

## Economic Transformation through Digitalization: Case Study of SMEs and E-Commerce Platforms

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**Abstract:** This research examines the economic transformation process occurring within Micro, Small, and Medium Enterprises (MSMEs) through integration with e-commerce platforms in Indonesia. Using a case study method involving 5 MSMEs in East Java, this research analyzes changes in business models, revenue growth, market expansion, and operational adaptations experienced by MSME actors after joining e-commerce platforms. The findings indicate that digitalization through e-commerce platforms provides an average revenue increase of 45%, expansion of market reach to international markets, and business operational efficiency. However, several obstacles such as digital literacy gaps, uneven infrastructure, and intensifying competition were also identified. This research contributes to understanding the dynamics of digital transformation in MSMEs and provides strategic recommendations for business actors and policymakers to optimize the utilization of e-commerce platforms in local economic development.

**Keywords:** economic digitalization, MSMEs, e-commerce, business transformation, digital inclusion

### INTRODUCTION

In the era of the Fourth Industrial Revolution (Industry 4.0), digitalization has significantly transformed the global economic landscape. Indonesia, as one of the largest economies in Southeast Asia, is currently undergoing an economic transformation driven by the penetration of digital technologies across various sectors, including the Micro, Small, and Medium Enterprises (MSMEs) sector. MSMEs play a strategic role in Indonesia's economy, contributing 60.34% to the Gross Domestic Product (GDP) and absorbing 97% of the total workforce (Ministry of Cooperatives and SMEs, 2023). Nonetheless, this sector still faces several challenges such as limited market access, capital constraints, and suboptimal production capabilities. The emergence of e-commerce platforms such as Tokopedia, Shopee, Bukalapak, and Lazada has opened new opportunities for MSMEs to expand their business reach. According to a report by Bank Indonesia (2022), the volume of e-commerce transactions in Indonesia reached IDR 380 trillion in 2022, representing a 31.8% growth compared to the previous year. Data from the Indonesian E-commerce Association (idEA) indicates that by the end of 2023, approximately 13.5 million MSMEs had joined digital platforms, an increase of 28% compared to 2022.

The digital transformation within the MSME sector is not merely a shift from physical stores to online shops but also involves fundamental changes in business models, marketing strategies, supply chain management, and organizational culture (Pramono et al., 2021). Nugroho and Cahyono (2022) argue that this transformation holds potential as a solution to Indonesia's economic inequality issues by enhancing market access for MSMEs across diverse regions. This study aims to analyze the economic transformation process occurring in MSMEs

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through the utilization of e-commerce platforms, focusing on changes in business models, revenue growth, market expansion, and operational adaptations undertaken. By examining five case studies of MSMEs in East Java that have successfully leveraged e-commerce platforms, this research is expected to provide insights into the dynamics of digital transformation in the MSME sector and offer strategic recommendations for business actors and policymakers.

## **LITERATURE REVIEW**

### **Economic Digitalization and MSMEs**

Economic digitalization refers to the integration of digital technologies into economic activities that result in changes to business processes, value creation, and market structures (Schwab, 2016). For MSMEs, digitalization has enabled entrepreneurs to reach broader markets, reduce operational costs, and increase efficiency (Rachinger et al., 2019). Wardhana (2020) posits that the adoption of digital technologies among MSMEs in Indonesia has accelerated innovation processes and enhanced competitiveness at both national and global levels. Tambunan (2019) identifies four stages of digital transformation in MSMEs: introduction to basic digital technologies, adoption of e-commerce platforms, integration of digital management systems, and implementation of data-driven business strategies. Research by Sari and Haryanto (2021) reveals that the majority of MSMEs in Indonesia remain in the second stage, i.e., e-commerce platform adoption, with only 23% having reached the third and fourth stages.

### **E-commerce Platforms and Economic Inclusivity**

E-commerce platforms have revolutionized the way producers and consumers interact by eliminating geographical and temporal barriers (Laudon & Traver, 2021). In Indonesia, the presence of national e-commerce platforms such as Tokopedia, Bukalapak, and Blibli, alongside regional platforms like Shopee and Lazada, has created a digital ecosystem that facilitates the growth of MSMEs. A study by Rahayu and Day (2017) reveals that e-commerce platforms contribute to economic inclusivity through three mechanisms: (1) reducing market entry barriers, (2) expanding geographic reach, and (3) lowering information asymmetry between producers and consumers. Furthermore, research by Wijaya and Darma (2020) shows that MSMEs utilizing e-commerce platforms experienced an average revenue increase of 37% within the first six months. Despite these significant benefits, Hardjono and Maulana (2021) caution that the use of e-commerce platforms also raises issues such as intensified competition, pressure to continuously innovate, and dependency on third parties. Hence, appropriate strategies are necessary for MSMEs to maximize benefits while minimizing the risks associated with digitalization.

### **Digital Business Models for MSMEs**

Digital transformation drives the evolution of MSME business models from conventional, location-based models towards hybrid or fully digital models (Osterwalder & Pigneur, 2020). Purwanto and Suhardi (2022) identify five common digital business models adopted by MSMEs in Indonesia: (1) direct-to-consumer via social media, (2) marketplace utilization, (3) omnichannel retail, (4) subscription-based models, and (5) platform-based service providers. In line with these findings, Hartono et al. (2022) emphasize the importance of digitalizing the value chain, including transformation in procurement, production, logistics, marketing, and customer service. Their research indicates that MSMEs digitalizing at least three aspects of the value chain experienced 42% higher revenue growth compared to those focusing on only one aspect. Kurniawan and Anggoro (2023) highlight that the success of digital business models for MSMEs is determined not only by technology but also by organizational adaptive capabilities, innovative leadership, and the development of employees'

digital skills. The ability to design a value proposition relevant to digital consumers' needs is a crucial factor in the successful digital transformation of MSMEs.

## **RESEARCH METHODS**

This study employs a qualitative approach using a case study method to conduct an in-depth analysis of the economic transformation process experienced by MSMEs through the utilization of e-commerce platforms. This approach was selected as it allows detailed exploration of phenomena in real-life contexts (Yin, 2018) and can reveal the mechanisms underlying changes occurring in the digital transformation process of MSMEs.

### **Research Subjects**

Five MSMEs in East Java were selected as research subjects based on the following criteria: (1) having been operational for a minimum of three years, (2) actively using at least two e-commerce platforms for at least one year, and (3) experiencing significant changes in their business models after utilizing e-commerce platforms. These five MSMEs operate in diverse sectors: batik crafts (MSME A), processed food products (MSME B), fashion (MSME C), household accessories (MSME D), and herbal cosmetics (MSME E).

### **Data Collection**

Primary data were collected through semi-structured interviews with the owners and managers of the MSMEs, participatory observation of MSME operational activities, and focus group discussions (FGDs) involving MSME actors and representatives from e-commerce platforms. Interviews were conducted both face-to-face and online from January to March 2024, with each session lasting 60 to 90 minutes. Secondary data were obtained from MSME financial reports, statistical data from e-commerce platforms, annual reports from the Ministry of Cooperatives and MSMEs, and relevant scholarly publications. Data triangulation was employed to ensure the validity and reliability of the collected information.

### **Data Analysis**

Data analysis was conducted using a thematic approach, comprising the following steps: (1) transcription of interview and observation data, (2) open coding to identify main themes, (3) axial coding to connect themes, (4) constant comparative analysis to identify patterns and differences across cases, and (5) data interpretation to construct theoretical arguments (Braun & Clarke, 2019). The analytical framework focused on four dimensions of economic transformation: business model changes, revenue growth, market expansion, and operational adaptation. To ensure data validity, this study employed member checking by returning the analysis results to informants for verification, as well as peer debriefing involving other researchers in the analysis process.

## **RESULTS AND DISCUSSION**

### **Profile of the MSMEs Studied**

The five MSMEs studied exhibited diverse characteristics in terms of business scale, product type, and business development stage. MSME A is a traditional batik producer that has operated for 15 years with 12 employees. MSME B produces processed soybean-based food products, employs 8 staff, and has been operating for 7 years. MSME C operates in the Muslim fashion sector, with 10 employees and 5 years of business age. MSME D produces household accessories made from recycled materials, employs 6 workers, and has been operating for 4 years. MSME E is a herbal cosmetics producer with 9 employees and 6 years in operation. Prior to adopting e-commerce platforms, these MSMEs relied on conventional sales channels such as physical stores, trade exhibitions, and local distributor networks. Their monthly

revenues ranged from IDR 5 million to IDR 20 million, with market reach limited to their respective city or province of operation.

### **Transformation of MSME Business Models**

The results indicate that all five MSMEs underwent significant business model transformations after integrating with e-commerce platforms. These transformations encompassed changes in value propositions, distribution channels, customer segmentation, cost structures, and revenue streams. MSME A, originally focused on producing premium-priced batik, began developing a more affordable product line to reach a broader market segment through the e-commerce platform. As expressed by the owner of MSME A: *"We realized that online consumers have different expectations. They seek batik that maintains quality but is more affordable. We had to adjust our product line to remain relevant in the digital marketplace."* (Owner of MSME A)

MSME B transformed from a processed food producer relying on distributors into a direct-to-consumer business model via e-commerce. This shift enabled them to increase profit margins while building direct relationships with end consumers. MSME C adopted an omnichannel business model, integrating physical stores with an online presence across various e-commerce platforms. This model allowed them to offer consumers a seamless shopping experience. MSME D evolved from a conventional producer into a brand emphasizing sustainability as its core value proposition. E-commerce platforms facilitated their access to environmentally conscious consumer segments across Indonesia.

MSME E implemented a subscription-based business model through e-commerce, allowing customers to subscribe to periodic deliveries of herbal cosmetic products. This approach successfully created a more stable revenue stream and enhanced customer loyalty. These business model transformations align with the theory proposed by Rachinger et al. (2019), which asserts that digitalization compels companies to redesign their business models to create and capture value in novel ways.

### **Revenue Growth and Market Expansion**

Empirical data demonstrate that all five MSMEs experienced significant revenue growth after joining e-commerce platforms. On average, revenue increased by 45% within the first year, with variations ranging from 32% (MSME A) to 67% (MSME C). MSME A reported a 32% revenue increase alongside market expansion into the Java, Sumatra, and Kalimantan regions. MSME B achieved a 43% revenue growth with market reach extending throughout Indonesia and initiating export activities to Malaysia and Singapore. MSME C recorded the highest growth at 67%, expanding its market to include Indonesia, Malaysia, Brunei, and the Middle East. MSME D experienced a 38% increase in revenue with market penetration across Indonesia, particularly in major cities with heightened awareness of environmentally friendly products. MSME E reported a 45% revenue growth with market coverage spanning Indonesia and several ASEAN countries.

This study found that market expansion was not only geographical but also demographic. E-commerce platforms enabled MSMEs to reach consumer segments previously difficult to access, such as millennials and Generation Z, who are more familiar with online shopping. As expressed by the owner of MSME C: *"Before using e-commerce, our customers were predominantly women aged 35-50. Now, we see significant growth among younger consumers aged 18-34, who tend to be more active online shoppers."* (Owner of MSME C). These findings reinforce the results of Wijaya and Darma (2020), which identified a positive correlation between e-commerce platform adoption and increased revenue and market expansion for MSMEs.

### **Operational Adaptation and Enhancement of Digital Capabilities**

Digital transformation through e-commerce platforms has driven MSMEs to undertake various operational adaptations and develop new digital capabilities. The study identified five key areas of adaptation undertaken by MSMEs:

1. Reorganization of the organizational structure by adding divisions or personnel specifically responsible for online sales, digital content management, and digital customer service.
2. Automation of business processes, particularly in inventory management, order processing, and delivery tracking through integration with systems provided by e-commerce platforms.
3. Development of employees' digital capabilities through training and mentoring programs, both internally organized and facilitated by the e-commerce platforms.
4. Adoption of supporting technologies such as digital payment systems, customer relationship management (CRM), and data analytics to better understand online consumer behavior.
5. Rebranding and strengthening of visual identity to enhance visibility and recognition on digital platforms, which tend to be highly saturated.

The owner of MSME E shared their adaptation process: *"We had to adjust many aspects, from packaging that needs to be safer for long-distance shipping, integrating inventory systems with marketplaces, to hiring dedicated social media and marketplace administrators. This transformation is not easy but is crucial to survive in the digital era."* (Owner of MSME E). The study also found that e-commerce platforms act not only as sales channels but also as facilitators for developing MSMEs' digital capabilities through various mentoring and training programs. Four out of five MSMEs studied had participated in digital training programs organized by the e-commerce platforms.

## **CONCLUSION**

This study reveals that economic transformation through digitalization, particularly via the utilization of e-commerce platforms, has had a significant impact on the development of MSMEs in Indonesia. Five case studies of MSMEs in East Java demonstrate that integration with e-commerce platforms drives business model transformation, an average revenue increase of 45%, expansion of market reach including international markets, as well as various operational adaptations to optimize digital presence. Digital transformation in MSMEs is not merely a shift from offline to online, but involves fundamental changes in value proposition, market segmentation, distribution channels, cost structure, and revenue streams. Successful MSMEs are those capable of redesigning their business models to optimally leverage digital opportunities.

Despite these substantial benefits, the digital transformation process also faces several challenges such as digital literacy gaps, uneven infrastructure distribution, intensifying competition, limited capital, as well as issues of security and trust. These challenges must be addressed through collaboration among MSMEs, e-commerce platforms, government, and other stakeholders. Based on the findings, several recommendations are proposed: (1) enhancement of digital literacy training and mentoring programs for MSME actors; (2) development of more equitable digital infrastructure to support e-commerce expansion into remote areas; (3) provision of specialized financing access for digital technology investment; (4) strengthening regulations that support a healthy and fair e-commerce ecosystem; and (5) development of MSME empowerment strategies based on data and technology.

The theoretical implication of this research lies in advancing the understanding of the mechanisms of economic transformation through digitalization at the micro-level (MSMEs). Practically, this study contributes insights into adaptation strategies that MSMEs can apply to

navigate the digital era. Limitations of this study include a relatively small sample size and a geographical focus limited to East Java. Future research is recommended to expand geographical coverage, involve a wider range of business sectors, and adopt longitudinal approaches to better comprehend the dynamics of MSME digital transformation over the long term.

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