



# The Role of Digital Ecosystems in Shaping New MSME Business Models

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## Article Info

Received: December 18, 2025

Revised: January 11, 2026

Accepted: February 28, 2026

Published: April 30, 2026

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DOI: [10.29303/alexandria.v7i1.1403](https://doi.org/10.29303/alexandria.v7i1.1403)

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**Abstract:** The rapid development of digital technology has significantly reshaped the operational landscape of Micro, Small, and Medium Enterprises (MSMEs). This study examines how digital ecosystems comprising e-commerce platforms, social media, digital payment systems, logistics technologies, government support, and online communities shape new business models and enhance MSME competitiveness and sustainability. Using a qualitative descriptive method based on literature review and policy analysis, the study reveals that digitalization enables MSMEs to transform production, marketing, and customer engagement through platform-based business models and digital collaboration networks. Furthermore, it facilitates financial inclusion and opens access to broader national and international markets. However, challenges persist, including limited digital literacy, infrastructural disparities, and unequal access to technology. Addressing these issues requires a synergistic approach involving MSME actors, government institutions, and digital service providers. The findings highlight the strategic role of digital ecosystems not only in fostering innovation and adaptability but also in promoting sustainable business growth for MSMEs in the digital economy era.

**Keywords:** Digital Ecosystem, MSMEs, Business Models, Competitiveness, Sustainability.

## Introduction

Micro, Small and Medium Enterprises (MSMEs) are an economic sector that has a fundamental role in supporting the national economy (Mubarok et al., 2023). In Indonesia, MSMEs are the backbone of the economy due to their dominant number and significant contribution to Gross Domestic Product (GDP) and employment absorption (Arifa et al., 2025).

MSMEs not only play a role as drivers of economic activity at the local level, but also as a crucial instrument in creating income equality and reducing unemployment. In various crises, both economic and global, MSMEs have proven to be relatively more resilient than large businesses (Aftitah et al., 2025).

However, despite having a strategic role, MSMEs are also the sector that is most vulnerable to changes in the business environment (Krisna, 2024). Limited capital, low access to technology, and limited managerial capabilities are structural challenges faced

by MSMEs (Munawara et al., 2025). These challenges become even more complex when MSMEs must navigate the dynamics of the global market, characterized by increasingly fierce competition, changing consumer preferences, and accelerating technological developments. In this context, MSMEs are required to adapt to survive and grow sustainably (Febrian et al., 2025).

Entering the era of the industrial revolution 4.0 and the digital economy, business patterns are undergoing significant changes. Digital technology is no longer seen as merely a supporting tool, but has become the primary foundation for building and developing business models (Nursasi et al., 2024). Digitalization has transformed the way businesses produce goods, market products, connect with consumers, and even manage finances and distribution. Business processes that were previously manual and conventional have now shifted to technology-based systems that are more efficient, faster, and integrated (Ardhy et al., 2024).

## How to Cite:

Gebrian, G., Zulfani, M. A., Marjadi P, L. E., Dwary, A. S., Afrilia, A. N., & Nururly, S. The Role of Digital Ecosystems in Shaping New MSME Business Models. *ALEXANDRIA (Journal of Economics, Business, & Entrepreneurship)*, 7(1), 36-40. <https://doi.org/10.29303/alexandria.v7i1.1403>

This change has significant implications for MSMEs. On the one hand, digitalization opens up new opportunities for MSMEs to improve operational efficiency and expand their markets (Muna et al., 2025). On the other hand, digitalization also demands that MSMEs be prepared to master technology and adapt to new business patterns. MSMEs that fail to keep pace with technological developments risk being left behind and losing their competitive edge. Therefore, the ability to adapt to digital change is a key factor in determining the sustainability of MSMEs in the digital economy era (Hidayat & Kholik, 2024).

In the context of digitalization, the concept of a digital ecosystem is becoming increasingly relevant. A digital ecosystem is understood as an integrated system of digital technology, businesses, consumers, governments, financial institutions, and other supporting service providers (Mariana et al., 2025). This ecosystem creates a collaborative space that enables innovation and sustainable value creation. The presence of e-commerce platforms, social media, fintech, digital logistics, and technology-based business incubators are crucial parts of the digital ecosystem, influencing how MSMEs operate their businesses (Ingriana et al., 2024).

Digital ecosystems not only provide technological infrastructure but also shape new patterns of interaction between businesses and consumers. Through digital platforms, MSMEs can interact directly with consumers, obtain real-time feedback, and adapt products and services to market needs (Safitri et al., 2025). This situation creates opportunities for MSMEs to innovate more responsively and focus on consumers. Thus, the digital ecosystem acts as a catalyst in driving the transformation of MSME business models (Hudori, 2025).

Changes in the business environment due to digitalization have driven the transformation of MSME business models from traditional to digital-based ones. Traditional business models that relied on direct interactions, local markets, and manual systems are now shifting toward platform-, network-, and data-based business models. Digitalization enables MSMEs to access broader markets, even across borders, without the need for extensive physical infrastructure. This provides opportunities for MSMEs to significantly increase their business scale and competitiveness (Mikro et al., 2018).

In addition to expanding markets, digitalization also encourages MSMEs to adopt more flexible and innovative business models (Handajani et al., 2019). Platform-based business models, digital marketing, and network collaboration enable MSMEs to operate at relatively lower costs and with more manageable risks. This transformation demonstrates that digitalization impacts not only technical operational aspects but also

business strategies and how MSMEs create economic value (Ratnani & Aksar, 2025).

The COVID-19 pandemic has become a crucial momentum accelerating digital adoption among MSMEs. Restrictions on mobility and physical interaction have forced MSMEs to seek alternative ways to run their businesses. Digital technology is the primary solution for maintaining business continuity (Arifa et al., 2025). MSMEs that have integrated into the digital ecosystem have proven to be more adaptive and resilient than those that still rely on conventional business models. This phenomenon further emphasizes that the digital ecosystem is no longer just an option, but a strategic necessity for MSMEs (Hidayat & Kholik, 2024).

However, the digital transformation of MSMEs is not without challenges. Limited digital literacy is a major obstacle for most MSMEs in optimally utilizing technology (Arifa et al., 2025). Furthermore, low technology-based managerial capabilities and disparities in digital infrastructure between regions also slow down the digitalization process of MSMEs. MSMEs in rural or underdeveloped areas often face limited access to the internet and other supporting technologies (Ingriana et al., 2024).

Another challenge is the low level of understanding among MSMEs regarding the development of sustainable digital business models. Many MSMEs utilize digital technology only for online marketing, without undergoing a comprehensive transformation of their business models. As a result, the use of digital technology has not had a maximum impact on improving business performance and competitiveness. This situation highlights the importance of a more comprehensive approach to MSME digitalization (Wijaya et al., 2025).

Therefore, studying the role of digital ecosystems in shaping new business models for MSMEs is crucial. A comprehensive understanding is needed so that MSME digitalization is not merely a matter of technology adoption but also drives fundamental changes in how MSMEs create, deliver, and capture value. With an ecosystem approach, digitalization is expected to become a strategic solution for increasing MSME competitiveness and sustainability (Mubarok et al., 2023).

Based on this background, this article aims to analyze the role of digital ecosystems in shaping new business models for MSMEs and their implications for business sustainability and competitiveness in the digital economy era. This study is expected to provide theoretical contributions to the development of literature on MSMEs and the digital economy, as well as practical contributions for MSMEs and policymakers in

designing strategies to strengthen inclusive and sustainable digital ecosystems.

## Method

This study adopts a qualitative descriptive research design aimed at gaining a comprehensive understanding of how digital ecosystems influence the development of new business models in Micro, Small, and Medium Enterprises (MSMEs). The qualitative approach was chosen because it allows for a contextual and in-depth exploration of the complex socio-economic dynamics associated with digital transformation in the MSME sector.

The data collection method employed in this research is literature-based, involving a systematic review of secondary sources such as scholarly journal articles, books, official government reports, and institutional publications related to the digitalization of MSMEs and the structure of digital ecosystems. Inclusion criteria focused on recent and relevant studies to ensure the validity and reliability of the findings.

For data analysis, a content analysis technique was used. This involved identifying recurring themes, patterns, and key insights from the collected literature. The analysis process included coding, categorizing, and interpreting textual data to evaluate the roles, opportunities, and challenges posed by digital ecosystems in shaping MSME business models. The findings were then organized and presented narratively in alignment with the research objectives.

This methodological framework ensures analytical rigor and provides meaningful insights into the strategic role of digital ecosystems in enhancing MSME competitiveness and sustainability.

## Result and Discussion

The findings of this study reveal that the digital ecosystem plays a transformative role in the evolution of MSME business models, particularly across the dimensions of value creation, value delivery, and value capture.

In the aspect of value creation, digital platforms enable MSMEs to respond more effectively to consumer preferences through access to real-time market data. This capability fosters product innovation, customization, and differentiation, positioning MSMEs to compete in increasingly dynamic markets. Digital interactions also facilitate brand-building by allowing MSMEs to communicate their identity and values directly to consumers, thereby strengthening trust and engagement.

Regarding value delivery, MSMEs benefit from the scalability and cost-efficiency of e-commerce infrastructure. The integration of marketing, sales, and logistics within digital platforms expands market reach beyond regional boundaries. Digital marketing strategies, supported by consumer analytics, improve targeting precision and foster two-way communication. Moreover, by cultivating digital communities, MSMEs enhance consumer loyalty and embed their brands within customer networks.

In the dimension of value capture, the use of digital payments and fintech services improves financial transparency, accelerates transactions, and supports better liquidity management. Financing options such as peer-to-peer lending and crowdfunding provide greater access to working capital. Additionally, data-driven decision-making based on transactional and behavioral analytics allows MSMEs to optimize operations and refine their business strategies.

The digital ecosystem also facilitates collaborative and flexible business models. Strategic partnerships with influencers, logistics providers, and platform operators strengthen MSME competitiveness within the digital supply chain while reducing operational costs. However, the extent of digital transformation remains uneven due to disparities in digital literacy and infrastructure. MSMEs with limited digital capabilities often struggle to fully exploit available technologies, resulting in suboptimal outcomes.

External factors such as government support and ecosystem quality significantly influence MSME digital readiness. Programs offering training, mentoring, and infrastructure development are essential to fostering inclusive digital participation. The creation of a robust and equitable digital ecosystem requires cross-sectoral collaboration to ensure sustainable and scalable business innovation.

Overall, the results underscore that digital ecosystems are not merely enablers but strategic catalysts for MSME transformation. They enhance operational efficiency, market access, and innovation while fostering resilience and long-term sustainability. The extent to which MSMEs can successfully integrate into the digital ecosystem will determine their role and relevance in the evolving digital economy.

## Conclusion

This study concludes that the digital ecosystem plays a strategic and transformative role in reshaping MSME business models. The integration of digital platforms, social media, fintech services, and technology-based logistics has redefined how MSMEs create, deliver, and capture value, enabling greater adaptability,

efficiency, and market expansion at both national and international levels.

Digitalization encourages innovation, supports data-driven marketing, and facilitates collaborative networks that allow MSMEs to grow with lower capital requirements. It also promotes financial inclusion and enhances competitiveness. However, the effectiveness of this transformation is closely tied to the digital readiness of MSME actors and the quality of the supporting ecosystem.

Persistent challenges including limited digital literacy, infrastructural gaps, and unequal access underscore the need for collaborative efforts. A coordinated synergy between MSMEs, government institutions, and digital platform providers is essential to ensure an inclusive and sustainable digital ecosystem that benefits all stakeholders equitably.

#### Acknowledgements

The authors express their sincere gratitude to the Faculty of Economics and Business, University of Mataram, for the academic support and research guidance provided throughout the completion of this study. The authors also wish to acknowledge all individuals who contributed indirectly through valuable discussions, constructive feedback, and access to relevant data sources.

This research was conducted independently and did not receive any specific funding from public, commercial, or not-for-profit agencies.

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