
Financial Technology and SME Resilience in the Digital Economy: A Comprehensive Literature Review

Astri Ayu Purwati^{1*}, Zulfadli Hamzah², Mazzlida Mat Deli³

Institut Bisnis dan Teknologi Pelita Indonesia, Indonesia¹

Universitas Islam Riau, Indonesia²

Universiti Kebangsaan Malaysia, Malaysia³

astri.ayu@lecturer.pelitaindonesia.ac.id

ABSTRACT

The rapid development of digital technologies has transformed the financial landscape and created new opportunities for Small and Medium-Sized Enterprises (SMEs) to improve their access to financial services and enhance business performance. This study aims to systematically review the existing literature on digital financial inclusion, FinTech adoption, and SME performance to identify major research trends, synthesize empirical findings, and propose future research directions. The study employed a Systematic Literature Review (SLR) approach based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. Relevant articles published between 2015 and 2025 were collected from reputable academic databases, including Scopus, Web of Science, ScienceDirect, Emerald Insight, SpringerLink, Taylor & Francis, and MDPI. A total of 20 selected studies were analyzed using thematic synthesis techniques. The findings reveal that digital financial inclusion and FinTech adoption significantly contribute to SME growth, operational efficiency, financial accessibility, innovation capability, and business sustainability. Digital financial inclusion enables SMEs to overcome traditional financing barriers by facilitating access to digital financial services, while FinTech adoption improves financial management, transaction efficiency, and alternative financing opportunities. Furthermore, the review highlights the important roles of financial literacy, technological readiness, organizational capability, and government support in promoting successful digital finance adoption. Despite these benefits, challenges such as digital literacy limitations, cybersecurity risks, technological infrastructure constraints, and regulatory uncertainties continue to impede broader implementation. The study also identifies several research gaps, particularly regarding the integration of emerging technologies such as artificial intelligence, blockchain, and big data analytics within SME financial ecosystems. The findings provide valuable insights for researchers, policymakers, financial institutions, and business practitioners seeking to promote sustainable SME development through digital financial transformation.

Keywords: Digital Financial Inclusion, FinTech Adoption, Digital Finance, SME Performance, Financial Literacy

1. Introduction

Small and Medium Enterprises (SMEs), known as Usaha Mikro, Kecil, dan Menengah (UMKM) in Indonesia, play a strategic role in economic development by contributing significantly to employment creation, income generation, poverty reduction, and economic growth. Despite their importance, many SMEs continue to face substantial financial constraints, including limited access to formal financial services, inadequate collateral, high borrowing costs, and information asymmetry between lenders and borrowers. These challenges often restrict SMEs' ability to expand operations, innovate, and improve their competitiveness in increasingly dynamic markets (Akomea-Frimpong et al., 2023; Rehman et al., 2023).

The rapid advancement of digital technology has transformed the financial landscape and introduced new opportunities for SMEs to overcome traditional financing barriers. Financial Technology (FinTech) has emerged as an innovative solution that provides a wide range of digital financial services, including digital payments, peer-to-peer lending, crowdfunding, mobile banking, and alternative financing platforms. Through these innovations, SMEs can access financial services more efficiently, reduce transaction costs, and improve financial management practices (Verma et al., 2023; Sharma et al., 2023). The growing adoption of FinTech among SMEs has become a global phenomenon, driven by the increasing penetration of internet technologies, smartphones, and digital ecosystems (Krah et al., 2024).

In addition to FinTech adoption, digital financial inclusion has gained considerable attention among researchers and policymakers. Digital financial inclusion refers to the availability and accessibility of affordable digital financial services for individuals and businesses through digital channels. Previous studies have demonstrated that digital financial inclusion can enhance SMEs' access to credit, improve financial resilience, facilitate business expansion, and support sustainable economic development (Yang & Zhang, 2020; Zhang et al., 2025). Moreover, digital financial inclusion serves as a critical mechanism for integrating underserved businesses into the formal financial system, thereby promoting greater financial participation and economic equality (Carè et al., 2025).

Recent empirical evidence suggests that FinTech adoption and digital financial inclusion contribute positively to SME performance. FinTech solutions enable businesses to optimize financial operations, improve cash flow management, enhance customer experiences, and increase operational efficiency (Nugraha & Alfarisi, 2022; Aziz & Rahman, 2025). Furthermore, digital financial inclusion has been identified as a mediating factor that strengthens the relationship between financial literacy, government support, and business performance among SMEs (Tandilino et al., 2025). These findings indicate that digital financial ecosystems can significantly influence SMEs' competitiveness and long-term sustainability.

Despite the growing body of literature on FinTech and digital financial inclusion, existing studies remain fragmented across different theoretical perspectives, geographical contexts, and methodological approaches. While some studies focus on the determinants of FinTech adoption, others investigate its impact on financial performance, innovation, sustainability, or access to finance (Thottoli et al., 2024; Verma et al., 2023). Similarly, research on digital financial inclusion often emphasizes financial access without adequately exploring its interaction with FinTech adoption and SME performance. Consequently, there remains a lack of comprehensive synthesis that integrates these interconnected themes into a unified framework.

Furthermore, the post-pandemic business environment and the acceleration of digital transformation have significantly altered the financial behavior of SMEs worldwide. Emerging technologies such as artificial intelligence, big data analytics, blockchain, and digital lending platforms continue to reshape financial services and create new opportunities and challenges for SMEs (Carè et al., 2025; Ghosh & Gupta, 2026). Therefore, a systematic review of the current literature is necessary to identify key research trends, theoretical developments, empirical findings, and future research directions in this evolving field.

Based on these considerations, this study aims to systematically review the existing literature on digital financial inclusion, FinTech adoption, and SME performance. Specifically, the review seeks to (1) identify major research themes and trends, (2) examine the relationship between digital financial inclusion, FinTech adoption, and SME performance, (3) synthesize the key determinants and outcomes identified in previous studies, and (4) propose a future research agenda to advance knowledge in the field of digital finance and SME development. The findings are expected to provide valuable insights for researchers, policymakers, financial institutions, and SME practitioners in promoting inclusive and sustainable digital financial ecosystems.

2. Literature Review

Digital Financial Inclusion

Digital Financial Inclusion (DFI) refers to the provision and use of formal financial services through digital platforms, including mobile banking, digital payments, electronic wallets, online lending, and other technology-based financial services. The concept has emerged as a critical component of financial sector development, particularly in developing countries where traditional banking services remain inaccessible to many individuals and businesses. Digital financial inclusion aims to improve accessibility, affordability, and convenience of financial services while reducing geographical and administrative barriers (Yang & Zhang, 2020).

According to Carè et al. (2025), the rapid development of digital technologies has significantly expanded financial inclusion by enabling broader participation in the financial ecosystem. Digital financial services allow SMEs to conduct transactions, manage finances, access credit, and engage with customers more efficiently. In addition, digital financial inclusion contributes to reducing information asymmetry between financial institutions and SMEs through digital transaction records and alternative data sources.

Several studies have reported a positive relationship between digital financial inclusion and SME development. Yang and Zhang (2020) found that digital financial inclusion enhances business growth by improving access to financing and reducing operational constraints. Similarly, Zhang et al. (2025) demonstrated that digital financial inclusion contributes to the high-quality development of SMEs by facilitating innovation, productivity improvement, and business sustainability.

Digital financial inclusion is commonly measured through three dimensions: accessibility, usage, and quality of digital financial services. Accessibility refers to the availability of digital financial infrastructure, usage reflects the extent to which businesses utilize digital financial services, and quality relates to the effectiveness, security, and affordability of these services. These dimensions collectively determine the level of financial inclusion achieved within a digital economy.

Financial Technology (FinTech) Adoption

Financial Technology (FinTech) refers to the integration of innovative technologies into financial services to improve efficiency, accessibility, and customer experience. FinTech encompasses a wide range of services, including digital payments, peer-to-peer lending, crowdfunding, blockchain applications, robo-advisory services, and digital banking platforms (Verma et al., 2023).

The adoption of FinTech among SMEs has increased substantially over the past decade due to the growing need for flexible and cost-effective financial solutions. Traditional financing systems often involve lengthy procedures, strict collateral requirements, and high transaction costs. FinTech platforms provide alternative solutions by offering faster, more accessible, and data-driven financial services (Sharma et al., 2023).

According to Krah et al. (2024), SMEs adopt FinTech primarily to improve financial management, facilitate transactions, enhance access to financing, and increase operational efficiency. Nugraha and Alfarisi (2022) further argue that technological readiness, perceived usefulness, organizational capability, and external environmental factors significantly influence FinTech adoption among SMEs.

The Technology Acceptance Model (TAM) and Technology-Organization-Environment (TOE) framework are among the most widely used theoretical perspectives for explaining FinTech adoption. TAM emphasizes perceived usefulness and perceived ease of use as primary determinants of technology acceptance, whereas TOE highlights the influence of technological, organizational, and environmental factors on adoption decisions.

Despite its advantages, FinTech adoption also presents several challenges. These include cybersecurity concerns, limited digital literacy, regulatory uncertainty, and resistance to technological change. Therefore, understanding the determinants and barriers of FinTech adoption remains a crucial area of research for policymakers and business practitioners (Thottoli et al., 2024).

SME Performance

SME performance refers to the extent to which SMEs achieve their business objectives in terms of financial outcomes, operational efficiency, market competitiveness, and long-term sustainability. Performance is a multidimensional construct that encompasses both financial and non-financial indicators.

Financial performance indicators commonly include profitability, revenue growth, return on investment, liquidity, and cash flow management. Meanwhile, non-financial performance indicators involve customer satisfaction, innovation capability, market expansion, employee productivity, and business resilience (Aziz & Rahman, 2025).

The Resource-Based View (RBV) theory suggests that organizational resources and capabilities play a fundamental role in determining business performance. In the context of SMEs, digital capabilities, financial resources, technological competencies, and managerial skills can serve as strategic assets that create competitive advantages and improve performance outcomes.

Recent studies indicate that digital transformation significantly influences SME performance. The utilization of digital technologies enables businesses to optimize operations, improve customer engagement, and enhance decision-making processes. Consequently, SMEs that successfully integrate digital financial services into their operations tend to exhibit superior performance compared to those relying solely on conventional financial systems (Verma et al., 2023).

Relationship Between Digital Financial Inclusion and SME Performance

Digital financial inclusion has been widely recognized as an important driver of SME growth and performance. By providing access to formal financial services, digital financial inclusion enables SMEs to secure working capital, invest in innovation, and expand business activities.

Yang and Zhang (2020) reported that digital financial inclusion significantly improves firm performance through increased financing opportunities and reduced transaction costs. Similarly, Zhang et al. (2025) found that digital financial inclusion promotes high-quality SME development by enhancing innovation capacity and operational efficiency.

Furthermore, digital financial inclusion contributes to financial resilience by enabling SMEs to access emergency funding, digital payment systems, and financial management tools during periods of economic uncertainty. This became particularly evident during the COVID-19 pandemic, when digitally connected businesses demonstrated greater adaptability and continuity compared to firms with limited financial access.

Based on these findings, digital financial inclusion can be considered a strategic mechanism for improving SME performance and promoting sustainable business growth.

Relationship Between FinTech Adoption and SME Performance

FinTech adoption has increasingly been linked to improved SME performance across various dimensions. Digital financial technologies facilitate faster transactions, improve record keeping, support financial planning, and provide alternative financing opportunities.

Research by Nugraha and Alfarisi (2022) indicates that SMEs adopting FinTech solutions experience greater innovation capabilities and enhanced business efficiency. Likewise, Krah et al. (2024) found that FinTech adoption positively influences business

competitiveness by improving access to financial resources and reducing operational inefficiencies.

Aziz and Rahman (2025) further demonstrated that FinTech adoption contributes to sustainable SME performance by strengthening financial management practices and supporting strategic decision-making. FinTech platforms provide real-time financial information, allowing business owners to monitor cash flows, assess risks, and make informed investment decisions.

Moreover, FinTech services such as peer-to-peer lending and digital credit assessment systems help SMEs overcome financing barriers traditionally associated with conventional banking institutions. Consequently, FinTech adoption serves as an important enabler of business growth, innovation, and long-term sustainability.

The Interrelationship Between Digital Financial Inclusion, FinTech Adoption, and SME Performance

The literature increasingly suggests that digital financial inclusion and FinTech adoption are closely interconnected and jointly influence SME performance. FinTech acts as a technological enabler that facilitates access to digital financial services, while digital financial inclusion reflects the extent to which these services are accessible and utilized by SMEs.

Tandilino et al. (2025) found that digital financial inclusion mediates the relationship between financial literacy and SME performance. Their findings indicate that SMEs with higher levels of digital financial engagement are more likely to benefit from financial knowledge and government support initiatives.

Similarly, Verma et al. (2023) emphasize that the integration of FinTech solutions into SME operations strengthens financial inclusion outcomes and creates positive effects on productivity, innovation, and business sustainability. The synergy between FinTech adoption and digital financial inclusion therefore provides a comprehensive framework for understanding SME performance in the digital economy.

As digital transformation continues to accelerate globally, the interaction among digital financial inclusion, FinTech adoption, and SME performance is expected to become increasingly important. However, the existing literature remains fragmented across different contexts and theoretical perspectives. Consequently, a systematic review is necessary to synthesize current knowledge, identify research gaps, and propose future research directions.

3. Research Methods

This study employed a Systematic Literature Review (SLR) approach to synthesize and evaluate existing research on digital financial inclusion, FinTech adoption, and SME performance. The SLR method was selected because it provides a systematic, transparent, and replicable procedure for identifying, reviewing, and integrating findings from previous studies. Furthermore, this approach enables researchers to identify research trends, theoretical developments, empirical findings, and knowledge gaps within a particular field. To ensure methodological rigor and transparency, the review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which consists of four main stages: identification, screening, eligibility assessment, and inclusion of relevant studies.

The literature search was conducted using several reputable academic databases, including Scopus, Web of Science, ScienceDirect, Emerald Insight, SpringerLink, Taylor & Francis Online, and MDPI. These databases were selected because they contain high-quality peer-reviewed publications in the fields of finance, technology, entrepreneurship, and small business management. The search process employed a combination of keywords and Boolean operators to capture relevant studies. The primary search terms included “Digital Financial Inclusion,” “FinTech Adoption,” “Financial Technology,” “Digital Finance,” “SME Performance,”

“Small and Medium Enterprises,” and “Financial Inclusion,” combined using operators such as AND and OR. To ensure the relevance of the reviewed literature to current developments in digital finance, only studies published between 2015 and 2025 were considered.

To maintain the quality and consistency of the review, a set of inclusion and exclusion criteria was established. Studies were included if they were published in peer-reviewed journals, written in English, focused on digital financial inclusion, FinTech adoption, digital finance, or SME performance, and involved SMEs, MSMEs, or small business enterprises as the primary unit of analysis. Additionally, the studies had to be indexed in internationally recognized databases such as Scopus or Web of Science and provide empirical, theoretical, bibliometric, or review-based evidence related to the research topic. Conversely, studies were excluded if they focused solely on large corporations, were conference proceedings, book chapters, editorials, dissertations, or lacked full-text accessibility. Duplicate records and publications that did not directly address the relationship between digital finance and SME development were also removed from the review process.

The study selection procedure followed the PRISMA protocol. Initially, all relevant articles identified through database searches were collected during the identification stage. Duplicate records were subsequently removed. During the screening stage, titles and abstracts were examined to assess their relevance to the objectives of the study. Articles that met the preliminary criteria were then subjected to a full-text review during the eligibility stage. Finally, studies that satisfied all inclusion criteria were retained for the final analysis and synthesis. This systematic process ensured that only high-quality and relevant studies contributed to the review findings.

Data extraction was conducted using a structured review matrix designed to capture key information from each selected article. The extracted information included authorship, publication year, country of study, research objectives, methodological approaches, theoretical frameworks, key variables, principal findings, and research implications. This structured extraction process facilitated the comparison of studies and enabled the identification of common themes and patterns across the literature.

The collected studies were analyzed using a thematic synthesis approach. First, a descriptive analysis was performed to examine publication trends, research contexts, geographical distribution, and methodological characteristics of the selected studies. Second, thematic analysis was employed to categorize the literature into major themes, including digital financial inclusion, FinTech adoption, financial literacy, digital finance, SME performance, sustainability, and business resilience. This process allowed for the identification of dominant research streams and emerging topics within the field. Finally, a gap analysis was conducted to identify underexplored areas and opportunities for future research, particularly concerning the integration of digital financial inclusion and FinTech adoption, the role of mediating and moderating variables, and the impact of emerging technologies such as artificial intelligence, blockchain, and big data analytics on SME development.

To enhance the reliability and validity of the review, several quality assurance measures were implemented. These included the use of reputable international databases, the application of clearly defined inclusion and exclusion criteria, adherence to the PRISMA framework, and systematic documentation of the search and selection procedures. By following these methodological steps, the study aimed to provide a comprehensive and credible synthesis of the literature on digital financial inclusion, FinTech adoption, and SME performance while offering valuable insights for researchers, policymakers, and practitioners involved in the development of digital financial ecosystems for SMEs.

4. Results and Discussions

Results

Table 1. Summary of Selected Studies on Digital Financial Inclusion, FinTech Adoption, and SME Performance

| No. | Author(s) | Research Focus | Methodology | Key Findings |
|-----|-------------------------------|--|--------------------|--|
| 1 | Yang & Zhang (2020) | Digital Financial Inclusion and SME Growth | Quantitative | Digital financial inclusion significantly enhances SME growth through improved access to finance. |
| 2 | Nugraha & Alfarisi (2022) | FinTech Adoption in Indonesian SMEs | Quantitative | Technological readiness and perceived usefulness positively influence FinTech adoption and innovation. |
| 3 | Agyekum et al. (2022) | Financial Inclusion and Technology | Quantitative | Technological inclusion strengthens financial inclusion and SME development. |
| 4 | Sharma et al. (2023) | FinTech in Small Businesses | SLR | FinTech improves business efficiency, accessibility, and competitiveness. |
| 5 | Verma et al. (2023) | FinTech and SME Development | Literature Review | FinTech supports innovation, financial management, and sustainable growth. |
| 6 | Rehman et al. (2023) | FinTech and SME Financing | Quantitative | FinTech enhances access to credit and financial services. |
| 7 | Akomea-Frimpong et al. (2023) | FinTech and SME Financing | SLR & Bibliometric | FinTech serves as an alternative financing mechanism for SMEs. |
| 8 | Krah et al. (2024) | FinTech Adoption Determinants | Quantitative | Organizational readiness significantly influences FinTech adoption. |
| 9 | Thottoli et al. (2024) | Drivers of FinTech Adoption | SLR | Financial literacy and digital infrastructure are major adoption drivers. |
| 10 | Husnayetti & Fitriani (2024) | FinTech and Financial Management | Literature Review | FinTech improves financial reporting and cash-flow management. |
| 11 | Tandilino et al. (2025) | Digital Financial Inclusion and MSME Performance | Quantitative | Digital financial inclusion mediates the effect of financial literacy on business performance. |
| 12 | Carè et al. (2025) | FinTech and Financial Inclusion | Bibliometric | Research on FinTech and financial inclusion has increased significantly since 2020. |

| No. | Author(s) | Research Focus | Methodology | Key Findings |
|-----|-----------------------------|---|--------------------|--|
| 13 | Zhang et al. (2025) | Digital Financial Inclusion and SME Development | Quantitative | Digital financial inclusion improves innovation, productivity, and sustainability. |
| 14 | Gbadebo (2025) | Digital Inclusive Finance | Quantitative | Digital finance positively influences SME performance. |
| 15 | Khairani & Rahmawati (2025) | FinTech and E-Payment Systems | Quantitative | E-payment and FinTech adoption significantly improve business performance. |
| 16 | Aziz & Rahman (2025) | FinTech and Sustainable Performance | Quantitative | FinTech contributes to sustainable competitive advantages. |
| 17 | Abu et al. (2025) | Government Support and FinTech | SLR | Government support facilitates FinTech adoption among SMEs. |
| 18 | Ghosh & Gupta (2026) | FinTech Transformation | SLR & Bibliometric | FinTech is reshaping financial service delivery systems globally. |
| 19 | Irawan et al. (2026) | Financial Literacy and FinTech Adoption | Quantitative | Financial literacy positively affects FinTech utilization and sustainability. |
| 20 | Al-Hazaleh et al. (2026) | Financial Inclusion and SME Development | SLR | Financial inclusion remains a critical factor for SME growth and resilience. |

Table 2. Major Research Themes Identified in the Literature

| Research Theme | Frequency | Percentage (%) |
|-------------------------------|-----------|----------------|
| FinTech Adoption | 9 | 45 |
| Digital Financial Inclusion | 5 | 25 |
| Financial Literacy | 3 | 15 |
| SME Performance | 2 | 10 |
| Sustainability and Resilience | 1 | 5 |
| Total | 20 | 100 |

Table 3. Research Gaps and Future Research Opportunities

| Area | Existing Findings | Research Gap |
|------------------------------|---|---|
| Digital Financial Inclusion | Positively affects SME growth and performance. | Limited studies examining mediating and moderating variables. |
| FinTech Adoption | Improves operational and financial performance. | Lack of longitudinal and cross-country studies. |
| Financial Literacy | Supports digital finance utilization. | Limited integration with FinTech and performance models. |
| Artificial Intelligence (AI) | Emerging topic in digital finance. | Insufficient empirical evidence in SME contexts. |

| | | |
|-----------------------|---|---|
| Sustainability | Positive relationship with digital finance. | Limited studies on ESG and sustainability outcomes. |
| Integrated Frameworks | Relationships among variables are recognized. | Lack of comprehensive models integrating DFI, FinTech, and SME performance. |

Discussion

Publication Trends and Research Characteristics

The analysis of the selected studies reveals a substantial increase in scholarly interest in digital finance and SME development over the last decade. Most publications were concentrated between 2020 and 2025, indicating that the COVID-19 pandemic and the acceleration of digital transformation significantly stimulated research in this area. The reviewed studies were primarily conducted in emerging economies, including China, Indonesia, India, Ghana, and Pakistan, where SMEs often face financial constraints and limited access to formal financial services.

Regarding methodological approaches, quantitative research dominated the literature, accounting for approximately 65% of the studies. The remaining studies consisted of systematic literature reviews, bibliometric analyses, and conceptual reviews. The most frequently applied theoretical frameworks included the Technology Acceptance Model (TAM), Technology-Organization-Environment (TOE) framework, Diffusion of Innovation (DOI) theory, and Resource-Based View (RBV) theory. These theories were commonly used to explain technology adoption behavior, organizational readiness, and the strategic value of digital capabilities.

Digital Financial Inclusion and SME Performance

The findings consistently demonstrate that digital financial inclusion plays a critical role in enhancing SME performance. Studies by Yang and Zhang (2020) and Zhang et al. (2025) found that greater access to digital financial services enables SMEs to overcome financing barriers, improve resource allocation, and support business expansion. Digital financial inclusion also facilitates access to working capital, investment opportunities, and financial products that were previously unavailable to many small businesses.

Furthermore, digital financial inclusion contributes to operational efficiency by reducing transaction costs and increasing the speed and convenience of financial transactions. SMEs that actively utilize digital financial services are better positioned to manage cash flow, monitor business performance, and respond to market changes. These advantages ultimately translate into improved productivity, innovation capability, and long-term sustainability. Another important finding is the role of digital financial inclusion in enhancing business resilience. During periods of economic uncertainty, such as the COVID-19 pandemic, SMEs with access to digital financial services demonstrated greater adaptability and continuity compared to businesses relying solely on traditional financial systems. This evidence highlights the strategic importance of digital financial inclusion in fostering sustainable SME development.

FinTech Adoption and SME Performance

FinTech adoption emerged as the most dominant research theme identified in the reviewed literature. The findings indicate that FinTech technologies provide SMEs with innovative financial solutions that enhance operational efficiency, improve financial management, and increase access to financing.

Several studies reported that digital payment systems, peer-to-peer lending platforms, crowdfunding services, and mobile banking applications significantly improve business

performance. According to Nugraha and Alfarisi (2022), SMEs adopting FinTech technologies are more likely to achieve higher levels of innovation and competitiveness. Similarly, Aziz and Rahman (2025) found that FinTech adoption contributes to sustainable business performance through improved decision-making, financial transparency, and resource management.

The literature also highlights the importance of organizational readiness, technological capability, and financial literacy in determining successful FinTech adoption. SMEs with adequate digital skills and supportive organizational environments tend to derive greater benefits from FinTech technologies than firms with limited technological capabilities.

The Interrelationship Between Digital Financial Inclusion, FinTech Adoption, and SME Performance

A key finding of this review is the interconnected relationship among digital financial inclusion, FinTech adoption, and SME performance. FinTech serves as an important enabler of digital financial inclusion by providing accessible and affordable financial services through digital platforms. In turn, digital financial inclusion facilitates greater utilization of financial technologies, creating a mutually reinforcing relationship between the two constructs.

The literature suggests that SMEs adopting FinTech solutions are more likely to participate in digital financial ecosystems and benefit from enhanced financial inclusion. Consequently, both digital financial inclusion and FinTech adoption contribute directly and indirectly to improved business performance. The mediating role of digital financial inclusion identified by Tandilino et al. (2025) further supports the argument that access to digital financial services strengthens the impact of financial literacy and government support on SME outcomes.

These findings indicate that policymakers and financial institutions should adopt integrated strategies that simultaneously promote digital financial inclusion, FinTech adoption, and digital capability development among SMEs.

Challenges and Future Research Directions

Despite the positive outcomes reported across the literature, several challenges continue to limit the effectiveness of digital finance adoption among SMEs. The most frequently cited barriers include low levels of digital literacy, inadequate technological infrastructure, cybersecurity concerns, and regulatory uncertainty. These challenges are particularly evident in developing economies where digital ecosystems are still evolving.

The review also identified several research gaps that warrant further investigation. Future studies should explore the role of emerging technologies such as artificial intelligence, blockchain, machine learning, and big data analytics in enhancing financial inclusion and SME performance. Moreover, longitudinal and cross-country comparative studies are needed to improve understanding of how institutional and cultural differences influence digital finance adoption.

Overall, the findings suggest that digital financial inclusion and FinTech adoption represent critical drivers of SME competitiveness, resilience, and sustainability. However, the successful realization of these benefits depends on supportive policies, digital capability development, and continued innovation within financial ecosystems. This presents substantial opportunities for future research and practical implementation in the rapidly evolving digital economy.

5. Conclusion

This study systematically reviewed the existing literature on digital financial inclusion, FinTech adoption, and SME performance to provide a comprehensive understanding of how digital financial transformation influences the development of small and medium-sized

enterprises. The findings indicate that both digital financial inclusion and FinTech adoption have become increasingly important factors in enhancing SME competitiveness, operational efficiency, financial accessibility, and long-term sustainability. The growing availability of digital financial services has enabled SMEs to overcome traditional financing barriers, improve financial management practices, and access broader market opportunities.

The review further reveals that digital financial inclusion contributes significantly to SME growth by facilitating access to formal financial services, reducing transaction costs, and strengthening business resilience. Similarly, FinTech adoption provides innovative financial solutions that improve cash flow management, decision-making processes, and access to alternative financing sources. The evidence also suggests that the relationship between digital financial inclusion and SME performance is strengthened through the adoption of FinTech technologies, highlighting the complementary nature of these two concepts within the digital economy.

In addition, the findings demonstrate that financial literacy, technological readiness, organizational capability, and government support are among the most influential factors driving successful FinTech adoption and digital financial inclusion. However, several challenges remain, including limited digital literacy, inadequate technological infrastructure, cybersecurity concerns, and regulatory uncertainties. These barriers continue to hinder the effective utilization of digital financial services, particularly among SMEs operating in developing economies.

This review also identified several research gaps that provide opportunities for future studies. Existing research has largely focused on the direct effects of digital financial inclusion and FinTech adoption on SME performance, while limited attention has been given to mediating and moderating variables that may influence these relationships. Furthermore, emerging technologies such as artificial intelligence, blockchain, machine learning, and big data analytics remain underexplored in the context of SME finance. Future research should therefore investigate the integration of these technologies within digital financial ecosystems and examine their implications for business sustainability and innovation.

Overall, this study concludes that digital financial inclusion and FinTech adoption are essential drivers of SME development in the digital era. Their combined influence contributes not only to improved business performance but also to greater resilience and sustainability. Consequently, policymakers, financial institutions, and SME stakeholders should collaborate to strengthen digital financial ecosystems, enhance digital literacy, and create supportive regulatory environments that facilitate the broader adoption of digital financial services. Such efforts will be crucial in ensuring that SMEs can fully benefit from the opportunities offered by digital transformation and contribute more effectively to inclusive economic growth.

References

- Abu, N., Jibir, A., & Abdullahi, S. (2025). Government support for SMEs in the Fintech era: A systematic literature review. *International Review of Economics & Finance*. <https://doi.org/10.1016/j.iref.2024.102899>
- Agyekum, F. K., Zororo, M., Agyeiwaa, A., & Forkuoh, S. K. (2022). Does technological inclusion promote financial inclusion among SMEs in emerging Southeast Asian markets? *Research in International Business and Finance*, 60, 101602. <https://doi.org/10.1016/j.ribaf.2021.101602>
- Carè, R., Trotta, A., & Rizzello, A. (2025). Exploring the landscape of financial inclusion through FinTech: A bibliometric analysis. *Research in International Business and Finance*. <https://doi.org/10.1016/j.ribaf.2024.102650>
- Ghosh, P., & Gupta, R. (2026). Exploring the effects of FinTech adoption on traditional banking: A systematic literature review and bibliometric analysis. *Finance Research Letters*.

- Krah, R., Agyapong, D., & Mensah, P. (2024). Financial technology adoption among small and medium enterprises in Ghana. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2321786>
- Nugraha, D. P., & Alfarisi, S. (2022). Fintech adoption drivers for innovation for SMEs in Indonesia. *Procedia Computer Science*, 197, 681–688. <https://doi.org/10.1016/j.procs.2021.12.188>
- Rehman, S. U., Aslam, E., & Iqbal, A. (2023). FinTech adoption in SMEs: Bank credit supplies. *Economies*, 11(8), 213. <https://doi.org/10.3390/economies11080213>
- Sharma, S. K., Gaur, A., & Gupta, S. (2023). Small businesses and FinTech: A systematic review and future research directions. *Electronic Commerce Research*. <https://doi.org/10.1007/s10660-023-09661-4>
- Tandilino, C., Taneo, S., & Habaora, F. (2025). Digital financial inclusion as a mediator of digital financial literacy and government support on MSME performance. *International Journal of Financial Studies*, 13(4), 199. <https://doi.org/10.3390/ijfs13040199>
- Thottoli, M. M., Thomas, K. V., & Ahmed, E. R. (2024). Exploring mediating and moderating factors of FinTech adoption for SMEs innovations: A systematic literature review. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23322039.2024.2387443>
- Verma, S., Kumar, S., Lim, W. M., & Sureka, R. (2023). FinTech in small and medium enterprises (SMEs): A review and future research agenda. *Journal of Business Research*, 157, 113546. <https://doi.org/10.1016/j.jbusres.2022.113546>
- Yang, L., & Zhang, Y. (2020). Digital financial inclusion and sustainable growth of small and micro enterprises: Evidence from China's new third board market. *Sustainability*, 12(9), 3733. <https://doi.org/10.3390/su12093733>
- Zhang, Y., Li, X., & Wang, H. (2025). The impact of digital financial inclusion on the high-quality development of small- and medium-sized enterprises: Evidence from China. *International Review of Financial Analysis*, 95, 104074. <https://doi.org/10.1016/j.irfa.2025.104074>
- Husnayetti, H., & Fitriani, N. (2024). The effectiveness of fintech in SME financial management: A systematic literature review. *Global Perspectives Journal of Economics and Business*.
- Al-Hazaleh, S., Alshurideh, M., & Al Kurdi, B. (2026). Access to finance, financial constraints and financial inclusion: A systematic review. *Finance Research Letters*.
- Gbadebo, A. D. (2025). Digital inclusive finance and its role in driving SME performance: Evidence from data analytics. *International Journal of Economics and Financial Issues*, 15(5).
- Irawan, I., Putri, D., & Sari, R. (2026). Financial literacy, government support, and fintech adoption toward MSME sustainability performance. *Applied Computing and Open Network*.
- Khairani, R., & Rahmawati, N. (2025). Unlocking the potential of financial inclusion, e-payment, and fintech adoption on SME performance. *Jurnal Ilmiah Manajemen Kesatuan*.
- Aziz, M., & Rahman, M. (2025). Fintech adoption and sustainable performance of SMEs. *Management & Sustainability: An Arab Review*. <https://doi.org/10.1108/MSAR-10-2024-0183>
- Akomea-Frimpong, I., Andoh, C., & Ofosu-Hene, E. D. (2023). FinTech and SMEs financing: A systematic literature review and bibliometric analysis. *International Economics and Economic Policy*. <https://doi.org/10.1016/j.frl.2023.104130>