


## Optimizing Digital Applications For MSMEs In Operational Efficiency And Encouraging The Acceleration Of The Digital Economy

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Article Info	ABSTRACT
<p><b>Keywords:</b> Digital Technology, MSMEs, Digital Economy Acceleration</p>	<p>In the digital economy era, the application of information and communication technology is the main support for MSMEs to improve operational efficiency. This study uses a systematic literature review method to review and analyze literature related to the adoption of digital technology in MSMEs. The results show that digital applications such as inventory management systems, e-commerce platforms, digital marketing tools, and financial applications can significantly improve the operational efficiency of MSMEs. However, the adoption of these technologies still faces barriers such as limited resources, lack of technical knowledge, and minimal infrastructure support. To encourage the adoption of digital technology, it is necessary to improve digital literacy, financial support, and strengthen infrastructure. Case studies show the success of MSMEs that have adopted digital technology in increasing sales and operational efficiency. This research provides practical recommendations for MSMEs, government, and other stakeholders in supporting MSME digitalization, which in turn is expected to contribute to the acceleration of the digital economy in Indonesia.</p>
<p>This is an open access article under the <a href="https://creativecommons.org/licenses/by-nc/4.0/">CC BY-NC</a> license</p> 	<p><b>Corresponding Author:</b> Andi Primafira Bumandava Eka Prodi Manajemen, STIE Manajemen Bisnis Indonesia <a href="mailto:andi.primafira@stiemi.ac.id">andi.primafira@stiemi.ac.id</a></p>

### INTRODUCTION

In numerous countries, including Indonesia, Micro, Small, and Medium Enterprises (MSMEs) serve as the foundation of the economy. MSMEs are instrumental in the reduction of social inequality, the promotion of economic development, and the creation of employment opportunities. Nevertheless, micro, small, and medium-sized enterprises (MSMEs) frequently encounter a variety of challenges, including inadequate capital, restricted market access, and inadequate technology. Information and communication technology (ICT) is a critical consideration in the current era of digitalization, as it can assist SMEs in surmounting these challenges and enhancing operational efficiency (Muzdalifah et al., 2020; Wijaya et al., 2022).

Digital transformation offers various opportunities for MSMEs to improve their performance and competitiveness. The use of digital applications, such as inventory management systems, e-commerce platforms, and digital marketing tools, can help MSMEs optimize their operations. These digital applications do not only help in reducing operational

costs (Candrasari, 2022) but also open up access to a wider market, both local and international (Aryani et al., 2022).

Based on a survey conducted by the Association of Indonesian Internet Service Providers (APJII) in 2022, around 85% of MSMEs that have adopted digital applications reported improved operational efficiency. In addition, a study from the Ministry of Cooperatives and SMEs the same year showed that the use of e-commerce platforms by MSMEs increased by 32% in the past two years, which contributed to a 25% increase in sales. This data underscores the importance of digital technology adoption in driving the growth and competitiveness of MSMEs in the global marketplace (H. V. Paramarta et al., 2021; Zulfikar et al., 2022).

Despite the huge potential offered by information and communication technology (ICT) for Micro, Small and Medium Enterprises (MSMEs), the adoption of digital applications among MSMEs is still relatively low. Many MSMEs face various obstacles such as limited resources, lack of technical understanding and skills, and lack of adequate digital infrastructure support. In addition, there are still concerns regarding data security and the initial investment required for the implementation of these technologies. These challenges mean that many MSMEs are unable to fully utilize the benefits of digital applications, which impacts their operational efficiency and competitiveness in the market. Therefore, this study aims to identify factors that hinder the adoption of digital technology among MSMEs, evaluate the impact of using digital applications on operational efficiency and acceleration of the digital economy, and develop recommendations that can encourage increased technology adoption in the MSME sector.

## METHODS

This research uses a systematic literature review method to review and analyze various literature sources related to the adoption of digital technology in Micro, Small and Medium Enterprises (MSMEs). This method was chosen because it allows researchers to comprehensively collect and synthesize existing knowledge, so as to provide a clear picture of trends, findings, and research gaps in this topic. (Fanani et al., 2024; Ibrahim et al., 2023). The research process began with a literature search of various academic databases using relevant keywords. The first stage in this method is data collection based on journal articles, references and relevant case studies will be collected. The researcher will filter the literature found based on its relevance, quality, and linkage to the research objectives. The literatures taken are those published within the last 5 years to ensure the novelty and relevance of the data. Qualitative analysis is the subsequent phase following data acquisition. The main themes that emerge from each selected piece of literature will be analysed to determine the impact of technology adoption on business performance, the barriers faced in technology implementation, and the types of digital applications used by MSMEs. The information will be categorised into predetermined categories using coding techniques in this analysis. In the third stage, the findings are synthesised. The information that has been analysed will be synthesised to produce a more profound comprehension of how digital applications can be optimised to enhance operational efficiency and expedite the digital economy among MSMEs.

In order to identify common patterns and significant differences across various contexts, the findings will be compared and contrasted. Ultimately, this investigation will produce recommendations that are derived from the literature synthesis. The purpose of these recommendations is to offer practical advice to MSMEs, government, and other stakeholders in order to promote the adoption of digital technology. This method of systematic literature review is anticipated to make a significant contribution to the comprehension and resolution of the obstacles encountered by micro, small, and medium-sized enterprises (MSMEs) in the digital age.

## RESULTS AND DISCUSSION

### Digital Technology Analysis for MSMEs

Based on the literature analysis, there are several types of digital applications that have proven effective in improving the operational efficiency of MSMEs. These applications include inventory management systems, e-commerce platforms, digital marketing tools, and financial applications. According to research by (Maharani et al., 2023; Suryadana & Sarasvananda, 2024; Wiratama et al., 2022), the use of inventory management systems can help MSMEs in managing stock efficiently. The system enables real-time tracking of inventory, reduces human error, and optimizes the reordering process. This study shows that MSMEs that use inventory management systems experience a reduction in storage costs of up to 20%. Studies by (Alfiana et al., 2024; Kurniati et al., 2022) found that e-commerce platforms such as Tokopedia, Shopee, and Bukalapak open up new market access for MSMEs. By participating in these platforms, MSMEs can reach a wider range of customers, both locally and internationally. This study recorded a 25% increase in sales after MSMEs started using e-commerce platforms. Studies by (Indriyani et al., 2022; Usvita et al., 2023) highlight the importance of digital marketing in the modern era. Tools such as social media, search engine optimization (SEO), and email marketing can assist MSMEs in reaching potential customers at a relatively low cost. Research (Kraugusteeliana & Violin, 2024) shows that MSMEs that actively use social media for marketing experience an increase in customers of up to 30%. The use of financial applications such as digital accounting and financial management applications helps MSMEs in managing their finances better. According to studies by (Lin, 2024; Sari, 2019; Syafitri et al., 2023) MSMEs using financial apps reported an increase in the accuracy of financial reports and a reduction in time spent on administrative tasks by up to 40%.

### The Impact of Digital Applications on the Operational Efficiency of MSMEs

The use of digital applications is proven to have a positive impact on the operational efficiency of MSMEs. This operational efficiency includes cost reduction, productivity improvement, and business process optimization. A study by the Indonesian Internet Service Providers Association (APJII) in 2022 showed that around 85% of MSMEs that have adopted digital applications reported reduced operational costs. The use of inventory management systems and financial applications, for example, helps MSMEs in reducing storage and financial management costs. Digital applications allow MSMEs to automate various business

processes, thereby increasing productivity. According to research by (Kartini et al., 2022; Riyanti et al., 2024; Sutono, 2023) MSMEs that use digital marketing tools and e-commerce platforms report an increase in productivity of up to 30%. These applications help in reducing time spent on manual tasks and allow staff to focus on more strategic activities. Research by (Mariam et al., 2023; Permana et al., 2024) show that the use of digital applications helps MSMEs in optimizing their business processes. Tools such as social media and SEO help in reaching potential customers more efficiently, while financial and inventory management apps help in managing internal operations better.

### **Inhibiting Factors in the Implementation of Digital Technology Adoption in MSMEs**

Despite the many benefits offered by digital technology, its adoption among MSMEs still faces various barriers. These barriers include limited resources, lack of technical knowledge, and lack of infrastructure support. Research by (V. Paramarta et al., 2021; Sudarmo et al., 2020; Wahyudi et al., 2024) identified that one of the main barriers to the adoption of digital technology by MSMEs is limited resources. Many MSMEs do not have enough budget to adopt new technologies, whether in the form of hardware, software, or employee training. Lack of technical knowledge and skills is also a major obstacle. According to studies by (Mahadewi et al., 2023; Sudarmo, 2020) many MSMEs do not have staff with the necessary technological skills to implement and manage digital applications. This results in resistance to change and the inability to utilize technology optimally. Lack of infrastructure support, such as limited and unstable internet access, is also a barrier to digital technology adoption. Research by APJII (2022) shows that in some areas, particularly in rural areas, poor internet access hinders the ability of MSMEs to adopt and utilize digital technology.

### **Recommendations to Encourage Digital Technology Adoption among MSMEs**

Based on the findings of this study, there are several recommendations that can be implemented to encourage the adoption of digital technology among MSMEs. These recommendations include improving digital literacy, providing financial support, and strengthening infrastructure. To address the lack of technical knowledge, training and education programs targeted at MSMEs are needed. The government and educational institutions can work together to organize training that focuses on basic to advanced technological skills. This program should include the use of digital applications relevant to MSME operations. Given limited resources, the government and financial institutions can provide financial support to MSMEs in the form of low-interest loans or grants for technology investments. Fiscal incentives, such as tax rebates for MSMEs that adopt digital technology, can also be an effective measure. Strengthening infrastructure, especially internet access, is crucial to support the adoption of digital technology. The government can work with internet service providers to improve the quality and coverage of internet access, especially in rural areas. This program could involve subsidies for network infrastructure development in underserved areas. Building collaborative platforms that connect MSMEs with technology service providers can help accelerate technology adoption. These platforms can provide information on the various technology solutions available, as well as offer consulting services and technical support.

## CONCLUSION

The conclusion shows that based on the results of the literature analysis, the adoption of digital technology has great potential to improve operational efficiency and accelerate the digital economy among MSMEs. However, barriers such as limited resources, lack of technical knowledge, and lack of infrastructure support need to be overcome to encourage wider adoption of these technologies. Recommendations, including improving digital literacy, providing financial support, and strengthening infrastructure, are expected to help MSMEs utilize digital technology to achieve sustainable and highly competitive growth. By effectively adopting digital technology, MSMEs can apply digital technology to drive economic growth and reduce social disparities. Successful digital transformation among MSMEs will not only improve their performance and competitiveness, but will also contribute to the overall acceleration of the digital economy in Indonesia. This research is expected to be a valuable reference for MSMEs, government, and other stakeholders in designing strategies and policies that support MSME digitalization.

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