

## DIGITAL TRANSFORMATION IN THE SHARIA ECONOMY: TECHNOLOGICAL INNOVATION TO STRENGTHEN THE HALAL FINANCIAL ECOSYSTEM IN THE 5.0 ERA

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### Abstract

This study aims to explore digital transformation in the Islamic economy and how technological innovation strengthens the halal financial ecosystem in the era of the Industrial Revolution 5.0. The research object includes digital-based Islamic financial services such as fintech, halal e-wallets, Islamic crowdfunding, and Islamic smart contracts. The method used is a descriptive, qualitative approach, involving in-depth interviews with industry players, regulators, and academics, as well as studies of literature and policy documentation. The results show that digitalization improves service efficiency, expands Islamic financial inclusion, and supports the achievement of maqashid Sharia. However, challenges remain in the form of low sharia digital literacy, suboptimal regulatory readiness, and the need for strict sharia governance and supervision. This study concludes that digital transformation is a fundamental strategy in building an inclusive, efficient, and competitive Islamic financial ecosystem. In the future, it is recommended to strengthen digital literacy, foster stakeholder synergy, and invest in halal technology infrastructure so that this transformation aligns with sharia principles as a whole.

**Keywords:** Sharia digitalization, Islamic fintech, Industrial Revolution 5.0.

## A. INTRODUCTION

The Industrial Revolution 5.0 marks a new era that prioritizes integrating technological sophistication with human values (Caporale et al., 2025). In the global economy, the penetration of digital technology across sectors, including the Islamic financial sector, has led to a significant shift (Wang et al., 2025). Developments such as artificial intelligence, blockchain, the Internet of Things (IoT), and big data are not only changing the way humans work but also changing the architecture of economic systems in a more adaptive, efficient, and inclusive direction (Nurhayati & Julina, 2025). On the other hand, the sharia economy, as an alternative system that upholds the values of justice, transparency, and sustainability, has excellent potential to develop in the context of digitalization. State of the Global Islamic Economy Report (Borrero & Yousafzai, 2025)

It shows that the Islamic finance sector is growing rapidly, with assets exceeding USD 3.06 trillion globally. However, to optimize this growth, digital transformation is essential so the halal financial system can reach a wider audience, especially the unbanked and underbanked. Indonesia, as a country with the largest Muslim population, has great potential in the development of a digital-based sharia economy. However, fundamental challenges remain, such as the limitations of sharia digital literacy, the low penetration of sharia fintech compared to conventional fintech, and the lack of infrastructure support for Islamic sharia-based digital services (Borrero & Yousafzai, 2025). Therefore, an innovative strategy is needed that synergizes technology and Islamic principles to strengthen the national halal financial ecosystem (Baba et al., 2025).

This phenomenon raises the need for systematic transformation in the implementation of Islamic financial services through a digital approach. Innovations such as Islamic mobile banking, halal e-wallets, sharia crowdfunding, and smart contracts based on Islamic principles are potential solutions to meet the needs of the Muslim digital generation, which demand speed, practicality, and compliance with sharia principles (Bejar et al., 2022).

Theoretically, the process of technology adoption in the Islamic economy can be analyzed using Rogers' Diffusion of Innovation Theory. This theory emphasizes that the adoption of innovation is influenced by perceptions of a technology's relative superiority, suitability, complexity, experimentation, and visibility (Dhar et al., 2026). In the context of digital Islamic finance, public perception of the suitability of innovation with Islamic values is a key factor in determining the success of transformation. Furthermore, the Technology Acceptance Model (TAM) by Davis provides a framework for understanding user behavior in accepting technology. In its application to Islamic fintech, two main factors—perceived usefulness and perceived ease of use—determine whether Muslim consumers will widely accept the technology (Dhar et al., 2026)

The incorporation of this model with Sharia values is important to ensure the success of digitalization. In Islamic economics, the normative foundation cannot be separated from the maqashid

of Sharia—the goals of Islamic Sharia, including the protection of religion, soul, intellect, descent, and property. Therefore, digital transformation in Islamic finance must be directed to support the achievement of this *maqashid*, not solely for the sake of efficiency or profitability (Yasin et al., 2025)

For example, innovations such as digital zakat and blockchain-based waqf can increase transparency and accountability in the management of Islamic social funds. In addition to accelerating financial inclusion, digitalization also strengthens the integrity of the Islamic financial system. The use of technology, such as smart contracts based on *murabahah* or *ijarah*, can help minimize the risk of fraud and *gharar* in transactions. This technology can also be used to build a halal ecosystem that is interconnected among industry players, ranging from producers and distributors to financial institutions (Ghassan & Al-Jeefri, 2016). Nonetheless, the challenges of digital regulation and ethics in the context of Sharia should not be ignored. The presence of technology must be accompanied by clear regulations and contemporary fatwas that adapt to digital developments. Collaboration between regulators, academics, and industry players is vital in shaping technology governance in accordance with Islamic principles (Radaideh & Azam, 2015)

Therefore, digital transformation in the Islamic economy is not just a technological choice but part of a grand strategy to strengthen the resilience, independence, and economic competitiveness of the people. This study will systematically discuss how technological innovations can be integrated within the framework of the Islamic economy to strengthen the halal financial ecosystem, while affirming the importance of Islamic values in the development of an inclusive and sustainable digital economy (Dhaoui & Khraief, 2014). In addition, the challenges of economic transformation, competition, and regulatory changes. The main challenges of financial reform include resistance to change, limited competent human resources, and uneven adoption of digital technology.

Other challenges are the management of state debt, which needs to be balanced with development needs, low financial inclusion, and transparency and accountability issues (Aslam Memon & Jabeen, 2018)

## **B. METHOD**

This research uses a descriptive qualitative approach to explore in depth the dynamics of digital transformation in the Islamic economy, particularly in strengthening the halal financial ecosystem. The qualitative approach was chosen because it can capture social realities and innovation processes that are not fully quantifiable but are important to analyze contextually. The primary focus of this study is how technological innovations—such as Islamic fintech, halal blockchain, and Islamic finance mobile applications—expand inclusion and strengthen Islamic values in the modern financial system (Salman & Nawaz, 2018). The data were collected through in-depth interviews with key informants, including sharia fintech practitioners, regulators from financial services authorities, Islamic economics academics, and MSME actors using digital-based Islamic financial services. In addition, a documentation study was

conducted on policies, industry reports, scientific journals, and other relevant secondary data. The sampling technique was carried out purposively, taking into account the involvement and understanding of informants in the digital transformation process in the Islamic financial sector (Haron et al., 2017)

In analyzing the data, the researcher uses a thematic analysis method to identify, classify, and interpret the main themes that emerge from field data and the literature. This analysis also considers the theory of Diffusion of Innovation (Ghassan & Alhajhoj, 2013) and Qashou & Saleh (2018), which are used to understand how technology adoption occurs in the Islamic financial system. These theories will help explain the pattern of Muslim people's acceptance of sharia-based digital innovations and the extent to which these technologies are in line with sharia maqashid. (Khodeir, 2017) and (Yasin et al., 2025). The direction of this research is not only to identify technological innovations applied in Islamic finance, but also to evaluate their contribution to improving Islamic literacy, accessibility, and compliance in digital financial services.

Thus, the results of this study are expected to make a conceptual and practical contribution to the development of Islamic economic digitalization strategies, both by regulators, industry players, and Islamic financial institutions, in line with the demands of the Industrial Revolution 5.0 and the needs of contemporary Muslim society (Alhodhaibi & Barakat, 2015)

### **C. RESULTS AND DISCUSSION**

The study's results show that digitalization in the Islamic economy has grown rapidly, especially in the technology-based financial services sector. Islamic fintech, halal e-wallets, Islamic crowdfunding, and the use of smart contracts based on Islamic contracts are the main drivers of innovation in the halal financial ecosystem. This innovation provides easy access and expands the reach of Islamic financial services to segments of society that were previously difficult to reach by the conventional system (Suryono et al., 2021)

Digital transformation also accelerates the process of delivering Islamic financial products and services in accordance with Sharia. Users can access Islamic banking applications, make digital zakat and waqf payments, and invest in Sharia through online platforms. This shows that technology is a strategic means in realizing sharia maqashid, namely maintaining wealth, expanding welfare, and increasing justice-based financial inclusion (Misran et al., 2012). Other findings show that perceptions of ease of use and usefulness of technology are the main factors driving the adoption of sharia fintech. As explained in the Technology Acceptance Model (TAM), the higher users' perceptions of a system's usefulness and convenience, the greater the tendency to adopt it (Andrade & Gonalo, 2021).

In the context of Islamic finance, religious value factors also strengthen the motivation for digital adoption. From the perspective of industry players, digitalization allows for operational cost efficiency and increased transaction accuracy. Several leading sharia fintechs in Indonesia and Malaysia have implemented automated services such as digital onboarding, sharia risk assessment, and blockchain-

based halal tracking systems (Dagostin et al., 2017). This proves that digital innovation is not only a response to technological developments, but also the need for efficiency and transparency. However, this research also found that Sharia digital literacy among the community is still relatively low. Many users do not understand the fundamental differences between Islamic and conventional fintech, especially in their contract structures and operational models. This is a serious challenge for regulators and industry players to systematically improve public education (Yudiantini & Jones, 2015).

On the regulatory side, the Financial Services Authority (OJK) and Bank Indonesia have developed a supervisory framework for Islamic fintech. However, there is still a gap between accelerating innovation and regulatory readiness. This aligns with previous research findings that digital regulation in the Islamic financial sector tends to lag behind technological developments (Menne et al., 2022). This imbalance has the potential to pose Sharia and operational risks. Within the framework of the Diffusion of Innovation theory (Lehtimäki et al., 2026), this study's results indicate that digital innovation in the Islamic economy has entered the "early majority" stage. This means that most Islamic financial institutions and MSMEs are increasingly open to adopting technology, although there is still resistance among conservatives who doubt the halalness of automated systems.

Fatwa-based education and consultative approaches can help overcome this resistance. Sharia crowdfunding is one of the real examples of how digitalization democratizes financing. Platforms such as Ethis, Kapital Boost, and Ammana allow micro businesses to obtain financing in accordance with Sharia principles without relying on banks. This innovation not only provides access to capital but also strengthens the principle of helping and community participation (Hafidh, 2021). In addition, the concept of embedded shariah is becoming increasingly relevant in the development of digital financial applications and systems. This means that sharia principles are not only an additional attribute, but are integrated into the system architecture from the beginning of design. A real example is the use of smart contracts for murabahah or wakalah contracts, which are automatically activated when sharia requirements are met (Caporale et al., 2025). In the context of the digital economy 5.0, technology involvement does not stop at automation; it also extends to personalization. Artificial intelligence (AI) and big data are used to map the needs of Muslim users and to offer financial services that better align with their values. This opens up opportunities to create financial experiences that are not only efficient but also ethical and spiritual (Huang & Zhou, 2025).

Digital transformation also allows for the creation of a more collaborative halal financial ecosystem. Sharia fintech can be connected to amil zakat institutions, sharia cooperatives, BMTs, and halal marketplaces in a single integrated ecosystem. This collaboration drives systemic efficiency and extends the impact of the Islamic economy to other sectors, such as halal tourism, education, and sharia logistics (Jaffar & Musa, 2014). Nevertheless, it is important to ensure that digital innovations remain within the Sharia compliance corridor. The use of technology must be verified by the Sharia Supervisory Board (DPS) to ensure that every product and service is in accordance with Islamic principles. This underscores the

importance of integrating technology with robust sharia governance (Wijayanti & Setiawan, 2023). This research also reveals that digital transformation opens up the space for Islamic economic da'wah through digital media.

Islamic finance education can now be delivered through social media, webinars, podcasts, and other digital platforms that reach younger Muslims. This is an excellent opportunity to strengthen awareness of the importance of Islamic economics as a just and sustainable system (OJK, 2017). As a policy implication, synergy is needed between the government, regulators, industry, and academia to build an inclusive and sustainable digital ecosystem of the sharia economy. Progressive regulatory support, incentives for halal innovation, and the integration of digital platforms in sharia financing schemes are concrete steps that need to be prioritized (Priyatnasari et al., 2024; Puspitasari, 2015). Thus, digital transformation in the Islamic economy is not just technical digitalization but a structural revolution to build an economic system that is more just, efficient, and in accordance with Islamic values. Technological innovation is a strategic instrument to strengthen the halal financial ecosystem in the increasingly complex and globally interconnected era of halal finance (Wijayanti & Setiawan, 2023)

#### **D. CLOSING**

##### **1. Conclusion**

The study's results show that digitalization in the Islamic economy has grown rapidly, especially in the technology-based financial services sector. Islamic fintech, halal e-wallets, Islamic crowdfunding, and the use of smart contracts based on Islamic contracts are the main drivers of innovation in the halal financial ecosystem. This innovation provides easy access and expands the reach of Islamic financial services to segments of society that were previously difficult to reach by the conventional system (Raquel et al., 2025). Digital transformation also accelerates the process of delivering Islamic financial products and services in accordance with Sharia.

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On the regulatory side, the Financial Services Authority (OJK) and Bank Indonesia have developed a supervisory framework for Islamic fintech. However, there is still a gap between accelerating innovation and regulatory readiness. This aligns with previous research findings that digital regulation in the Islamic financial sector tends to lag behind technological developments (Martinelli et al., 2025). The results of this study indicate that digital innovation in the Islamic economy has entered the "early majority" stage. This means that most Islamic financial institutions and MSMEs are increasingly open to adopting technology, although there is still resistance among conservatives who doubt the halalness of automated systems. Fatwa-based education and consultative approaches can help overcome this resistance. Sharia crowdfunding is one of the real examples of how digitalization democratizes financing. Platforms such as Ethis, Kapital Boost, and Ammana allow micro businesses to obtain financing in accordance with Sharia principles without relying on banks. This innovation not only provides access to capital, but also strengthens the principle of helping and community participation (Nasrillah, 2018)

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This research also reveals that digital transformation opens up the space for Islamic economic da'wah through digital media. Islamic finance education can now be delivered through social media, webinars, podcasts, and other digital platforms that reach younger Muslims. This is an excellent opportunity to strengthen awareness of the importance of Islamic economics as a just and sustainable system (OJK, 2017). As a policy implication, synergy is needed between the government, regulators, industry, and academia to build an inclusive and sustainable digital ecosystem of the sharia economy. Progressive regulatory support, incentives for halal innovation, and the integration of digital platforms in sharia financing schemes are concrete steps that need to be prioritized (Sugianto et al., 2021), (Dr. Effendi Sadly, SE., 2024) Thus, digital transformation in the Islamic economy is not just technical digitalization, but a structural revolution in building an economic system that is more just, efficient, and in accordance with Islamic values. Technological innovation is a strategic tool to strengthen the halal financial ecosystem in the increasingly complex, globally interconnected 5.0 era.

## **2. Suggestions**

Digital transformation in the Islamic economy has become a significant driver of financial inclusion and the effectiveness of the halal financial system. Through technologies such as Islamic fintech, halal blockchain, and Islamic finance applications, the sharia-based financial system is now more accessible to the broader community, including micro-entrepreneurs and the younger generation of Muslims. This innovation not only enhances efficiency and service speed but also reinforces the values of justice, transparency, and compliance with Sharia principles.

The application of theories such as the Technology Acceptance Model and the Diffusion of Innovation shows that positive perceptions of the convenience and usefulness of technology greatly influence the adoption of sharia-based digital financial services. However, challenges persist, including low sharia digital literacy, adaptive regulatory limitations, and the need for stricter sharia supervision of digital systems and products. This shows that digital transformation must be accompanied by strengthening educational, regulatory, and Sharia governance aspects. Overall, digitalization in Islamic economics is not just a response to the technological era, but also a strategic effort to realize sharia maqashid within the modern economy. This transformation opens up great opportunities for the creation of an inclusive, collaborative, and sustainable halal financial ecosystem, which can compete and be relevant in the dynamics of the Industrial Revolution 5.0



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