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Strengthening Islamic Financial Inclusion Through Sharia Fintech: Implications for MSME Development in Parepare City, Indonesia

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Abstract

The rapid growth of Sharia financial technology (fintech) has created significant opportunities to enhance Islamic financial inclusion and support the development of micro, small, and medium enterprises (MSMEs). However, empirical evidence regarding the mechanisms through which Sharia fintech influences MSME development remains limited, particularly in regional contexts in Indonesia. This study examines the mediating role of Islamic financial inclusion in the relationship between Sharia fintech services and MSME development. Using a quantitative approach, data were collected from 100 MSME owners in Parepare City, South Sulawesi, Indonesia, and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that Sharia fintech has a positive and significant effect on Islamic financial inclusion and MSME development. Islamic financial inclusion also positively influences MSME development. Furthermore, Islamic financial inclusion partially mediates the relationship between Sharia fintech and MSME development, suggesting that the benefits of fintech adoption are strengthened through broader access to Sharia-compliant financial services. The structural model explains 50.1% of the variance in MSME development. These findings underscore the strategic role of Sharia fintech in fostering an inclusive Islamic financial ecosystem and promoting sustainable MSME growth. While the findings provide valuable insights into Islamic digital finance, they are based on MSMEs operating in Parepare City and should therefore be interpreted within this local context. This study contributes to the literature on Islamic digital finance by providing empirical evidence on the mediating role of Islamic financial inclusion and offers practical implications for policymakers, Islamic financial institutions, and fintech providers.

Keywords*:* Sharia Fintech; Islamic Financial Inclusion; MSME Development; Digital Islamic Finance; Indonesia

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Penguatan Inklusi Keuangan Syariah Melalui Fintech Syariah: Implikasi terhadap Pengembangan UMKM di Indonesia

Abstrak

Perkembangan pesat financial technology (fintech) syariah membuka peluang besar untuk meningkatkan inklusi keuangan syariah dan mendukung pengembangan usaha mikro, kecil, dan menengah (UMKM). Namun, bukti empiris mengenai mekanisme pengaruh fintech syariah terhadap pengembangan UMKM masih terbatas, khususnya dalam konteks daerah di Indonesia. Penelitian ini bertujuan menganalisis peran inklusi keuangan syariah sebagai variabel mediasi dalam hubungan antara layanan fintech syariah dan pengembangan UMKM. Penelitian menggunakan pendekatan kuantitatif dengan data yang dikumpulkan dari 100 pelaku UMKM di Kota Parepare, Sulawesi Selatan, Indonesia, dan dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM). Hasil penelitian menunjukkan bahwa fintech syariah berpengaruh positif dan signifikan terhadap inklusi keuangan syariah serta pengembangan UMKM. Inklusi keuangan syariah juga berpengaruh positif dan signifikan terhadap pengembangan UMKM. Selain itu, inklusi keuangan syariah terbukti memediasi secara parsial hubungan antara fintech syariah dan pengembangan UMKM, yang menunjukkan bahwa manfaat adopsi fintech semakin kuat ketika diikuti oleh akses yang lebih luas terhadap layanan keuangan syariah. Model penelitian mampu menjelaskan 50,1% variasi pengembangan UMKM. Temuan ini menegaskan peran strategis fintech syariah dalam memperkuat ekosistem keuangan Islam yang inklusif serta mendorong pertumbuhan UMKM yang berkelanjutan. Meskipun temuan ini memberikan wawasan berharga mengenai keuangan digital syariah, temuan tersebut didasarkan pada UMKM yang beroperasi di Kota Parepare, sehingga harus ditafsirkan dalam konteks lokal tersebut. Penelitian ini memberikan kontribusi empiris terhadap literatur keuangan digital syariah serta menawarkan implikasi praktis bagi pembuat kebijakan, lembaga keuangan syariah, dan penyedia fintech.

Kata Kunci: Fintech Syariah; Inklusi Keuangan Syariah; Pengembangan UMKM; Keuangan Digital Syariah; Indonesia.

INTRODUCTION

The rapid advancement of digital technology has transformed the global financial landscape, creating new opportunities for improving access to financial services and accelerating economic development. Financial technology (fintech) has emerged as one of the most significant innovations in the contemporary financial sector, enabling individuals and businesses to access financial products and services more efficiently through digital platforms. In many developing countries, fintech has become an important instrument for addressing financial exclusion, particularly among micro, small, and medium enterprises (MSMEs), which frequently encounter barriers in obtaining formal financial services. Recent studies indicate that fintech contributes to improving business efficiency, expanding market access, and facilitating financial transactions among underserved communities (Liu et al., 2024). Fintech

innovation is therefore increasingly recognized as a catalyst for inclusive economic growth and sustainable business development.

In Indonesia, the digital transformation of financial services has occurred alongside the rapid expansion of the Islamic economy. As the country with the largest Muslim population in the world, Indonesia possesses substantial potential for the development of Islamic finance, including Islamic banking, Islamic capital markets, Islamic social finance, and Sharia-compliant financial technology (Hasan et al., 2023; Rabbani et al., 2021). The emergence of Sharia fintech has introduced alternative financial solutions that align technological innovation with Islamic principles, offering products and services that avoid *riba* (interest), *gharar* (uncertainty), and *maysir* (speculation) (Sarpini, 2025; Hasan et al., 2023). Sharia fintech encompasses various digital financial services, including Islamic peer-to-peer lending, digital payment systems, crowdfunding platforms, and mobile-based financial applications designed to comply with Sharia principles (Rabbani et al., 2021). Recent literature suggests that the integration of Islamic finance and digital technology provides an effective mechanism for expanding access to financial services while maintaining compliance with Islamic ethical and legal standards (Alfian et al., 2025; Hasan et al., 2023).

The growing relevance of Sharia fintech is closely associated with the persistent challenge of financial inclusion. Although Indonesia has experienced significant progress in financial sector development, disparities in access to formal financial services remain evident, particularly among MSMEs operating in peripheral and regional areas. Financial inclusion refers to the availability, accessibility, and utilization of affordable financial services that meet the needs of individuals and businesses. Within the Islamic economic framework, financial inclusion extends beyond access to financial products and emphasizes fairness, transparency, risk-sharing, and social welfare. Islamic financial inclusion therefore reflects the extent to which individuals and enterprises can access and utilize Sharia-compliant financial services in a sustainable manner. Several recent studies have highlighted the strategic role of Islamic fintech in promoting financial inclusion by reducing geographical barriers, lowering transaction costs, and providing alternative financing opportunities for underserved populations.

The importance of financial inclusion becomes particularly evident in the context of MSMEs. MSMEs constitute the backbone of Indonesia's economy, contributing significantly to employment generation, income distribution, and regional economic development. Despite their substantial contribution, many MSMEs continue to

face challenges related to capital constraints, limited financial literacy, inadequate access to formal financial institutions, and low adoption of digital financial services. These challenges often hinder business expansion and reduce long-term sustainability. Consequently, improving access to financial services has become a strategic priority for supporting MSME growth and strengthening economic resilience. Previous studies have demonstrated that enhanced financial inclusion positively influences business performance by facilitating access to financing, improving cash-flow management, and supporting innovation and productivity.

Within the Islamic economic ecosystem, Sharia fintech has increasingly been viewed as a promising instrument for addressing financial exclusion among MSMEs. Unlike conventional fintech, Sharia fintech integrates technological innovation with Islamic legal and ethical principles, thereby creating financial solutions that are not only efficient but also compliant with religious values. The expansion of Sharia fintech has enabled MSMEs to access financing, payment systems, and financial management tools that align with Islamic norms. Moreover, Sharia fintech contributes to the realization of maqashid al-shariah by promoting economic justice, protecting wealth, reducing inequality, and encouraging productive economic activities. Contemporary studies argue that Islamic fintech possesses considerable potential to strengthen Islamic financial inclusion while simultaneously supporting sustainable business development among MSMEs.

The relationship between fintech adoption and business development can also be explained through the Technology Acceptance Model (TAM). Developed by Davis (1989), TAM suggests that individuals' acceptance of technology is primarily influenced by perceived usefulness and perceived ease of use. Subsequent studies have confirmed that these factors significantly affect users' intentions to adopt and utilize digital technologies in various organizational and financial contexts (Venkatesh & Davis, 2000; Venkatesh et al., 2012). In the context of Sharia fintech, MSME owners are more likely to adopt digital financial services when they perceive such services as beneficial, accessible, secure, and compatible with their business needs (Abbasi et al., 2021; Purnamasari et al., 2025). The adoption of Sharia fintech is therefore expected to enhance financial inclusion by increasing access to financial products and encouraging the utilization of digital financial services (Alfian et al., 2025; Hasan et al., 2023). Enhanced financial inclusion may subsequently improve business performance through better financial management, greater financing opportunities, and broader market reach (Nurohman et al., 2021; Angraini & Zakik, 2024). Consequently, TAM provides a relevant theoretical framework for examining how perceptions of Sharia fintech influence

financial inclusion and MSME development.

Although a growing body of literature has examined fintech, financial inclusion, and MSME performance, empirical findings remain inconsistent. Several studies report that fintech significantly improves financial inclusion and business performance by facilitating access to financial services and reducing operational costs (Nurohman et al., 2021; Dewi & Adinugraha, 2023). Other studies indicate that while financial inclusion positively affects MSME performance, the direct influence of fintech adoption is not always significant due to variations in digital literacy, technological readiness, and institutional support (Artha, 2023). Recent investigations have similarly demonstrated that Islamic fintech contributes to MSME sustainability, yet the magnitude and mechanism of this influence vary across contexts and regions.

A review of previous studies reveals several important research gaps. First, an empirical gap exists because prior studies have produced inconsistent findings regarding the effects of fintech on MSME performance and financial inclusion. While several studies report that fintech significantly improves financial inclusion and MSME performance through enhanced access to financing and digital financial services (Nurohman et al., 2021; Abbasi et al., 2021; Zunairoh & Wijaya, 2024), other studies indicate that the impact of fintech varies depending on factors such as financial literacy, digital readiness, institutional support, and business characteristics (Ozili, 2021; Wulandari, 2023).

Second, a conceptual gap remains concerning the mechanism through which Sharia fintech influences business development. Most previous studies focus primarily on direct relationships between fintech and business outcomes, overlooking the potential mediating role of Islamic financial inclusion (Dewi & Adinugraha, 2023; Alfian et al., 2025).

Third, a contextual gap is evident because most studies have been conducted in large urban areas or broader regional settings, while limited attention has been devoted to smaller cities with distinct socioeconomic characteristics and varying levels of digital financial adoption (Angraini & Zakik, 2024; Purnamasari et al., 2025).

Fourth, a theoretical gap persists because relatively few studies have integrated Technology Acceptance Model (TAM) perspectives with Islamic financial inclusion frameworks to explain the impact of Sharia fintech on MSME development. Existing studies generally examine technology adoption and financial inclusion separately rather than as an integrated mechanism influencing MSME growth (Hasan et al., 2023; Saifurrahman & Kassim, 2023). Therefore, further investigation is needed to provide a more comprehensive understanding of how Sharia fintech contributes to MSME

development through Islamic financial inclusion, particularly in regional contexts in Indonesia.

Several recent studies further emphasize the importance of addressing these gaps. Afini (2023) demonstrated that Sharia fintech positively affects Islamic financial inclusion among MSMEs but did not examine its implications for business development. Similarly, Ashwat (2025) found that Sharia fintech supports MSME activities in Java; however, the study did not investigate the mediating role of Islamic financial inclusion. Recent literature also highlights the need for more localized evidence concerning the contribution of Islamic fintech to MSME sustainability and regional economic development within Indonesia's rapidly evolving digital economy.

These gaps are particularly relevant in the context of Parepare City, South Sulawesi. As an emerging economic center characterized by a growing MSME sector, Parepare presents a unique environment for examining the interaction between Sharia fintech, Islamic financial inclusion, and business development. Although the number of MSMEs in the city has continued to increase, many business owners still experience difficulties in accessing financing and utilizing digital financial services. Limited understanding of Sharia fintech products and insufficient engagement with formal Islamic financial institutions remain important challenges. Consequently, investigating the role of Islamic financial inclusion in connecting Sharia fintech adoption with business development may provide valuable insights for policymakers, Islamic financial institutions, and fintech providers seeking to strengthen regional economic growth.

Based on the foregoing discussion, this study aims to examine the influence of Sharia financial technology services on MSME development and to analyze the mediating role of Islamic financial inclusion in this relationship. Specifically, the study investigates whether Sharia fintech contributes to MSME development directly and indirectly through enhanced Islamic financial inclusion. By focusing on MSMEs in Parepare City, Indonesia, this study contributes to the growing literature on Islamic digital finance, extends the application of the Technology Acceptance Model within the Islamic financial context, and provides empirical evidence regarding the strategic role of Islamic financial inclusion in strengthening sustainable MSME development.

In this study, TAM serves as a supporting theoretical lens for understanding MSME owners' acceptance of Sharia fintech services. The model is not intended to directly test perceived usefulness and perceived ease of use; rather, it provides a conceptual explanation for technology adoption behavior.

RESEARCH METHOD

This study employed a quantitative research approach to examine the relationship between Sharia financial technology (fintech), Islamic financial inclusion, and MSME development in Parepare City, South Sulawesi, Indonesia. A quantitative design was considered appropriate because the study aimed to test causal relationships among variables and evaluate the mediating role of Islamic financial inclusion in the relationship between Sharia fintech and MSME development. The research framework was developed based on the Technology Acceptance Model (TAM), which explains that the adoption of technology is influenced by users' perceptions of usefulness and ease of use, ultimately affecting behavioral intentions and actual utilization (Davis, 1989; Venkatesh & Davis, 2000). It is important to note that the Sharia fintech variable did not merely measure the use of QRIS or digital payment services. Rather, it assessed respondents' perceptions regarding accessibility, efficiency, financing opportunities, and compliance with Sharia principles in fintech-based financial services.

The population consisted of micro, small, and medium enterprise (MSME) owners operating in Parepare City. According to data from the Department of Manpower and MSMEs of Parepare City, the number of registered MSMEs reached 16,334 units in 2025. The sample size was determined using a probability sampling approach to ensure that each MSME had an equal opportunity to participate in the study. Respondents were selected from various business sectors, including trade, services, food and beverages, and home industries, in order to obtain a comprehensive representation of MSME activities in the city.

The population consisted of 16,334 registered MSMEs in Parepare City. The sample size was determined using Slovin's formula with a 10% margin of error:

$$n = N/(1+Ne^2)$$

Based on this calculation, a minimum sample of approximately 100 respondents was required. Therefore, the sample size employed in this study was considered adequate for statistical analysis.

Primary data were collected through a structured questionnaire distributed directly to MSME owners. The questionnaire employed a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The measurement items were adapted from previous studies on fintech adoption, financial inclusion, and MSME performance to ensure content validity and contextual relevance (Nurohman et al., 2021; Artha, 2023; Afini, 2023). Prior to data analysis, the instrument was tested for validity and reliability to ensure the consistency and accuracy of the measurement indicators. The questionnaire consisted of three constructs:

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- Sharia Fintech (SF)
- Islamic Financial Inclusion (IFI)
- MSME Development (MD)

The Sharia Fintech construct was measured using indicators related to accessibility, transaction efficiency, financing accessibility, and perceived compliance with Sharia principles. Islamic Financial Inclusion was measured through access, usage, and availability of Islamic financial services. MSME Development was measured through indicators of business growth, operational efficiency, market expansion, and sustainability. All items were measured using a five-point Likert scale.

The independent variable in this study was Sharia financial technology services. This construct was measured through indicators reflecting perceived ease of use, accessibility, transaction efficiency, security, trust, and compliance with Islamic principles. These indicators were adapted from previous studies examining Islamic fintech adoption and digital financial services (Firmansyah & Anwar, 2022; Hasan et al., 2023). The intervening variable was Islamic financial inclusion, which was assessed through indicators related to access to Islamic financial services, utilization of Sharia-compliant financial products, affordability, financial literacy, and continuity of service usage (Ozili, 2021; Afini, 2023). Meanwhile, MSME development served as the dependent variable and was measured through business growth indicators, including sales growth, customer expansion, market reach, operational efficiency, and business sustainability (Nurohman et al., 2021; Sihombing & Masdiantini, 2025).

Data analysis was conducted using path analysis to examine both direct and indirect relationships among variables. Path analysis was selected because it enables the assessment of mediation effects and provides a comprehensive understanding of the causal mechanisms linking Sharia fintech, Islamic financial inclusion, and MSME development (Hair et al., 2022). The analysis procedure consisted of descriptive statistical analysis, instrument testing, classical assumption testing, hypothesis testing, and mediation analysis. The significance of indirect effects was evaluated to determine whether Islamic financial inclusion mediated the influence of Sharia fintech on MSME development.

The methodological framework of this study contributes to the growing literature on Islamic digital finance by integrating the Technology Acceptance Model with the concept of Islamic financial inclusion. Through this approach, the study provides empirical evidence regarding the mechanisms through which Sharia fintech supports the development of MSMEs in the context of Indonesia's expanding Islamic digital economy.

RESULT AND DISCUSSION

Results

Respondent Profile

This study involved 100 MSME owners operating in Parepare City. The respondents represented various business sectors, with the culinary sector accounting for the largest proportion (51%), followed by trade and service-based enterprises. Most respondents were between 18 and 25 years old (62%), indicating that the adoption of digital financial services among MSMEs is largely driven by younger entrepreneurs who are more familiar with digital technology and mobile-based financial transactions. In addition, approximately 91% of respondents reported using digital payment facilities such as QRIS and other fintech-based transaction services. These findings indicate that digital financial technology has become an integral part of business operations among MSMEs in Parepare.

The profile of respondents reflects the ongoing transformation of Indonesia's MSME ecosystem toward digitalization. The widespread use of fintech services among young entrepreneurs demonstrates that digital financial platforms are increasingly perceived as accessible, practical, and beneficial tools for business activities. This trend is consistent with recent studies highlighting the growing role of fintech in reducing transaction costs, increasing financial accessibility, and improving operational efficiency among MSMEs.

The result may be explained by the characteristics of MSMEs in Parepare City, where many businesses operate on a micro scale and have limited interaction with formal Islamic financial institutions. Digital financial services therefore provide an accessible alternative for conducting financial transactions and accessing financing opportunities.

Measurement Model Assessment

Before testing the structural relationships among variables, the measurement model was evaluated to ensure the validity and reliability of the constructs. The reliability assessment demonstrated satisfactory results for all latent variables. Sharia Fintech recorded a Cronbach's Alpha value of 0.940 and Composite Reliability of 0.941. Islamic Financial Inclusion achieved a Cronbach's Alpha value of 0.937 and Composite Reliability of 0.940, while MSME Development obtained a Cronbach's Alpha value of 0.923 and Composite Reliability of 0.925. These values exceed the recommended threshold of 0.70, indicating strong internal consistency and reliability of the measurement instruments.

The high reliability scores suggest that the indicators consistently measured the intended constructs and adequately captured the perceptions of MSME owners regarding fintech utilization, financial inclusion, and business development. Therefore, the

data were considered suitable for further structural model analysis.

Prior to testing the structural relationships, the measurement model was evaluated through convergent validity, discriminant validity, and reliability assessments. Convergent validity was examined using outer loadings and Average Variance Extracted (AVE). As shown in Table 1, all indicator loadings exceeded the recommended threshold of 0.70, ranging from 0.750 to 0.890, indicating satisfactory indicator reliability. Furthermore, all AVE values exceeded the minimum requirement of 0.50, confirming adequate convergent validity (Hair et al., 2022).

Reliability was assessed using Cronbach's Alpha, rho_A, and Composite Reliability (CR). The results demonstrate that all constructs achieved values above the recommended threshold of 0.70, indicating strong internal consistency and construct reliability.

Table 1. Construct Reliability and Convergent Validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Sharia Fintech	0.940	0.941	0.948	0.648
Islamic Financial Inclusion	0.937	0.940	0.948	0.694
MSME Development	0.923	0.925	0.939	0.687

Structural Model Assessment

The structural model was assessed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results of hypothesis testing are presented in Table 1.

Table 2. Structural Model Results

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	Sharia Fintech → Islamic Financial Inclusion	0.780	18.694	0.000	Supported
H2	Sharia Fintech → MSME Development	0.384	2.577	0.010	Supported
H3	Islamic Financial Inclusion → MSME Development	0.366	3.236	0.001	Supported
H4	Sharia Fintech → Islamic Financial Inclusion → MSME Development	0.285	3.154	0.002	Supported

The results indicate that all proposed hypotheses were supported. Sharia fintech significantly influenced Islamic financial inclusion (β = 0.780, p

< 0.001), demonstrating the strongest relationship in the model. Furthermore, Sharia fintech directly influenced MSME development (β = 0.384, p = 0.010), while Islamic financial inclusion also significantly influenced MSME development (β = 0.366, p = 0.001). The indirect effect analysis confirmed that Islamic financial inclusion significantly mediated the relationship between Sharia fintech and MSME development (β = 0.285, p = 0.002).

The coefficient of determination (R^2) for MSME development was 0.501, indicating that Sharia fintech and Islamic financial inclusion jointly explained 50.1% of the variance in MSME development. The remaining 49.9% was influenced by other factors not included in the model, such as entrepreneurial capability, market conditions, innovation capacity, financial literacy, and institutional support.

The structural model was evaluated using R^2 and effect size (f^2). The R^2 value for Islamic Financial Inclusion was 0.609, indicating that Sharia Fintech explained 60.9% of the variance in Islamic Financial Inclusion. Meanwhile, the R^2 value for MSME Development was 0.501, suggesting that Sharia Fintech and Islamic Financial Inclusion jointly explained 50.1% of the variance in MSME Development. According to Hair et al. (2022), these values indicate moderate explanatory power.

Table 3. Coefficient of Determination (R^2)

Endogenous Variable	R^2	R^2 Adjusted
Islamic Financial Inclusion	0.609	0.605
MSME Development	0.501	0.491

Discriminant Validity

Discriminant validity was assessed using cross-loadings. The results indicate that each indicator loaded more strongly on its associated construct than on any other construct, satisfying the discriminant validity criterion. For example, indicator Y3 exhibited a loading of 0.890 on MSME Development, which was substantially higher than its loadings on Sharia Fintech (0.562) and Islamic Financial Inclusion (0.513). Similar patterns were observed across all indicators, confirming that the constructs are empirically distinct.Effect Size (f^2)

Effect size analysis revealed that Sharia Fintech had a substantial effect on Islamic Financial Inclusion (f^2 = 1.556). Meanwhile, the effects of Sharia Fintech on MSME Development (f^2 = 0.116) and Islamic Financial Inclusion on MSME Development (f^2 = 0.105) were categorized as small to moderate. These findings indicate that Sharia Fintech is the primary driver of Islamic Financial Inclusion in the model.

Table 4. Effect Size (f^2)

Relationship	f^2
Sharia Fintech → Islamic Financial Inclusion	1.556
Sharia Fintech → MSME Development	0.116
Islamic Financial Inclusion → MSME Development	0.105

Discussion

Sharia Fintech Enhances Islamic Financial Inclusion

The findings reveal that Sharia fintech exerts a strong and significant influence on Islamic financial inclusion. The path coefficient of 0.780 demonstrates that improvements in fintech accessibility, usability, efficiency, and Sharia compliance substantially increase the ability of MSMEs to access and utilize Islamic financial services.

This finding supports the argument that fintech functions as an important mechanism for reducing traditional barriers to financial access. Historically, MSMEs have faced various obstacles in obtaining financial services, including geographic distance from financial institutions, lengthy administrative procedures, collateral requirements, and limited financial information (Ozili, 2021; Demirgüç-Kunt et al., 2022). The emergence of Sharia fintech has significantly reduced these barriers by enabling MSMEs to access financial services through digital platforms regardless of location and time (Rabbani et al., 2021; Alfian et al., 2025). Through digital payment systems, peer-to-peer financing, crowdfunding platforms, and mobile-based financial applications, Islamic fintech offers more accessible and efficient financial solutions for entrepreneurs and previously underserved communities (Hasan et al., 2023). Recent studies similarly conclude that Islamic fintech broadens access to financial products and promotes inclusion among underserved populations and MSMEs, thereby contributing to more inclusive and sustainable economic development (Dewi & Adinugraha, 2023; Widagdo et al., 2026).

From the perspective of the Technology Acceptance Model (TAM), the strong relationship observed in this study can be explained through perceived usefulness and perceived ease of use. MSME owners who perceive fintech services as beneficial and user-friendly are more likely to adopt them in their business activities. The high utilization of QRIS and digital payment systems among respondents further supports this explanation. Similar evidence indicates that ease of use significantly influences fintech adoption decisions among MSMEs, particularly when digital services improve transaction efficiency and business operations.

In the Islamic economic context, the contribution of Sharia fintech extends beyond technological convenience. Sharia fintech promotes financial inclusion while adhering to Islamic principles such as transparency,

fairness, risk-sharing, and the prohibition of riba. Consequently, financial inclusion is not merely a matter of access but also involves participation in an ethical financial ecosystem aligned with Islamic values. This aligns with contemporary literature emphasizing the role of Islamic fintech in realizing inclusive economic development through Sharia-compliant financial innovation.

Sharia Fintech Supports MSME Development

The results indicate that Sharia fintech directly and positively influences MSME development. The significant coefficient (β = 0.384) suggests that MSMEs utilizing Sharia fintech services experience improvements in business growth, operational efficiency, customer expansion, and overall sustainability.

This finding reinforces previous studies demonstrating that fintech contributes to MSME performance by facilitating financial transactions, improving liquidity management, and expanding financing opportunities. Through digital payment systems and online financing platforms, MSMEs can conduct transactions more efficiently, reduce operational costs, and reach broader markets. Fintech also accelerates decision-making processes and improves financial management practices, thereby enhancing business competitiveness.

The result is particularly relevant within Indonesia's rapidly growing digital economy. As business activities increasingly migrate toward digital platforms, MSMEs that adopt fintech services are better positioned to participate in modern economic networks. Digital financial services facilitate integration into e-commerce ecosystems, strengthen customer relationships, and improve transaction transparency.

MSMEs possessing access to digital financial infrastructure gain competitive advantages through faster information processing, improved financial planning, and increased market responsiveness (Zunairoh & Wijaya, 2024). Fintech adoption also facilitates access to financing, reduces transaction costs, and strengthens business resilience in increasingly competitive markets (Banna et al., 2022; Mhlanga, 2023). Consequently, fintech adoption contributes not only to short-term business performance but also to long-term sustainability and organizational growth (Nurohman et al., 2021; Widagdo et al., 2026).

Within Islamic finance, Sharia fintech further offers ethical financing alternatives based on profit-sharing and partnership principles. Such financing mechanisms are particularly beneficial for MSMEs that may face difficulties accessing conventional financing due to collateral requirements or concerns regarding interest-based transactions. Recent research identifies Sharia fintech lending as an increasingly important instrument for supporting productive MSME financing in the Society 5.0 era.

Islamic Financial Inclusion as a Driver of MSME Development

The study also demonstrates that Islamic financial inclusion significantly influences MSME development. The positive coefficient ($\beta = 0.366$) indicates that MSMEs with greater access to Sharia-compliant financial services tend to achieve better business outcomes.

This finding is consistent with financial inclusion theory, which argues that access to appropriate financial services enables businesses to mobilize resources more effectively, manage risks, and invest in productive activities. When MSMEs gain access to Islamic financing products, savings instruments, payment systems, and financial advisory services, they become better equipped to expand operations and improve performance.

Recent studies similarly report that financial inclusion contributes to MSME sustainability by increasing access to capital and strengthening financial resilience. Islamic financial inclusion is particularly important because it addresses both economic and ethical considerations. MSMEs that prefer Sharia-compliant financial products can participate in formal financial systems without compromising their religious values.

Moreover, Islamic financial inclusion supports broader socioeconomic objectives. By expanding access to financial services among underserved entrepreneurs, inclusion promotes equitable economic participation and reduces disparities in financial opportunities. This perspective aligns closely with the Islamic vision of social justice and equitable wealth distribution.

The Mediating Role of Islamic Financial Inclusion

The most important finding of this study concerns the mediating role of Islamic financial inclusion. The indirect effect of Sharia fintech on MSME development through Islamic financial inclusion was statistically significant ($\beta = 0.285$, $p = 0.002$), indicating partial mediation.

This result suggests that the benefits of fintech adoption are not realized solely through technological efficiency. Rather, fintech contributes to MSME development by creating pathways toward broader financial inclusion. In other words, fintech serves as an enabler that connects MSMEs with formal Islamic financial services, and it is this increased access that ultimately contributes to business growth and sustainability.

The finding addresses an important gap in the literature. Many previous studies focused primarily on the direct relationship between fintech and business performance. However, the present study demonstrates that financial inclusion constitutes an essential mechanism explaining how fintech influences MSME outcomes. This finding supports recent evidence emphasizing that Islamic fintech improves MSME sustainability largely

through its capacity to enhance financial inclusion.

The partial mediation observed in this study further indicates that fintech affects MSME development through both direct and indirect channels. Directly, fintech improves business efficiency and transaction management. Indirectly, fintech expands financial inclusion, which subsequently enhances business performance. This dual pathway highlights the strategic importance of integrating technological innovation with inclusive financial policies.

From a policy perspective, the findings imply that efforts to promote MSME development should not focus exclusively on expanding fintech adoption. Policymakers must also ensure that fintech services effectively connect users with broader Islamic financial ecosystems. Without meaningful inclusion, the developmental impact of fintech may remain limited.

Table 5. Specific Indirect Effect

Path	β	t-value	p-value
Sharia Fintech → Islamic Financial Inclusion → MSME Development	0.285	3.154	0.002

The indirect effect of Sharia Fintech on MSME Development through Islamic Financial Inclusion was statistically significant (β = 0.285; t = 3.154; p = 0.002). This finding confirms the mediating role of Islamic Financial Inclusion and indicates that part of the influence of Sharia Fintech on MSME Development is transmitted through enhanced access to Islamic financial services.

Implications for Islamic Economic Law and Maqasid al-Shariah

The findings carry important implications for the development of Islamic Economic Law (Hukum Ekonomi Syariah). The significant relationship between Sharia fintech, Islamic financial inclusion, and MSME development demonstrates that digital financial innovation can serve as a practical instrument for realizing the objectives of Islamic economic systems.

From the perspective of *maqasid al-shariah*, the expansion of Islamic financial inclusion contributes to the protection and development of wealth (*hifz al-mal*) by providing entrepreneurs with secure and ethical financial services. Access to Sharia-compliant financing enables MSMEs to engage in productive economic activities while avoiding prohibited elements such as *riba*, *gharar*, and *maysir* (Ahyar et al., 2025; Sarpini, 2025). Islamic financial inclusion also promotes economic justice and equitable access to financial resources, which are consistent with the broader objectives of *maqasid al-shariah*. This finding may indicate the potential contribution of Sharia fintech

to the realization of maqasid al-shariah, particularly in supporting hifz al-mal through improved access to ethical financial services. Contemporary Islamic finance literature similarly argues that fintech-driven inclusion strengthens the realization of *maqasid* through broader access, transparency, efficiency, and economic empowerment, particularly for underserved communities and MSMEs (Hasan et al., 2023; Alfian et al., 2025; Widagdo et al., 2026).

Furthermore, the findings support the principle of economic justice (*al-'adl*) by expanding financial opportunities to previously underserved groups. By reducing barriers to financial participation, Sharia fintech contributes to a more equitable distribution of economic resources and opportunities. Such outcomes are consistent with the broader objectives of Islamic economic law, which emphasize fairness, welfare enhancement, and sustainable development.

Therefore, the integration of Sharia fintech within Indonesia's Islamic financial ecosystem should be viewed not merely as technological modernization but as a strategic mechanism for achieving inclusive and sustainable economic development in accordance with Islamic principles. The results of this study provide empirical evidence that strengthening Islamic financial inclusion represents a critical pathway through which Sharia fintech can contribute to the long-term development and resilience of MSMEs in Indonesia.

CONCLUSION

This study examined the influence of Sharia financial technology (fintech) services on MSME development through the mediating role of Islamic financial inclusion in Parepare City, Indonesia. The findings demonstrate that Sharia fintech significantly enhances Islamic financial inclusion among MSMEs. The results indicate that the accessibility, efficiency, and Sharia-compliant characteristics of fintech services enable entrepreneurs to obtain broader access to financial products and services, thereby strengthening their participation in the formal Islamic financial ecosystem.

The study further reveals that Sharia fintech directly contributes to MSME development. MSMEs that utilize Sharia fintech services experience improvements in business operations, transaction efficiency, and opportunities for market expansion. In addition, Islamic financial inclusion has a positive and significant effect on MSME development, suggesting that broader access to Sharia-compliant financial services supports business growth, sustainability, and economic resilience.

The most important finding of this study is the significant mediating role of Islamic financial inclusion in the relationship between Sharia fintech and MSME development. This result

confirms that the developmental impact of Sharia fintech is not solely derived from technological innovation itself, but also from its capacity to facilitate greater inclusion within the Islamic financial system. Islamic financial inclusion therefore functions as a strategic mechanism through which fintech generates broader economic benefits for MSMEs.

From a theoretical perspective, this study extends the application of the Technology Acceptance Model (TAM) within the context of Islamic digital finance by demonstrating that the adoption of Sharia fintech contributes to business development through enhanced financial inclusion. The findings enrich the growing body of literature on Islamic fintech, financial inclusion, and MSME development, particularly in emerging regional economies.

Practically, the findings imply that policymakers, Islamic financial institutions, fintech providers, and MSME development agencies should strengthen collaboration to expand access to Sharia-compliant digital financial services. Efforts to improve digital financial literacy, develop inclusive fintech infrastructure, and encourage the adoption of Sharia fintech products among MSMEs may contribute significantly to sustainable economic development.

Furthermore, the findings provide important implications for Islamic Economic Law and the realization of maqashid al-shariah. By expanding access to ethical and Sharia-compliant financial services, Sharia fintech contributes to the protection and development of wealth (*hifz al-mal*), promotes economic justice (*al-'adl*), and supports broader financial inclusion. Consequently, Sharia fintech should be regarded not only as a technological innovation but also as a strategic instrument for strengthening an inclusive and sustainable Islamic economic ecosystem.

This study is limited to MSMEs operating in Parepare City and focuses on the roles of Sharia fintech and Islamic financial inclusion in explaining MSME development. Future studies are encouraged to incorporate additional variables such as financial literacy, digital literacy, entrepreneurial orientation, institutional support, and business innovation. Comparative studies involving different regions and larger samples may also provide a more comprehensive understanding of the contribution of Islamic digital finance to MSME development in Indonesia.

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