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THE ROLE OF DIGITAL TECHNOLOGY
IN INCREASING THE COMPETITIVENESS OF MSMES IN INDONESIA:
A DEVELOPMENT ECONOMY PERSPECTIVE

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Abstrak

Penelitian ini mengkaji peran teknologi digital dalam meningkatkan daya saing usaha mikro, kecil, dan menengah (UMKM) di Indonesia dari perspektif ekonomi pembangunan. UMKM memainkan peran vital dalam perekonomian Indonesia, namun sering kali menghadapi tantangan dalam bersaing di pasar global. Teknologi digital, termasuk platform e-commerce, fintech, dan media sosial, diidentifikasi sebagai alat strategis yang dapat meningkatkan efisiensi operasional, memperluas akses pasar, dan mendorong inovasi di sektor UMKM. Penelitian ini menggunakan pendekatan kualitatif dan kuantitatif, dengan data diperoleh melalui survei dan wawancara mendalam dengan pemilik UMKM di berbagai sektor industri.

Analisis menunjukkan bahwa adopsi teknologi digital secara signifikan meningkatkan daya saing UMKM, terutama dalam hal akses ke pasar yang lebih luas, pengelolaan keuangan yang lebih efisien, serta kemampuan untuk berinovasi. Meskipun demikian, penelitian ini juga menemukan adanya hambatan yang signifikan, seperti kurangnya literasi digital dan keterbatasan infrastruktur, yang menghambat optimalisasi manfaat teknologi digital bagi UMKM. Oleh karena itu, diperlukan intervensi kebijakan yang mendukung peningkatan literasi digital dan penguatan infrastruktur, agar teknologi digital dapat diakses secara merata oleh UMKM di seluruh Indonesia.

Kata kunci: Teknologi Digital, Daya Saing, UMKM

Abstract

This study examines the role of digital technology in increasing the competitiveness of micro, small, and medium enterprises (MSMEs) in Indonesia from the perspective of development economics. MSMEs play a vital role in Indonesia's economy, but often face challenges in competing in the global market. Digital technologies, including e-commerce, fintech, and social media platforms, are identified as strategic tools that can improve operational efficiency, expand market access, and drive innovation in the MSME sector. This research uses qualitative and quantitative approaches, with data obtained through in-depth surveys and interviews with MSME owners in various industry sectors.

The analysis shows that the adoption of digital technology significantly increases the competitiveness of MSMEs, especially in terms of access to a wider market, more efficient financial management, and the ability to innovate. However, this study also found significant obstacles, such as a lack of digital literacy and limited infrastructure, which hinder the optimization

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of the benefits of digital technology for MSMEs. Therefore, policy interventions are needed that support the improvement of digital literacy and the strengthening of infrastructure, so that digital technology can be accessed equally by MSMEs throughout Indonesia.

Keywords: Digital Technology, Competitiveness, MSMEs

INTRODUCTION

Micro, small, and medium enterprises (MSMEs) have a strategic role in Indonesia's economy. Its contribution can not only be seen from the creation of significant jobs, but also from the contribution to the national gross domestic product (GDP). Although MSMEs are the backbone of the economy, their competitiveness still needs to be improved in order to be able to survive and thrive in increasingly fierce global competition. Globalization and technological developments have brought new challenges to MSMEs, especially in the face of rapid changes in market dynamics. Therefore, it is important to explore how digital technology can be used to improve the competitiveness of MSMEs (Wibowo & Zainul Arifin, 2015).

Digital technology has become one of the main pillars in the transformation of the global economy. Innovations in information and communication technology (ICT) have changed the way businesses are run, from production to marketing. In Indonesia, the adoption of digital technology is increasingly widespread in various sectors, including the MSME sector. Digital technology offers various advantages for MSMEs, such as wider market access, increased operational efficiency, and the ability to innovate. However, not all MSMEs in Indonesia are able to utilize digital technology optimally (L. D. Putra & Pratama, 2023).

Although the adoption of digital technology by MSMEs in Indonesia shows an increase, there is still a significant disparity in its application. MSMEs in urban areas tend to adopt technology faster than MSMEs in rural areas. Factors such as limited infrastructure, lack of digital literacy, and cost barriers are the main obstacles in technology adoption by MSMEs. This disparity can cause inequality in the competitiveness of MSMEs in various regions in Indonesia. Therefore, an in-depth study of the factors affecting the adoption of digital technology by MSMEs is needed (Rifai & Mychelisda, 2023).

This research aims to examine the role of digital technology in increasing the competitiveness of MSMEs in Indonesia from the perspective of development economy. The main

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focus of this research is to understand the extent to which digital technology can help MSMEs improve efficiency, expand market access, and encourage innovation. In addition, this study also seeks to identify the obstacles faced by MSMEs in adopting digital technology. With a better understanding of these factors, it is hoped that policy recommendations can be formulated that support increasing the competitiveness of MSMEs through the adoption of digital technology (Sudewo, 2021).

In the context of a development economy, digital technology has great potential to reduce economic disparities and increase inclusivity. Digital technology allows MSMEs to connect with the global market without having to invest heavily in physical infrastructure. This provides opportunities for MSMEs in rural areas to compete in a wider market. However, this potential can only be realized if MSMEs have adequate access to technology and are able to use it effectively. Therefore, it is important to examine how digital technology can be integrated into broader economic development strategies (Syahza, 2013).

Along with technological developments, the government and the private sector have initiated various programs to support the adoption of digital technology by MSMEs. These programs include digital literacy training, infrastructure development, and providing access to digital platforms. While these programs provide significant benefits, there are still many challenges that need to be overcome to ensure that all MSMEs can take advantage of them. One of the main challenges is ensuring that these programs can reach MSMEs in all corners of Indonesia, including in rural and remote areas (Pramono & Fanumbi, 2012).

By understanding the role of digital technology in increasing the competitiveness of MSMEs, this research is expected to contribute to the development of a more inclusive and sustainable economic development strategy. Digital technology is not only a tool to improve efficiency, but also a driver of broader economic transformation. In this context, MSMEs can become the main actors in Indonesia's more modern and competitive economy. Therefore, this study will highlight the potential of digital technology as the main driver in increasing the competitiveness of MSMEs in Indonesia (Lantu et al., 2016).

METHOD

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This study uses a mixed approach that combines qualitative and quantitative methods to obtain a comprehensive understanding of the role of digital technology in increasing the competitiveness of MSMEs in Indonesia. Quantitative data was collected through a survey conducted on MSME owners in various industrial sectors in Indonesia. The survey is designed to measure the adoption rate of digital technology, the obstacles faced, and its impact on business performance. Meanwhile, qualitative data was obtained through in-depth interviews with MSME owners who were selected based on different levels of digital technology adoption. This approach allows for a more in-depth exploration of the experiences and perspectives of MSMEs in utilizing digital technology.

The study population consists of MSMEs operating in different regions of Indonesia, with a focus on the differences in technology adoption between MSMEs in urban and rural areas. The research sample was selected using purposive sampling techniques to ensure that various industry sectors and levels of digital technology adoption are represented in this study. The data collected through the survey was analyzed using descriptive and inferential statistics to identify patterns and relationships between the variables studied. In addition, qualitative analysis was carried out using thematic analysis methods to identify key themes that emerged from the interview. This combination of quantitative and qualitative analysis is expected to provide a comprehensive picture of the role of digital technology in increasing the competitiveness of MSMEs in Indonesia.

The study also considers contextual factors that can affect outcomes, such as digital literacy levels, infrastructure availability, and government support. Therefore, secondary data from government reports, international organizations, and previous literature are also used to complete the analysis. The validity and reliability of the research instrument are tested through pilot testing before being used in the main survey. In addition, data triangulation is carried out to ensure the accuracy and validity of research findings. This comprehensive methodological approach is expected to produce relevant and reliable findings in the context of increasing the competitiveness of MSMEs through the adoption of digital technology.

RESULTS AND DISCUSSION

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The results of this study show that the adoption of digital technology by MSMEs in Indonesia significantly affects their competitiveness, especially in terms of market access and operational efficiency. Based on survey data conducted, the majority of MSMEs that have adopted digital technology report increased sales and a wider customer reach. MSMEs that utilize e-commerce platforms, for example, are able to expand their markets abroad, which were previously unreachable through conventional sales methods. In addition, the use of digital technology also has an impact on the efficiency of business processes, such as inventory management and payment systems. This shows that digital technology is not only a tool, but also a key factor in the strategy to increase the competitiveness of MSMEs (Agustian et al., 2020).

Further analysis shows that the level of adoption of digital technology by MSMEs in Indonesia still varies significantly between regions. MSMEs in urban areas tend to be faster and more widespread in adopting digital technology compared to MSMEs in rural areas. Factors such as access to adequate digital infrastructure, digital literacy levels, and government support are the main determinants of this disparity. MSMEs in rural areas often face challenges in accessing quality internet, which prevents them from fully utilizing digital technology. In addition, the lack of knowledge and skills in using digital technology is also a significant obstacle (Jamilati et al., 2023).

The results of in-depth interviews with MSME owners show that despite the challenges, most of them recognize the great potential of digital technology in improving the competitiveness of their businesses. Some MSME owners stated that digital technology has helped them reduce operational costs, improve time efficiency, and manage finances better. However, there are also those who mention that the process of adapting to digital technology is not always easy and requires a considerable investment of time and resources. These barriers point to the need for greater support in the form of training and the provision of adequate infrastructure, especially in areas that are still lagging behind in technology adoption (Abdullah & Sutrisno, 2008).

This discussion also revealed that certain industrial sectors benefit more from digital technology than other sectors. For example, MSMEs in the trade and service sectors tend to integrate digital technology more easily in their operations compared to MSMEs in the agriculture and manufacturing sectors. This difference is due to the characteristics of each sector, where the

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trade and service sectors need more connectivity and quick access to information. In contrast, the agriculture and manufacturing sectors often require more complex adaptations in implementing digital technologies. This highlights the need for a more specific and tailored approach in supporting the adoption of digital technology in various industry sectors (Rifai & Mychelisda, 2023).

In terms of financial management, the results of the study show that fintech or financial technology plays an important role in helping MSMEs manage cash flow and access to capital. MSMEs that use fintech services report the ease of accessing loans, payments, and digital financial management. This is especially important for MSMEs who often face limitations in accessing traditional financial institutions. However, there are still challenges in terms of digital financial literacy, where some MSMEs still find it difficult to understand and use fintech services effectively. Therefore, increasing digital financial literacy is an important aspect in supporting the use of fintech technology by MSMEs (Ardiansyah, 2019).

The results of the study also show that social media is one of the most widely used digital tools by MSMEs for marketing and interaction with customers. The use of social media allows MSMEs to reach a wider audience at a relatively low cost. In addition, social media also allows MSMEs to build stronger brands and customer communities. However, there are challenges when it comes to content management and effective interaction on social media. Some MSMEs stated that they have difficulty creating engaging and sustainable content, which is necessary to maintain customer engagement (Annisa, 2023).

On the other hand, this study also reveals that there are several internal obstacles that hinder the adoption of digital technology by MSMEs. Factors such as resistance to change, lack of trust in technology, and limited human resources are the main obstacles in the implementation of digital technology. Some MSMEs are still hesitant to invest in digital technology due to concerns about the costs and risks associated with it. In addition, the lack of expertise in the field of technology in the MSME management team is also an inhibiting factor. This emphasizes the importance of the role of education and training in encouraging wider adoption of digital technology among MSMEs (R. R. Putra et al., 2024).

Based on these findings, it can be seen that support from various parties, including the government, the private sector, and educational institutions, is very important to accelerate the adoption of digital technology by MSMEs. The government is expected to provide supportive incentives and regulations, while the private sector can play a role in providing technology and services that are easily accessible to MSMEs. Education and training institutions also have a crucial role in improving digital literacy and technology skills for MSME owners and employees. This collaboration between various parties is expected to create an ecosystem that supports the digital transformation of MSMEs in a sustainable manner (Sulaiman et al., 2021).

This discussion underscores that while digital technology offers a great opportunity for MSMEs to increase their competitiveness, its adoption cannot be done instantly and requires ongoing support. The challenges faced by MSMEs, both in terms of infrastructure, digital literacy, and internal barriers, must be overcome through a holistic approach. Thus, digital technology can be an effective enabler in changing the business landscape of MSMEs in Indonesia, allowing them to compete in the global market and contribute more to the national economy (Marlinah, 2020).

CONCLUSION

This research has revealed that digital technology has a significant role in improving the competitiveness of MSMEs in Indonesia, especially through wider market access and better operational efficiency. The use of digital technologies such as e-commerce, fintech, and social media has been proven to have a positive impact on the performance of MSMEs, allowing them to operate more efficiently and reach markets that were previously unreachable. However, the adoption of digital technology still faces various challenges, especially in rural areas, where infrastructure and digital literacy are still limited. Therefore, appropriate intervention from the government and the private sector is urgently needed to overcome these obstacles and encourage the adoption of digital technology evenly throughout Indonesia (Hidayat, 2016).

In addition, this study also shows that there is a significant variation in the adoption rate of digital technology in various sectors of the MSME industry. The trade and services sectors are easier to adopt digital technologies compared to the agriculture and manufacturing sectors, which require more complex adaptations. Internal factors such as resistance to change and lack of skilled

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human resources are also inhibiting the adoption of digital technologies. As such, a more specific and tailored approach is needed to support the adoption of technology in each sector, including through more intensive training and education (Mantra et al., 2022).

Overall, this study emphasizes the importance of collaboration between the government, the private sector, and educational institutions in creating an ecosystem that supports the digital transformation of MSMEs in Indonesia. With the right support, digital technology can be a key driver in increasing the competitiveness of MSMEs, allowing them to compete in the global market, and contribute more to the national economy. The future of MSMEs in Indonesia is highly dependent on their ability to adopt and integrate digital technologies in their operations, so efforts to support and facilitate this process should be a priority in economic development strategies.

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