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Islamic Fintech for Financial Inclusion in MSMEs: Comparative Analysis of Egypt and Indonesia Evidence

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Abstract

Objective: This study aims to comparatively analyse the role of Islamic fintech in promoting financial inclusion for Micro, Small, and Medium Enterprises (MSMEs) in Egypt and Indonesia, two of the world's largest Muslim-majority economies. **Theoretical framework:** The study is grounded in the concepts of financial inclusion, Islamic finance, digital financial ecosystems, and Maqasid al-Shariah, which emphasise equitable access to financial services, sustainable economic development, and the expansion of Sharia-compliant digital finance. **Literature review:** Existing studies primarily examine Islamic fintech or financial inclusion within individual countries, with limited comparative evidence integrating official regulatory and industry data from Egypt and Indonesia. This study addresses that gap by providing a unified comparative perspective. **Methods:** A qualitative comparative analytical approach based on secondary data was employed using the World Bank Global Findex (2011–2025), Central Bank of Egypt (CBE) reports, Financial Services Authority (OJK) and DSN-MUI regulatory documents, Egyptian Islamic Finance Association (EIFA) reports, and the DinarStandard/Elipses Global Islamic Fintech Report series (2020/21–2025/26). **Results:** Indonesia demonstrates a more mature Islamic fintech ecosystem supported by an earlier and dedicated Sharia fintech regulatory framework, leading to stronger financial inclusion and greater global competitiveness. Although Egypt has significantly improved financial inclusion, with the CBE reporting a rise from 27% in 2016 to 77.6% in 2025 alongside substantial growth in MSME financing, Islamic banking assets and fintech development remain comparatively limited. **Implications:** The findings highlight the importance of strengthening Sharia-specific fintech regulation and expanding Islamic digital financial services to accelerate MSME inclusion. **Novelty:** This study integrates fragmented official and industry evidence into a single comparative framework, providing an updated benchmark for evaluating Islamic fintech-driven financial inclusion in Egypt and Indonesia.

Keywords: islamic fintech, financial inclusion, msmes, sharia compliance, egypt and indonesia.

INTRODUCTION

Micro, small, and medium enterprises (MSMEs) play a fundamental role in fostering economic growth, employment generation, poverty reduction, and innovation in both developed and developing economies [1]. In Egypt and Indonesia, MSMEs constitute the largest share of business establishments and provide employment opportunities for millions of people, making them a critical driver of national economic resilience [2]. Despite their significant contribution to gross domestic product (GDP) and labour markets, many MSMEs continue to face substantial barriers in accessing formal financial services. Limited access to credit, high financing costs, inadequate collateral, and geographical disparities have constrained the growth potential of these enterprises, particularly in rural and underserved communities [3]. These challenges are further compounded by financial exclusion among individuals, as a considerable proportion of adults in both countries remain outside the formal banking system despite ongoing government initiatives aimed at expanding financial access [4].

According to the World Bank's *Global Findex Database 2025*, Egypt and Indonesia remain among the eight economies that collectively account for more than 650 million unbanked adults worldwide, alongside Bangladesh, China, India, Mexico, Nigeria, and Pakistan [5]. Although financial inclusion has improved considerably over the past decade, significant disparities persist in account ownership, digital payment adoption, formal savings, and access to business financing [6]. Such gaps limit the capacity of MSMEs to obtain affordable financing, participate in digital commerce, and integrate into formal financial markets. Consequently, enhancing financial inclusion has become a strategic priority for policymakers seeking to promote inclusive and sustainable economic development while supporting the achievement of the Sustainable Development Goals (SDGs) [7].

In recent years, Islamic financial technology (Islamic fintech) has emerged as one of the most promising mechanisms for addressing these challenges. Islamic fintech combines technological innovation with Sharia-compliant financial principles to deliver financial services that avoid *riba* (interest), *gharar* (excessive uncertainty), and *maysir* (speculation), while promoting transparency, risk sharing, and ethical investment [8]. By utilising digital platforms, mobile applications, peer-to-peer (P2P) financing, crowdfunding, digital payment systems, and other technology-enabled financial solutions, Islamic fintech has expanded opportunities for individuals and businesses that have traditionally remained excluded from conventional banking systems [9]. This model is particularly relevant in Muslim-majority countries where religious considerations influence financial behaviour and where many potential users prefer financial products that comply with Islamic legal and ethical principles [10].

Although both Egypt and Indonesia recognise the importance of Islamic finance as a tool for expanding financial inclusion, the development of their Islamic fintech ecosystems has followed different trajectories [11]. Indonesia has established one of the world's most comprehensive regulatory environments for Islamic fintech through the Financial Services Authority (OJK). The introduction of POJK No. 77/2016 on technology-based lending services, subsequently updated by POJK No. 10/2022, together with the issuance of DSN-MUI Fatwa No. 117/2018 on information technology-based financing services according to Sharia principles, has provided a clear legal and operational framework for Islamic digital financial institutions [12]. These regulatory developments have encouraged innovation, increased investor confidence, and supported the rapid expansion of Sharia-compliant peer-to-peer financing, digital payments, crowdfunding platforms, and other Islamic fintech services. Consequently, Indonesia has become one of the leading global markets for Islamic fintech, supported by strong institutional coordination between regulators, Islamic financial institutions, fintech providers, and religious authorities [13].

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By contrast, Egypt's Islamic finance industry has historically developed through Islamic banking windows and fully fledged Islamic banks operating under the supervision of the Central Bank of Egypt (CBE). Although the country has made remarkable progress in expanding financial inclusion through nationwide digital transformation initiatives, financial literacy programmes, and MSME financing schemes, the Islamic fintech sector remains relatively limited compared with Indonesia [14]. Most Islamic financial activities continue to be concentrated within traditional banking institutions rather than specialised Sharia-compliant fintech platforms. Nevertheless, recent government efforts to promote digital payments, financial technology, entrepreneurship, and SME financing suggest growing opportunities for expanding Islamic digital financial services in the coming years [15].

The contrasting experiences of Egypt and Indonesia provide an important opportunity for comparative analysis. While both countries possess large Muslim populations and recognise Islamic finance as an instrument for inclusive economic development, differences in regulatory frameworks, institutional support, market maturity, and technological adoption have produced varying levels of Islamic fintech development and financial inclusion outcomes [16]. Understanding these differences is particularly important for identifying effective policy approaches that can strengthen access to finance for MSMEs while ensuring compliance with Islamic financial principles. Comparative studies of this nature remain relatively limited despite increasing academic and policy interest in Islamic fintech and digital financial inclusion [17].

Accordingly, this study seeks to examine the current state of Islamic fintech and financial inclusion in Egypt and Indonesia through a comparative analytical perspective. Specifically, the study addresses three principal research questions. First, how do Egypt and Indonesia compare regarding key financial inclusion indicators and the relative development of their Islamic banking sectors? Second, what is the current position of each country within the global Islamic fintech industry, as reflected in successive editions of the Global Islamic Fintech (GIFT) Report? Third, what do Egypt's recent financial inclusion initiatives, particularly those implemented by the Central Bank of Egypt to support MSMEs and digital financial services, indicate about the future trajectory of Islamic finance-led financial inclusion? By answering these questions, the study aims to contribute to the growing body of literature on Islamic fintech while providing evidence-based insights for policymakers, regulators, financial institutions, and researchers interested in promoting inclusive and sustainable economic development through Sharia-compliant digital finance [18].

LITERATURE REVIEW

Financial Inclusion in Egypt and Indonesia

Financial inclusion has become a central policy objective in both Egypt and Indonesia because of its recognised contribution to inclusive economic growth, poverty reduction, and the development of Micro, Small, and Medium Enterprises (MSMEs). Access to formal financial services enables individuals and businesses to save securely, obtain financing, conduct digital transactions, and participate more effectively in economic activities. Despite considerable progress over the past decade, both countries continue to face challenges in expanding access to financial services, particularly among low-income households, women, rural communities, and small businesses [19].

According to the World Bank Global Findex Database 2021, financial inclusion has improved substantially in both countries, although at different rates. In Egypt, adult account ownership increased from approximately 10% in 2017 to 27% in 2021,

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reflecting the impact of national financial inclusion initiatives and digital payment reforms. Indonesia experienced a more consistent upward trend, with account ownership increasing from 20% in 2011 to 36% in 2014 before reaching 52% in 2021. These findings indicate that Indonesia has achieved broader penetration of formal financial services than Egypt, largely supported by earlier digital transformation, stronger financial infrastructure, and wider adoption of electronic payment systems [20].

It is important, however, to distinguish the Global Findex indicators from Egypt's national financial inclusion statistics. The Central Bank of Egypt (CBE) applies a broader measurement framework that includes traditional bank accounts, Egypt Post accounts, mobile wallets, and prepaid payment cards. Using this methodology, Egypt's financial inclusion rate increased from 27% in 2016 to 77.6% by December 2025, representing one of the fastest improvements recorded in the region [21]. Since the Global Findex and CBE statistics rely on different definitions, methodologies, and reporting periods, the two measures should not be directly compared. Instead, they provide complementary perspectives: the Global Findex facilitates international comparison, while the CBE data illustrate domestic progress in expanding access to formal and digital financial services [22].

Islamic Banking Depth

The expansion of Islamic banking represents another important indicator of financial sector development, particularly in Muslim-majority economies where demand for Sharia-compliant financial services continues to increase. Islamic banks provide financing based on principles of profit and loss sharing, asset-backed transactions, and ethical investment, thereby offering alternatives to conventional interest-based banking while supporting financial inclusion among individuals and businesses seeking Sharia-compliant products [23].

In Egypt, the Islamic banking industry has experienced steady growth during the past decade. According to the Egyptian Islamic Finance Association (EIFA), Islamic banking assets reached approximately EGP 1.14 trillion by December 2024, accounting for nearly 5% of the country's total banking assets [24]. The sector consists of 15 banks licensed by the Central Bank of Egypt to offer Islamic banking services, including four fully fledged Islamic banks alongside conventional banks operating Islamic banking windows. Although the sector remains relatively small compared with conventional banking, recent growth reflects increasing customer demand, regulatory support, and the gradual expansion of Sharia-compliant financial products [25].

Indonesia has likewise experienced continuous growth in Islamic banking, although its market share remains modest relative to the country's overall banking industry. Data published by the Financial Services Authority (OJK) indicate that Islamic banking assets increased from approximately 5% of total banking assets in 2016 to around **7–8%** by 2024–2025. As of October 2023, Indonesia's Islamic banking industry comprised 13 full-fledged Islamic commercial banks and 20 Islamic banking units operating within conventional banks. The sector has benefited from sustained regulatory reforms, industry consolidation, and government initiatives designed to strengthen the competitiveness of Islamic finance while expanding financial inclusion [26].

Islamic Fintech Development

The rapid development of Islamic financial technology (Islamic fintech) has transformed the delivery of Sharia-compliant financial services by integrating digital innovation with Islamic financial principles. Islamic fintech encompasses a wide range of services, including digital payments, peer-to-peer (P2P) financing, crowdfunding, digital investment platforms, and other technology-enabled financial solutions that comply with Sharia requirements. As digital finance continues to expand globally, Islamic fintech has become an increasingly important mechanism for improving financial inclusion, particularly among MSMEs and underserved populations [27].

The annual Global Islamic Fintech (GIFT) Report, jointly published by DinarStandard and Elipses, demonstrates the rapid expansion of the global Islamic fintech market. Total Islamic fintech transaction volume increased from approximately USD 100 billion in the 2020/21 report to USD 138 billion in 2022/23, USD 161 billion in 2023/24, and USD 198 billion in 2024/25. The report further projects that transaction volumes will reach approximately USD 306 billion by 2027/28 and USD 341 billion by 2028/29, reflecting the growing adoption of digital Islamic financial services across international markets [28].

Within this global landscape, Indonesia has consistently ranked among the five largest Islamic fintech markets worldwide, alongside Saudi Arabia, Iran, Malaysia, and the United Arab Emirates. This strong international position reflects Indonesia's comprehensive regulatory framework, expanding digital economy, supportive Islamic finance ecosystem, and high level of fintech adoption among consumers and businesses. In contrast, Egypt has not yet been included among the top ten Islamic fintech markets in the 2025/26 GIFT Report, indicating that its Islamic fintech industry remains at an earlier stage of development despite substantial progress in digital financial inclusion. These differences highlight the varying levels of ecosystem maturity between the two countries and provide an important basis for comparative analysis of how regulatory frameworks, institutional support, and technological innovation influence the development of Islamic fintech and its contribution to financial inclusion [29].

METHODOLOGY

This study employs a documentary comparative-analytical research design to examine the development of Islamic fintech and its contribution to financial inclusion for Micro, Small, and Medium Enterprises (MSMEs) in Egypt and Indonesia. Rather than collecting primary data through surveys or interviews, the study relies exclusively on secondary data obtained from official publications, regulatory documents, and internationally recognised databases. This approach is appropriate because the objective of the research is to compare the current state of Islamic fintech ecosystems, financial inclusion indicators, and Islamic banking development using authoritative and publicly available statistics [30].

The documentary evidence was collected from several principal sources. International financial inclusion indicators were obtained from the World Bank Global Findex Database (2021 and 2025 editions). National financial inclusion statistics and MSME financing data for Egypt were collected from the Central Bank of Egypt (CBE), particularly the *Financial Inclusion Strategy (2022–2025)* and the *Financial Inclusion Datahub* [31]. Information concerning Indonesia's Islamic fintech regulatory framework was obtained from the Financial Services Authority (OJK), including POJK No. 77/2016 and its updated regulation POJK No. 10/2022, together with DSN-MUI Fatwa No. 117/DSN-MUI/II/2018, which provides the Sharia principles governing technology-based financing services [32]. Data relating to the size and development of Egypt's Islamic banking sector were gathered from reports published by the Egyptian Islamic Finance Association (EIFA) and verified through reputable financial news sources, including *Daily News Egypt*, *Egypt Today*, and *Zawya*. Global Islamic fintech market data and international rankings were obtained

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from successive editions of the DinarStandard–Elipses Global Islamic Fintech (GIFT) Report (2023/24–2025/26) [33].

The collected data were analysed using comparative descriptive analysis. Key indicators, including financial inclusion, Islamic banking market share, Islamic fintech market development, and MSME financing, were extracted from the most recent reporting periods available for each country. To enhance data reliability, statistics were cross-checked with at least one additional authoritative secondary source whenever possible. The analysis focuses on identifying similarities, differences, and developmental trends between Egypt and Indonesia rather than establishing causal relationships.

RESULTS AND DISCUSSION

Comparative Analysis of Financial Inclusion and Islamic Finance

The comparative analysis reveals significant differences in the development of financial inclusion, Islamic banking, and Islamic fintech between Egypt and Indonesia. Although both countries have adopted national strategies to improve financial access and promote digital financial services, Indonesia has achieved greater progress in establishing a mature Islamic financial ecosystem supported by comprehensive regulatory policies. Egypt, on the other hand, has demonstrated remarkable improvements in overall financial inclusion, particularly through digital financial services and MSME financing initiatives, although its Islamic fintech sector remains at an earlier stage of development [34].

Table 1 summarises the principal indicators collected from international databases, national regulators, and industry reports. The comparison shows that Indonesia records higher levels of account ownership, a larger Islamic banking sector, and a stronger international position in the Islamic fintech market. Conversely, Egypt has experienced one of the fastest increases in financial inclusion according to the Central Bank of Egypt's national measurement framework, indicating rapid domestic progress despite remaining below Indonesia in internationally comparable indicators [35].

Table 1. Comparative Financial Inclusion and Islamic Finance Indicators

Indicator (Latest Available Year)	Egypt	Indonesia	Source
Adult account ownership (Global Findex 2021)	27%	52%	World Bank Global Findex (2021)
National financial inclusion rate	77.6% (Dec 2025)	N/A	Central Bank of Egypt
Islamic banking share of total banking assets	Approximately 5%	Approximately 7–8%	EIFA; OJK
Position in Global Islamic Fintech Market	Outside Top 10	Top Five	GIFT Report 2025/26

The findings indicate that although Egypt has made considerable progress in expanding financial access, Indonesia continues to demonstrate stronger performance across internationally comparable indicators. This reflects differences in regulatory maturity, digital infrastructure, institutional coordination, and the historical development of Islamic finance within each country [36].

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Financial Inclusion Trends

Financial inclusion has improved significantly in both countries during the last decade. According to the World Bank Global Findex Database, Indonesia increased adult account ownership from approximately 20% in 2011 to 36% in 2014 before reaching 52% in 2021. This continuous improvement reflects sustained government investment in digital finance, financial literacy, mobile banking, and electronic payment systems [37].

Egypt also experienced notable progress, although from a lower starting point. Adult account ownership increased from approximately 10% in 2017 to 27% in 2021. While this growth is substantial, it remains below Indonesia's level according to internationally comparable data [38].

However, Egypt's domestic financial inclusion statistics present a considerably different picture. Using the Central Bank of Egypt's broader methodology—which includes bank accounts, Egypt Post accounts, prepaid cards, and mobile wallets—the country's financial inclusion rate increased from 27% in 2016 to 77.6% by December 2025. This remarkable improvement demonstrates the success of Egypt's digital transformation strategy and financial inclusion initiatives [39].

It is important to recognise that the Global Findex and CBE indicators employ different definitions and methodologies. Consequently, they should not be interpreted as directly comparable measures but rather as complementary indicators describing financial inclusion from international and national perspectives.

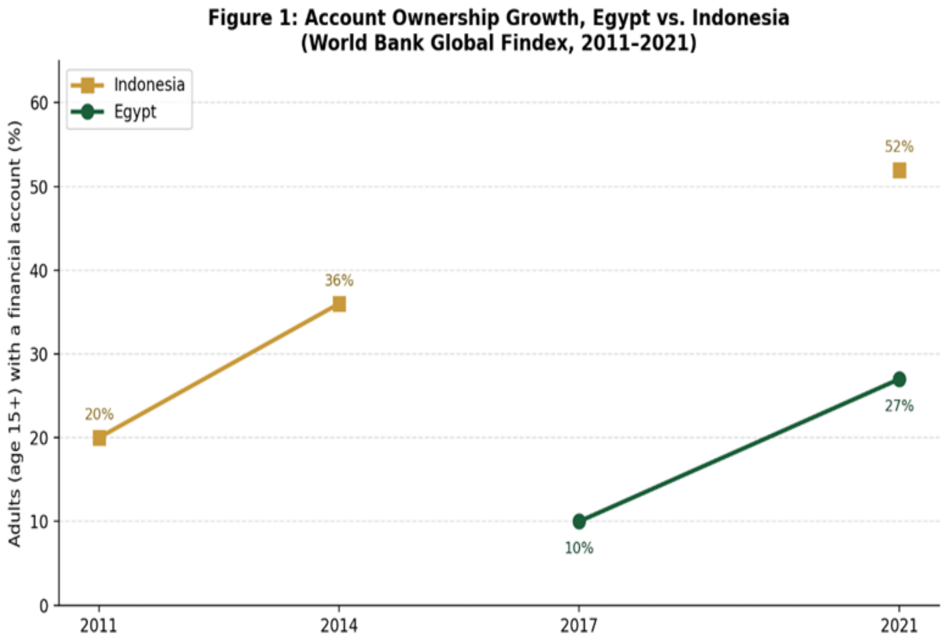

Figure 1. Account Ownership Growth in Egypt and Indonesia (World Bank Global Findex, 2011–2021)

(Insert line chart illustrating the growth of adult account ownership in Egypt and Indonesia using Global Findex data.)

Figure 1 clearly illustrates Indonesia's steady upward trajectory throughout the decade, whereas Egypt demonstrates rapid improvement during the period for which comparable Global Findex data are available. Although both countries have expanded access to financial services, Indonesia maintains a significant advantage in formal account ownership [40].

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Development of Islamic Banking

Islamic banking represents another important indicator of financial sector development in Muslim-majority economies. The comparative evidence suggests that Indonesia possesses a deeper Islamic banking sector than Egypt, although both countries have experienced continuous expansion [41].

According to the Egyptian Islamic Finance Association (EIFA), Islamic banking assets in Egypt reached approximately EGP 1.14 trillion by the end of 2024, representing nearly 5% of the country's total banking assets. Fifteen banks licensed by the Central Bank of Egypt currently offer Islamic banking services, including four fully Islamic banks and eleven conventional banks operating Islamic windows [42].

Indonesia has achieved a slightly larger Islamic banking market share, accounting for approximately **7**–8% of total banking assets during 2024–2025. The industry consists of thirteen full-fledged Islamic commercial banks and twenty Islamic banking units operating within conventional banks. Government support, regulatory reforms, and the consolidation of Islamic financial institutions have strengthened the competitiveness of Indonesia's Islamic banking sector over the past decade [43].

Although the difference in market share appears relatively modest, Indonesia's Islamic banking industry has developed alongside a broader Islamic financial ecosystem that includes Islamic capital markets, takaful, Islamic social finance, and Islamic fintech. This integrated ecosystem has contributed to stronger market development and greater innovation [44].

Islamic Fintech Development

The comparative analysis of Islamic fintech reveals notable differences between Egypt and Indonesia in terms of market maturity, regulatory support, and global competitiveness. Over the past few years, Islamic fintech has become one of the fastest-growing segments of the global Islamic finance industry, driven by rapid digital transformation, increasing smartphone penetration, expanding internet accessibility, and growing demand for Sharia-compliant financial services. By integrating financial technology with Islamic principles, Islamic fintech has enhanced access to financing, digital payments, crowdfunding, peer-to-peer (P2P) lending, and investment opportunities for individuals and Micro, Small, and Medium Enterprises (MSMEs), particularly in underserved communities [45].

Evidence from the Global Islamic Fintech (GIFT) Report, published annually by DinarStandard and Elipses, demonstrates the continuous expansion of the global Islamic fintech market [46]. Total transaction volumes increased from approximately USD 100 billion in the 2020/21 edition to USD 138 billion in 2022/23, before rising further to USD 161 billion in 2023/24 and USD 198 billion in 2024/25. The report also projects that global Islamic fintech transaction volumes will exceed USD 300 billion within the next few years, reaching approximately USD 306 billion by 2027/28 and USD 341 billion by 2028/29. These figures illustrate not only the rapid expansion of Islamic digital financial services but also the increasing confidence of consumers, investors, and regulators in technology-driven Sharia-compliant financial solutions [47].

Within this expanding global market, Indonesia has consistently maintained a position among the five leading Islamic fintech markets worldwide, alongside Saudi Arabia, Iran, Malaysia, and the United Arab Emirates [48]. Indonesia's strong performance can be attributed to several interconnected factors, including an early and comprehensive regulatory framework, supportive government policies, an advanced digital economy, and close collaboration between financial regulators, Islamic financial institutions, fintech companies, and religious authorities. The

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implementation of dedicated regulations governing Sharia-compliant fintech has encouraged innovation while ensuring compliance with Islamic legal principles, thereby strengthening consumer confidence and accelerating market growth [49].

By contrast, Egypt has not yet been ranked among the top ten Islamic fintech markets in the latest editions of the Global Islamic Fintech (GIFT) Report. Although Egypt has made considerable progress in financial technology through the expansion of digital payments, mobile wallets, electronic banking services, and fintech start-ups, the development of Islamic fintech remains comparatively limited. Most Sharia-compliant financial services continue to be delivered through Islamic banks and Islamic banking windows rather than through specialised Islamic fintech platforms. This suggests that, while Egypt has established a solid foundation for digital financial inclusion, further regulatory development and greater institutional support for dedicated Islamic fintech providers are required to enhance its competitiveness within the rapidly expanding global Islamic fintech industry [50].

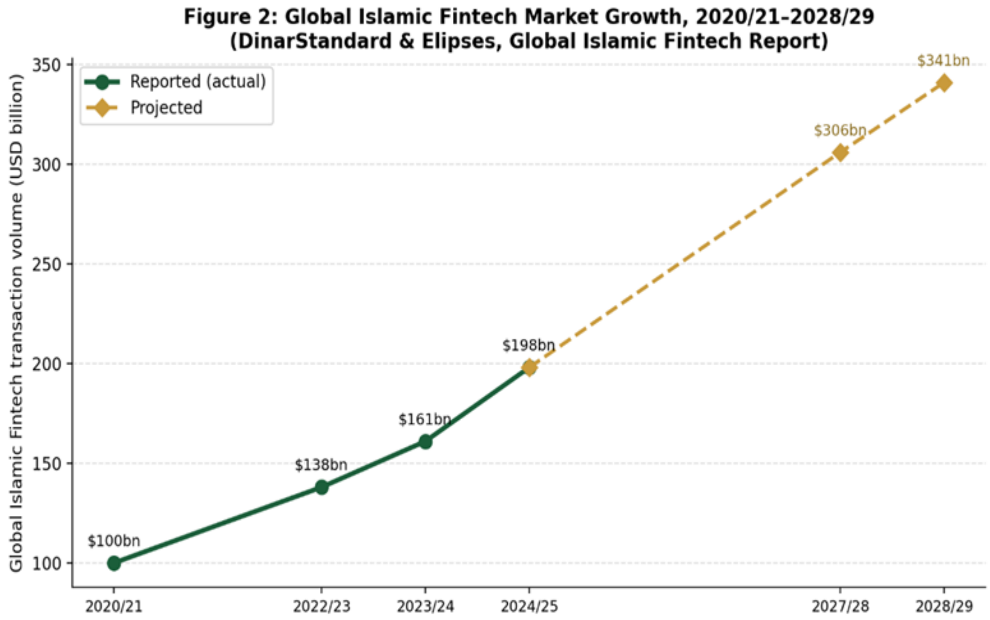

Figure 2. Global Islamic Fintech Transaction Volume (2020/21–2028/29)

(Insert bar or line chart showing historical and projected Islamic fintech transaction volumes based on successive GIFT Reports.)

Figure 2 illustrates the rapid growth of the global Islamic fintech industry, emphasizing its expanding role in transforming the financial sector. This significant development reflects the increasing adoption of digital technologies within Islamic finance and the growing demand for innovative Sharia-compliant financial solutions. The figure also highlights the considerable opportunities available to countries that can establish effective regulatory frameworks and foster supportive environments for fintech development. By promoting innovation, digital infrastructure, financial inclusion, and Sharia governance, these countries can strengthen their position in the global Islamic fintech market. Therefore, creating a balanced regulatory ecosystem is essential for maximizing the economic potential of Islamic fintech.

Egypt's MSME Financing Performance

Despite lagging behind Indonesia in Islamic fintech development, Egypt has achieved remarkable progress in financing Micro, Small, and Medium Enterprises (MSMEs). Data published by the Central Bank of Egypt indicate substantial increases in lending and financial support directed toward MSMEs during recent years [51].

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Table 2. Egypt's MSME and Microfinance Development

Indicator	Period	Growth
Bank facilities allocated to MSMEs	2015–2024	+388%
Microfinance portfolio	2016–2024	+1,350%
Financial inclusion rate	2016–2025	27% → 77.6%

The evidence demonstrates that MSME financing has expanded considerably faster than the banking sector overall. Similarly, the rapid growth of the microfinance portfolio reflects increased access to finance for entrepreneurs, low-income households, and small businesses. These improvements suggest that Egypt's financial inclusion policies have produced measurable outcomes, particularly through digital payments, mobile financial services, and targeted financing programmes [52].

Regulatory Comparison

Regulatory frameworks constitute one of the principal differences between the two countries. Indonesia established a dedicated regulatory framework for Islamic fintech several years before Egypt, providing legal certainty for investors, fintech companies, and consumers.

Table 3. Comparative Regulatory Framework

Dimension	Egypt	Indonesia
Main regulator	Central Bank of Egypt	OJK
National strategy	CBE Financial Inclusion Strategy	KNEKS Roadmap
Dedicated Islamic fintech regulation	No	Yes (POJK No. 77/2016; POJK No. 10/2022; DSN-MUI Fatwa No.117/2018)
Islamic banking institutions	15 banks (4 fully Islamic)	13 Islamic banks + 20 Islamic windows
Major digital finance providers	Fawry, Paymob, MNT-Halan	BSI, Ammana, ALAMI, Investree Syariah

The comparison indicates that Indonesia has established a more comprehensive institutional framework linking Islamic banking, Islamic fintech, and national economic development. Egypt has focused primarily on digital financial inclusion and banking-sector reforms rather than developing specialised Islamic fintech regulations.

Discussion

The findings demonstrate that Indonesia has developed a more mature Islamic fintech ecosystem through the early introduction of dedicated Sharia-compliant regulatory frameworks and strong institutional coordination among regulators, Islamic financial institutions, and fintech providers. The implementation of POJK No. 77/2016, its subsequent revision under POJK No. 10/2022, and the issuance of DSN-MUI Fatwa No. 117/2018 have provided legal certainty that encouraged innovation, investment, and market expansion. These regulatory developments appear to have contributed to Indonesia's larger Islamic banking sector and its consistent ranking among the world's leading Islamic fintech markets [53].

Egypt presents a different pattern of development. Although Islamic banking represents approximately 5% of total banking assets and Islamic fintech remains comparatively limited, the country's overall financial inclusion performance has improved dramatically. The Central Bank of Egypt's financial inclusion strategy, together with the expansion of digital payment infrastructure and MSME financing programmes, has significantly increased access to formal financial services. The rapid growth of mobile wallets, prepaid cards, and electronic payment systems demonstrates that Egypt has successfully expanded digital finance, even though much of this progress has occurred outside dedicated Islamic fintech platforms [54].

These findings suggest that Egypt possesses a strong foundation upon which a more comprehensive Islamic fintech ecosystem could be developed. Building a dedicated Sharia-compliant regulatory framework, similar to Indonesia's model, could encourage greater participation by Islamic fintech providers, increase competition, and expand financing opportunities for MSMEs seeking Sharia-compliant financial services. Nevertheless, the study does not claim a causal relationship between regulation and financial inclusion outcomes. Rather, the comparison demonstrates that Indonesia's more advanced regulatory framework coincides with stronger Islamic fintech development, whereas Egypt's financial inclusion progress has been driven primarily by broader digital finance initiatives [55].

Finally, the results should be interpreted in light of several methodological limitations. The statistics analysed originate from different organisations employing different definitions, reporting periods, and measurement methodologies. Consequently, the comparisons presented in this study are descriptive rather than inferential. The principal contribution of this research lies in synthesising dispersed official evidence into a unified comparative framework that provides an updated overview of Islamic fintech, Islamic banking, and financial inclusion developments in Egypt and Indonesia while identifying policy directions for future research and regulatory development.

CONCLUSION

This study comparatively examined the development of financial inclusion, Islamic banking, and Islamic fintech in Egypt and Indonesia using official statistics, regulatory documents, and internationally recognised industry reports. The findings demonstrate that both countries have made significant progress in expanding access to formal financial services; however, they have followed different developmental pathways. Indonesia has established a more mature Islamic finance ecosystem supported by a comprehensive regulatory framework for Sharia-compliant fintech, a larger Islamic banking sector, and a strong international presence in the global Islamic fintech market. In contrast, Egypt has achieved remarkable improvements in overall financial inclusion through the expansion of digital financial services, mobile wallets, electronic payments, and MSME financing initiatives led by the Central Bank of Egypt. Despite these achievements, Egypt's Islamic fintech sector remains comparatively underdeveloped, with most Sharia-compliant financial services continuing to be delivered through Islamic banks rather than specialised Islamic fintech platforms. The comparative evidence suggests that strengthening a dedicated regulatory framework for Islamic fintech could enhance Egypt's capacity to expand Sharia-compliant digital financial services, encourage innovation, and improve financial access for Micro, Small, and Medium Enterprises (MSMEs). At the same time, Indonesia's experience demonstrates the potential benefits of integrating regulatory support, digital innovation, and Islamic financial institutions within a coherent national strategy. It should be noted that the findings are descriptive rather than causal because they rely exclusively on secondary data collected from different organisations employing varying

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definitions and reporting methodologies. Future research could build upon this study by incorporating primary survey data, interviews with MSME owners and fintech providers, or econometric analyses to evaluate the causal relationship between Islamic fintech adoption, financial inclusion, and MSME performance in both countries, thereby providing deeper policy insights into the role of Sharia-compliant digital finance in promoting inclusive and sustainable economic development.

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Author Contribution

Syukri Hidayah: Conceptualisation, Methodology, Investigation, Formal analysis, Writing – original draft. D. Ousmane Gaoussou Wague: Supervision, Validation, Writing – review & editing. Fahmi Arfan: Data curation, Visualisation, Project administration, Resources, Final manuscript approval.

Conflicts of Interest

The authors declare that they have no financial, professional, institutional, or personal conflicts of interest that could have influenced the research process, interpretation of findings, manuscript preparation, or publication of this comparative study.

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