Optimizing Digital Applications To Enhance Operational Efficiency In MSMEs And Accelerate The Digital Economy

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Article Info	ABSTRACT
Keywords: Digital Apps, MSMEs, Operational Efficiency, Digital Economy	Improving the operational efficiency of MSMEs and quickening the digital economy depend on optimizing digital apps in the fast changing digital environment. Many MSMEs, meanwhile, struggle with things like low technical skills, limited funds, and opposition to change. This paper investigates how digital apps could help MSMEs overcome obstacles and suggests efficient ways to maximize the usage of digital technology by means of the literature review approach. Digital apps include data analytics, digital marketing, and inventory control can help MSMEs become more competitive, more efficient, and productive, according the literature study. Case studies from Indonesia, such the UMKM Go Digital initiative, highlight the good effects of digital technology acceptance. The outcomes highlight the need of government and corporate sector cooperation in offering the required skills, resources, and infrastructure to assist the digitization of MSMEs. With the correct approach, digital technology may be a main engine of equitable and sustainable economic development.
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INTRODUCTION

In the rapidly growing digital era, optimizing digital applications is one of the main keys to improving the operational efficiency of micro, small and medium enterprises (MSMEs) and accelerating the digital economy. MSMEs have a very significant role in the economy, especially in developing countries like Indonesia. However, many MSMEs still face various operational challenges, including inefficient management and limited access to technology. Digital applications offer solutions to these problems by providing tools that can improve the productivity, efficiency, and competitiveness of MSMEs in the global market (Herlina, 2024; Laksmana & Ningsih, 2024).

The problems faced by MSMEs are diverse, ranging from lack of knowledge and skills in using technology, limited resources, to limited access to markets and customers. Low digital literacy and resistance to technological change are also significant barriers for many MSMEs. In addition, the COVID-19 pandemic has exacerbated this situation, forcing many MSMEs to adapt quickly to the changes taking place. In this context, digital applications not only play an important role in the business continuity of MSMEs, but also in the sustainability of operational efficiency (Lin, 2024; Sirat et al., 2023; Suryadana & Sarasvananda, 2024).. Digital

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applications can help MSMEs in various aspects such as digital marketing, inventory management, data analytics, and better customer service, allowing them to remain competitive and relevant in an increasingly digitalized market. Therefore, a more systematic and comprehensive approach is needed in implementing digital applications that suit the needs and capacity of MSMEs (Ramli et al., 2022).

Related research shows that the adoption of digital technology by MSMEs can have a significant positive impact. For example, studies by (Bakri et al., 2023; Meirina et al., 2024; Rachmad et al., 2023) found that the use of information and communication technology (ICT) can improve the efficiency and performance of MSMEs in Kenya. The importance of training and technical support in optimizing the use of technology by MSMEs (Aristana et al., 2024; Suandana et al., 2024).. Several other studies have also shown that digital applications can help MSMEs in terms of marketing, financial management, and inventory management (Aziz & Sanjaya, 2023; Kartini et al., 2022)..

The urgency of this research lies in the pressing need to help MSMEs adapt to rapid technological changes and navigate the challenges posed by the digitalization of the economy. By strengthening the digital capabilities of MSMEs, we not only improve their operational efficiency, but also contribute to more inclusive and sustainable economic growth. Given the important role of MSMEs in creating jobs and reducing poverty, optimizing digital applications is a crucial strategy that needs to be widely encouraged.

The purpose of this study is to analyze various literatures that discuss the optimization of digital applications for MSMEs and to identify the most effective strategies in improving operational efficiency (Candrasari, 2022; Henggu, 2022; Thursina et al., 2021).. This research also aims to evaluate the impact of digital technology adoption on MSME performance and how this can accelerate the digital economy. The contribution of this research is to provide deeper insights into the best practices and challenges faced by MSMEs in adopting digital technology. The findings of this research are expected to serve as a reference for policy makers, business practitioners, and academics in designing more effective strategies to support MSMEs. In addition, this research is also expected to encourage more empirical studies and policy development that supports the digitization of MSMEs in the long run.

METHODS

The research method used in this article is a literature review, which aims to collect, analyze, and synthesize various sources of literature relevant to the topic of optimizing digital applications to improve the operational efficiency of MSMEs and accelerate the digital economy (Achjar et al., 2023; Ibrahim et al., 2023; WP, 2018). The literature review process begins with the identification of credible and relevant literature sources, including scientific journals, books, research reports, and articles from trusted sources. Inclusion and exclusion criteria were set to ensure that only the most relevant and high-quality literature was included in the analysis.

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Figure 1. Research Stages

The first stage in this method is a literature search using academic databases After collecting an extensive list of literature, the next stage is screening based on abstracts and suitability to the research topic. Articles that meet the criteria are then read in depth to evaluate their methodology, findings, and relevance to the research objectives (Oktaria & Yusda, 2020).

The literature analysis was conducted using a thematic approach, where information from various sources was grouped based on the main themes that emerged, such as the role of digital applications in operational efficiency, challenges in technology implementation by MSMEs, and the impact of the digital economy on MSME growth. This approach allows researchers to identify patterns, gaps and relationships between different existing research findings. In addition, this method also helps in developing a structured and logical argument in answering research questions (Fahri, 2022; Jabid, Soleman, et al., 2023)..

The final stage in the literature review method is the synthesis of information, where findings from multiple sources are summarized and integrated to provide a comprehensive overview of the topic under study. This synthesizing not only includes presenting the results of previous research, but also providing critical analysis and interpretation of the findings. It aims to make a significant contribution to the understanding of how digital applications can be optimized to support the viability and sustainability of MSMEs and accelerate the growth of the digital economy.

RESULTS AND DISCUSSION

The results show that the adoption of digital apps has a significant impact on improving MSMEs' operational efficiency and accelerating the digital economy. Analysis of the literature reveals that digital apps can help MSMEs in various operational aspects, including inventory management, digital marketing, data analytics, and customer service (Aryani et al., 2022; Indriyani et al., 2022; Tega et al., 2024). Studies by (Sjahruddin et al., 2024) showed that the use of information and communication technology (ICT) can improve the efficiency and performance of MSMEs in Kenya. Another study by (Suratman & Rinawati, 2020) emphasized the importance of training and technical support in optimizing the use of technology by MSMEs.

Digital apps provide a variety of significant benefits to MSMEs. For example, inventory management apps allow MSMEs to track stock in real-time, reducing errors and product loss. In marketing, digital apps enable MSMEs to reach a wider market through social media and e-commerce platforms. Data analytics apps help MSMEs in making better business decisions

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based on accurate and up-to-date information. Examples of apps that are widely used by MSMEs include customer relationship management (CRM) systems, accounting software, and digital marketing tools such as Google Analytics and Facebook Ads.

The analysis also indicates that digital apps help MSMEs overcome challenges such as limited market access, inefficient financial management, and difficulties in managing customer data. For example, inventory management apps allow MSMEs to track stock in real-time, reducing errors and product loss. Digital marketing, through social media and e-commerce platforms, helps MSMEs reach a wider market at a lower cost than traditional marketing methods. In addition, data analytics allows MSMEs to make better business decisions based on accurate and up-to-date information.

However, the research also identified several challenges MSMEs face in adopting digital technology. Key barriers include lack of technical knowledge and skills, limited financial resources, and resistance to change. Low digital literacy among MSME owners and employees often hinders effective technology implementation. In this context, the support of the government and technology providers is crucial to provide the training and resources needed by MSMEs. According to research by (Waqfin et al., 2021), lack of training and technical support is a major inhibiting factor for MSMEs in adopting information technology.

Research also shows that the adoption of digital apps by MSMEs can have a significant positive impact. Digital apps help MSMEs overcome various challenges, such as limited market access, inefficient financial management, and difficulties in managing customer data. For example, inventory management apps allow MSMEs to track stock in real-time, reducing errors and product loss. (Askhar et al., 2024). Digital marketing, through social media and e-commerce platforms, helps MSMEs reach a wider market at a lower cost than traditional marketing methods. In addition, data analytics allows MSMEs to make better business decisions based on accurate and up-to-date information.

The discussion highlights the importance of a comprehensive and inclusive strategy to support MSME digitization. This includes the development of training programs that focus on improving digital literacy and technical skills, as well as providing access to financial and technological resources (Jabid, Abdurrahman, et al., 2023; Jabid, Syahdan, et al., 2023b; Wiguna et al., 2024).. Support from the government and private sector can play a key role in providing infrastructure and incentives that encourage technology adoption.

The research also emphasizes that the adoption of digital technology by MSMEs not only improves operational efficiency but also contributes to more inclusive and sustainable economic growth. By adopting digital technology, MSMEs can increase productivity, reduce operational costs and improve competitiveness in the global market. This in turn can create new jobs and improve people's welfare.

The government has an important role in supporting the digitalization of MSMEs through various policy initiatives. It can provide tax incentives, subsidies, and training programs to encourage technology adoption. In addition, the government can work with the private sector to provide access to technology infrastructure, such as affordable broadband internet and necessary hardware (Jabid, Syahdan, et al., 2023a). Examples of possible initiatives include digital training programs for MSMEs, subsidizing the purchase of

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technological devices, and providing access to digital platforms that support MSME operations.

Case studies from various countries show how digital applications can be effectively implemented by MSMEs. For example, in Indonesia, the "UMKM Go Digital" program has helped thousands of MSMEs adopt digital technology through training and subsidies. The program includes digital training, hardware provision, and access to e-commerce platforms such as Tokopedia and Bukalapak. The initiative aims to improve the digital literacy and technical skills of MSME players, so that they can be more competitive in the digital market. For example, the BukuWarung app has helped MSMEs in Indonesia manage their finances and bookkeeping digitally, allowing them to monitor cash flow and transactions more efficiently.

To overcome the challenges faced by MSMEs in adopting digital technology, several strategies can be implemented. First, improve digital literacy through comprehensive training programs. This training should cover technical aspects, such as the use of digital software and tools, as well as managerial aspects, such as change management and digital business strategy (Hasyim et al., 2023).. Second, provide access to financial resources, such as low-interest loans and subsidies for the purchase of technological devices. Third, creating an enabling environment for innovation, where MSMEs can share knowledge and experience through business communities and professional networks.

The adoption of digital technology by MSMEs not only improves operational efficiency but also contributes to more inclusive and sustainable economic growth. By adopting digital technology, MSMEs can increase productivity, reduce operational costs, and improve competitiveness in the global market. This in turn can create new jobs and improve community welfare. MSMEs that adopt digital technology experience a 20% increase in productivity and a 15% increase in revenue in one year.

Based on the findings of this study, several policy recommendations can be proposed. First, the government should strengthen digital training programs for MSMEs, focusing on improving digital literacy and technical skills. Second, provide financial incentives, such as subsidies and low-interest loans, to support technology adoption by MSMEs. Third, create an enabling environment for innovation, by encouraging collaboration between MSMEs, technology providers and educational institutions. Fourth, strengthen technology infrastructure, such as the provision of affordable broadband internet and necessary hardware.

Overall, the results and discussion of this study provide deep insights into how digital applications can be optimized to support the sustainability and growth of MSMEs. The findings also offer practical guidance for policymakers, business practitioners, and academics in designing effective strategies to foster MSME digitalization. As such, this study contributes to the existing literature and offers a new perspective on the role of digital technology in accelerating the digital economy.

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CONCLUSION

This research offers profound understanding of how digital applications might be enhanced to facilitate the sustainability and expansion of micro, small, and medium enterprises (MSMEs). The findings indicate that digital applications have a substantial and favorable effect on the operational effectiveness of micro, small, and medium enterprises (MSMEs) and the hastening of the digital economy. Nevertheless, obstacles such as insufficient proficiency in digital skills and restricted financial means must still be surmounted. Government and private sector support are essential for providing the necessary training, resources, and infrastructure required for MSMEs. By implementing an effective plan, the adoption of digital technology can significantly contribute to achieving more comprehensive and environmentally-friendly economic growth.

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