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# **A REVIEW ON MSME'S READINESS IN FACING INDONESIA'S DIGITAL-BASED ECONOMIC TRANSFORMATION**

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## **ABSTRACT**

Micro, Small, and Medium-Sized Enterprises (MSMEs) have significant contribution to Indonesia's GDP. The contribution has increased from year to year to reach 61% in 2020. However, various internal and external problems are still become formidable challenge for MSMEs to increase competitiveness in global competition. These challenges are increasing along with the digital-based economic transformation. Are MSMEs ready to face the changes that exist in the midst of various problems and challenges that must be solved? This article is a theoretical study of MSMEs readiness in facing digital-based economic transformation in Indonesia. The discussion covers the contribution of MSMEs to the Indonesian economy, various internal problems (institutional and human resources, production and marketing, as well as intellectual capital) and external (access to finance, bureaucratic services, and infrastructure), opportunities and challenges in facing digital-based economic transformation, MSMEs strategies and empowerment in the digital economy era. The discussion will end with the summary of previous studies on MSMEs readiness for digital transformation in Indonesia.

**Keywords:** Digital-based Economic Transformation, MSMEs Readiness, Competitiveness

## **Introduction**

The Fourth Industrial Revolution has a significant impact on disruption due to the massive development of digital technology. Disruption is a fundamental change and usually begins with innovations that break the chain of previous approaches (Adiningsih, 2019). These previous approaches might include simplifying the supply chain in the company's business activities and eliminating company boundaries. To prevent this, policy makers must be able to adjust and review laws and policies in accordance with changes. The disruption does not only have positive impact on the creation of new market share, but also negative impact that might disrupt and even damage the existing market share which is better known as disruptive innovation.

Disruptive innovation due to the development of the digital economy has also occurred in the Indonesian economy, which is marked by the emergence of various digital startups, e-commerce, financial technology and on demand services. Several digital

startups in Indonesia include Go-Jek, Traveloka, Tokopedia, and Bukalapak, which have been the pioneers of unicorns in Indonesia since 2016 and have valuation of over US\$1 million, and in 2019 Go-Jek has become the first Indonesian decacorn start up. E-commerce as the driver of the digital economy also has significant contribution in Indonesia. Some well-known e-commerce platforms in Indonesia include blibli.com, shopee, and Lazada. As well as in financial technology, such as Kartuku in the payment sector, Kitabisa.com in the crowdfunding sector, Modalku and Coinworks in the P2P Lending sector, and Pasarpolis.com in the Insuretech sector.

On-demand services are demand-based services, and in the context of information technology are service facilities and features that allow users to use cloud computing, store, software, and resources instantly (Technopedia 2019, cited in Adiningsih, 2019). On demand services include several services in the field of courier and logistics (JNE, Tiki, J&T, Sicepat), transportation (Go-jek, Grab), accommodation (Airbnb, RedDoors, ZenRooms), Culinary (Go Food, Grab Food), Tourism (Traveloka, pegipegi.com), and other services such as GrabHealth, Go Laundry.

The massive development of digital technology presents its own challenges for economic actors, especially the micro, small and medium scale (MSMEs) in Indonesia. To be able to compete and survive in the digital-based economy, the evolution of business model should be identified though the product value or service offered by the producers (Ellitan & Anatan, 2020). However, the lack of digital literacy ability of MSMEs in Indonesia has become one of the core problems that should be immediately solved in addition to various internal and external problems (Kurniadi, 2021; Jelita, 2021). Various internal MSME problems include institutional and human resource problems, problems related to production and marketing, and intellectual capital issues. Meanwhile, the external problems of MSMEs include financial access, bureaucratic services, and infrastructure). However, the study conducted by Nilamsari et al. (2020) involved members of the Womanpreneur Community (WPC) in Semarang shows that the ability or digital literacy readiness factor is not a barrier factor for WPC respondents in fulfilling their obligations to report taxes online.

This paper will discuss MSMEs readiness in facing digital-based economic transformation in Indonesia from conceptual view. The rest of the paper is structured as follows: Firstly, it will discuss the contribution of MSMEs to the Indonesian economy. Secondly, will focus on various internal and external problems faced by the Indonesian MSMEs. Thirdly, the discussion will concern on opportunities and challenges in facing digital-based economic transformation. Fourthly, it will focus on MSMEs strategies and empowerment in the digital economy era. The discussion will end summary of previous studies on MSMEs readiness for digital transformation in Indonesia.

### **Micro Small and Medium-Sized Enterprises (MSMEs): Definition and Contribution**

There are several references to the definition of MSMEs used in Indonesia, including those given by the Ministry of Cooperatives and SMEs, the Ministry of Industry and Trade, Bank Indonesia and the Central Statistics Agency. The Ministry of Cooperatives and SMEs classifies a business as a small business if it meets the criteria for turnover of less than 1 billion Rupiah per year, and a medium-sized business meets the criteria for turnover of 1-50 billion per year. The Ministry of Industry and Trade refers to Law No. 9 of 1995 classifying small and medium-sized industries based on the investment value, which reaches 5 billion rupiah, while small businesses have assets of less than 200 million rupiah and annual turnover is less than 1 billion rupiah.

Bank Indonesia classifies medium-sized businesses in the manufacturing and non-manufacturing sectors with fixed assets criteria of 200 million to 5 billion rupiah for the manufacturing industry and 200 million to 600 million for non-manufacturing. The criteria for small businesses refer to Law No. 9 of 1995. The Central Bureau of Statistics classifies MSMEs based on the number of workers owned by these businesses. A business meets the criteria for a micro business if it has a workforce of 1-5 workers, a small business 6-19 workers, a medium business 20-99 workers, and a large business has workforce of at least 100 workers.

In this paper, the criteria for MSMEs refer to Law No. 20 of 2008. Law No. 20/2008 in Chapter I classified MSMEs are based on the amount of assets owned and turnover generated as shown in Table 1. According to the law, microbusiness is defined as businesses owned by individuals that meet minimum 50 million Rupiah for asset and maximum 300 million rupiah as turnover, while small business is productive business that stands alone (not subsidiaries and not branches), operated by individuals or business entities who owned, controlled, become a part either of medium or large businesses directly or indirectly and meet minimum 50-500 million rupiah of assets and maximum 3 billion rupiah of turnover. A medium-sized business should meet minimum 500 million to 10 billion rupiah of asset and maximum 2,5 to 50 billion of turnover. Medium sized business characterized as an independent business that operated by individuals or business entities and are not subsidiaries or branches of a company that is owned, controlled, or become part, either directly or indirectly with a small business or large business with a net worth or annual sales results (Anatan et al., 2020).

**Table 1. SME Classifications Based on Law no. 20/2008**

Size	Asset	Turnover
Micro	Min 50 milion	Max 300 million
Small	>50 – 500 million	Max 3 billion
Medium	>500 million – 10 billion	>2,5 – 50 billion

Source: Anatan, Bangun, Marcel (2020)

According to Jayani (2018), MSMEs make a fairly huge and significant contribution to Indonesia's Gross Domestic Product, reaching 8,573.9 trillion or 57.8 percent. The Ministry of Cooperatives and Small and Medium Enterprises released information showed that in 2020, the contribution of MSMEs to Indonesia's GDP has increased significantly, reaching 61.7%. Another data released by the ADB Institute in 2015 indicated that the contribution of MSMEs to the absorption and provision of employment reached 97.2 percent and it was a very high number compared to the average employment absorption by the MSME sector in other Asian countries which reached 57.8 percent (Wilantara & Susilawati 2016). However, it is unfortunate that the contribution of Indonesian MSMEs in the export sector is still considered quite low at the level of 15% (Septyaningsih, 2021). This indicates that Indonesian MSMEs are still focused on serving the local market and are not yet oriented towards serving the international market. In 2015, data showed that the export value of Indonesian MSMEs was still lagging behind other ASEAN countries such as Thailand, the Philippines, and Malaysia even though the number of Indonesian MSMEs dominated the Indonesian economy at that time, reaching 99.99 percent (Wilantara & Susilawati, 2016).

Based on the data published by Central Bureau of Statistic (2019), Ministry of Finance (2019) and Ministry of Information and Communication (2020), it could be



summarized as follow: the total number of MSMEs in Indonesia reaches 64.2 million, however MSMEs selling online only reach 17.1%. The total contribution of MSMEs reaches an average of 56-59% with investment absorption reaching 50%. The total available employment in the MSME sector reaches 99% with a labor absorption rate of 97%. The largest contribution of the MSME sector is in the fields of agriculture, stock raising, forestry and fisheries that reached 49% and the trade business sector reached 29% (kominfo.go.id).

**Table 2. Summary of MSMEs Role in the Indonesian Economy**

Total Number of MSMEs	64,2 million
Online MSMEs	17, 1%
MSMEs Contribution to GDP	56-59%
Investment Absorption	50%
Total Employment	99%
Labor Absorption Rate	97%
Largest Contributor based on its sectors	
a. Agriculture, stock raising, forestry and fisheries	49%
b. Trade	29%

Source: Author's Elaboration

### **Problems Faced by Indonesian MSMEs**

Despite having a major contribution to economic growth as measured by Gross Domestic Product (GDP) and in the absorption of domestic workers, it is undeniable that Indonesian MSMEs still have various internal and external problems that must be immediately solved. Internal problems can be identified as institutional problems and human resources, production and marketing, and intellectual capital. Meanwhile, external problems include access to financing, bureaucratic services, and infrastructure (Wilantara & Susilawati, 2016; Ayodya, 2019).

Institutional problems and human resources refer to capacity, competency and MSME mindset. Institutional problems are related to the lack of knowledge of MSMEs in managing and developing their businesses. For example, in terms of financial management, in general, MSME actors still do not separate between business capital and personal assets, bookkeeping is still manually so that often in conditions of declining demand MSMEs tend to sacrifice their personal assets in order to survive. In addition, MSMEs are more focused on efforts to produce goods without a good understanding of how to promote and develop their business. The problem of human resources is more about the lack of competence and capacity of MSMEs so that they have limitations in terms of developing creativity and mindset to develop innovative strategies (Susanti, 2020).

Production and marketing problems are more related to limitations in product innovation capabilities, difficulties in marketing and distributing products due to the lack of ability to utilize digital marketing, and the lack of understanding of the importance of branding and customer relationship management. It is undeniable that the lack of ability of local products to compete in the international market is caused by the low competitiveness of products and the ability to market products. Online marketing is still not used optimally, although not a few MSMEs have been able to market their products through social media such as Facebook, Instagram and other marketplaces. Another problem is more related to the lack of awareness of the importance of brand and customer loyalty to improve the competitiveness and performance of MSMEs.

Intellectual capital problems refer to the lack of understanding of MSMEs on the importance of synergies with external parties, such as banks and universities. For example, the comprehensive MSMEs assistance program by Bank Rakyat Indonesia (BRI). This program provides benefits in preparing standardized modules and assessments to help solve MSMEs problems based on their geographical location. Partnership programs with universities or higher education through two mechanisms, including financial literacy and the development of business incubators is another example of MSMEs assistance program to solve intellectual capital problem.

External problems refer to financing or capital aspects due to the large number of MSMEs that have not been reached by financial institutions, therefore MSMEs tend to decide to utilize microfinance institutions by bearing a heavier burden. Although currently many financial institutions have made it easy for MSMEs to get access to services through the use of digital technology such as financial technology services. In fact, only 5 percent of MSMEs in Indonesia have managed to go digital by the end of 2019. This has resulted that even though there are many fintech services, such as crowdfunding and peer-to-peer (P2P) lending, MSMEs are still not optimally utilized.

The problem of bureaucratic services is more related to licensing issues. In fact, there are still few MSME actors who have knowledge regarding the importance of legality and licensing aspects which are certainly important for MSMEs in running their business. Another external problem relates to infrastructure issues. For example, the digital-based economic transformation certainly requires infrastructure support for digital development. The Government has prepared budget for infrastructure development through the Palapa Ring Project which is developed for the purpose of improving the quality of the internet network so that the internet can be enjoyed in remote villages and cities or better known as Sideka (Village and City Information System). However, the lack of digital literacy for SMEs has resulted in these facilities not being used optimally. Table 3 summarized problem faced by Indonesian MSMEs.

**Table 3. Problem Faced by Indonesian MSMEs**

<b>Internal Problems</b>	<b>External Problems</b>
Institutional problems and human resources	Finance
- Lack of knowledge, competency, and capacity	- Funding
Production and marketing	Bureaucratic service
- limitations in product innovation capabilities - lack of understanding of the importance of branding and customer relationship management	- legality and licensing
Intellectual capital	Infrastructure
- lack of understanding of MSMEs on the importance of synergies with external parties, such as banks and universities.	- infrastructure support for digital development

Source: Author's Elaboration

### **Opportunities and Challenges of Digital-Based Economic Transformation**

Various opportunities that arise along with digital-based economic transformation have been discussed in introduction which include the raise of digital start-ups,

e-commerce, financial technology, on demand services along with the examples of companies mentioned. Each has promising prospects in supporting economic growth. Indonesia as a whole. For example, e-commerce is considered the most dynamic business in the digital-based economy in Southeast Asia, and Indonesia in particular (Adiningsih, 2019). Indonesia has the highest value of e-commerce transactions in the Southeast Asia Region with a value of US \$ 1.7 billion. One of Indonesia's e-commerce which plays an important role in encouraging the growth of e-commerce is Tokopedia. For MSMEs that are able to adapt to changes that arise as a result of digital-based economic transformation, this condition provides good opportunities in terms of cost efficiency in production, transportation, warehousing, and even promotions to expand market share. However, for SMEs who are unable to adapt, this is a threat.

Adiningsih (2019) identifies a number of challenges and threats caused by digital-based economic transformation. First, the digital gap that occurs between the western part of Indonesia and other regions is quite striking which can certainly be an obstacle to achieving digital-based economic success. Second, the development of competent and highly competitive human resources so that they are able to adapt to the existing changes. Third, regulations related to startups and disruptive innovation are considered to be lagging behind when compared to the massive digital-based economic development. Sangaji et al. (2019) stated several challenges that will be faced, especially by MSMEs in the era of a digital-based economy, including the problem of the ability of human resources to adapt to changes, data security, and even the loss of employment due to automation which will cause unemployment to soar.

Achieving advantage of the opportunities that might arise as result of digital-based economic transformation is the key factor for MSMEs to survive and win the existing competition. The ability to adapt and utilize digital technology and increase competence through mastering several skills needed in the digital-based economy era is the solution that must be applied by MSMEs. Some of these skills include complex problem solving, social skills, process skills, system skills, technology skills, resource management skills, content skills and cognitive abilities (Anatan, 2019). Table 4 summarized opportunities and challenges faced by Indonesian MSMEs in digital-based economic transformation.

**Table 4. Opportunities and Challenges in Digital-Based Economic Transformation**

<b>Opportunities</b>	<b>Challenges</b>
Digital start-ups	Digital gap
E-commerce	Human resources
Financial technology	Regulations related to startups and disruptive innovation
On demand services	

Source: Author's Elaboration

### **MSMEs Strategies in Digital-Based Economic Transformation**

To be able to compete in the digital-based economy, there are several things that need to be prepared and done by MSMEs, include conducting evaluations to determine the current business position and determining strategies that will be formulated for the next stage, planning product development ideas and MSME businesses, and determining management strategies. business resources in various functional areas (Ayodya, 2019; Anatan, 2021). Simple business evaluation can be done by analyzing several aspects including market aspect analysis, technical aspect analysis, and financial aspect analysis. Market aspect analysis is implemented to determine market area, business growth, and

level of demand. Analysis of technical aspects is implemented to determine the accuracy of the use of technology, facilities and infrastructure, as well as the production process. Analysis of the financial aspect is implemented to determine the financial condition of the business being run.

Planning for product development ideas might be done through several stages, from searching for ideas, selecting product ideas, making preliminary product designs, conducting product testing or pilot tests, and making final product designs before being marketed. Another strategy that needs to be considered by MSMEs is to implement the stages of business development. Business development techniques focus on increasing economies of scale and expanding the scope of business. Increasing economies of scale might be done through the addition of production scales, labor, technology, distribution systems, and places of business. Meanwhile, the expansion of business scope through the addition of new types of businesses, new products and services that are different from the business being carried out, as well as with different technologies.

MSMEs business development strategies consists of some strategies include product development strategies, market development strategies, integrated development strategies, horizontal integration strategies and innovation strategies. The product development strategy focuses on efforts to increase sales through improving products and services by increasing product attractiveness, maintaining brand image and company reputation, and providing positive experiences for consumers. The market development strategy aims to introduce a product or service to a new market share by adding distribution channels, branch companies, as well as increasing advertising and promotion programs.

Concentrated development strategies focus on specific product and market combinations and require significant skills and competency development support. Horizontal development strategy is implemented by adding one or more businesses which produce similar products or services and operate in the same market. While the innovation strategy emphasizes the company's ability to innovate both product and process innovations to develop new products or modified products. Table 5 summarizes some of MSMEs business development strategies.

**Table 5. MSMEs Business Development Strategies**

<b>Strategy</b>	<b>Focus</b>
Product development strategies	Increase sales through improving products and services by increasing product attractiveness, maintaining brand image and company reputation, and providing positive experiences for consumers
Market development strategies	Introduce a product or service to a new market share by adding distribution channels, branch companies, as well as increasing advertising and promotion programs.
Integrated development strategies	Focus on specific product and market combinations and require significant skills and competency development support.
Horizontal integration strategies	Add one or more businesses which produce similar products or services and operate in the same market.
Innovation strategies	Innovate both product and process innovations to develop new products or modified products.

Source: Author's Elaboration

In order to develop a business, there are several stages that need to be carried out by MSMEs, namely identifying opportunities, formulating business alternatives, selecting alternatives, implementing alternative chosen and conducting evaluations. In identifying opportunities, it is necessary to support data and information such as company plans, management suggestions and proposals, government programs and roles, and business opportunity results based on preliminary research which can usually be obtained from various sources. Identification of opportunities systematically to formulate strategy through a SWOT analysis (Strength, Weakness, Opportunity, Threat). While the decision making always related to mission development, strategy, and company's policies.

After all the information has been collected, the leadership is obliged to conduct an analysis so that alternative businesses can be implemented. Several alternative analysis results are then selected to select the best prospective alternative in terms of market availability, risk of failure and price. After the decision is made, a new business could be implemented and an evaluation conducted to provide some corrections and insights for further business improvements.

The determination of business resource management strategies in various functional areas in terms of human resource management, production and operations, marketing and finance. Human resource management strategy aims to develop skills, knowledge, and competence of human resources that can be done through education and training programs. Operations and production management strategies might focus on supply chain strategies or by making SOPs (Standard Operation Procedures) for production. Marketing management strategies should focus on the adoption of digital marketing, such as by utilizing social media, using the Google search site for blogs or websites, which have been widely discussed in the previous discussion. Financial or financial management strategies need to focus on receiving and paying, recording, and monitoring.

### **Previous Studies on MSMEs Readiness for Digital Transformation: A Brief Review**

Anatan et al. (2021) conducted a case study on one of the MSMEs that produce Batik in Cimahi City, to reveal its readiness in responding to digital-based economic transformation. A previous study was conducted by Anatan (2019, 2020) to identify the main problems faced by the MSME, especially with regard to some of the main problems faced from aspects of human resources, production, finance, and business strategy.

The interview results show that the main problem related to human resources is the difficulty faced by the company in getting employees who meet the criteria for needs, one of which is related to interest. According to the informant, the interest of the younger generation in batik art is considered quite low which lead to the difficulties to find human resources that meet the required standards and have creativity in developing new motifs for MSME products.

Problems in the operational aspect are caused by a lack of capital to increase investment in production equipment such as stamps so that the increase in the number of motifs produced is quite slow. MSME owners also raised other problems related to the absence of standard operating procedures used for production supervision and quality control, all of which are still done manually by MSME owners.

The financial problems as discussed earlier have more to do with the absence of bookkeeping process and separation between business capital and personal assets. From the aspect of marketing and business strategy, problems arise due to the lack of use of information and communication technology which impact on limited market share and lack of sales. Likewise, the promotion strategy has not been used optimally.

Several statements were given to respondent to determine the level of readiness to adopt digital technology in their specific business to manage production planning, inventory, collaboration, production scheduling, and outsourcing activities. The average answers given ranged between 2 and 3 which indicate the low level of readiness for digital technology adoption. Other statements related to readiness for e-commerce adoption include readiness to accept purchases from consumers through the internet, make online sales to consumers through the internet, and offer consumer services through the internet are in the ranges 3 and 4, which indicate that business actors are more likely to adopt e-commerce adoption. Two questions related to the readiness to adopt e-business were given, namely an assessment of the readiness of consumers and suppliers to interact electronically, respondents gave answers in number 3 or neutral.

Previous research MSMEs readiness in conducting digital-based business transformation was conducted by Astuti and Nasution (2014). The objective of the study was to determine the technological readiness and the level of e-commerce adoption of MSMEs involving 190 MSME entrepreneurs in the city of Bandung. The results show that the technological readiness of entrepreneurs is still moderate, which is indicated by the level of internet adoption, especially for promotional purposes, which is still low, which is 36.3%.

Another study was conducted by Taryadi (2016) which aims to analyze the level of readiness to adopt electronic marketing, namely e-marketplaces by MSMEs in Pekalongan City that used 6 e-readiness indicators, namely awareness, government, commitment, business resources, human resources, human resources. technological power and adoption. The measurement results show that MSMEs Batik in Pekalongan City already have a fairly ready level of readiness to use information technology facilities to market their products through e-marketplaces.

The research conducted by Sari and Santoso (2019) aims to develop a model to identify the readiness of MSMEs in responding to the industrial revolution 4.0 and involves 100 respondents who were selected using the random sampling method. The results of the study show that many young MSME actors are able to adapt and capture current development opportunities and market demand, but do not follow the MSME community so that further approach efforts in the form of coaching are needed to develop the MSMEs in Karawang Regency.

## **Conclusion**

The digital-based economic transformation that occurs has a positive impact on the digital-based business opportunities such as the formation of digital startups, e-commerce, financial technology, and on demand services. However, negative impacts might also arise due to challenges and threats that arise, for example, the digital gap, the lack of digital literacy, and regulations that regulate startup problems and the impact of innovation disruption are not optimal. The ability of MSMEs to adapt to change, survive in change and win the competition is largely determined by their ability to overcome and solve both internal and external problems faced so that the competitiveness of MSMEs could be improved. Based on the preliminary case studies and the results of the literature review, it is shown that not few of micro, small and medium scale business actors still do not have mastery of digital technology and are prepared to compete in a digital-based economy. To overcome this problem, one of the efforts that might be taken is to increase collaboration and synergy between MSMEs with external parties such as banks to help with funding problems and universities to assist in the transfer of knowledge so that the performance and competitiveness of MSMEs can be improved.

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