

Mapping Digital Strategy in SMEs in Indonesia: Opportunities, Challenges, and Managerial Implications

Reyzza Anferditya Bagaskhara¹

¹ Universitas Diponegoro, Semarang, Indonesia

Abstract

Article history:

Received: January 6, 2022
Revised: February 22, 2022
Accepted: April 28, 2022
Published: June 30, 2022

Keywords:

Challenges,
Digital Strategy,
Managerial Implications,
Opportunities,
SMEs.

Identifier:

Nawala
Page: 1-16
<https://nawala.io/index.php/ijdb>

Digitalization has become a vital strategy for Small and Medium Enterprises (SMEs) in responding to the rapid and competitive changes in the business environment. This article aims to map the digital strategies adopted by SMEs in Indonesia, identify the opportunities and challenges they face, and formulate relevant managerial implications. This study employs a Systematic Literature Review (SLR) approach, analyzing selected scholarly articles from national. The findings reveal that digital strategies implemented by Indonesian SMEs primarily involve digital marketing, e-commerce, integration of social media platforms, and the use of cloud-based technologies. On the opportunity side, digitalization enhances operational efficiency, market reach, and customer relationships. However, SMEs face significant challenges such as limited resources, low levels of digital literacy, and inadequate technological infrastructure. The resulting managerial implications highlight the need for digital capacity development, the strengthening of strategic collaborations, and the enhancement of supportive policies from government and financial institutions.

*Corresponding author:
(Reyzza Anferditya Bagaskhara)

©2022 The Author(s).

This is an open-access article under CC-BY-SA license (<https://creativecommons.org/licence/by-sa/4.0/>)



1. Introduction

Over the past two decades, the development of digital technology has significantly transformed the global business landscape. Technologies such as the internet, mobile devices, big data analytics, artificial intelligence (AI), the Internet of Things (IoT), and cloud computing have not only reshaped how large corporations operate but also created both pressures and opportunities for small and medium-sized enterprises (SMEs). Amid this rapid digital transformation, SMEs worldwide, including in Indonesia, are encouraged to adapt in order to survive and thrive in the digital economy era (Permana & Puspitaningsih, 2021; Putri et al., 2021). In Indonesia, SMEs are the backbone of the national economy. Naradda Gamage et al. (2020) emphasize their strategic role, while data from the Ministry of Cooperatives and SMEs reports more than 64 million SME units contributing over 60% of national Gross Domestic Product (GDP) and employing approximately 97% of the workforce. Thus, SMEs not only drive economic growth but also generate employment, reduce social inequality, and strengthen the domestic economic structure.

Despite their importance, SMEs remain among the most vulnerable sectors to disruption, especially in the face of technological change and market dynamics. Digital transformation is now a necessity for competitiveness. Beyond the use of digital tools, SME strategies must encompass shifts in managerial mindset, organizational structure, business models, and value creation for customers (Becker & Schmid, 2020). Such strategies serve as critical levers for enhancing productivity, cost efficiency, market access, and long-term sustainability, particularly for SMEs

that previously relied on traditional practices. The adoption of digital technologies among Indonesian SMEs has progressed, though unevenly (Berliandaldo et al., 2020; Marfuin & Robin, 2021). Many have started using social media for marketing, e-commerce platforms for sales, and digital finance applications for recordkeeping and transactions. However, this digitalization often remains superficial, lacking integration into core business processes, data-driven decision-making, or the establishment of a sustainable digital ecosystem.

Several challenges hinder digital transformation (Maksum et al., 2020; Kurniawati et al., 2021). First, limited infrastructure in non-urban areas restricts access to technology, with slow internet, high device costs, and minimal technical support. Second, digital literacy levels among SME actors remain low; many business owners do not fully understand how technology can improve performance, let alone integrate digital strategies into their vision. Third, SMEs face a shortage of skilled human resources in technology. Small organizational structures and limited financial capacity make it difficult to recruit or train digital talent. Fourth, limited access to funding hinders investment in technology.

In addition, regulations and policies that do not yet fully support SME digitalization further slow adoption (Garzoni et al., 2020). Nevertheless, digital transformation offers significant opportunities. Digitalization enables SMEs to expand market access both domestically and internationally through online platforms, build real-time customer relationships, and enhance production and distribution efficiency. Furthermore, it allows new business models to emerge, such as subscription-based services, dropshipping, and influencer-driven marketing

strategies that were previously out of reach for resource-constrained SMEs (Pasaribu & Widjaja, 2021). Given the importance of digital strategies for SME development, systematic mapping is necessary to understand how these strategies are implemented, the opportunities and challenges SMEs face, and the managerial implications for stakeholders. Current research remains fragmented and lacks in-depth analysis within the Indonesian context, highlighting the need for more comprehensive studies.

This study employs a Systematic Literature Review (SLR) approach, a transparent, replicable method of reviewing existing scholarship. SLR enables researchers to identify, evaluate, and synthesize key findings, producing a holistic and in-depth understanding. By applying this method, the study aims to outline trends in SME digital strategies, identify best practices, and summarize common barriers to adoption. The findings are expected to provide both theoretical contributions to the digital strategy literature and practical insights for SME actors, policymakers, and supporting institutions in designing effective interventions to accelerate SME digitalization in Indonesia. Moreover, this mapping can serve as a foundation for more inclusive public policies that support small businesses in their digital transformation journey.

2. Methods

This study employs the Systematic Literature Review (SLR) approach as the primary research method to identify, examine, and synthesize scholarly findings concerning the implementation of digital strategies by Small and Medium

Enterprises (SMEs) in Indonesia. The choice of the SLR method is deliberate, as it allows for a structured, transparent, and replicable process that provides not only a comprehensive but also an objective overview of the body of knowledge available within a defined time frame (Shaffril et al., 2021). Unlike traditional literature reviews, which may be narrative in nature, the SLR emphasizes systematic procedures to minimize bias and ensure that the evidence collected is both relevant and reliable.

The literature search was conducted through reputable international and national academic databases. On the international level, Google Scholar was utilized due to its extensive coverage of peer-reviewed works across multiple disciplines. To capture local scholarship and ensure contextual relevance, Garuda an Indonesian national academic database, was also included. The use of both sources ensured that the review encompassed global academic perspectives while simultaneously considering national-level research output that directly addresses Indonesian SMEs. A series of carefully selected keywords guided the search process, including digital strategy SMEs Indonesia, digital transformation SME Indonesia, digitalization challenges SMEs, and managerial implications digital SMEs. These keywords were chosen strategically to capture a wide range of articles focusing on both the practical implementation and theoretical exploration of SME digitalization within Indonesia. The inclusion of terms such as “challenges” and “managerial implications” also ensured the review addressed not only technological adoption but also organizational and managerial dimensions.

To maintain academic rigor, strict inclusion and exclusion criteria were applied. The inclusion criteria encompassed scholarly articles published within the last five years that specifically examined SMEs in Indonesia and directly addressed topics such as digital strategy, digital transformation, or digital technology adoption. Exclusion criteria eliminated non-peer-reviewed works, studies focusing on large enterprises, and purely conceptual papers that lacked empirical evidence. Finally, all selected articles were subjected to thematic coding as the analytic technique. Through this process, recurring themes were identified, such as common patterns in digital strategies, key barriers to adoption, and opportunities for leveraging digital technologies. Managerial implications derived from the literature were also synthesized to provide a deeper understanding of how SME actors and policymakers can respond effectively to the ongoing digital transformation.

3. Results and Discussion

3.1. Digital Strategies Implemented by SMEs in Indonesia

In the increasingly urgent context of digital transformation, Small and Medium Enterprises (SMEs) in Indonesia have demonstrated varied responses to adopting digital strategies. These strategies not only involve the digitalization of marketing and distribution channels but also extend to internal management, operations, and customer relations. Based on a review of various literature, the most prominent digital strategies implemented by Indonesian SMEs fall into two main areas: digital marketing and e-commerce on one hand, and supporting technologies for operational management on the other. Most SMEs begin their digitalization

process through digital marketing, which typically relies on the use of social media platforms (Trulline, 2021). Platforms such as Instagram, Facebook, and TikTok serve as the primary tools for reaching new customers and strengthening engagement with existing ones.

This strategy is considered effective due to its relatively low cost, message delivery flexibility, and ability to reach large audiences quickly. As internet penetration and mobile device usage increase, many SMEs have also integrated their sales channels into major e-commerce platforms such as Tokopedia, Shopee, and Bukalapak. Being present on these platforms not only provides access to national markets but also enables SMEs to reach customers in remote areas and even international markets without having to establish physical stores. User review systems, promotional features, and logistics integration on e-commerce platforms offer added value for SMEs seeking to accelerate their business growth.

Furthermore, a number of SMEs have started adopting digital-based Customer Relationship Management (CRM) technologies. CRM is used to track customer interactions, purchasing preferences, and transaction histories, which ultimately helps businesses build long-term relationships with their customers. By gaining deeper insights into consumer behavior, SMEs can offer more personalized products or services, improve customer retention, and increase the potential for upselling and cross-selling. In addition, communication applications like WhatsApp Business also play a significant role in SMEs' digital strategies. Many business owners utilize features such as automated replies, product catalogs, and customer contact labels to enhance professionalism and communication efficiency. Some more

advanced SMEs have even started using chatbots to automatically respond to customer inquiries, especially outside of business hours.

The combination of social media, e-commerce platforms, CRM systems, and WhatsApp Business forms an integrated digital marketing ecosystem, enabling SMEs to compete more effectively in an increasingly competitive market. However, the effectiveness of these strategies largely depends on the business owner's ability to design engaging content, understand digital customer behavior, and manage multiple channels consistently. In addition to focusing on marketing and distribution, many SMEs in Indonesia have begun adopting digital technologies to support internal operational management. These services provide collaboration tools like professional email, document storage, spreadsheets, and project management features that can be accessed in real time by team members from various locations.

The implementation of digital Point of Sales (POS) systems has also become a key strategy in digitizing transaction processes and sales tracking. With app-based POS systems, SME owners can easily monitor inventory, calculate profit margins, and generate daily sales reports automatically. This marks a significant leap from manual record-keeping systems that are prone to errors and require lengthy reconciliation processes. Furthermore, online accounting applications such as Jurnal.id, Accurate, and BukuWarung are increasingly being used by SMEs to manage their financial reporting digitally. These applications allow real-time recording of income and expenses, preparation of profit and loss statements, and tax calculations. The use of such technologies enhances financial transparency,

strengthens investor and partner trust, and facilitates access to funding from financial institutions.

Nevertheless, the adoption of supporting technologies by SMEs still faces several challenges that cannot be overlooked. One major issue is the gap in understanding and selecting the right technologies. Many SMEs lack the capacity to assess their technological needs strategically, often adopting technologies based on trends rather than their specific business requirements. As a result, many SMEs struggle to operate new technologies or fail to integrate them effectively into existing workflows. Training capacity and digital literacy among SME owners and employees also remain significant barriers.

Geographical disparity also affects the pace of technology adoption. SMEs in urban areas tend to adopt digital technologies more quickly and adaptively, supported by sufficient infrastructure such as fast internet access, availability of technology service providers, and digital community networks. In contrast, SMEs in rural areas still face basic technology access issues, limited training opportunities, and minimal technical support. The digital strategies of Indonesian SMEs are still in a transitional phase and have yet to reach optimal utilization. However, the positive trends in the use of digital marketing, e-commerce platforms, and supporting technologies indicate that SMEs have significant potential to thrive in the digital economy era. What is needed is sustained support in the form of training, mentoring, and access to technologies tailored to the characteristics and needs of SMEs in diverse regions.

3.2. Opportunities, Challenges, and Managerial Implications

Digital transformation has become a major driving force in reshaping the business landscape, including for the Small and Medium Enterprises (SMEs) sector in Indonesia. Amid an increasingly connected and competitive market dynamic, digitalization is not only a necessity but also a strategic opportunity that can significantly accelerate SME growth (Dyduch et al., 2021). Through the utilization of digital technologies, SMEs can expand their market reach to a global scale via e-commerce platforms and social media. No longer limited to local markets, SME products and services can now reach consumers in various countries with more efficient promotion and distribution costs. Moreover, digitalization enhances operational efficiency by automating various business processes such as financial recording, inventory management, and customer service (Ahmad & Van Looy, 2020; Baiyere, 2020).

This allows SMEs to save time, costs, and resources previously consumed by inefficient manual processes. Digital transformation also fosters innovation in more adaptive, technology-based business models. For instance, dropshipping enables SMEs to sell products without maintaining physical inventory; subscription-based services guarantee recurring income; and product personalization strategies help build customer loyalty. On the other hand, digitalization creates new opportunities for collaboration between SMEs and external parties such as tech startups, app-based logistics platforms, and digital financial services (fintech). These collaborations can improve SMEs' capabilities in accessing previously unavailable services, such as

data-driven financing, logistics system integration, or product development through technological innovation.

However, behind this great potential, SMEs also face considerable challenges in optimally adopting digital strategies. One of the main obstacles is the limited digital literacy among SME owners and managers. Many business actors do not fully understand the strategic benefits of digital technologies or still perceive digitalization as complex, costly, and irrelevant to their operations. This lack of understanding often leads to unpreparedness in developing structured digital transformation plans. Additionally, limited access to technology presents a real challenge, particularly for SMEs located in rural or underdeveloped areas. Poor digital infrastructure, such as unstable internet connections, high equipment costs, and minimal technical support, hinders SMEs from initiating the digitalization process. Another pressing issue is data security and privacy, which are often neglected due to limited awareness of cybersecurity risks.

In a digital ecosystem, managing customer and transaction data must adhere to strict security principles to prevent data leaks or misuse. A further challenge is the lack of human resources with practical digital skills. Most SMEs are still managed conventionally and lack staff with adequate digital competencies. As a result, technology adoption tends to be half-hearted or unsustainable. These various challenges carry significant managerial implications that must be carefully considered. First, continuous digital training is needed for SME owners and employees to ensure they possess adequate understanding and skills in managing digital businesses. This training should be practical and contextual, tailored to the

specific needs of each business sector. Second, SMEs need to conduct digital readiness mapping as an initial step before implementing more complex digital strategies.

By mapping their technological capabilities, digital literacy, and organizational readiness, SMEs can set priorities in the digitalization process and avoid failure due to rushed implementation. Third, it is necessary to encourage increased collaboration with third parties, such as tech startups that can provide innovative solutions, universities or research institutions that can assist in developing digital strategies, and digital communities that can offer practical guidance. Such collaboration is essential to bridging the knowledge and resource gaps that often hinder SMEs in their digital transformation journey. Fourth, government policies also play a crucial role in creating a conducive digital ecosystem for SMEs. Digitalization programs must be designed to be more inclusive, targeting the real needs of SMEs on the ground and supported by both fiscal and non-fiscal incentives. These may include subsidies for digital devices, access to data-driven business loans, and training facilitated by local governments.

Although SME digitalization in Indonesia faces various structural and resource-related challenges, its potential benefits are far greater when supported by appropriate managerial strategies. Digital transformation is not merely a passing trend but a critical prerequisite for the long-term sustainability of SMEs. Therefore, it is essential for all stakeholders from business actors and academics to technology providers and the government to work together in creating an ecosystem that

enables SMEs to undergo digital transformation effectively, efficiently, and sustainably.

4. Conclusion

This study indicates that digital transformation has become an urgent necessity for Small and Medium Enterprises (SMEs) in Indonesia to maintain their competitiveness in the digital economy era. Using a Systematic Literature Review (SLR) approach, the findings reveal that digital strategies among Indonesian SMEs are generally focused on the utilization of social media, e-commerce platforms, and supporting technologies such as Customer Relationship Management (CRM), Point of Sales (POS) systems, and cloud-based accounting applications. These strategies enable SMEs to expand market access, improve operational efficiency, and open opportunities for collaboration with various digital partners. Nevertheless, SME digitalization still faces several critical challenges, including limited digital literacy, uneven technological infrastructure, low digital human resource capacity, and a lack of awareness regarding data security.

In addition, geographical disparities and restricted access to funding further hinder equitable technology adoption. The managerial implications highlight the importance of continuous digital training, systematic digital readiness mapping, and cross-sector collaboration to support successful digital transformation. The government and other stakeholders must provide more targeted and inclusive support through policies, incentives, and infrastructure that reach SMEs in remote areas. Future research should include empirical studies based on case studies or

direct surveys of SME actors across sectors and regions in Indonesia to gain a more contextual and in-depth understanding of digital strategies in use. Further studies could also explore the effectiveness of digital training interventions, SME-startup collaboration models, and the impact of digital adoption on revenue growth, productivity, and long-term sustainability of SMEs.

References

- Ahmad, T., & Van Looy, A. (2020). Business process management and digital innovations: A systematic literature review. *Sustainability*, 12(17), 6827.
- Baiyere, A., Salmela, H., & Tapanainen, T. (2020). Digital transformation and the new logics of business process management. *European journal of information systems*, 29(3), 238-259.
- Becker, W., & Schmid, O. (2020). The right digital strategy for your business: an empirical analysis of the design and implementation of digital strategies in SMEs and LSEs. *Business Research*, 13(3), 985-1005.
- Berliandaldo, M., Fasa, A. W. H., Kholiyah, S., Chodiq, A., & Hendrix, T. (2020). Transformasi Digital Dan Strategi Pengembangan Bisnis Umkm Yang Adaptif Dan Berkelanjutan Pasca Pandemi Covid-19. *Jurnal Analisis Kebijakan*, 4(2), 54-73.
- Dyduch, W., Chudziński, P., Cyfert, S., & Zastempowski, M. (2021). Dynamic capabilities, value creation and value capture: Evidence from SMEs under Covid-19 lockdown in Poland. *Plos one*, 16(6), e0252423.

- Garzoni, A., De Turi, I., Secundo, G., & Del Vecchio, P. (2020). Fostering digital transformation of SMEs: a four levels approach. *Management Decision*, 58(8), 1543-1562.
- Kurniawati, E., Idris, I., Handayati, P., & Osman, S. (2021). Digital transformation of MSMEs in Indonesia during the pandemic. *Entrepreneurship and Sustainability Issues*, 9(2), 316-332.
- Maksum, I. R., Rahayu, A. Y. S., & Kusumawardhani, D. (2020). A social enterprise approach to empowering micro, small and medium enterprises (SMEs) in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(3), 50.
- Marfuin, M., & Robin, R. (2021). Strategi Bisnis Digital dan Kinerja Perusahaan Pada Usaha Mikro Kecil dan Menengah (UMKM). In *CoMBInES-Conference on Management, Business, Innovation, Education and Social Sciences* (Vol. 1, No. 1, pp. 425-436).
- Mohamed Shaffril, H. A., Samsuddin, S. F., & Abu Samah, A. (2021). The ABC of systematic literature review: the basic methodological guidance for beginners. *Quality & quantity*, 55(4), 1319-1346.
- Naradda Gamage, S. K., Ekanayake, E. M. S., Abeyrathne, G. A. K. N. J., Prasanna, R. P. I. R., Jayasundara, J. M. S. B., & Rajapakshe, P. S. K. (2020). A review of global challenges and survival strategies of small and medium enterprises (SMEs). *Economies*, 8(4), 79.
- Pasaribu, M., & Widjaja, A. (2021). *Strategi dan Transformasi Digital*. Kepustakaan Populer Gramedia.

- Permana, T., & Puspitaningsih, A. (2021). Studi ekonomi digital di Indonesia. *Jurnal Simki Economic*, 4(2), 161-170.
- Putri, N. I., Herdiana, Y., Suharya, Y., & Munawar, Z. (2021). Kajian Empiris Pada Transformasi Bisnis Digital. *ATRABIS Jurnal Administrasi Bisnis (e-Journal)*, 7(1), 1-15.
- Trulline, P. (2021). Pemasaran produk UMKM melalui media sosial dan e-commerce. *Jurnal Manajemen Komunikasi*, 5(2), 259.