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Optimizing the Role of MSMEs in Driving Regional Economic Growth Through Digital Transformation and Local Technology-Based Innovation In Indonesia

Syamsu Rijal[1], Mustari[2]

[1,2]Jurusan ilmu ekonomi,Universitas Negeri Makassar

Email: syamsurijalasnur@unm.ac.id,Mustari7105@unm.ac.id

Abstract

This article aims to critically analyze how the strategy of optimizing the role of MSMEs in the digital economy ecosystem can encourage sustainable regional economic growth. This research uses a library research method, with narrative data analysis that emphasizes extracting, interpreting, and telling experiences or phenomena based on existing literature. The results show that optimizing the role of MSMEs in regional economic growth can be achieved through digital transformation and local technology-based innovation. Collaborative support from the government, private sector, and community is needed so that MSMEs are able to adapt, improve competitiveness, and create an inclusive and sustainable economy.

Keywords: MSMEs, Regional Economy, Local Technology

INTRODUCTION

In Indonesia's decentralized economic structure based on regional resource diversity, Micro, Small, and Medium Enterprises (MSMEs) play a central role not only as productive economic entities but also as strategic instruments in strengthening the foundations of local economic independence (Sarfiah et al., 2019). In reality, MSMEs play a central role in supporting community economic activities, contributing more than 60% to national GDP and absorbing more than 90% of the workforce. In various regions, MSMEs reflect local identity as well as the main driving force of economic development based on endogenous potential (Sedyastuti, 2018).

However, along with the dynamics of economic globalization and the acceleration of the Industrial Revolution 4.0, MSMEs face complex structural challenges (Nurul Aflah Harahap,

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2022). The rapid digital transformation demands that businesses strategically adapt to changing patterns of production, distribution, and consumption, which are increasingly digitalized (Sofyan, 2017). On the one hand, the digital era opens up significant opportunities for MSMEs to access broader markets, utilize technology to improve operational efficiency, and drive product and business model innovation. On the other hand, disparities in access to technology, low digital literacy, limited supporting infrastructure, and bureaucratic barriers at the local level are often major obstacles to an inclusive and equitable digitalization process (Hidayat et al., 2022).

This situation raises the urgency of a comprehensive, contextual, and needs-based MSME empowerment strategy at the regional level (Dewi et al., 2022). Within the framework of regional economic growth, MSMEs function not only as the main driver in creating jobs and equalizing income, but also as innovative actors that increase regional competitiveness (Agustin et al., 2023). Digital transformation in the regional economic context cannot be understood partially as merely the application of technology, but must be seen as an integrative process that touches various fundamental aspects, such as developing human resource capacity, strengthening local institutions, improving the quality of business ecosystem support, and creating synergies between the public, private, academic, and community sectors (Simangunsong, 2022).

This transformation must be implemented gradually and continuously, tailored to the socio-economic conditions and strengths of each region (Al Farisi et al., 2022). MSMEs need to adaptively utilize digital technologies such as e-commerce platforms, electronic payment systems, and artificial intelligence-based analytics to expand market reach, improve operational efficiency, and create innovative products that meet consumer demand, both locally and globally (Naimah et al., 2020). However, digitalization without adequate human resource readiness and ecosystem support will actually create new gaps and weaken the competitiveness of small businesses. Therefore, digital literacy training, technical assistance, and opening access to technological infrastructure must be an integral part of MSME transformation policies (Aliyah, 2022).

Furthermore, local technology-based innovation is crucial for maintaining the relevance and sustainability of MSMEs amidst the dynamics of market change. By encouraging the utilization of local resources and local wisdom processed through technological approaches, MSMEs can create unique added value while strengthening regional economic identity. This approach must be multidimensional, emphasizing inclusivity by ensuring the involvement of business actors from various groups (including women, youth, and marginalized communities),

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environmental and social sustainability, and cross-sector and cross-regional collaboration. In the long term, optimizing the role of MSMEs through digitalization and local innovation will create a more resilient regional economic structure, adaptive to global change, and capable of generating equitable and equitable growth (Anggraeni et al., 2021).

Furthermore, resilient and adaptive regional economic development in the digital era requires a paradigm shift from a top-down approach to a participatory and collaborative approach, where MSMEs are not only objects of development but also key competitive actors. In this context, strengthening MSME digital capacity, developing equitable information and communication technology (ICT) infrastructure, and designing affirmative policies by local governments are key prerequisites for building a digital ecosystem that supports the structural transformation of the local economy (Suryanti et al., 2021).

Sajiwo et al., (2023) argue that empowering Micro, Small, and Medium Enterprises (MSMEs) not only impacts the progress of individuals or businesses themselves but also makes a real contribution to the local economy. Helping MSMEs connect to digital markets can be a major driver of economic growth in local communities. Currently, various parties, from the government, the private sector, banks, Non-Governmental Organizations (NGOs), and international organizations, are showing significant attention to efforts to improve and develop MSMEs. Digital transformation in MSME development is expected to increase operational efficiency, accelerate business transactions, and improve service quality and customer satisfaction (Nugroho, 2023). Sari (2021) revealed that utilizing e-commerce platforms to sell regional specialties can reach consumers from various regions. Likewise, promoting river tourism destinations or local coffee shops through social media and websites can attract more tourists and have a positive impact on increasing community income in those areas. The research results of Debi et al., (2021) also show that social communities play an important role in contributing and being a solution to overcome problems in reducing the digital divide between rural and urban areas.

Given the significant potential and challenges faced, this article aims to critically analyze how strategies to optimize the role of MSMEs in the digital economy ecosystem can drive sustainable regional economic growth. Focusing on the integration of local technological innovation and adaptive regional policies, this article also seeks to formulate applicable strategic recommendations to promote regional economic independence based on inclusive and competitive digital transformation.

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RESEARCH METHODS

This study uses a library research method, which falls into the qualitative research category. The focus of this research is limited to sources available in libraries and published scientific journals, without involving data collection through field research. This method is applied to answer questions in the preliminary research with the aim of gaining a deeper understanding of this new phenomenon developing in society or in the field. The data analysis used in this study is narrative analysis. Narrative analysis is a data analysis method in qualitative research that emphasizes the exploration, interpretation, and storytelling of experiences or phenomena based on existing literature.

The main types of literature used in this research include books and journals discussing MSMEs, technological change, and other sources focused on the research. The data collection technique used was a literature study, which involved identifying various references related to the research topic. The data or information obtained came from reliable literature and was then compiled based on the study results to ensure they were interconnected and relevant to the theme discussed in this research.

DISCUSSION

MSMEs make a significant contribution to the national Gross Domestic Product (GDP) and create numerous jobs. They are a key pillar in strengthening regional economic resilience. However, their role is not yet fully optimized due to various obstacles such as limited access to financing, low digital literacy, and uneven distribution of technological infrastructure across regions. Amidst rapid technological developments, digital transformation is a crucial solution to address these challenges and increase the efficiency and competitiveness of MSMEs. Through digitalization, MSMEs can expand their markets, utilize e-commerce platforms, manage their businesses more efficiently, and develop innovative products and services based on data and market needs.

In addition to digital transformation, innovation based on local technology is also key to increasing the added value of MSME products. This innovation enables small businesses to adapt technology to local conditions, such as the use of appropriate technology in the agriculture, fisheries, and crafts sectors based on local wisdom. This not only strengthens regional economic identity but also increases product competitiveness in the broader market. However, the success of this transformation process is largely determined by collaboration between various stakeholders, such as the government, educational institutions, the private sector, and the technology community. Several strategies that can be adopted include increasing human

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resource capacity through digital training, providing adequate infrastructure, collaboration between institutions, and providing incentives for MSMEs that adopt innovation and digitalization.

With an integrated approach based on local potential, MSMEs can transform into the main driver of inclusive and sustainable regional economic growth. This transformation not only opens up new economic opportunities but also creates jobs, increases regional productivity, and accelerates equitable development across regions in Indonesia. Research by Mulyadi et al. (2023) shows that MSMEs are a form of micro, small, and medium enterprises that typically grow from individual initiatives, thus playing a crucial role in reducing unemployment. To compete in an increasingly dynamic market, MSMEs are required to continuously adapt, particularly in utilizing evolving marketing technologies, such as social media and digital marketing. Therefore, training in digital marketing and e-commerce is crucial, especially for local MSMEs, to encourage community economic growth and ensure they are not left behind by changing times. Empowering MSMEs through such training not only increases the capacity of individual entrepreneurs but also positively impacts the local economy as a whole. This Community Service activity also aims to strengthen local MSMEs by equipping them with skills in digital marketing and e-commerce, so they can grow sustainably and be better prepared to face the challenges of the digital economy.

Felix Sevanov Gilbert (2022) also pointed out that MSMEs are a very promising economic sector, but they still face various obstacles, especially during times of crisis and in adapting to the new digital-based era. Although the digital economy is considered a solution to overcome challenges during the transition to a new normal, its implementation has not yet fully reached the informal sector, where many MSMEs operate. This is due to the still low level of digital literacy among them. Therefore, special attention and support are needed to enable MSMEs to adapt to the ever-changing market dynamics, in order to encourage their economic recovery and improve their well-being. MSMEs need to transform due to the imbalance in business models between community-based businesses and investment-based corporations. Therefore, it is necessary to create a more conducive business climate and encourage collaboration. This is crucial considering that a large portion of the Indonesian workforce is involved in the entrepreneurial sector, with approximately 64 million MSMEs registered in 2021, which significantly impact economic growth through their contribution to Gross Domestic Product (GDP). In this context, the role of the government is crucial. Referring to Keynesian theory, the government has a responsibility to maintain economic stability, especially during crises. However, from a policy perspective, various obstacles remain. Existing policies have not fully

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addressed technical issues, such as aid distribution mechanisms, strengthening the business ecosystem, and the lack of legal certainty that could open up opportunities for collaboration between businesses and technology providers.

Firdausya and Ompusunggu (2023) explain that MSMEs play a crucial role in the Indonesian economy, contributing significantly to Gross Domestic Product (GDP) and job creation. Therefore, support from the government and relevant institutions, particularly in the form of training and mentoring, is essential for MSMEs to optimize their use of digital technology. However, during the pandemic, the role of MSMEs in contributing to GDP has declined, prompting them to quickly adapt to digitalization to remain competitive amidst increasingly competitive market conditions. Although some MSMEs have begun adopting digital technology, they still face several obstacles, such as limited ability to market products online, difficulty obtaining business capital, raw material supply chain issues, and uneven digital infrastructure. Despite this, the growth trend of digital MSMEs continues to increase annually. Therefore, the development of more equitable digital infrastructure and technology is crucial to support the sustainable growth of MSMEs and strengthen their contribution to the national economy.

Empowering Micro, Small, and Medium Enterprises (MSMEs) plays a crucial role in driving economic development while reducing poverty in Indonesia. Analysis of respondent data reveals that the majority of MSMEs have a good understanding of the products they offer, and product quality is a key factor influencing consumer purchasing decisions. This finding underscores the importance of businesses maintaining and improving product quality to remain competitive in the market. Research also indicates that consumer purchasing patterns are periodic, with many customers making purchases quarterly, providing opportunities for developing marketing strategies such as seasonal promotions or loyalty programs. Despite high levels of customer satisfaction, a small percentage of dissatisfied customers remain, indicating the need for evaluation and improvement in certain aspects of the product or service. By better understanding consumer needs and preferences, MSMEs have a significant opportunity to develop more targeted business strategies, achieve sustainable growth, and contribute to improving community well-being (Siagian et al., 2025).

Apriani (2020) also found that the ever-evolving pace of technological advancements is pushing businesses to adapt to the digital era that now dominates various aspects of life. Digitalization offers significant opportunities for MSMEs to expand their market reach. However, this development also presents challenges, demanding rapid adaptation from small and medium-sized businesses.

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Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in reducing poverty in Indonesia from 2020 to 2023. Various studies have shown that MSMEs make a significant contribution to creating jobs, increasing community incomes, and driving inclusive economic growth. The government has launched various initiatives to support MSME empowerment, including expanding access to financing, skills training, promotional assistance, and encouraging the adoption of digital technology. However, significant challenges remain, such as limited access to capital and low digital readiness among MSMEs. The COVID-19 pandemic has further exacerbated the situation, forcing many MSMEs to close their businesses. However, some MSMEs have been able to survive and adapt by leveraging digital technology, opening up new opportunities for recovery and growth post-pandemic. In this context, empowering MSMEs through sustainable and inclusive policies is an effective long-term solution to reducing poverty. With synergy from various stakeholders, strengthening the MSME sector is expected to create a more just, equitable, and sustainable economic structure (Ariani et al., 2024).

CONCLUSION

Micro, Small, and Medium Enterprises (MSMEs) play a highly strategic role in strengthening economic growth at both the regional and national levels in Indonesia, while also being a key pillar in poverty reduction and job creation. Despite their significant contribution to Gross Domestic Product (GDP), MSMEs still face a number of challenges, such as limited access to capital, low levels of digital literacy, and unequal distribution of technological infrastructure. Digital transformation and innovation based on local technology are key to increasing the competitiveness and sustainability of MSMEs, driven by collaboration between the government, the private sector, educational institutions, and the community. Efforts to provide training, mentoring, and strengthen the digital ecosystem have shown positive results, as evidenced by the growth of digital MSMEs and increased revenue from the digital economy sector. With a collaborative approach and leveraging local potential, MSMEs have the potential to develop into key drivers of an inclusive, equitable, and sustainable economy, ready to face future challenges in an adaptive and innovative manner.

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