



The Impact of Digitalization on the Growth of MSMEs in Developing Countries

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Abstract: Digitalization has become a key catalyst in the global economic transformation, including in the Micro, Small, and Medium Enterprises (MSMEs) sector, particularly in developing countries. This study aims to identify the positive and negative impacts of digitalization on MSME growth, analyze the factors influencing successful digital adoption, and explore the challenges and possible solutions. The method used is a literature review with a descriptive qualitative approach, relying on secondary sources such as scholarly journals, reports from international institutions, and policy documents. The findings reveal that digitalization significantly contributes to expanding market access, improving operational efficiency, and promoting innovation and competitiveness among MSMEs. However, this process also presents challenges such as limited access to technology, lack of digital literacy, and data security issues. The success of MSME digitalization is influenced by infrastructure readiness, human resource skills, government policies, and financial capacity. Therefore, collaborative strategies and inclusive policy support are essential to maximize the potential of digitalization in the development of MSMEs in developing countries.

Keywords: Digitalization, MSMEs, Economic Growth, Developing Countries, Digital Technology.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in the economy of developing countries. MSMEs also serve as a driving force for equitable development, particularly in more remote and underdeveloped regions (Vinatra, 2023). However, in facing the challenges of globalization and increasing competition, MSMEs must adapt to technological advancements. According to Zein et al. (2025), digitalization which includes the use of information and communication technology to support business operations has become one of the key aspects in strengthening the competitiveness of MSMEs. With the growing accessibility of the internet and digital platforms, MSMEs have great opportunities to expand their market reach, improve efficiency, and enhance the quality of their products and services.

In developing countries, the adoption of digital technology by MSMEs (Micro, Small, and Medium Enterprises) is steadily increasing, in line with the growing access to the internet and technological devices (Muharir, 2024). This digitalization encompasses various aspects, ranging from product marketing through social media to the use of digital management systems for operational efficiency. According to Zikri (2024), developing countries are also beginning to explore the potential of technology to advance their MSME sectors, supported by government initiatives and financial institutions that facilitate MSMEs' access to technology and digital infrastructure. In some countries, government policies such as internet access subsidies and digital literacy training for small business owners have also become driving factors that

accelerate the digital transition of MSMEs, although significant challenges remain especially in regions with limited digital infrastructure (Friska, 2024).

Digitalization offers various opportunities for MSMEs to grow more rapidly and reach wider markets (Astuti & Wulandari, 2023). By utilizing e-commerce platforms, MSMEs can now sell their products not only in local markets but also in international ones. According to Manurung & Putri (2024), this reduces their dependence on traditional markets, which are sometimes limited. In addition, the use of social media enables MSMEs to promote their brands more broadly and engage directly with consumers, thereby enhancing customer relationships and brand loyalty. Digital technology also provides operational efficiency, such as the use of accounting software for easier financial record keeping and management applications that optimize inventory and logistics management, ultimately reducing costs and increasing productivity.

However, despite the opportunities offered by digitalization, many MSMEs in developing countries still face various challenges in adopting it (Octiva, 2024). One of the biggest challenges is the limited access to technology, both in terms of hardware and adequate network infrastructure. In addition, the low level of digital literacy among MSME actors is another obstacle, as many of them are not yet familiar with new technologies or how to utilize them for their business needs. Another equally important issue is data security. Many MSMEs are concerned about cyber threats, such as the theft of personal or business information, which can damage their reputation and consumer trust. Inadequate digital infrastructure, particularly in rural or remote areas, is also one of the reasons why digitalization cannot be optimally implemented across all MSME sectors.

This study aims to explore the impact of digitalization on the growth of MSMEs in developing countries in a more comprehensive manner. Specifically, this research will identify the forms of digitalization that have been adopted by MSMEs and examine their effects on performance and competitiveness in the global market. In addition, the study will also investigate the challenges faced by MSMEs in implementing digital technologies and seek applicable solutions to overcome these barriers. Through the findings of this research, it is expected that a better understanding will be gained regarding how digitalization can be effectively utilized by MSMEs in developing countries, as well as how government policies can support a smoother digital transition process.

This research is expected to make a significant contribution both theoretically and practically. Theoretically, it will enrich the literature on digitalization in the context of MSMEs, especially in developing countries, and provide deeper insights into the influence of digitalization on economic growth and business sustainability. Practically, the findings of this study can serve as valuable input for governments, financial institutions, and policymakers in designing more effective programs to support MSMEs in facing the digital era. Furthermore, this research will also offer useful insights for MSME actors on effective ways to integrate technology into their business operations, in order to enhance competitiveness and expand market share.

METHODS

This study employs a descriptive qualitative approach using the library research method. According to Wahyudin (2020), this method is used to identify and analyze the impact of digitalization on the growth of MSMEs in developing countries. Data were obtained through a literature review from various relevant secondary sources, such as scientific journals, reports from international organizations (e.g., the World Bank, UNCTAD), academic articles, and government policies related to digitalization and MSME development (Ardiansyah, 2023). The data analysis technique involved reviewing, comparing, and synthesizing information from various literature sources to reveal the positive and negative impacts of digitalization, as well as the factors that influence its success. In addition, this study also explores the challenges faced by MSMEs in the digitalization process and offers solutions, along with policy and strategy recommendations based on literature findings. Data validity was ensured by using credible and up-to-date references, making the research findings a reliable basis for policy formulation and decision-making related to MSME development in the digital era.

RESULT AND DISCUSSION

Digitization has opened up significant opportunities for MSMEs (Micro, Small, and Medium Enterprises) to expand their market reach, not only at the local level but also globally. Through e-commerce platforms and social media, MSMEs can now reach customers from around the world at relatively low costs. Previously, accessing international markets required MSMEs to face major challenges related to distribution and logistics costs. However, with digitization, MSMEs can tap into broader markets without the need for large investments in physical infrastructure. Digital platforms allow MSMEs to promote their products directly to consumers, whether through online advertisements or social media, which facilitates direct interaction with customers.

The utilization of digital technology by MSMEs has a significant impact on operational efficiency. Technologies such as inventory management systems, automated accounting software, and production performance monitoring applications enable MSMEs to reduce resource waste, accelerate operational processes, and improve accuracy in calculations and reporting. By reducing dependence on time-consuming and error-prone manual processes, MSMEs can allocate more time and resources to other aspects of the business, such as marketing or product development. In addition, digitization makes product distribution more efficient, with system integration simplifying goods delivery and real-time order tracking.

One of the major advantages of digitization is that it encourages MSMEs to be more creative and innovative in developing products and services that are increasingly relevant to the evolving needs of the market. By utilizing data analytics and digital customer feedback, MSMEs can conduct more effective market research, identify emerging trends, and create products that align better with consumer preferences. Technology also enables MSMEs to develop application-based or digital platform services, such as chatbot-based customer service or mobile apps to ease product access. Such innovations provide MSMEs with a competitive edge in attracting and retaining customers.

Digitization provides equal opportunities for MSMEs to compete with large companies in the global market. In the past, large companies had the advantage of greater resources and infrastructure for marketing, distribution, and customer service. However, with digital technology, MSMEs can now leverage digital marketing platforms at relatively lower costs without the need for massive budgets like those of large corporations. Social media, SEO (Search Engine Optimization), and online advertising campaigns offer MSMEs effective and budget-friendly ways to market their products. Therefore, digitization not only expands the market for MSMEs but also enhances their competitiveness, allowing them to survive amid intense competition with large enterprises.

One of the negative impacts of digitization on MSMEs is the increased reliance on technology. MSMEs that depend on digital platforms for marketing, distribution, and daily operations may face serious risks if supporting infrastructure such as internet access and hardware is inadequate. In many regions, especially in developing countries, there are still limitations in terms of stable internet access and adequate technological devices. If disruptions occur in this infrastructure, MSMEs may lose the ability to operate smoothly, ultimately affecting business continuity. High dependency on technology also increases vulnerability to technical problems, such as device malfunctions or system failures, which can directly impact operations and revenue.

As digitization advances, many MSMEs are not yet fully prepared to deal with risks related to data security and cyber threats. Cybercrimes such as hacking, theft of customer personal data, or online fraud are real threats that can damage the reputation and credibility of MSMEs. Many MSMEs, especially smaller ones, lack the resources or knowledge to protect their systems from cyberattacks. As a result, sensitive customer data may be leaked, leading to financial losses and the erosion of consumer trust. Moreover,

without adequate protection policies or systems, MSMEs may face legal sanctions for failing to safeguard customer data in accordance with prevailing regulations.

One of the greatest challenges in the digitization process for MSMEs is the high implementation cost. Initial investments in digital infrastructure—such as hardware, software, and human resource training—often become obstacles for MSMEs with limited budgets. For many MSMEs, especially those that are newly established or operating with minimal capital, the cost of adopting digital technology can be overwhelming and difficult to afford. This often causes some MSMEs to delay or even cancel their digital adoption efforts, hindering their potential to compete in an increasingly digital market. The inability to access or utilize digital technology can leave MSMEs behind their larger or more capable competitors.

The success of MSME digitization in developing countries largely depends on the availability of adequate technological infrastructure. Access to stable internet, extensive communication networks, and the availability of hardware and software are essential foundations for carrying out digital transformation. Without this infrastructure support, MSMEs will struggle to optimally utilize digital platforms for marketing, transactions, or business management. In remote or underdeveloped areas, connectivity and access to technology equipment are often still problematic, leading to a digital divide between urban and rural regions.

Competent and tech-adaptive human resources are key to supporting the success of MSME digitization. Many MSME actors still lack understanding and proficiency in using digital technology, from utilizing social media for promotion to managing finances via applications. Therefore, training and digital skill development are crucial. Without human resource capacity building, the potential of technology cannot be maximized, and digital adoption may be only partial or even fail. Digital literacy is not only essential for business owners but also for all employees to ensure that business operations run efficiently within a digital ecosystem.

The government plays a strategic role in supporting MSME digitization through proactive policies and programs. These include providing technology-based training, fiscal incentives for MSMEs that adopt digitalization, and building digital infrastructure in underdeveloped regions. Additionally, regulations that support the development of the MSME digital ecosystem, as well as public-private partnerships, will accelerate the digital adoption process. Without supportive public policies, MSMEs are likely to face structural barriers that are difficult to overcome on their own.

Financial factors are also a key variable in the success of MSME digitization. Digitization requires substantial initial investments, including purchasing technology equipment, subscribing to software, and training the workforce. MSMEs with limited funding often struggle to allocate sufficient resources for this process, lagging behind competitors with better access to capital. Therefore, the success of digitization is not only determined by technology and human resource readiness but also by the availability of financial access, including from financial institutions, fintech, or government assistance programs.

One of the main challenges in the digitization of MSMEs in developing countries is the limited access to technology. Many MSME operators in remote areas still find it difficult to obtain stable internet connections, adequate hardware, or even basic digital training. This infrastructure inequality results in a digital gap that widens the divide between MSMEs that can already utilize technology and those that remain untouched by digitization. The lack of access not only hampers growth but also limits the competitiveness of MSMEs in both local and global markets.

In addition to limited access, the low level of digital literacy among MSME players is also a significant barrier. Many small business owners do not yet understand how technology can improve the efficiency and expansion of their businesses. This lack of knowledge makes them reluctant to invest in digital systems such as e-commerce, digital financial management, or social media marketing. In fact, for some business actors, technology is still seen as complicated and expensive. As a result, the adoption of technology becomes slow and uneven, even though digitization holds great potential to support business growth.

Amid the rapid growth of the digital ecosystem, another critical challenge is the unpreparedness of MSMEs in understanding and complying with regulations related to digital activities. Although regulations on personal data protection and electronic transactions already exist, many MSMEs lack awareness or the ability to implement them. This makes MSMEs vulnerable to digital security risks, such as data theft or online fraud. Furthermore, a lack of understanding of legal obligations associated with digital business can lead MSME actors into legal trouble without their realization. Therefore, legal protection and awareness of the importance of cybersecurity are crucial aspects that must be addressed in promoting MSME digital transformation.

To address the low understanding and digital literacy among MSME actors, serious efforts are needed to provide training and education on digital technology. The government, in collaboration with the private sector, universities, and digital communities, can develop practical and applicable educational programs, ranging from using e-commerce platforms and digital management to cybersecurity. These trainings should be tailored to the characteristics of MSME operators to ensure ease of understanding and implementation. With proper education, MSMEs will not only be able to adopt technology but also use it strategically to grow their businesses.

Another important solution is the improvement and equal distribution of technological infrastructure, particularly in areas that have not yet been optimally served by digital services. The government needs to accelerate the development of equitable internet networks and encourage the establishment of digital service centers in remote areas. Access to affordable digital devices such as computers and smartphones is also key to this transformation process. With adequate infrastructure, MSMEs will have a solid foundation to enter the digital ecosystem and compete more equally with businesses from more developed regions.

MSMEs often struggle to understand complex digital regulations. Therefore, efforts are needed from the government to simplify regulatory processes, especially those related to e-commerce, personal data protection, and other digital legal aspects. This simplification can take the form of easy-to-understand guidelines, digitalized licensing processes, and legal assistance for MSMEs that are just starting to engage in the digital world. With MSME-friendly regulations, it is hoped that they will not only be protected from legal risks but also be encouraged to grow sustainably within the digital ecosystem.

CONCLUSION

Digitalization has had a significant impact on the growth of MSMEs (Micro, Small, and Medium Enterprises) in developing countries, presenting both opportunities and challenges. On one hand, digitalization expands market access, enhances operational efficiency, drives product and service innovation, and strengthens the competitiveness of MSMEs amid global competition. On the other hand, the digitalization process also introduces new challenges, such as dependence on technology, data security risks, and the high cost of digital technology implementation, which remains unaffordable for many MSME actors.

The success of MSME digital transformation is greatly influenced by several key factors, including the readiness of technological infrastructure, the digital skills and literacy of human resources, supportive government policies, and the financial capacity of individual businesses. In addition, challenges related to regulation, technological understanding, and limited access must also be addressed promptly.

Therefore, a collaborative effort is needed between the government, the private sector, and educational institutions to provide training, infrastructure, access to financing, and strategic partnerships with digital platforms. With the right approach and supportive policies, digitalization can become a key driver for the growth and sustainability of MSMEs in developing countries as they navigate the increasingly dynamic digital economy.

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