irman, M., Yusrizal, Anton, & Renaldo, N. (2024). Green Intellectual Capital, Financial Performance, and Good Corporate Governance. *Jurnal Akuntansi Keuangan Dan Bisnis*, 17(1), 28–37. <https://doi.org/10.35143/jakb.v17i1.6267>
- Zulkifli, Z., Purwati, A. A., Renaldo, N., Hamzah, Z., & Hamzah, M. L. (2023). Employee performance of Sharia Bank in Indonesia : The mediation of organizational innovation and knowledge sharing. *Cogent Business & Management*, 10(3), 1–25. <https://doi.org/10.1080/23311975.2023.2273609>