

Analysis of Factors Hindering and Supporting the Digital Transformation of MSMEs in Gorontalo Regency

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ABSTRACT

Digital transformation is one of the main keys to increasing the competitiveness of Micro, Small, and Medium Enterprises (MSMEs) in the era of technology-based economy. However, implementing this transformation still faces several obstacles, especially in areas such as Gorontalo Regency. This study aims to identify the factors that affect the success or failure of implementing digital transformation in MSMEs fostered by the Gorontalo Regency Cooperatives and MSMEs Office. Using a descriptive qualitative approach, data were obtained through in-depth interviews, direct observation, and analysis of related documents. The research respondents comprised MSME actors, related agency officials, and MSME companions who were directly involved in the digitalization program. The results of the study show that the main challenges in implementing digitalization include a lack of understanding of digital technology among business actors, limited infrastructure such as internet access, and insufficient budget to support technology adoption. On the other hand, factors that support the digital transformation of MSMEs in this region include the availability of training programs from local governments, collaborative support from the private sector, and increasing business actors' understanding of the importance of technology in expanding the market. In conclusion, the success of the digital transformation of MSMEs in Gorontalo Regency depends on the integration of improving human resource skills, strengthening digital infrastructure, and proactive government policies to support sustainable transformation. This research recommends more focused training, more equitable infrastructure development, and strengthening partnerships between the government, the private sector, and other stakeholders to encourage more effective and efficient digital development of MSMEs. With these steps, it is hoped that digital transformation can be the main driver in increasing the competitiveness of MSMEs and supporting sustainable regional economic growth.

Keywords: Digital transformation, MSMEs, inhibiting factors, supporting factors, Cooperatives and SMEs Office, digitalization,

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I. INTRODUCTION

Digital transformation has become one of the main pillars in encouraging economic growth and competitiveness of micro, small, and medium enterprises (MSMEs) in the digital era. In the context of an increasingly competitive global economy, the use of digital technology allows MSMEs to improve operational efficiency, expand market reach, and create product and service innovations. As the backbone of the economy in Indonesia, MSMEs contribute more than 60% to the national Gross Domestic Product (GDP) and make a major contribution to job creation. However, despite this potential, the digital transformation of MSMEs in various regions, including Gorontalo Regency, still faces various complex obstacles.

Gorontalo Regency is an area with great economic potential, supported by the agribusiness, handicraft, and service sectors. However, the majority of MSMEs in this region have not fully adopted digital technology in their operations. Various obstacles such as limited digital literacy, lack of technological infrastructure, and financing constraints are the main barriers. On the other hand, several MSMEs in Gorontalo Regency have shown success in utilizing digital technology, such as using e-commerce platforms to market their products to penetrate the national market. This contrast suggests that there are certain factors that support and hinder the digital transformation of MSMEs in the region, which have not been fully identified academically.

Previous research has discussed a lot about the digital transformation of MSMEs in Indonesia. The study conducted by Setiawan et al. (2022) highlights the importance of digital literacy and the role of training as a key component in encouraging the digitalization of MSMEs. Meanwhile, research by Saputra and Hidayat

(2021) shows that government involvement in providing regulatory support and access to funding plays an important role in accelerating the adoption of digital technology. However, these studies tend to focus on urban areas or areas with adequate infrastructure access, thus ignoring the local context of semi-urban or rural areas such as Gorontalo Regency.

The novelty of this research lies in the analysis that integrates internal factors, such as human resource readiness and digital literacy, with external factors, such as local government support and infrastructure availability. In contrast to previous research that emphasized one specific aspect, this study provides a holistic approach to understand the challenges and opportunities faced by MSMEs in Gorontalo Regency in transforming towards digital. This research also focuses on local contexts that are rarely discussed, considering the unique characteristics of Gorontalo Regency which combines cultural, geographical, and limited aspects of digital infrastructure.

Furthermore, this study fills a gap in the literature, namely the lack of empirical studies on the factors that inhibit and support the digital transformation of MSMEs in non-urban areas. The results of this research are expected to contribute not only to the development of theories but also to the design of more effective policies to support the digital transformation of MSMEs. Thus, this research is expected to be a strategic reference for local governments, MSME actors, and other stakeholders to encourage local economic growth based on digital technology.

This research aims to explore in depth the factors that hinder the implementation of digital transformation of MSMEs in Gorontalo Regency, as well as identify supporting elements that can accelerate the digitalization process. In addition, this research seeks to develop relevant and applicable strategic recommendations for the Gorontalo Regency Cooperatives and SMEs Office, in order to overcome various challenges and maximize opportunities in supporting sustainable digital transformation for MSMEs in the region.

II. LITERATURE REVIEW

2.1 Digital Transformation

Digital transformation refers to the process of integrating digital technology into all aspects of business operations, aiming to create added value, increase efficiency, and provide a better customer experience (Henriette et al., 2015). This process involves not only the adoption of digital tools or devices, but also profound changes in organizational culture, business models, and ways of thinking (Vial, 2019). In the context of MSMEs, digital transformation includes the use of e-commerce, social media, management software, and cloud-based applications to support more efficient and competitive operations.

According to the innovation adoption theory by Rogers (2003), the success of digital transformation is greatly influenced by the level of awareness, willingness, and ability of individuals or organizations to accept technological changes. Factors such as technology infrastructure, digital literacy, and external support are crucial elements that affect the speed of digital transformation adoption in MSMEs.

In Indonesia, digital transformation is the government's priority to increase the competitiveness of MSMEs. The Ministry of Communication and Information Technology noted that until 2023, around 21 million MSMEs have joined the digital ecosystem through e-commerce platforms. However, this process still faces significant challenges, especially in terms of limited resources, access to infrastructure, and resistance of business actors to change (Setiawan et al., 2020).

2.2 Micro, small, and medium enterprises (MSMEs)

Micro, small, and medium enterprises (MSMEs) are business units that are legally regulated through Government Regulation No. 7 of 2021. The definition of MSMEs includes the criteria for the number of employees, annual turnover, and the value of business assets. Based on this regulation, micro businesses have a maximum turnover of IDR 2 billion per year, small businesses are in the range of IDR 2 billion to IDR 15 billion, while medium businesses have a turnover of IDR 15 billion to IDR 50 billion.

MSMEs play a strategic role in the Indonesian economy, contributing more than 60% to the national gross domestic product (GDP) and providing more than 97% of employment (Tambunan, 2019). In the context of Gorontalo Regency, MSMEs are dominated by the agribusiness, handicraft, and small trade sectors. This type of MSME has special characteristics, such as dependence on the local market, limited capital structure, and minimal use of technology in business operations.

The theory of small business development by Drucker (1985) emphasizes that the success of MSMEs is not only determined by the creativity of business actors, but also by their ability to utilize available resources, including technology. This is in line with research by Yusra and Priyadi (2021), which shows that digitalization can increase the efficiency and competitiveness of MSMEs, as long as they are supported by adequate training, mentoring, and access to financing.

III. METHOD

This study uses a descriptive qualitative approach to explore the factors that inhibit and support digital transformation among MSMEs in Gorontalo Regency. This approach was chosen because it is able to explore a deep understanding of the experiences, challenges, and opportunities faced by MSME actors in the digitalization process. In addition, this approach provides flexibility in exploring perspectives from various parties involved, including business actors, officials of the Cooperative and SME Office, and technical assistants. Data collection was carried out through interviews with MSME actors, government officials, and technical assistants. The interview guide used is designed to identify various obstacles such as limitations in digital literacy, technology infrastructure, and policy constraints. In addition, supporting elements such as digital training, government support, and local technology initiatives were also the focus of the interview. This research also utilizes policy documents as additional data sources, such as the work program of the Gorontalo Regency Cooperatives and SMEs Office related to the digitization of MSMEs. This document is analyzed to understand the existing policy framework and the gap between these policies and the needs of MSME actors in the field. Overall, this research method is designed to provide a rich and contextual picture of the dynamics of MSME digital transformation in Gorontalo Regency, focusing on specific factors relevant in the region.

IV. RESULTS AND DISCUSSION

4.1 Factors Hindering MSME Digital Transformation

Below is presented a table summarizing the inhibiting factors identified during the study:

Table 1. Factors Hindering MSME Digital Transformation

Inhibiting Factors	Frequency of Findings	Percentage (%)
Low understanding of MSME actors towards digital technology	15	30%
Limited infrastructure, especially internet access	12	24%
Lack of budget allocation for technology adoption	10	20%
Lack of intensive training and mentoring	8	16%
Dependence on traditional markets	5	10%

Explanation:

One of the main obstacles identified in this study is the lack of understanding of MSME actors regarding digital technology. This is often due to a lack of adequate training and a lack of awareness of the benefits that can be gained from using the technology. In addition, limited internet access in a number of regions, especially in rural areas, is also a significant obstacle to the application of digital technology. Many MSME actors also face difficulties in allocating the funds needed to adopt new technologies.

4.2 Supporting Factors for MSME Digital Transformation

On the other hand, this study also identifies a number of factors that support the digital transformation of MSMEs, which will be explained as follows:

Table 2. Supporting Factors for MSME Digital Transformation

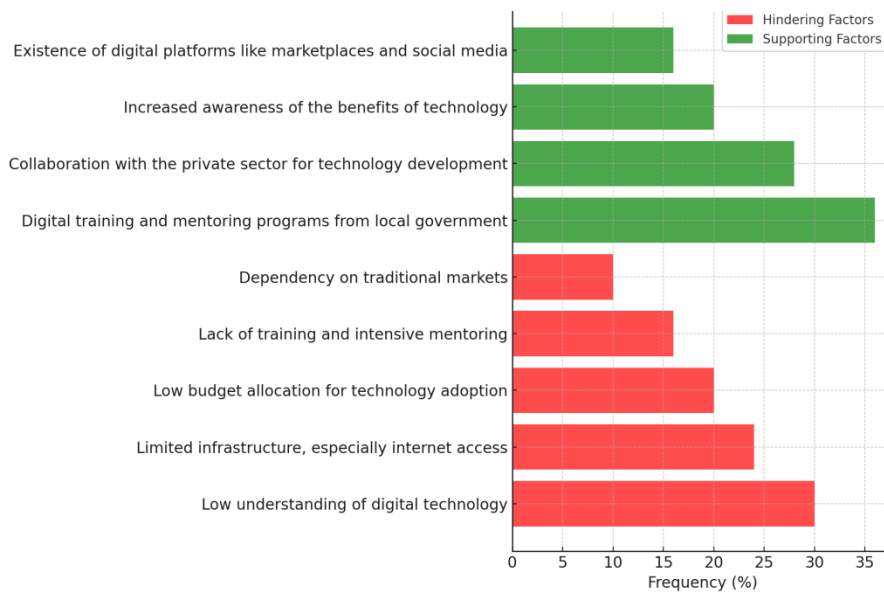
Supporting Factors	Frequency of Findings	Percentage (%)
Digital training and mentoring programs from local governments	18	36%
Collaboration with the private sector for technology development	14	28%
Increasing awareness of MSME actors about the benefits of technology	10	20%
The existence of digital platforms such as marketplaces and social media	8	16%

Explanation:

One of the main supporting factors is the existence of training and mentoring programs provided by the local government. MSME actors involved in this initiative have shown significant progress in the application of digital technology. Collaboration with the private sector, such as technology provider companies, also plays an important role in supporting the digitalization of MSMEs by providing access to digital platforms and online payment solutions. In addition, increasing awareness of the benefits of technology plays a crucial role, reflecting a change in mindset among MSME actors.

Graph 1. Analysis of Inhibiting and Supporting Factors

The graph below presents a comparison between the inhibiting and supporting factors in the digital transformation process of MSMEs in Gorontalo Regency:



Explanation:

This graph illustrates that although there are many challenges that hinder the digital transformation process in MSMEs, supporting factors—especially those related to training and collaboration—have an important role to play in accelerating the adoption of digital technologies. This research emphasizes how crucial the synergy between the public and private sectors is in creating an atmosphere that supports digital transformation for MSMEs.

4.3 Qualitative Analysis

Through interviews with officials of the Gorontalo Regency Cooperatives and SMEs Office, it was revealed that although there are policies that support digitalization, its implementation is still hampered by limitations in human resources and budget. To overcome these obstacles, it is necessary to increase cooperation between various parties and provide wider access to training and digital infrastructure.

Field observations also show that although some MSMEs have started to take advantage of online platforms, the rate of technology adoption is still focused on specific business groups, generally larger and more organized. Therefore, more attention needs to be paid to small MSMEs that need additional support in developing technological capacity and mentoring.

V. DISCUSSION

This study identifies several factors that affect the digital transformation of MSMEs in Gorontalo Regency, both in the form of challenges and opportunities. Key findings show that the biggest obstacles come from the lack of digital literacy among business actors, limited supporting infrastructure such as internet access, and low allocation of funds for technology implementation. Instead, government support in the form of digital training, partnerships with the private sector, and increased awareness of the importance of technology are the main drivers of this transformation process.

The lack of knowledge about digital technology among MSME actors reflects the problem of literacy which is still a challenge. Many small businesses do not fully understand how to leverage technology to grow their business. In addition, inadequate infrastructure, especially in rural areas, exacerbates this situation, as stable internet access is a fundamental necessity in the digitalization process. On the other hand, limited funds make it difficult for MSMEs to invest in relevant technology devices or services.

Meanwhile, training programs initiated by local governments play a significant role in strengthening the capacity of MSME actors. This training helps them understand digital strategies, such as online marketing and the use of e-commerce platforms, which can increase market reach. In addition, partnerships with the private sector provide solutions in the form of more affordable technology and access to platforms that can be used by MSMEs. This synergy is an important element in accelerating the digitalization process and encouraging the sustainability of MSME businesses in the digital era.

The results of this study are in line with various previous studies that identified major obstacles in the digitization of MSMEs, such as low levels of digital literacy, lack of understanding of technology, and limited access to supporting infrastructure (Al-Qudah & Amayreh, 2021; Hidayati et al., 2020). For example, Susanto et al. (2021) found that the main obstacle for MSMEs in various regions is the lack of adequate resources and technological infrastructure, slowing down digital adaptation.

This research also strengthens the findings of Nugroho et al. (2020), which emphasizes the importance of the role of the government and collaboration with the private sector in accelerating technology adoption in the MSME sector. In this study, the focus is given on the role of local governments in providing more specific training programs and according to local needs. In addition to helping improve digital literacy, this training also serves to increase business actors' awareness of the benefits of digital transformation in expanding their business opportunities.

From this study, it can be suggested that policies related to the digitalization of MSMEs need to be strengthened, especially in increasing digital literacy, improving infrastructure, and providing adequate budgets to support technology adoption. Local governments have a huge responsibility to design more targeted digital training programs, covering remote areas that are often hampered by a lack of infrastructure.

In addition, collaboration with the private sector must continue to be encouraged. The private sector can contribute by providing a platform that is easy for MSMEs to use and offering subsidies or incentives to help them take advantage of digital technology. This synergy between the government and the private sector is very important to accelerate the digitalization of MSMEs, so that they can compete in an increasingly technology-based global market.

This research also emphasizes that the success of digital transformation does not only depend on technical aspects, but also on the readiness of human resources. The training provided should not only focus on the technical aspects, but also on a strategic understanding of how technology can improve the efficiency and competitiveness of businesses.

For policymakers and MSME development practitioners, these findings can be a reference in designing policies that are more effective and relevant to local needs. Strategic measures such as strengthening human resource capacity, providing adequate technological infrastructure, and cross-sector cooperation can be implemented to overcome various obstacles in the digital transformation process of MSMEs. The findings also provide practical guidance for accelerating technology adoption among MSMEs, while increasing their competitiveness in the digital era.

VI. CONCLUSION

This research was conducted to identify factors that are obstacles as well as drivers in the process of digitizing MSMEs in Gorontalo Regency. Based on the results obtained, the main obstacles found include a low level of understanding of digital technology among MSME actors, limited access to infrastructure, and the lack of budget allocated for technology implementation. On the other hand, significant support includes training programs initiated by local governments, strategic collaborations with the private sector, and increased awareness among business actors about the benefits of digital transformation for business development.

From a practical perspective, these findings are an important guide for local governments and other stakeholders in developing more effective strategies to support the digitalization of MSMEs. Some of the priority measures include strengthening digital training programs, improving supporting infrastructure, and encouraging partnerships with the private sector. The implementation of this policy is expected to be able to increase the competitiveness of MSMEs in facing the challenges of a digital-based economy.

Academically, this research contributes to the development of theories regarding digital transformation in the MSME sector, especially in areas with limited infrastructure and technological literacy. In addition, this research enriches scientific discourse related to technology adoption by providing a more in-depth picture of the dynamics of digital transformation at the regional level.

For future research, it is recommended to conduct a deeper exploration of specific factors that affect the ability of MSMEs in remote areas to adopt technology. Research that focuses on the role of innovative technologies, such as e-commerce platforms and mobile apps, in supporting digital transformation will also provide added value. Studies with a quantitative approach can also be used to measure the direct impact of government policies and digital training on increasing the competitiveness of MSMEs in the regions. The results of this follow-up research can provide more comprehensive insights to formulate evidence-based policies.

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