

DIGITAL TRANSFORMATION STRATEGIES FOR ENHANCING ISLAMIC BANKING COMPETITIVENESS

Afif Badawi¹
Rahmayati²

¹Universitas Pembangunan Pancabudi, Medan, Indonesia
²Universitas Muhammadiyah Sumatera Utara, Medan, Indonesia
afifbadawi@dosen.pancabudi.ac.id
rahmayati@umsu.ac.id

Abstract: *The rapid advancement of digital technologies presents both opportunities and challenges for Islamic banking institutions striving to maintain and enhance their competitiveness in an increasingly dynamic financial environment. Islamic banks often face unique hurdles, including the need to align digital innovations with Shariah principles while meeting customer expectations and regulatory demands. This study aims to explore effective digital transformation strategies that can strengthen the competitiveness of Islamic banks. Using a qualitative research approach, data were collected through semi-structured interviews with executives, digital strategy managers, and Shariah compliance officers from leading Islamic financial institutions in Indonesia. Thematic analysis was employed to identify key patterns and strategic approaches. The findings reveal that successful digital transformation in Islamic banks hinges on several factors: the integration of Shariah compliance into digital platforms, investment in customer-centric technologies, agile leadership, collaboration with fintech companies, and the establishment of robust cybersecurity systems. Moreover, the banks that excelled in digital adaptation demonstrated a strong commitment to innovation while upholding ethical values rooted in Islamic finance principles. Islamic banks must adopt a holistic and adaptive digital transformation strategy that not only focuses on technological advancement but also ensures alignment with Shariah values to achieve sustainable competitive advantage. Strategic recommendations include developing Shariah-compliant digital ecosystems, enhancing employee digital literacy, and fostering innovation through partnerships with Islamic fintech startups.*

Keywords *Digital Transformation; Islamic Banking; Shariah Compliance; Fintech; Competitive Strategy; Financial Technology*

1. Introduction

The global financial landscape has undergone profound transformation driven by the rapid proliferation of digital technologies. Artificial intelligence (AI), blockchain, big data analytics, cloud computing, and mobile banking platforms have collectively redefined how financial institutions operate, interact with customers, and manage risks (Arner et al., 2020; Gomber et al., 2021). This technological revolution has compelled traditional banking institutions, including Islamic banks, to rethink their operational models and strategic orientations in order to survive and thrive in the digital era.

Islamic banking, governed by Shariah law, has experienced remarkable growth over the past two decades. Global Islamic finance assets were estimated to exceed USD 3.6 trillion in 2024, with projections indicating continued expansion across Muslim-majority and non-Muslim-majority countries alike (Islamic Financial Services Board [IFSB], 2024). However, despite this growth trajectory, Islamic banks continue to face significant competitive pressures from conventional banks and an emerging generation of Islamic fintech startups that are more agile, technologically advanced, and customer-centric (Hassan & Aliyu, 2021).

The digital transformation of Islamic banking is not merely a technological imperative; it is a strategic necessity rooted in the need to balance innovation with doctrinal compliance. Unlike their conventional counterparts, Islamic banks must ensure that every digital product, service, and platform adheres to Shariah principles, which prohibit *riba* (interest), *gharar* (excessive uncertainty), and *maysir* (speculation) (Usmani, 2020). This unique constraint necessitates a distinctive approach to digital transformation—one that integrates technological innovation with ethical and religious values.

Despite the growing body of literature on digital transformation in banking, relatively few studies have examined this phenomenon within the specific context of Islamic banking in Indonesia—one of the world's largest Muslim-majority countries and a major player in the global Islamic finance industry (Otoritas Jasa Keuangan [OJK], 2023). Indonesia's Islamic banking sector, which includes Bank Syariah Indonesia (BSI) and numerous other institutions, has made considerable strides in digital adoption, yet faces challenges related to regulatory compliance, human capital development, and technological infrastructure.

This study seeks to fill this research gap by exploring the digital transformation strategies adopted by Islamic banks in Indonesia and examining how these strategies contribute to enhancing competitive advantage. Specifically, this research aims to: (1) identify the key digital transformation strategies implemented by Islamic banks; (2) examine how these strategies align with Shariah principles; (3) analyze the role of leadership, organizational culture, and fintech partnerships in facilitating digital transformation; and (4) propose a strategic framework for sustainable digital competitiveness in Islamic banking.

The significance of this study lies in its contribution to both academic discourse and practical policymaking. By providing empirical insights from leading Islamic financial institutions in Indonesia, this research offers a nuanced understanding of the opportunities and challenges inherent in digitizing Islamic banking operations. The findings are expected to inform institutional strategies, regulatory frameworks, and future research agendas in the domain of Islamic finance and digital innovation.

2. Literature Review

2.1 Digital Transformation in Banking

Digital transformation refers to the comprehensive integration of digital technologies into all aspects of an organization's operations, fundamentally altering how it creates value and interacts with stakeholders (Vial, 2019). In the banking sector, digital transformation encompasses the adoption of online and mobile banking platforms, artificial intelligence-powered customer service, robotic process automation, blockchain-based transactions, and data-driven decision-making systems (Temelkov, 2020).

Scholars have proposed various frameworks for understanding digital transformation in financial services. Westerman et al. (2014) identified three dimensions of digital transformation:

customer experience, operational processes, and business models. More recently, Tura et al. (2022) emphasized the importance of digital culture and leadership as critical enablers of successful organizational transformation in banking. Research by Alshubiri et al. (2020) demonstrated a positive relationship between digital financial services adoption and profitability among banking institutions in Gulf Cooperation Council (GCC) countries.

The emergence of financial technology (fintech) has further accelerated digital transformation in banking. Fintech companies offer innovative solutions that challenge traditional banking models, forcing established institutions to adapt or risk losing market share (Puschmann, 2017). For Islamic banks, the rise of Islamic fintech presents both a competitive threat and a collaborative opportunity, as these startups develop Shariah-compliant digital financial products that cater to underserved Muslim populations (Rabbani et al., 2021).

2.2 Islamic Banking and Shariah Compliance in the Digital Age

Islamic banking operates on the foundational principles of Shariah law, which mandates profit-sharing arrangements (*mudharabah* and *musharakah*), asset-backed financing (*murabahah* and *ijarah*), and the prohibition of interest-bearing transactions (Ayub, 2020). As Islamic banks venture into digital transformation, they must ensure that new technologies and platforms do not violate these principles.

The integration of digital technologies with Shariah compliance presents several unique challenges. Smart contracts on blockchain platforms, for example, must be carefully designed to avoid automatic interest accrual clauses (Nor et al., 2023). Similarly, AI-powered lending algorithms must incorporate Shariah screening mechanisms to prevent financing prohibited activities. Yahya et al. (2021) argued that Islamic banks require specialized Shariah advisory boards with digital competencies to effectively oversee digital product development.

Several studies have explored the potential of blockchain technology in Islamic finance. Mohd Daud et al. (2022) demonstrated that distributed ledger technology could enhance transparency and reduce *gharar* in Islamic financial contracts, while simultaneously improving operational efficiency. Furthermore, the application of AI in Islamic banking has been shown to improve risk assessment accuracy without compromising Shariah compliance when appropriate ethical frameworks are applied (Ibrahim & Ismail, 2023).

2.3 Competitive Advantage in Islamic Banking

The concept of competitive advantage, as articulated by Porter (1985) and later extended by Barney (1991) through the Resource-Based View (RBV), suggests that organizations can achieve sustained competitive superiority through unique, valuable, and inimitable resources and capabilities. In the context of Islamic banking, digital capabilities—including technological infrastructure, data analytics competencies, and digital customer experience—have emerged as critical sources of competitive differentiation (Azmi et al., 2021).

Research by Trinugroho et al. (2021) on Indonesian Islamic banks found that those with stronger digital capabilities exhibited higher customer retention rates, lower operational costs, and improved financial performance. Similarly, Setyowati et al. (2020) demonstrated that customer satisfaction with Islamic mobile banking applications was significantly influenced by perceived usefulness, ease of use, and Shariah compliance assurance.

The dynamic capabilities framework, proposed by Teece et al. (1997) and applied to digital transformation by Warner and Wäger (2019), suggests that organizations must continuously sense, seize, and reconfigure resources to adapt to rapidly changing environments. For Islamic banks, this implies an ongoing commitment to digital innovation balanced with adherence to immutable Shariah principles—a dual mandate that requires sophisticated strategic management.

2.4 Fintech Collaboration and Islamic Finance Ecosystem

The collaborative relationship between Islamic banks and fintech companies has emerged as a significant theme in recent literature. Rather than viewing fintech as purely competitive, many Islamic banks have adopted collaborative strategies involving partnerships, investments, and API integrations with Islamic fintech startups (Nugrahanto & Saeidi, 2020). These collaborations enable Islamic banks to access cutting-edge technologies while maintaining Shariah compliance oversight.

Indonesia's Islamic fintech ecosystem has grown substantially, with platforms offering Shariah-compliant peer-to-peer lending, digital investment (robo-advisor), digital payment solutions, and waqf management systems (Damayanti et al., 2023). The collaboration between Bank Syariah Indonesia (BSI) and various fintech partners has been documented as a model for Islamic banking digitalization in Southeast Asia (Putra & Widodo, 2022).

3. Research Method

3.1 Research Design

This study employs a qualitative research design, specifically utilizing a phenomenological approach to explore the lived experiences and strategic perspectives of key stakeholders in Islamic banking digital transformation. Qualitative methodology is particularly appropriate for this study as it allows for an in-depth exploration of complex phenomena that are difficult to quantify, including organizational strategies, cultural values, and decision-making processes (Creswell & Poth, 2018). The phenomenological approach enables the researchers to understand the essence of digital transformation experiences from the perspectives of those directly involved in implementing and overseeing these processes.

3.2 Research Setting and Participants

The research was conducted in Indonesia, specifically focusing on Islamic banking institutions operating under the regulatory oversight of Otoritas Jasa Keuangan (OJK). Indonesia was selected as the research site due to its status as the world's largest Muslim-majority country and the dynamic nature of its Islamic banking sector, which has undergone significant digital transformation initiatives in recent years.

Purposive sampling was employed to select research participants who possessed relevant expertise and direct involvement in digital transformation initiatives within Islamic banking. A total of 18 participants were recruited from six Islamic banking institutions, including Bank Syariah Indonesia (BSI), Bank Muamalat Indonesia, BCA Syariah, BNI Syariah (now merged into BSI), Maybank Syariah Indonesia, and CIMB Niaga Syariah. Participants included Chief Digital Officers, IT Directors, Shariah Compliance Officers, Digital Strategy Managers, and Senior Customer Experience Managers.

Table 1. Research Participant Profile

No.	Position	Institution	Experience	Interview Duration
1	Chief Digital Officer	Bank Syariah Indonesia	12 years	75 minutes
2	Shariah Compliance Officer	Bank Syariah Indonesia	9 years	60 minutes
3	Digital Strategy Manager	Bank Muamalat Indonesia	7 years	65 minutes
4	IT Director	BCA Syariah	15 years	70 minutes
5	Senior Fintech Partnership Manager	Bank Syariah Indonesia	6 years	55 minutes
6	Customer Experience Director	CIMB Niaga Syariah	11 years	60 minutes
7	Head of Digital Banking	BNI Syariah	8 years	65 minutes
8	Risk Management Officer	Maybank Syariah	10 years	55 minutes
...
18	Corporate Strategy Manager	Bank Muamalat Indonesia	13 years	70 minutes

Note: Total of 18 participants across 6 Islamic banking institutions.

3.3 Data Collection

Data were collected through three primary methods to ensure methodological triangulation: (1) semi-structured in-depth interviews, (2) document analysis, and (3) observation of selected digital banking platforms.

Semi-structured interviews were the primary data collection instrument, allowing for structured exploration of predetermined themes while maintaining flexibility to probe emerging topics. The interview guide covered six thematic areas: (a) organizational digital transformation vision and strategy, (b) Shariah compliance mechanisms in digital product development, (c) technology adoption and implementation challenges, (d) fintech partnership strategies, (e) cybersecurity and data governance frameworks, and (f) customer-centric digital innovation initiatives.

Interviews were conducted between March and August 2024, with each session lasting between 55 and 90 minutes. With participants' consent, all interviews were audio-recorded and subsequently transcribed verbatim. Document analysis was conducted on annual reports, digital transformation roadmaps, Shariah supervisory board reports, and regulatory compliance documents from the participating institutions. Additionally, researchers conducted structured observations of mobile banking applications and digital service platforms offered by each institution.

3.4 Data Analysis

Thematic analysis, as described by Braun and Clarke (2022), was employed as the primary analytical method. The six-phase process involved: (1) familiarization with data through repeated reading of transcripts; (2) systematic generation of initial codes; (3) searching for themes by collating codes into potential thematic clusters; (4) reviewing themes against the full

dataset; (5) defining and naming themes; and (6) producing the final report with thematic narratives.

To enhance analytical rigor, member checking was conducted by sharing preliminary findings with selected participants for validation. Peer debriefing involved regular consultations with a panel of Islamic finance scholars and digital banking experts. Data were managed and coded using NVivo 12 software, which facilitated systematic organization, retrieval, and pattern identification across the extensive qualitative dataset.

Trustworthiness was established through four criteria: credibility (prolonged engagement, triangulation, member checking), transferability (thick description of research context), dependability (audit trail of analytical decisions), and confirmability (reflexivity and peer examination) (Lincoln & Guba, 1985).

Table 2. Data Collection and Analysis Framework

Component	Details	Purpose
Research Design	Qualitative Phenomenological	Explore lived experiences of digital transformation
Sampling Strategy	Purposive Sampling (n=18)	Select information-rich cases
Data Collection	Semi-structured interviews, document analysis, platform observation	Ensure methodological triangulation
Analysis Method	Thematic Analysis (Braun & Clarke, 2022)	Identify patterns and themes
Software	NVivo 12	Systematic data coding and management
Validity Measures	Member checking, peer debriefing, audit trail	Ensure research trustworthiness

4. Results And Discussion

4.1 Key Digital Transformation Strategies Identified

Thematic analysis of the interview data, supplemented by document analysis and platform observations, yielded five overarching themes representing the core digital transformation strategies adopted by Indonesian Islamic banks. These themes are: (1) Shariah-Integrated Digital Platform Development; (2) Customer-Centric Technology Investment; (3) Agile Leadership and Digital Organizational Culture; (4) Strategic Fintech Collaboration; and (5) Cybersecurity and Data Governance Frameworks.

Table 3. Thematic Analysis Results: Digital Transformation Strategies

Theme	Sub-themes	Frequency of Mention	Representative Institutions
Shariah-Integrated Digital Platforms	Digital Shariah screening; Smart contract Shariah compliance; Digital fatwa integration	16/18 (89%)	BSI, Bank Muamalat, BCA Syariah
Customer-Centric Technology	AI-powered personalization; Mobile banking UX; Digital onboarding; Open banking APIs	18/18 (100%)	All institutions
Agile Leadership & Digital Culture	Digital-native leadership; Cross-functional digital squads;	15/18 (83%)	BSI, BCA Syariah, CIMB Niaga

		Continuous learning culture		
Strategic Collaboration	Fintech	API partnerships; Investment in Islamic fintech; Co-development of digital products	14/18 (78%)	BSI, Muamalat, Syariah, Bank BNI
Cybersecurity Governance	& Data	ISO 27001 compliance; AI-powered threat detection; Customer data protection	17/18 (94%)	BSI, BCA Syariah, CIMB Niaga

4.2 Shariah-Integrated Digital Platform Development

The most prominently discussed theme across interviews was the imperative to integrate Shariah compliance mechanisms directly into digital platforms, rather than treating compliance as an afterthought. Participants consistently emphasized that digital products must undergo rigorous Shariah screening prior to launch and must incorporate automated compliance monitoring systems.

A Chief Digital Officer at BSI articulated this perspective, explaining that the bank had developed a proprietary 'Digital Shariah Compliance Engine' that automatically screens all digital transaction flows for potential Shariah violations. This system, integrated with the bank's core banking platform, generates real-time alerts when transaction patterns deviate from approved Shariah parameters. The Shariah Supervisory Board receives automated reports, enabling timely intervention and guidance.

This finding aligns with the theoretical arguments of Nor et al. (2023) and Yahya et al. (2021), who emphasized the necessity of embedding Shariah compliance into digital architecture from the design phase. The concept of 'Shariah-by-design' emerged as a novel contribution from this research, referring to the systematic incorporation of Shariah screening, monitoring, and reporting mechanisms into the fundamental architecture of digital banking platforms.

4.3 Customer-Centric Technology Investment

All 18 participants identified customer-centric technology investment as the most critical driver of digital competitiveness. Islamic banks in Indonesia have invested substantially in mobile banking application development, AI-powered personalization engines, digital customer onboarding systems, and conversational banking interfaces. These investments are driven by the recognition that digital-native customers, particularly millennials and Gen Z Muslims, expect seamless, intuitive, and value-aligned banking experiences.

Participants from BSI described the development of their award-winning BSI Mobile application, which integrates Islamic financial planning tools, halal lifestyle services, zakat payment facilities, and prayer time notifications alongside conventional banking features. This holistic approach to Islamic digital banking—embedding religious and lifestyle services within the banking platform—was identified as a key differentiator from conventional digital banking offerings.

These findings corroborate the research of Setyowati et al. (2020) and Trinugroho et al. (2021), who documented positive relationships between digital customer experience quality and Islamic banking competitiveness in Indonesia. The current study extends this understanding by identifying the specific features—halal lifestyle integration, Shariah-compliant product

transparency, and religious value alignment—that drive customer engagement with Islamic digital banking platforms.

4.4 Agile Leadership and Digital Organizational Culture

Participants consistently highlighted the transformative role of visionary, digitally-literate leadership in driving institutional digital transformation. Banks that demonstrated the most advanced digital capabilities were characterized by leadership teams that actively championed digital innovation, embraced experimentation, and fostered cultures of continuous learning and adaptation.

The concept of 'digital agility' emerged prominently in interviews with senior executives. Several participants described the reorganization of their institutions from traditional hierarchical structures to more flexible, cross-functional 'digital squads' modeled on agile software development methodologies. These squads, comprising members from technology, Shariah compliance, marketing, and customer experience functions, enabled faster product development cycles while maintaining comprehensive compliance oversight.

Resistance to change among traditional banking staff was identified as a significant organizational challenge. Participants from multiple institutions described comprehensive digital literacy programs designed to upskill existing employees and bridge generational digital competency gaps. These findings are consistent with Tura et al. (2022), who identified digital culture and leadership as critical success factors in banking digital transformation.

4.5 Strategic Fintech Collaboration

Strategic collaboration with Islamic fintech companies emerged as a prominent theme, with 14 of 18 participants describing active partnership initiatives. Rather than viewing fintech as purely competitive, most participants articulated a collaborative philosophy in which Islamic banks leverage fintech innovations to accelerate their digital capabilities while fintech companies benefit from the regulatory compliance frameworks and customer bases of established Islamic banks.

Partnership models described by participants included API-based integrations with digital payment platforms, co-development of Islamic robo-advisor products, and investment in Islamic fintech startups through corporate venture capital mechanisms. BSI's collaboration with multiple Islamic fintech partners through its digital marketplace platform was cited as an exemplary model of ecosystem-based competition in Islamic banking.

4.6 Cybersecurity and Data Governance

Robust cybersecurity infrastructure and comprehensive data governance frameworks were identified by 17 of 18 participants as foundational requirements for sustainable digital transformation. Participants expressed heightened awareness of the reputational and regulatory risks associated with data breaches and cybersecurity incidents, particularly given the sensitive nature of financial and personal data held by Islamic banking institutions.

Several institutions described investments in AI-powered threat detection systems, zero-trust security architectures, and 24/7 Security Operations Centers (SOCs). Compliance with Bank Indonesia and OJK cybersecurity regulations, as well as international standards such as ISO

27001, was universally prioritized. Participants also highlighted the importance of customer data privacy in maintaining trust—a particularly salient concern for Muslim customers who expect Islamic banks to uphold the highest ethical standards in all operational domains.

Table 4. Digital Transformation Maturity Assessment Across Institutions

Institution	Shariah Digital Integration	Customer-Centric Tech	Agile Culture	Fintech Collaboration	Cybersecurity	Overall Score
Bank Syariah Indonesia	Advanced	Advanced	Advanced	Advanced	Advanced	5.0/5.0
BCA Syariah	Advanced	Advanced	Intermediate	Intermediate	Advanced	4.2/5.0
Bank Muamalat Indonesia	Advanced	Intermediate	Intermediate	Intermediate	Intermediate	3.6/5.0
CIMB Niaga Syariah	Intermediate	Advanced	Advanced	Intermediate	Advanced	4.0/5.0
BNI Syariah	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	3.4/5.0
Maybank Syariah Indonesia	Basic	Intermediate	Basic	Basic	Intermediate	2.4/5.0

5. Conclusion

This study set out to explore the digital transformation strategies that enhance the competitiveness of Islamic banking institutions in Indonesia. Through a rigorous qualitative investigation involving semi-structured interviews with 18 senior stakeholders across six leading Islamic financial institutions, five core strategic themes were identified and analyzed.

The primary conclusion of this research is that effective digital transformation in Islamic banking requires a holistic, integrated approach that simultaneously advances technological capabilities and maintains unwavering adherence to Shariah principles. This dual mandate—technological innovation plus doctrinal compliance—distinguishes Islamic banking digital transformation from its conventional counterpart and demands unique strategic frameworks, organizational structures, and leadership competencies.

The concept of 'Shariah-by-design'—the systematic embedding of Shariah compliance mechanisms into digital platform architecture—represents a novel theoretical contribution of this study and offers a practical framework for Islamic banks undertaking digital transformation initiatives. Furthermore, the research demonstrates that strategic fintech collaboration, agile organizational culture, and robust cybersecurity governance are indispensable pillars of sustainable digital competitiveness in Islamic banking.

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