

Optimization of Digitalization-Based MSMEs by the Dinas Koperasi dan UKM of South Tangerang City

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Abstract
This study explores the role of the Dinas Koperasi dan UKM of South Tangerang City in optimizing the digital transformation of Micro, Small, and Medium Enterprises (MSMEs). As MSMEs are key drivers of Indonesia's economy, their digital empowerment is essential to increase competitiveness and market
reach. Using a descriptive qualitative method, this study involved six key informants-three officials from the Office of Cooperatives and SMEs and three MSME actors. Data was collected through semi-structured interviews and non- participant observation, and methodological triangulation was applied by comparing findings from both sources to enhance data credibility. Findings show that the office implements several programs such as Incubator, Entrepreneur Hub, Tangsel Digifest, and Sapa UMKM to promote digital adoption. These initiatives provide technical training, mentoring, and digital branding assistance to help MSMEs adapt to technological changes. Success stories include improvements in product packaging, use of social media for marketing, and increased sales. However, challenges remain, such as low digital literacy, lack of confidence among business actors without legal permits, and limited internet access in some areas. Some MSMEs are reluctant to join programs due to administrative concerns or limited human resources to manage digital tools. The study concludes that digital transformation must be collaborative, contextual, and supported by ongoing engagement and personalized outreach. The government's role is crucial in building an inclusive and responsive digital ecosystem for sustainable MSME growth.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) have a very important role in boosting Indonesia's economy. According to data from the Ministry of Cooperatives and MSMEs, MSMEs contribute approximately 61% to the national Gross Domestic Product (GDP) and create over 97% of jobs in Indonesia (Kementerian Koperasi dan UKM, 2023). The capacity of MSMEs to absorb labor is a key factor in maintaining economic stability, particularly in developing countries like Indonesia (Iswan, 2023). Digital transformation has become a necessity for MSMEs in the digital economy era. The government, through various policies such as the National Movement for MSMEs to Go Digital and support for integrating MSMEs into the e-commerce ecosystem, is encouraging businesses to adopt digital technology in their operational and marketing activities (UKM, 2021). Digitalization has proven to enhance efficiency, expand market reach, and create new job opportunities (INDEF, 2023).

Based on data conducted by Boston Consulting Group, Blibli, and Kompas under the title "Creating Inclusive Growth through Digitalization of MSMEs in Indonesia," it was revealed that 20% of all MSMEs in Indonesia have gone digital and utilized e-commerce platforms to develop their businesses. This percentage is relatively low because there are still many MSMEs that have not undergone the digitalization process, including in the South Tangerang City area. To increase the number of MSMEs integrated with e-commerce platforms, training and support are needed so that MSMEs can develop their businesses and increase competitiveness through digital change (Suhartadi, 2022).

Currently, to encourage the digitization process and help MSME players adapt to the changes occurring, it is necessary to increase network access and technology exchange, enabling them to survive

in business competition (Wijoyo, 2020). It is predicted that the digital world will become a crucial aspect for all human activities, including MSME business activities (Bustomi et al., 2021). MSMEs must be able to work with technology to adapt to industrial progress. MSME players are expected to leverage technology to maximize business progress and growth, to increase competitiveness.

The present technological paradigm makes cooperation and combined intelligence the basis for designing and launching more resilient and sustainable entrepreneurial initiatives (Amelia et al., 2017). Therefore, it is important to start digital transformation because the use of technology can increase the productivity and competitiveness of MSMEs in Indonesia. Based on the pre-observation that the researcher observed that in some areas of South Tangerang City, especially areas with unstable internet connections, MSMEs have difficulty accessing digital infrastructure. In addition, many MSMEs do not have adequate technological devices and systems to support digital transformation, hindering them from competing effectively in the digital market. The majority of MSME players do not have human resources capable of managing digital aspects, such as online marketing, digital administration, and application-based inventory management. This hampers efforts to optimize the digital transformation of MSMEs. MSME digitalization is a transformation process that involves the adoption of digital technology by MSME players to improve business efficiency and competitiveness, both in marketing, operational, and managerial aspects. This process allows MSMEs to connect with a wider market and increase efficiency in business management (Suyanto, 2020a). In South Tangerang City, a city with rapid economic growth and a large number of MSMEs, not all MSME players are connected to the digital system. The main challenges include limited infrastructure, low digital literacy, lack of access to technology training, and limited human resources (Wijoyo, 2020; Bustomi et al., 2021).

One of the government institutions related to MSMEs, especially in the South Tangerang area, namely the Dinas Koperasi dan UKM Kota Tangerang Selatan as a regional technical institution, has an important role in supporting MSME empowerment through digitalization programs. Various programs such as training, business incubators, digital promotion, and partnership facilitation are carried out to encourage technology adoption by MSME actors. However, the effectiveness of this program needs to be studied in depth, both in terms of implementation strategies and constraints in the field. The process of digitalization has begun to be felt in various sectors of micro, small and medium enterprises.

MSMEs that can harness the potential of this technology will experience rapid progress in running their businesses, allowing them to increase their production, marketing, funding, and payment capacities. Therefore, digitization is very important and needs to be implemented by MSME business units. This research was conducted to examine: (1) the role of the Cooperative and SME Agency of South Tangerang City in optimizing the digitalization of MSMEs; (2) the strategies applied in supporting the digital transformation of MSMEs; and (3) the various obstacles faced in the implementation process.

METHODS

This study used a descriptive qualitative method to explore the optimization of MSMEs through digitalization. The research subjects included three staff members of the Cooperatives and SMEs Agency of South Tangerang City and three MSME players who are beneficiaries of the agency's assistance program. Data collection techniques consisted of semi-structured interviews, non-participant observation, and documentation, with methodological triangulation applied to increase data validity and reliability (Sugiyono, 2020). The research was conducted at the Cooperative and MSME Gallery Building, which was chosen for its role as a central facility for policy implementation and MSME development under the Cooperative and MSME Agency. The interview instrument was developed based on specific variables related to digital optimization of MSMEs, including: (1) access to and use of digital technology, (2) digital marketing practices, (3) capacity building and training, and (4) the role of institutional support. Each variable was further operationalized into indicators-for example, under digital marketing, indicators include the use of social media platforms, e-commerce channels, and customer engagement tools.

For the MSME actors, the interviews explored experiences in adopting digital platforms, the impact on business operations, and challenges encountered. Questionnaires were also prepared as a supporting instrument to capture structured responses around the same variables. Triangulation was carried out by cross-validating the findings from interviews with direct observations of MSME digital activities and documentation from agency reports and program materials. This approach was intended to produce more comprehensive, credible, and consistent data.

RESULTS AND DISCUSSION

A. Result

Based on the results of research conducted by related institutions, namely the Dinas Koperasi dan UKM of South Tangerang City and the beneficiaries, namely Micro, Small, and Medium Enterprises (MSMEs). This study involved in-depth interviews with three informants from the Dinas Koperasi dan UKM of South Tangerang City, and three informant from the MSME actors as detailed in the following table:

	Table 1. Detailed Informants			
No	Name	Job Position	Description	
1	Haris Ferdiansyah	Policy Technical Analyst	Responsible for evaluating and formulating cooperative deveploment policies related to digitalization	
2	Jimmi Ahmar	Entrepreneurship Deveploment Expert	Focuses on empowering MSMEs through innovation strategies and digital adoption facilitation	
3	Sultan	Innovation and Empowerment Officer	Oversees entrepreneurship capacity- building programs and coordinates with MSME actors in the field.	
4	Siti	Owner of Roti Titan 88	A food based MSME entrepreneur who experienced business growth after participacing in digital training.	
5	Aminah	Owner of Aminah Hijab	Manages a modest fashion MSME and uses Instagram and TikTok for product marketing after receiving guidance.	
6	Dedi	Owner of Kopi Tangsel Sejiwa	Coffee shop owner utilizing Qris and online ordering systems, benefited from Entrepreneur Hub workshops.	

The Cooperative and SME Office of South Tangerang City has developed various strategies for digital optimization of MSMEs through programs such as Incubator, Entrepreneur Hub, Tangsel Digifest, and Sapa UMKM. These programs have existed since 2024, which also routinely conducts monitoring for the Incubator program once every 6 months, and for the Entrepreneur Hub program, monitoring is carried out once every 2 months. The Incubator program is aimed at MSMEs with training patterns, consultation sessions, making business legality permits, and mentoring for MSMEs towards digitalization-based. Meanwhile, the Entrepreneur Hub aims to be a collaborative activity of technology and business, providing regular mentoring and training for 2 months. Entrepreneur Hub also contributes finance for MSMEs that are just starting to become part of the digitized MSMEs. Meanwhile, Tangsel Digifest is a promotional space with the aim of increasing the market reach of MSMEs. Meanwhile, Sapa UMKM is an activity that facilitates consultative media between MSME players and the Dinas Koperasi dan UKM of South Tangerang City.

These programs are structured based on the principle of caapcity differentiation and tailored guidance, which aligns with the findings of (Kamaruzzaman, 2023), who emphasize the importance of a needs-based approach in supporting digital transitions among small enterprises.

Assistance is provided through technical training, digital content guidance, free product photos for online marketing, product packaging, and branding strategies. Concrete evidence obtained from MSME players such as Mrs. Siti, the business owner of "Roti Titan 88", admitted that she received great benefits in product marketing and digital marketing after attending training and mentoring from the Dinas Koperasi dan UKM of South Tangerang City.

In addition, MSMEs that are assisted in South Tangerang utilize Instagram, WhatsApp, and Grab as media for transactions and promotions. This was also acknowledged by Sultan, the Technology Innovation Staff of the Cooperative and SME Agency of South Tangerang City, who stated that social media is the dominant platform used by businesses. The office facilitates training on using the platform, creating interesting content, and promotion strategies. A concrete example is the product photography activity that takes place at the Tangsel UKM Gallery Building, and MSME products can also be promoted for free through the official Instagram account of the South Tangerang Cooperative and SME Agency, or dinkop tangsel. The official social media belonging to the Tangsel agency is used to inform programs or training, so that it can be optimal as follows.

Based on the facilities available at the agency building Dinas Koperasi dan UKM of South Tangerang City, it indicates that the agency is optimizing facilities to support digitization-based MSMEs. However, on the other hand, from the many benefits obtained by MSME players, there are still many who do not participate in activities held by the agency, which is an obstacle to optimizing existing programs. The main obstacle is that many MSME players still have difficulty understanding how social media or online buying and selling platforms work, digital tools such as product uploads, digital stores, even such as Qris and or social media insights. Furthermore, there are limited human resources; some businesses may still not have enough to have staff who can manage digital accounts so that they continue to be optimal and consistent. Then, there are some businesses that are reluctant to join the program because they are not confident in advance due to not having legality or fear of administrative obligations. Some areas also still experience internet network problems, as mentioned by Jimmia Ahmar, a staff member of the South Tangerang Cooperatives and SMEs Office, in his interview. Evidence of this was found from the Office's admission that not all MSMEs actively report or register for the digitization program. This makes the process of mapping needs and distributing training difficult.

B. Discussion

The discussion of the results of this study examines the dynamics of MSME digitalization strategies in South Tangerang City in three main aspects, namely, program optimization strategies by the agency, technology utilization by MSMEs, and obstacles in the implementation of digitalization. Based on the results of data triangulation from in-depth interviews with business actors and the agency, it was found that the digital transformation of MSMEs requires a multi-level approach that is collaborative and adaptive. This is in line with the opinion of Suyanto (2020b), which states that local governments have an important role in creating a digital ecosystem that supports the growth of MSMEs through training and access to technology infrastructure. In addition, according to Nasution (2022) mentioned that the adoption of technology by MSMEs, especially in areas that are still lagging behind in terms of digital literacy. The agency also facilitates partnerships with private parties and digital platforms, such as national marketplaces and digital financial service providers, which can help MSMEs tap into a wider market. This reinforces Pratama (2021) statement, which asserts that collaboration between parties is a key factor in the success of MSME digitalization in the era of Industrial Revolution 4.0.

First, the digitalization strategy by the Office of Cooperatives and SMEs is structured within a systematic coaching framework. The Incubator and Entrepreneur Hub programs are designed to accommodate the needs of MSME players of different levels of digital capability. The Incubator targets existing businesses, while the Ehub is designed as a center for innovation, finance, and business technology development. Training includes digital branding, online marketing, and the use of tools such as Qris and social media platforms. This activity has proven to have an impact on the digital capabilities of MSMEs, as shown by the testimonials of several business owners, who claimed to have experienced an increase in turnover after attending the digitalization training. These practices reflect the findings of Hadi (2020) who argue that MSMEs with effective digital branding and social media engagement tend to have a stronger customer base and greater market exposure.

Second, packaging, content, and visual strategies were important factors introduced in the training. Workshops on taking product photos with cellphones and developing promotional content have helped improve the quality of online product display. The agency also facilitates the promotion of MSME products through DINKOP Tangsel's official social media accounts, providing additional exposure for free. This shows that digitalization not only impacts the transaction system, but also the way MSMEs display their brand identity. This is reinforced by research Halida et al. (2023), which shows that the use of appropriate digital technology greatly affects the effectiveness of marketing and product

development of MSMEs. The agency also provides physical facilities in the form of cooperative and MSME galleries as a place for incubation and showcase of MSME digital products. According to Arianto (2021) such a strategy is particularly relevant in the post-pandemic context, where MSMEs need a platform not only to sell but also to learn, network and transform digitally collaboratively.

However, the digitization process also faces challenges, especially for businesses that are not accustomed to using technology. Then, such is insecurity because they do not have legality, or lack of confidence to participate in the digitization program. In some cases, MSMEs choose not to report their business due to concerns about regulations, so they are not mapped by the Office. These constraints are in line with Yusuf et al. (2021) who identify both internal and external barriers such as digital competence gaps and infrastructure inequality as major setbacks in the MSME digital transformation journey. This finding is supported by research Fuadi et al. (2021), which suggests that the main challenges in empowering MSMEs towards digitalization lie in digital literacy and the lack of sustainable mentoring. In addition, Gunawan (2022) also mentioned that access to digital technology and training is still uneven, especially in the capital's buffer cities such as South Tangerang. Other problems found are limited funds to buy digital devices and limited time to learn new technologies, especially for MSME actors who manage their businesses independently without the help of labor. For this reason, fiscal policy support is needed in the form of subsidies for digital tools or access to technology-based capital, as suggested by (Bustomi et al., 2021).

Furthermore, these challenges also show the importance of a personal approach in program implementation. The Office has responded to this by conducting regular monitoring and field visits and developing the Sapa UMKM program as a two-way communication channel. Thus, this discussion shows that the optimization of MSME digitalization cannot be one-way or centralized, but must prioritize dialogue and adaptation to the social context of each business actor.

CONCLUSIONS AND SUGGESTIONS

A. Conclusion

This research shows that the process and efforts to optimize the digitalization of MSMEs in South Tangerang City have been progressive and directed through various strategic programs designed by the Cooperatives and SMEs Office. Digitalization is not only understood as the use of technology, but also as a process of transforming the way MSMEs think, work, and connect with consumers and markets.

Through programs such as the Incubator, Entrepreneur Hub, Tangsel Digifest, and Sapa UMKM, the Cooperative and SME Office of South Tangerang City has tried to answer the challenges faced by business actors. The assisted MSMEs have shown an increase in their ability to utilize digital platforms such as Instagram, WhatsApp to marketplaces and digital payment systems. The training provided by the agency is able to equips business owners with technical skills such as taking product photos, creating promotional content, and digital branding strategies. The impact can be seen from the increase in turnover, market reach, and business confidence in managing business online.

However, the results also show that the optimization of digitalization has not been evenly distributed and is still faced with a number of crucial challenges. In addition, not all MSME players are proactive in reporting their needs or participating in available programs, thus requiring a more personalized and intensive approach from related agencies. These findings illustrate that MSME digitization cannot be done unilaterally or through technical training alone. This process requires synergy between the government, businesses, the private sector, and communities, and must be tailored to the level of readiness and capacity of each MSME.

Thus, the optimization of MSME digitalization in South Tangerang City can be said to be on the right track. However, its sustainability and success in the future are highly dependent on the ability of the agency and related parties to build a digital ecosystem that is collaborative, inclusive, and responsive to change.

B. Suggestion

Based on the results of the study, the following are some suggestions that can be considered by the Cooperative and SME Agency of South Tangerang City and other stakeholders in accelerating the digitalization of MSMEs: (1) Expanded range of personal monitoring and mentoring, the Dinas needs to

expand an active monitoring system that not only waits for MSME players to come, but also proactively visits and identifies needs in the field. This ball-picking strategy is important to reach out to MSMEs that are not registered or have not been formally assisted; (2) Broader and more integrated technology partnerships, collaboration is not only with Grab, but should also involve platforms such as Shopee, Tokopedia, TikTok Shop, as well as digital training providers such as Google UMKM or Meta Boost. This will open up more access and digital market opportunities for businesses; (3) Strengthening the role of digital program communities and alumni, alumni of the digitization program can be engaged as local mentors for new MSMEs, thus establishing a closer and more sustainable community-based mentoring system.

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