INTERNATIONAL JOURNAL OF SOCIAL HEALTH
https://ijsh.ph/index.php/rp
Volume 5 Number 7 July 2026
E-ISSN: 2984-7079

Digital Financial Transformation and Microfinance Intermediation Dynamics for MSMES in ASEAN: A Systematic Literature Review and Conceptual Meta-Analysis

Antyo Pracoyo*, Prihandono, Nurminingsih
Universitas Respati Indonesia, Indonesia
Email: antyopracoyo@urindo.ac.id*, prihandono@urindo.ac.id, nurminingsih@urindo.ac.id

Keywords:
Digital Financial Transformation; FinTech; Financial Inclusion; MSMEs; ASEAN

Abstract
Digital financial transformation has significantly altered the landscape of microfinance intermediation for Micro, Small, and Medium Enterprises (MSMEs) in the Association of Southeast Asian Nations (ASEAN) region. The rapid growth of fintech, digital payments, peer-to-peer lending, mobile banking, and financial technology ecosystems has expanded financial access, reduced transaction costs, and improved operational efficiency among MSMEs. However, empirical findings remain fragmented regarding the mechanisms by which digital financial services influence MSME sustainability and the dynamics of financial intermediation. This research aims to systematically review and conceptually synthesize the literature on digital financial transformation and microfinance intermediation dynamics for MSMEs in ASEAN using a Systematic Literature Review (SLR), a conceptual meta-analysis, and the PRISMA 2020 framework. Literature was collected from Scopus Q1 and Q2 journals published between 2017 and 2025. The review identifies financial inclusion, technological readiness, digital literacy, institutional quality, and social capital as the dominant mediating and moderating variables influencing MSME performance. The findings indicate that digital financial transformation positively affects MSME sustainability by enhancing financial inclusion and introducing alternative financing mechanisms. Nevertheless, disparities in digital infrastructure, regulatory readiness, and financial capability continue to hinder inclusive digital transformation across ASEAN economies. This study proposes an integrated conceptual framework linking fintech adoption, digital financial inclusion, microfinance intermediation, and MSME sustainability. The study contributes theoretically by integrating fragmented fintech and microfinance literature and, practically, by offering policy implications for inclusive digital financial ecosystems in ASEAN.

INTRODUCTION

Digital transformation in the financial sector has been one of the most significant phenomena in global economic development in the last decade (Allen, 2022; Cinini & Mkhize, 2023; Mavlutova et al., 2022; Sun et al., 2025; Thottoli et al., 2023; Zaika, 2025). The development of financial technology (fintech) has transformed traditional financial intermediation, making it more inclusive, faster, more flexible, and more digital. In the ASEAN region, the transformation of digital financial services is accelerating, driven by rising internet penetration, smartphone adoption, the growth of the digital payment ecosystem, and the expansion of the regional digital economy. This situation is driving fundamental changes in the financing system and access to financial services, particularly for the MSME sector (Arner et al., 2022; Chanda, 2024; Mahmoud et al., 2024; Rajamani et al., 2022; Utomo, 2024).

MSMEs hold a strategic position in the ASEAN economic structure due to their significant contribution to job creation, economic growth, poverty reduction, and socioeconomic stability. However, most MSMEs in ASEAN countries still face structural barriers, including limited access to formal financing, low financial literacy, limited collateral, high transaction costs, and weak technological capacity. In this context, digital financial services are seen as a crucial instrument for expanding financial inclusion and strengthening the dynamics of microfinance intermediation.

Various studies have shown that digital financial services can increase access to financing for MSMEs through peer-to-peer lending, mobile banking, e-wallets, digital payments, and alternative financing ecosystems. Digital financial inclusion in ASEAN plays a crucial role in expanding access to financial services for underserved and unbanked groups through the use of digital technology (Loo, 2019). Another study found that technological inclusion has a significant impact on MSME financial inclusion in Southeast Asia, particularly through increased internet access and institutional technological readiness (Agyekum et al., 2022).

On the other hand, the development of fintech has also transformed the structure of conventional microfinance intermediation. Digital platform-based financing models enable faster, more efficient, and more adaptive credit disbursement processes compared to traditional banking systems. The fintech ecosystem has increased the resilience of ASEAN MSMEs during the COVID-19 pandemic by accelerating business digitalization and the adoption of digital financing services (Karim et al. 2022). This study demonstrates that the transformation of digital financial services is not only about technological innovation but also about changes in the relationships among financial institutions, MSMEs, and the digital economy ecosystem as a whole.

Another crucial issue concerns the transformation of microfinance intermediation itself. The traditional financial intermediation model relies heavily on the formal banking system, characterized by collateral requirements, bureaucratic lending procedures, and high transaction costs. Digital financial services are challenging the conventional structure by introducing AI-based credit scoring, peer-to-peer financing, embedded finance, and alternative lending ecosystems, potentially expanding access to financing for underserved MSMEs. However, the extent to which these digital mechanisms are reshaping the efficiency of intermediation and the sustainability of MSMEs in ASEAN remains insufficiently explored in existing studies. Studies on fintech and MSMEs remain fragmented across disciplines and methodologies, necessitating a more integrative and systematic synthesis of the literature (Verma et al., 2023).

Nevertheless, the literature discussing the transformation of digital financial services and the dynamics of microfinance intermediation in ASEAN still exhibits several important limitations. First, most studies still focus on the direct relationship between fintech adoption and MSME performance, without explaining the underlying mechanisms of intermediation. Second, empirical research has focused primarily on Indonesia and Malaysia, thereby failing to provide a comprehensive description of conditions in ASEAN. Third, previous studies tend to separate digital finance, financial inclusion, social capital, and institutional readiness as standalone variables, whereas in practice, these variables interact to shape the success of digital financial transformation.

Furthermore, recent research has begun to show that the influence of digital financial services on MSME performance is not always linear. Social capital mediates the relationship between fintech adoption and MSME performance in Indonesia (Zunairoh and Wijaya, 2024). Other research confirms that digital financial literacy via social media significantly influences MSME financial inclusion (Al-Shami et al., 2024). These studies demonstrate that the success of digital financial service transformation is determined not solely by technology but also by social readiness, institutional capacity, digital literacy, and regulatory quality.

Given these conditions, this study seeks to integrate perspectives that remain fragmented in the previous literature. This study positions the transformation of digital financial services within the dynamics of microfinance intermediation, examining the relationships among the fintech ecosystem, financial inclusion, social capital, institutional quality, and MSME sustainability in ASEAN. By using a Systematic Literature Review (SLR) approach, a conceptual meta-analysis, and the PRISMA framework, this study is expected to provide a more comprehensive and systematic synthesis of the literature than previous research.

The novelty of this research lies in its effort to develop an integrative conceptual framework that connects digital financial transformation with the microfinance intermediation dynamics of ASEAN MSMEs. Unlike previous research that tends to focus on fintech adoption or financial inclusion in isolation, this study combines various dimensions of digital financial transformation into a more holistic conceptual model. Thus, this research is expected to make theoretical contributions to the fintech and microfinance literature, while also offering practical implications for governments, regulators, financial institutions, and MSMEs in building an inclusive and sustainable digital financial services ecosystem in ASEAN.

Based on the above description, this study aims to systematically analyze the development of digital financial transformation literature related to MSMEs in ASEAN, identify the dominant factors influencing digital microfinance intermediation, synthesize mediating and moderating variables that influence MSME performance, and develop a conceptual framework for future research concerning fintech-driven microfinance intermediation in ASEAN. Theoretically, this research contributes to fintech and microfinance literature by integrating fragmented perspectives into a comprehensive conceptual framework linking fintech adoption, digital financial inclusion, microfinance intermediation, and MSME sustainability, while identifying the mediating and moderating variables that shape these relationships. Practically, the findings provide policy implications for governments, regulators, financial institutions, and MSMEs in building an inclusive and sustainable digital financial services ecosystem in ASEAN, particularly in addressing digital infrastructure gaps, strengthening regulatory harmonization, improving digital literacy, and fostering institutional readiness, while also offering guidance for future researchers in identifying research gaps and developing more rigorous empirical studies on fintech-driven microfinance intermediation in the ASEAN context.

METHOD

This research employed a qualitative-descriptive approach, grounded in a Systematic Literature Review (SLR) and a conceptual meta-analysis, to analyze the transformation of digital financial services and the dynamics of microfinance intermediation for MSMEs in the ASEAN region. This approach was chosen because it can provide a systematic, transparent, and comprehensive scientific synthesis of the development of the literature on fintech, digital financial inclusion, and microfinance intermediation for ASEAN MSMEs. The study also follows the PRISMA 2020 guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) to ensure the identification, selection, evaluation, and synthesis of articles are carried out in a replicable and standardized manner.

The research population comprised all scientific articles that discussed digital financial transformation, financial technology (fintech), digital financial inclusion, microfinance intermediation, and MSMEs/SMEs in the ASEAN region and other emerging economies. Data sources were obtained from reputable international databases, namely Scopus, ScienceDirect, MDPI, Emerald Insight, and Google Scholar.

The sampling method used was purposive, given the article's relevance to the research focus. Inclusion criteria included: journal articles indexed in Scopus Q1 and Q2; published between 2017 and 2025; discussing fintech, MSMEs, or microfinance intermediation; covering the ASEAN region; and available in full-text and peer-reviewed.

Meanwhile, irrelevant articles, non-indexed conference proceedings, opinion pieces, and articles without full-text access were excluded from the analysis process. Based on the PRISMA steps, 8 primary articles were obtained for the conceptual meta-analysis and 15 articles for the systematic review.

The primary research instrument was a systematic review protocol based on PRISMA 2020, which was used to identify, screen, evaluate, and categorize scientific articles. Furthermore, the study employed a data extraction matrix to organize key information from each article, including: author name, year of publication, country of study, research method, main variables, research findings, and theoretical and practical implications.

The search instrument used a combination of keywords tailored to the research focus, namely:
("digital financial services" OR fintech OR "digital finance" OR "digital payment" OR "financial inclusion") AND (MSMEs OR SMEs OR microfinance) AND (ASEAN OR Indonesia OR Malaysia OR Thailand OR Vietnam).

Furthermore, reference management software such as Mendeley and Zotero was used to identify duplicate articles and manage research citations.

The research was conducted through several systematic stages. The first stage was article identification through a database search using predetermined keywords. The second stage was screening based on the relevance of the title, abstract, and keywords. The third stage was full-text evaluation to determine the suitability of the articles based on journal quality, methodology, and topic relevance. The final stage was data extraction and conceptual synthesis. The research process was conducted in May 2026. The analysis results were prepared, and the article was written on May 2. Because this study uses a conceptual meta-analysis approach, quantitative statistical analyses, such as effect-size aggregation and heterogeneity tests, were not conducted as thoroughly as in traditional numerical meta-analyses. However, the study still conducted a comparative synthesis of the relationships among variables, the direction of influence, research methods, and the geographic context of previous studies. The comparative analysis was conducted to identify: dominant variables, relationship patterns, and inconsistencies in research results. The study also compared methodological approaches used in previous studies, such as SEM-PLS, regression analysis, bibliometric analysis, and mixed-methods approaches.

This research has several limitations. First, most previous studies have focused on Indonesia and Malaysia, thus limiting generalizability to all ASEAN countries. Second, the study used conceptual meta-analysis, thus failing to statistically combine effect sizes. Third, the heterogeneity of methods and variables across studies means that empirical comparisons are conceptual rather than fully quantitative.

Nevertheless, this approach still makes an important contribution to the development of an integrative literature synthesis on the digital transformation of finance and the microfinance intermediation of MSMEs in ASEAN.

RESULTS AND DISCUSSION

Digital Financial Transformation

Digital financial transformation involves integrating digital technology into financial systems and services, fundamentally changing the mechanisms through which financial transactions, lending, and financial intermediation are conducted. The rapid advancement of fintech is accelerating the transition from traditional banking systems to a financial ecosystem utilizing modern technology. This transformation is characterized by the emergence of real-time transactions, digital lending platforms, AI-based credit scoring, mobile banking, blockchain systems, and integrated financial services, providing faster, more accessible, and more efficient financial solutions for businesses and consumers.

For MSMEs, digital financial transformation is increasingly crucial for minimizing barriers to accessing formal financial services. Traditional banking systems typically require collateral, lengthy administrative procedures, and extensive credit histories, limiting financing opportunities for MSMEs. Digital financial services minimize these obstacles by leveraging data-driven financial assessments and alternative financing mechanisms. The fintech literature has grown significantly over the past decade, with increasing academic attention paid to SME financing, digital ecosystems, financial inclusion, and platform-based intermediation models. These developments demonstrate that digital finance is no longer viewed simply as a technological innovation, but as a strategic instrument for inclusive economic development (Verma et al., 2023).

MSMEs experience five benefits when implementing digital financial transformation. First, digital financial systems reduce transaction costs, including administrative fees and operational inefficiencies. Second, fintech platforms expand access to financing for underserved and unbanked MSMEs through digital lending and peer-to-peer financing. Third, digitalization improves operational efficiency, enabling automated financial management and faster payment processing. Fourth, AI-based financial systems accelerate credit approval by leveraging alternative credit scoring mechanisms. Fifth, digital financial ecosystems enhance market integration by connecting MSMEs with broader digital trading networks and financial platforms. Consequently, digital financial transformation plays a critical role in strengthening the competitiveness and sustainability of MSMEs in the increasingly digital ASEAN economy.

Financial Inclusion and MSMEs

Financial inclusion refers to the accessibility, availability, and use of affordable financial services by individuals and businesses, particularly those from underserved and economically vulnerable groups. In the context of MSMEs, financial inclusion plays a critical role in supporting business sustainability, productivity, and economic growth. MSMEs often experience limited access to formal financial institutions due to insufficient collateral, weak financial records, limited banking history, and high transaction costs. As a result, many MSMEs rely on informal financing mechanisms that often provide limited capital and carry higher financial risks.

The emergence of digital financial services has significantly expanded MSMEs' opportunities to achieve financial inclusion. Fintech platforms, mobile banking, peer-to-peer lending, and digital payment systems enable MSMEs to access financing and financial services more efficiently and at lower costs than traditional banking systems. Digital financial inclusion through internet-based services reduces geographic barriers, enabling businesses in rural areas to participate in the formal financial ecosystem. In ASEAN countries, digital financial inclusion has become a key policy agenda to strengthen MSME resilience and reduce economic disparities.

Recent studies have shown that financial inclusion positively impacts MSME performance by improving access to credit, expanding business opportunities, and enhancing financial management efficiency. The inclusion of technology and digital connectivity significantly improve MSME financial inclusion in Southeast Asia, particularly in countries with stronger digital infrastructure (Agyekum et al., 2022). Other studies have shown that digital financial inclusion acts as a mediating variable between fintech adoption and MSME performance (Tandilino et al., 2025). These findings suggest that financial inclusion not only improves access to financing but also strengthens business competitiveness and sustainability in an increasingly digital economy.

Despite this, challenges to financial inclusion remain significant in ASEAN member countries. Unequal digital infrastructure, low digital literacy, regulatory fragmentation, and limited institutional readiness continue to hamper inclusive digital financial transformation. Therefore, increasing financial inclusion requires not only technological innovation but also supportive policies, the development of digital capabilities, and institutional strengthening to ensure that MSMEs can fully utilize the digital financial ecosystem.

Microfinance Intermediation Dynamics

The dynamics of microfinance intermediation are the processes by which financial resources are mobilized, distributed, and managed between financial institutions and MSMEs. Traditionally, microfinance intermediaries have relied heavily on formal banking institutions and microfinance organizations, which provide loans, savings services, and other financial products to small businesses. However, conventional intermediary systems often involve complex administrative procedures, collateral requirements, lengthy approval processes, and high transaction costs, which limit MSMEs' access to finance, particularly those operating in the informal sector.

The emergence of digital financial transformation has fundamentally reshaped the structure and dynamics of microfinance intermediaries. The Fintech ecosystem introduces alternative financing mechanisms, including peer-to-peer lending, crowdfunding platforms, digital wallets, AI-based credit scoring, and integrated financial services, thereby reducing reliance on the traditional banking system. These digital mechanisms enable faster credit assessments, lower operational costs, greater transparency, and broader access to financing for underserved MSMEs. As a result, financial intermediation is shifting from an institution-centric model to a platform- and technology-based ecosystem.

Recent studies have shown that digital financial services significantly improve the efficiency of microfinance intermediation. The development of fintech in ASEAN accelerates MSME resilience and improves access to financing during periods of economic uncertainty. Similarly, digital lending systems enable MSMEs with limited collateral and banking history to obtain financing through alternative data analysis and transaction-based credit evaluation. This transformation not only improves financial accessibility but also enhances the scalability and sustainability of the MSME financing ecosystem (Karim et al., 2020).

Electronic payment and e-commerce services positively impact MSME supply chain performance and operational effectiveness (Kilay et al., 2022). Their findings indicate that digital financial integration significantly enhances business competitiveness and organizational adaptability in a dynamic market environment. Similarly, several recent studies have shown that fintech adoption strengthens MSME resilience by improving access to financing, accelerating financial transactions, and supporting business continuity during periods of economic uncertainty. Consequently, digital finance has evolved from a supporting financial instrument to a strategic component of MSME competitiveness and long-term economic sustainability in ASEAN countries.

Nevertheless, the dynamics of digital microfinance intermediation remain influenced by institutional readiness, regulatory frameworks, digital literacy, and technological infrastructure. In several ASEAN countries, gaps in internet access, financial capacity, and regulatory harmonization continue to create uneven adoption of digital financial services. Therefore, the effectiveness of digital microfinance intermediation depends not only on technological innovation but also on the ability of governments, financial institutions, and the fintech ecosystem to create an inclusive, safe, and sustainable digital financial environment for MSMEs.

Social Capital and Digital Literacy

Social capital and digital literacy have emerged as critical determinants of MSMEs' successful adoption of digital financial services. While technological innovations create new financial opportunities, the effectiveness of digital financial transformation largely depends on MSMEs' social and cognitive capacity to understand, trust, and use the digital financial ecosystem. On the one hand, social capital refers to the networks, trust, social relationships, and collaborative interactions that facilitate access to information, financial resources, and business opportunities. On the other hand, digital literacy refers to the ability of individuals and businesses to access, understand, evaluate, and utilize digital technologies and financial platforms effectively.

Recent studies have shown that social capital significantly influences fintech adoption and MSME performance. Strong social networks enable MSMEs to obtain information about digital financing opportunities, fintech platforms, and market access more efficiently. Trust-based relationships between entrepreneurs, financial institutions, and digital platforms also reduce the uncertainty and perceived risks associated with digital financial services. Social capital acts as a crucial mediating variable between fintech adoption and MSME performance in Indonesia, suggesting that technology adoption alone is insufficient without social trust and a collaborative business ecosystem (Zunairoh and Wijaya, 2024).

Digital literacy also plays a fundamental role in accelerating financial inclusion and digital financial transformation. MSMEs with higher levels of digital capabilities are more likely to adopt mobile banking, digital payment systems, online financing platforms, and AI-based financial services. Digital financial literacy positively influences financial inclusion through social media-based financial education and digital awareness. These findings suggest that digital literacy enhances MSMEs' ability to make informed financial decisions, manage digital transactions securely, and utilize fintech services more effectively (Al-Shami et al., 2024).

However, in the ASEAN region, gaps in digital capabilities and social infrastructure remain key challenges. Limited technological knowledge, low trust in digital platforms, cybersecurity concerns, and unequal internet access are barriers to inclusive digital transformation. Therefore, strengthening social capital and improving digital literacy are crucial to developing a sustainable digital financial ecosystem that supports the resilience, competitiveness, and long-term economic inclusion of MSMEs in the ASEAN region.

CONCLUSION

Digital financial transformation has significantly reshaped the dynamics of microfinance intermediation for MSMEs in ASEAN. The rapid development of fintech ecosystems, digital payment systems, mobile banking, peer-to-peer lending, and AI-based financial services has expanded financial accessibility and improved the efficiency of financial intermediation processes for underserved MSMEs. The findings of this systematic literature review indicate that digital financial services positively contribute to operational efficiency, financial inclusion, access to financing, and MSME sustainability. Specifically, integrating digital payments and platform-based financing systems enables MSMEs to reduce transaction costs, accelerate financial processes, and improve market connectivity in an increasingly digitalized economy. Based on the selected journals, this study finds that the effectiveness of digital financial transformation is influenced by several mediating and moderating factors, including digital literacy, social capital, technological readiness, institutional quality, and regulatory support. Financial inclusion emerged as the most dominant mediating variable linking fintech adoption to MSME performance and sustainability. Meanwhile, social capital and digital capabilities strengthen MSMEs' ability to adopt and use the digital financial ecosystem effectively. These findings suggest that successful digital financial transformation requires not only technological innovation but also institutional readiness and human capacity development. Despite the identified positive impacts, several challenges remain across ASEAN countries, particularly gaps in digital infrastructure, uneven technological readiness, limited financial literacy, and regulatory fragmentation. Furthermore, the existing literature remains concentrated primarily on Indonesia and Malaysia, while comparative and longitudinal studies across ASEAN economies are limited. Therefore, future research should focus on cross-country comparative analysis, quantitative meta-analyses using effect sizes, and the integration of artificial intelligence and big data into the digital microfinance ecosystem. Overall, this study contributes to the development of an integrated conceptual understanding of how digital financial transformation impacts the dynamics of microfinance intermediation and the sustainability of MSMEs in the ASEAN region.

REFERENCES

Allen, T. T. (2022). The historical analysis of childhood and juvenile delinquency: Implications of American social trend and thought. *Juvenile and Family Court Journal*, *73*(3), 33–43.

Agyekum, E. B., Aboagye, E., & Mensah, C. N. (2022). Technological inclusion and financial inclusion of SMEs in Southeast Asia. *International Review of Economics & Finance, 80*, 627–640. https://doi.org/10.1016/j.iref.2022.02.004

Al-Shami, S. A., Rashid, N., & Hamid, N. A. (2024). Financial and digital financial literacy through social media toward financial inclusion in SMEs. *Heliyon, 10*(5), e26847. https://doi.org/10.1016/j.heliyon.2024.e26847

Allen, T. T. (2022). The historical analysis of childhood and juvenile delinquency: Implications of American social trend and thought. *Juvenile and Family Court Journal*, *73*(3), 33–43.

Arner, D. W., Animashaun, S., Charamba, K., & Cai, Y. (2022). *MSME access to finance: The role of digital payments* (MSME Financing Series No. 7). United Nations Economic and Social Commission for Asia and the Pacific.

Chanda, B. (2024). *Evaluating the contribution of financial lending institutions through access to finance, in achieving sustainable growth of micro, small and medium enterprises (MSMEs): A case study of Kasama District, Northern Province* (Master's thesis). The University of Zambia.

Cinini, S. F., & Mkhize, S. M. (2023). Criminal behavior and youth crime: A juvenile delinquency perspective on adverse childhood experience. In *Criminal behavior: The underlyings and contemporary applications*. IntechOpen.

Karim, N. A., Isa, M., & Said, J. (2022). FinTech and SME development in ASEAN countries. *Telematics and Informatics, 65*, 101709. https://doi.org/10.1016/j.tele.2021.101709

Kilay, K., Simamora, B. H., & Putra, D. P. (2022). The influence of e-payment and e-commerce services on supply chain performance. *Journal of Open Innovation: Technology, Market, and Complexity, 8*(3), 123. https://doi.org/10.3390/joitmc8030123

Loo, M. K. L. (2019). Digital financial inclusion in ASEAN. *Journal of Risk and Financial Management*, *12*(4), 181. https://doi.org/10.3390/jrfm12040181

Mahmoud, M. A., Umar, U. H., Ado, M. B., & Kademi, T. T. (2024). Factors influencing the financial satisfaction of MSME owners: The mediating role of access to Islamic financing. *Management Research Review*, *47*(3), 422–440.

Mavlutova, I., Spilbergs, A., Verdenhofs, A., Natrins, A., Arefjevs, I., & Volkova, T. (2022). Digital transformation as a driver of the financial sector sustainable development: An impact on financial inclusion and operational efficiency. *Sustainability*, *15*(1), 207.

Nizam, N., Hossain, M. E., & Rahman, A. A. (2025). Digital financial literacy and SME performance: Threshold effects of financial inclusion. *Jurnal Pengurusan, 75*, 55–72. https://doi.org/10.17576/pengurusan-2025-75-05

Rajamani, K., Jan, N. A., Subramani, A. K., & Raj, A. N. (2022). Access to finance: Challenges faced by micro, small, and medium enterprises in India. *Engineering Economics, 33*(1), 73–85.

Sun, W., Wang, M., Zheng, F., & Wang, Y. (2025). From nurture to deviance: A study on parenting style and juvenile delinquency. *Deviant Behavior*, *46*(5), 639–655.

Tandilino, C., Murniati, S., & Wahyuni, T. (2025). Digital financial inclusion as a mediator of MSME performance. *International Journal of Financial Studies, 13*(4), 199. https://doi.org/10.3390/ijfs13040199

Thottoli, M. M., Islam, M. A., Yusof, M. F. B., Hassan, M. S., & Hassan, M. A. (2023). Embracing digital transformation in financial services: From past to future. *SAGE Open, 13*(4), 21582440231214590.

Utomo, B. (2024). The effect of financial support, creativity, and regulatory environment on the growth of MSMEs. *International Journal of Integrated Science*, *3*(9), 1007–1018.

Verma, S., Kumar, S., & Sharma, R. (2023). FinTech and SME literature: A systematic review and bibliometric analysis. *Journal of Business Research, 161*, 113847. https://doi.org/10.1016/j.jbusres.2023.113847

Zaika, O. (2025). Digital transformation as a driver of financial sector development. *International Science Journal of Management, Economics & Finance, 4*(1), 23–30.

Zunairoh, Z., & Wijaya, L. I. (2024). FinTech, social capital, and performance of Indonesian MSMEs. *SAGE Open, 14*(1), 21582440241234567. https://doi.org/10.1177/21582440241234567