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**QUALITATIVE ASSESSMENT OF DIGITAL ECONOMY
IMPLEMENTATION FOR ECONOMIC RECOVERY
DURING THE COVID-19 PANDEMIC IN YOGYAKARTA,
INDONESIA**

¹Helen Dian Fridayani & ²Li-Chun Chiang

^{1&2}Department of Political Science,

National Cheng Kung University, Tainan, Taiwan

¹Department of Government Affairs and Administration,
Universitas Muhammadiyah Yogyakarta, Indonesia.

¹*Corresponding author: helendianf9@gmail.com*

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ABSTRACT

The digital economy in Yogyakarta, Indonesia assumed a pivotal part in keeping society working during the Coronavirus 2019 (COVID-19) pandemic by empowering remote working, mechanizing measures, and encouraging contactless exchanges. The expanded utilization of digital technologies likewise carried society closer to building up a digital economy. The digital platforms used during COVID-19 can drive recovery and solidify future services. This study analyzes how Yogyakarta's Micro, Small, and Medium Enterprises (MSMEs)

sector faced difficult situations for the economy during the pandemic and how the government implemented the digital economy for MSMEs to recover the economy. This qualitative study uses in-depth online interviews for primary data and supporting books, journals, documents, and regulations to characterize the background. The research findings of this study report on the implementation of a digital economy to improve the economic situation. Specifically, the Yogyakarta government targeted bolstering MSMEs, focusing on online platform application development. Second, MSME owners and customers alike benefit from the platforms. Online, MSME owners can quickly sell their goods and customers may choose and buy goods. Third, Information and Communications Technology (ICT) users for MSMEs increased compared to the previous year and encompassed 70 percent of the total MSMEs. The research contribution can help to solve the problems faced by government, business and society by decreasing economic risk.

Keywords: COVID-19 outbreak, government's role, economic risk, digital economy, economic recovery.

INTRODUCTION

The Coronavirus 2019 (COVID-19) outbreak started as a pandemic infecting thousands of people worldwide (Schafer, 2020). The Asian continent saw the beginning of the spread of the COVID-19, starting in China, then South Korea, Singapore, India, and Indonesia (Nadeem, 2020). European countries were affected greatly, including Italy, Spain, England, and many more. The American continent, namely the United States, also felt the serious impact of the COVID-19 outbreak with the total cases until November 2020 of around 13.4 million (Jennifer, 2020). This condition affects almost all sectors of life, including the economic sector. The current conditions indirectly disrupt the export and import of products and reduce or slow down the investment rate. This occurs because of difficulty of investment from outside due to the influence of this outbreak (Muhyiddin, 2020). Many workers cannot continue to work, which has caused various fields to experience a decline in sales and market demand, such as the garment manufacturing industry (Phua et al., 2020). The large number of people who have experienced layoffs has resulted in a high number of unemployed people (Anderson et al., 2020). Table 1 below particularly in Indonesia case:

Table 1

The COVID-19 case from March to December 2020 and its Impact on MSMEs in Indonesia

Month	Number of Cases
March	1,538
April	10,118
May	26,473
June	56,385
July	108,376
August	174,796
September	406,945
October	410,088
November	450,518
December	611,097

Source: covid19.go.id

The Indonesian government implemented several policies, for example, the existence of large-scale social restrictions, closing shops, implementing work from home, and others, that adversely affected the economic sector. Based on year-on-year growth, Indonesia's largest source of economic growth in the first quarter of 2020 was in the information and communication sector at 0.53 percent (Kata Data Insight Center, 2020). Based on a release from the Central Statistics Agency, the number of foreign tourists coming to Indonesia in the first quarter of 2020 also dropped dramatically to 2.61 million visits, a decrease of 34.9 percent compared to last year (Sugihamretha, 2020). This is a result of the ban on flights between countries that came into effect in mid-February. The number of rail and air passengers also declined with the implementation of social restrictions. These statistics show that since COVID-19 was declared a pandemic, many sectors of the domestic and global economy have been affected. The impact of the pandemic in Indonesia was most pronounced in the micro, small and medium enterprises (MSMEs) sector.

Micro, Small, and Medium Enterprises (MSMEs) occupy a strategic position in the economy. In the Association of Southeast Asian Nations (ASEAN), MSMEs generate employment between 50 percent and up to 95 percent, and contributed between 30 percent and up to 50 percent of GDP (Pristiwasa, 2020). In Indonesia, MSMEs are one of

the strategic sectors of the national economy, which can be seen from labor absorption (Saidi, 2020). As a result of the COVID-19 pandemic, Yogyakarta's economic sector declined, especially tourism (of which Yogyakarta is heavily reliant) and MSMEs. The Yogyakarta Regional National Craft Council estimates that around 70 percent of micro, small and medium enterprises and more than 59 percent of MSME supporting industries admit they are affected by the COVID-19 pandemic (Adit & Pertiwi, 2020). The MSMEs most affected are in the tourism-oriented sector, such as handicrafts, because the primary market is tourists.

The government began to carry out various policies such as issuing social distancing, issuing appeals for Work from Home, imposing regional restrictions, building hospitals for handling COVID-19, and others (Adit & Pertiwi, 2020). These government actions positively impacted the range of society, providing benefits for the lower, middle, and elite classes. Various entities have always made efforts, especially the government, to bolster the country's economy by introducing the digital economy.

Although the current pandemic has affected the economy worldwide, digital economy has demonstrated instrumental in the fight against COVID-19. Countries which adopted web innovation have the benefit to quickly accelerate their business development (Kayanan, 2019); the capacity to use advanced digital tools is an unquestionable requirement for organizations to endure the progressing emergency (Sarwono, 2015).

This study explores how Yogyakarta's MSMEs sector is facing difficult situations for the economy during the pandemic; and secondly, how the government implemented a digital economy for MSMEs to recover during COVID-19. Therefore, the qualitative approach used in this study is a valuable method for exploring complex phenomena such as economic risks and recovery strategies during the COVID-19 pandemic. It allows for a detailed and nuanced understanding of the experiences of MSMEs and the impact of government policies, which can inform future interventions to support micro businesses during challenging times along with other supporting data such as government policies and initiatives aimed at supporting MSMEs during the pandemic, and data on the use of digital technologies among MSMEs in Yogyakarta.

LITERATURE REVIEW

The literature review will address the digital economy's role for micro, small, medium enterprises business oriented towards the creation of value for society to decrease the economic risk during COVID-19. In order to understand the government's role in solving the economic problem, the core concept is digital economy and information and communications technology (ICT) use during COVID-19 to be a starting point for further discussion.

Comprising of 90 percent of all businesses worldwide, MSMEs assume a critical part in public economy development and employment creation and offer a way out of neediness for some agricultural nations (Mesenbourg, 2001). This is especially valid for tech MSMEs, the wellsprings of creative ICT-empowered arrangements, and the motors driving progressive change (Europe connected, 2020). However, MSMEs may have less strength and adaptability in managing the costs these circumstances involve. Expenses for counteraction such as changes in work measures, specifically, for example, the move to teleworking, might be generally higher for MSMEs given their more modest size. Concurrently, the low degree of digitalization and challenges in getting to and receiving advancements are a barrier to progress (Karr et al., 2020). On the chance that creation is diminished in light of events, the expenses of underutilized work and capital weigh more heavily on MSMEs than larger firms (Lukonga, 2020). In addition, information on recommended mitigation measures may be difficult for MSMEs to acquire, such as reasonable business procedures to assist the businesses and announcements of government initiatives offering help.

If there were any waiting questions about the need for digital change in businesses, COVID-19 has hushed them (Insights, n.d.). In a contactless world, most associations with clients and representatives must occur practically. It is the best way to remain in business through ordered closures and limited movement (Bukht & Heeks, 2018).

The digital order is not new. Before the pandemic, a change in outlook towards digitization was already in progress. The digital economy is also called the Internet Economy, New Economy, or Web Economy (European Digital SME Alliance, 2020). Recent developments have

quicken the worldview, as proven by spending of progressive organizations. Digital economy depends on innovations, even though we progressively see this as directing business through sectors dependent on the internet and the World Wide Web (Qu et al., 2016). The digital economy is interlaced with the conventional economy, making an explicit depiction harder. It results from billions of ordinary online associations among individuals, organizations, gadgets, information, and cycles. It depends on the interconnectedness of individuals, and associations linked by the Internet, versatile innovation, and the web of things (IoT) (Sugiri, 2020).

The digital economy is supported by the spread of Information and Communication Technologies (ICT) to improve its productivity (Katz, 2020). Digital change of the economy is subverting ordinary thoughts about how organizations are organized, how buyers acquire services, information, and merchandise, and how states need to adjust to these new difficulties (Bukht & Heeks, 2018). The term ‘Advanced Economy’ was first referenced in Japan by a Japanese educator and financial analyst amidst Japan’s downturn of the 1990s (Zimmermann, 2015). In the west, the term followed and was used in Don Tapscott’s 1995 book, *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. This is among the top books to consider how the Internet changes how business is done. As indicated by Mesenbourg (2001), there are three fundamental parts of the ‘Digital Economy’:

- a) E-business infrastructure (equipment, programming, telecom, organizations, and human resources),
- b) E-business (how business is led, any cycle that an association conducts over PC intervened networks),
- c) E-commerce (transfer of products, for instance, when a book is sold on the web).

The digital economy will likely assume a significant function in the recovery of the worldwide economy post-COVID-19. As reflected in China, a system based upon the digital economy is versatile, agile, and ready to adjust to change quickly (World Economic Forum, 2020). The digital economy speaks to avoiding the customary lose-lose plan of action with its attention on shared worth creation (Katz, 2020). The advanced administrations that individuals depended on during COVID-19 like online commercial centers, credit only installment,

contactless conveyance, and live streaming will in all likelihood become omnipresent going forward. In building a system, business visionaries need to implement a staged approach that can empower various players to benefit together (Qu et al., 2016).

The digital economy will likewise experience a mass business spike on social versatility, and there will be more noteworthy financial interest from minimized populaces. Many organizations' experiences have indicated how the digital economy can be indispensable in opening up new opportunities and driving comprehensive development – having made in excess of 40 million immediate and roundabout openings for work in China and empowering a huge number of MSMEs and new companies.

The expanded reception of work because of COVID-19 additionally opens new open doors for business visionaries to reconsider their authoritative structures. MSMEs are the foundation of any general public for work creation and economic contribution. They are the pathfinders during the excursion to economic recovery. Those among them who can adopt digital technologies and empower their clients, peers and the nearby network will have the best chances to endure and flourish in the long term.

The economy is presently buried in a slump, which may outlive the pandemic's current (and ideally sole) rush (Eggers et al., 2020). A few organizations might be slanted to save on their computerized change plans as a component of a more extensive belt-fixing plan. A reasonable cost reduction program focuses on trimming the fat without cutting away the essential parts of the business necessary to sustain current levels of business performance (Shkalenko & Fadeeva, 2020). Ending computerized development endeavors in an emergency will fundamentally handicap and diminish overall business wellbeing (Ali et al., 2020). Even though it might appear illogical, an emergency is an ideal chance to effect progressive change. Instead of requiring advanced change to be postponed, businesses need to move forward towards digitalization.

MSME digitalization will not just improve their intensity; it will profit society too. As the fundamental driver of regional financial development and advancements, SMEs' digitalization likewise has a significant impact in building up a comprehensive and maintainable

economy. As of late, digitalization arrangements have contributed significantly to the UN's practical advancement objectives and diminished abundance holes, improved sex equity and reacted to environmental change, giving individuals access to assets necessary to their wellbeing. As the world keeps on going computerized, digitalization additionally has a lot to do with the improvement of governments and the effect of their arrangements on the digitalization pattern.

Currently, the Indonesian government encourages working from home, so MSMEs needed to expand their utilization of innovation to encourage online gatherings, data sharing, and permit workers to complete their obligations from afar. In the post-COVID-19 world, automatic apparatuses may replace considerably more significant jobs. Physical distancing may remain for the long term, making shoppers less inclined to visit physical stores. It suggests that the emergence of a non-contact economy could lead to further growth and development of web-based businesses and the digital economy. This means that the shift towards non-contact transactions could have a positive impact on these industries, leading to increased innovation and expansion.

RESEARCH METHOD

This study utilized a qualitative approach with a case study of snapshots, which emphasizes process and meaning from a subject perspective. The research focused on a particular period during the COVID-19 onset and was conducted in Yogyakarta, Indonesia. The theoretical basis was used as a guide to ensure that the research focus and conclusions aligned with the facts in the field, and to provide an overview of the research background and as material for discussion of research results. The unit of investigation was shaped by the particular setting of the study, which could be an individual, association, mediation or cycle. Moleong's definition of qualitative research was used as a synthesis of the main definitions, which describes qualitative research as research that intends to understand phenomena experienced by research subjects in a holistic manner through descriptions in the form of words and language. This approach was adopted in this study.

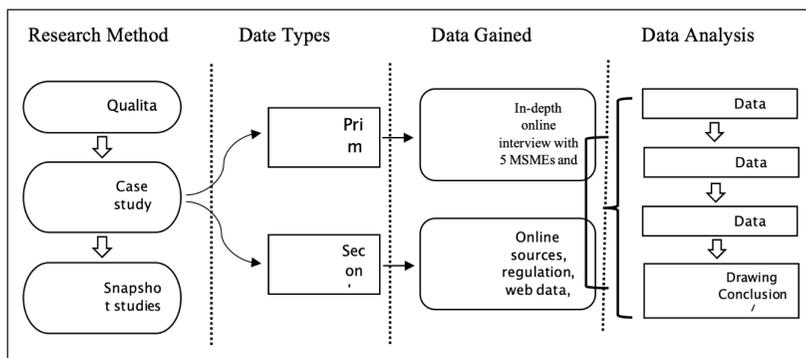
For this study, we used primary and secondary data. Primary data is obtained directly from the original source to answer research questions.

Primary data can be in the form of opinions of research subjects (people) either individually or in groups, the results of observations of an object (physical), events or activities, and test results. Secondary data means pre-existing data, not being collected (extracted) by the researcher. Secondary data is obtained by researchers indirectly through intermediary media. Secondary data are generally in the form of evidence, records, or historical reports that have been compiled in archives, both published and unpublished

The primary data in this study was obtained through in-depth online interviews with several entities, both from the government in Yogyakarta and MSMEs owners leading the creative economy, the tourism sector, the processing industry, educational services, trade, and various food businesses. The secondary data is obtained through online sources such as the web, news reports, journals, books, government regulations, as well as supporting documents from the government and MSMEs. The research model is outlined by the figure below:

Figure 1

Research Model



Source: Data from the authors.

The subjects in this study were MSME business owners and representatives of the Yogyakarta government. The selection of who was interviewed is based on the MSMEs related to the utilization of digital economy, and the relationship with the government. Details of the interviewees follow in Tables 2 and 3:

Table 2

The Information of Research Subjects

No	Interviewees	Total Number
A1.	Trading business sector	2
A2.	Industry sector	2
A3.	Creative economy sector	2
A4.	Tourism sector	2
B1.	Cooperative and SME Service department of Yogyakarta City	1
B2.	Department of communication and information	1
Total		10

Notes: A represents MSME entity; B denotes government entity.

The chart represents the number of interviewees in each sector or department for the study. There are four sectors represented in the study: trading business, industry, creative economy, and tourism. There are two interviewees from each sector, bringing the total number of interviewees from these sectors to eight. In addition, there are two government departments represented in the study: the Cooperative and SME Service department of Yogyakarta City, and the Department of Communication and Information. There is one interviewee from each department, bringing the total number of interviewees to 10. The chart provides an overview of the sample size and distribution for the study, which helps to ensure that the research findings are representative of the different perspectives and experiences within the sectors and departments being studied.

Table 3

Research Variable in Each Perspective

No.	Variable	Indicators	Definition	Author
1.	Connectivity	<ul style="list-style-type: none"> Customer activity cycle 	The deployment of broadband infrastructure and its quality. Access to fast broadband-enabled services is a necessary condition for competitiveness.	European Commission, 2016; Macchi et al., 2015.

(continued)

No.	Variable	Indicators	Definition	Author
2.	Use of Internet (E-Commerce)	<ul style="list-style-type: none">• Content• SMEs Selling Online• Transactions	Variety of activities performed by citizens already online. Such activities range from consumption of online content to modern communication activities or online shopping.	Bukht & Heeks, 2018; European Commission, 2016; Macchi et al., 2015.
3.	Human Capital	<ul style="list-style-type: none">• Basic Skills and Usage• Basic Digital Skills	Skills needed to take advantage of the possibilities offered by a digital society. Such skills go from basic user skills that enable individuals to interact online and consume digital goods and services to advanced skills that empower the work-force to take advantage of technology for enhanced productivity and economic growth.	Macchi et al., 2015; Qu et al., 2016.

This research variable is used as a reference for the author to analyze the results or findings of this study based on several literature studies. From the above references, the research variables are connectivity, use of internet and human capital for analyzing economic risk during the pandemic situation.

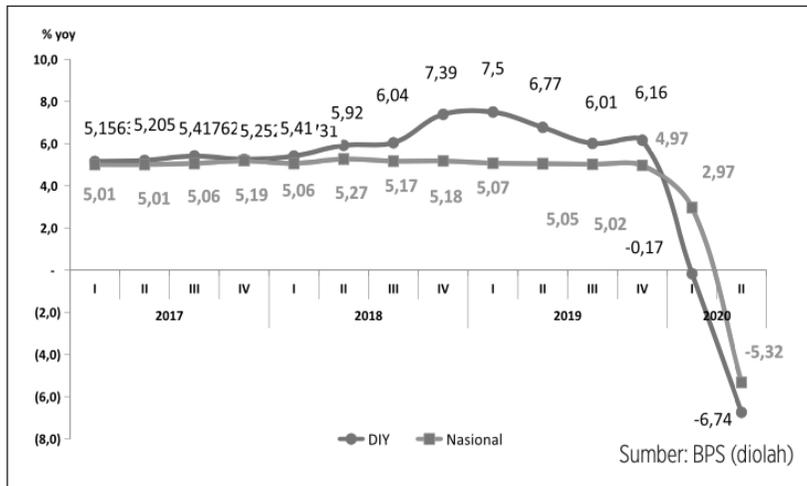
FINDINGS AND DISCUSSION

The Economic Situation During COVID-19 Outbreak in Yogyakarta

The COVID-19 pandemic has a major impact on the Yogyakarta economy. In March 2020, the number of people below the poverty line in Yogyakarta was 475,720 people (Adit & Pertiwi, 2020). This number increased by over 34,800 compared to September 2019 (Suparman et al., 2020). The Yogyakarta poverty line has also increased to IDR 463,479 compared to IDR 449,485 per capita per month of September 2019 (Ketchell, 2020). The unemployment rate also increased to 3.338 percent as of February 2020 (Ketchell, 2020). This increased by 0.52 percent compared to the unemployment in February 2019 of 2.86 percent.

Figure 2

Yogyakarta and National Economic Growth 2020



Source: Yogyakarta Economic Report, Regional Planning Agency, August 2020.

Figure 2 shows that in the second quarter of 2020, the Yogyakarta economic performance contracted again compared to the previous quarter and the same period the previous year, namely -6.74% (YoY) or down -6.65 percent (QoQ) (Yogyakarta Economic Report, Regional Planning Agency, August 2020). Yogyakarta's economic performance

was lower than that of the national and Java economies, which fell -5.32 percent (YoY) and -6.69 percent (YoY) (Yogyakarta Economic Report, Regional Planning Agency, August 2020). The contraction in Yogyakarta's economic growth occurred in all expenditure components, mainly due to the impact of the COVID-19 pandemic.

Based on data from the Yogyakarta regional planning agency, the decline in economic performance occurred in most of Yogyakarta's primary sectors. The sector most affected was the accommodation and food/beverage fields which is directly related to the stifled tourism. Restrictions on community activities due to COVID-19 and the implementation of large-scale social restrictions in several areas outside Yogyakarta have caused Yogyakarta tourism activities to decline drastically. This is reflected in the marked decrease in air passengers during the second quarter of 2020 to -92.6 percent (YoY). Meanwhile, the occupancy rate of hotel rooms in Yogyakarta in the same period was only around 15.5 percent (Heriani, 2020). The decline in tourism activity produces a multiplier effect on other sectors of up to 56.4 percent of Yogyakarta's Gross Regional Domestic Product (Sholikah & Suni, 2020). The tourism supporting sectors affected include the processing industry, which is dominated by MSMEs, handicraft/tourism supporting products, the trade sector, and several other sectors.

MSMEs Affected by COVID-19

The COVID-19 pandemic has shaken various businesses, with Micro, Small, and Medium Enterprises (MSMEs) among those enduring the most challenges. The cut back in customer spending, freeze in movement, and impediments for in-store activities have caused many MSMEs to shutter. Consequently, sparing them has become a need given their significant contribution – more than 60 percent – to the economy (Agustina, 2020), with the public authority dispatching numerous activities to enable SMEs to remain stay afloat.

The COVID-19 pandemic also has affected education in Yogyakarta. The absence of activity in tourist areas coupled with the implementation of online learning reduced the business of MSMEs in this city to a standstill. According to the Head of the Yogyakarta Special Region Cooperative and SME Service, B1 said that:

“More than 59 percent of SME owners admit that they have difficulty marketing because during the tourism pandemic, there are no visitors. Hotels are also closed. Education is also online so that even SMEs do not have buyers”.

Based on data from the Department of Medium, Small and Medium Enterprises, Manpower and Transmigration in Yogyakarta city, there were 248,499 MSMEs in early 2019. Of this number, 28.5 percent of them filled the trade sector. Not only from the culinary sector, it also has around 78,000 micro, small and medium industries that support the trade sector. This sector consists of a lot of informal workers or gig workers and forms the backbone of the Yogyakarta economy with a fairly large contribution. However, the COVID-19 pandemic is rendering them immobile.

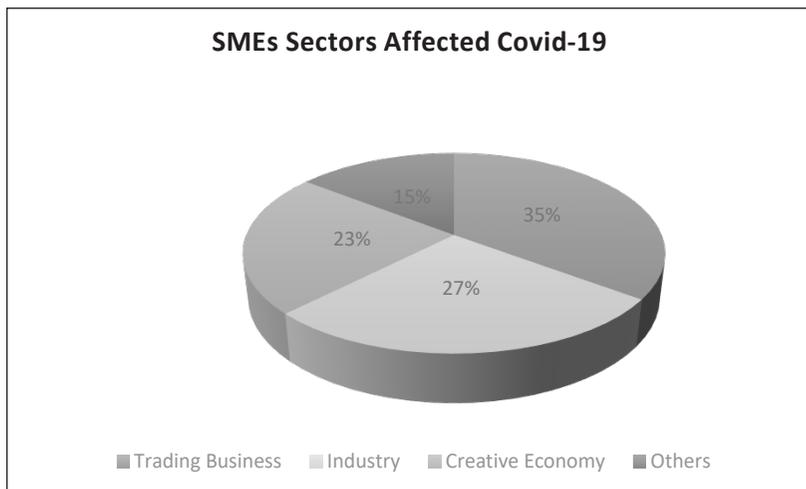
Apart from marketing difficulties, the Large-Scale Social Restriction policy (Pembatasan Sosial Berskala Besar [PSBB]) in a number of regions also made it difficult for MSMEs to obtain raw materials. Regions that implement Large scale social restrictions automatically cannot send the raw materials needed by MSMEs. One of the MSMEs actors stated that:

“Because the raw material is lacking, the price will go up”. (A2 & A3 said)

The Yogyakarta Special Region Cooperatives and MSMEs Service together with Jogja Economic Resilience for COVID-19 has conducted a survey of MSMEs in Yogyakarta affected by COVID-19. According to the head of entrepreneurial services at the Yogyakarta Cooperatives and SME Service, the results of the survey stated that the trading, industry and creative economy were heavily affected as Figure 3 shows below:

Figure 3

The Percentage of SMEs Sectors that Affected COVID-19 in Yogyakarta



Source: Data processed by the author.

In addition, the tourism sector was the worst affected during the COVID-19 pandemic. In almost all parts of the country, the industry has experienced a drastic decrease in the number of visitors. Thousands of tourist destinations in Yogyakarta city have stopped operating since March 2020 due to the outbreak. This closure is predicted to continue until at least May 2020. Unmitigated, tourism in the region has lost up to IDR 80 billion (Mustaqim, 2020). In fact, this number was predicted to continue to soar, because not all tourism businesses have reported the losses suffered. A4 mentions that:

“I surrendered, and many of my friends in this sector, what else could the tourism sector do? And those of us who have small businesses in the tourism sector was affected, and we cannot do anything more”.

Table 4 shows that of the four problems, the decline in sales is the biggest problem felt by MSME owners. The pandemic’s impact on MSMEs is believed to be heavy due to the high level of vulnerability and lack of resilience due to limited human resources, suppliers, and options for overhauling business models (Sugiri, 2020).

Table 4

Impact of COVID-19 on MSMEs

Impact	Percentage (%)
Decrease in Sales	56,0
Capital Difficulties	22,0
Product distribution barriers	15,0
Raw material difficulty	4,0

Source: Ministry of SME Cooperatives, 2020.

Through the results of interviews with eight business entities, the rate of decline in sales can be seen in the following table.

Table 5

Decrease in Sales over 3 Months (June-August, 2020)

Average turnover per month (MSMEs)	Decreased Turnover
Clothing (Trading Business Sector)	83%
Food/Beverage packaging (Home Industry)	63%
Village Tourism (Tourism sector)	80%
Souvenirs and Crafts (Home Industry, Creative and Trade Sector)	75%
Batik Craft (Home Industry)	78%
Traditional musical instruments (Creative Industry)	80%
Coffee Shop (Industry and Creative Sector)	68%

Source: The results of the interview were processed by the author, 2020.

A very drastic drop in sales turnover within a span of 3 (three) months was experienced by the batik handicraft businessman, whose average monthly sales were up to IDR 32 million. In August, sales revenue was only (22%) IDR 7 million. Likewise, businesses in the production and trading sectors of clothing only received 17% of their usual business. As mentioned by A1:

“Our turnover dropped dramatically, averaging only 15-30% from usual. What we usually get full now is only that much. We have trouble selling our goods even though we still have customers”.

As mentioned by (Capri, 2017) MSME proprietors are utilizing a blend of income boosting and cost-reducing measures to guarantee their incomes keep covering their costs. For example, 33 percent of all working organizations announced contribution limits to digitalization, while a fifth decided to raise costs. Right around a fifth of organizations began a conveyance administration since the pandemic started (Ali et al., 2020). Cost-cutting measures were added. For those organizations with representatives, decreasing the size of their labor force and work hours for staff was an effective system. Many working microenterprises announced that they cut workers, prompting a 42 percent decrease in work inside this fragment. This activity probably had downstream impacts (Sugiri, 2020). Numerous proprietors detailed that they were working longer hours to satisfy client needs, conceivably a consequence of a diminished labor force.

Digital Economy as the Tools to Support Economics Recovery for MSMEs

The COVID-19 pandemic is driving organizations from retail, assembling, and specialist co-ops to rethink their plans of action where the customary “face to face” and “social” setting is the standard (Europe connected, 2020). Organizations started to understand the need to consolidate a more significant bit of their business cycle with a creative contactless technique for conveying their items and services. Else, they would face the choice of closing down services until the emergency is over. Given the current status of the pandemic, that is equivalent to capital punishment for those organizations (Ali et al., 2020). MSMEs are the same, if not more frantic, for reevaluating their plans of action to beat the current emergency and future comparative circumstances.

Supporting MSMEs adjusting to the COVID-19 emergency, the government provided a significant function towards MSMEs to endure this hardship. The government gave both quick and exceptional help at an immense scope compared to the 2008 monetary emergency in Indonesia. MSMEs must understand that these are brief measures, and a computerized change is vital for enduring current and future emergencies (McKee & Stuckler, 2020). It is essential to note that most MSMEs work in a profoundly concentrated way with restricted (and generally limited) business sellers and clients (ERIA, 2018). A business person or a couple of ranking directors make practically

all choices, and there are commonly few or no middle managers. As senior administration is typically distracted with numerous significant business choices, undertaking new initiatives (such as digitalization) is seen as dangerous or tedious and is frequently needed to a lesser extent than to oversee everyday tasks (Shkalkenko & Fadeeva, 2020).

The effect of digital tools rises above the family (Europe connected, 2020). Governments are employing digital tools for work even as organizations amplify them to encourage online activities. In any case, at the core of advanced innovation is its expanded function in managing COVID-19, from following infection-related turns of events and contact-following to giving opportune updates and observing (Zimmermann, 2015). The pandemic has likewise made telehealth and online counsel the standard. As emergency clinics battle with stressed limits, relocating to online arrangements facilitates medical care frameworks. 3D printing innovation has also demonstrated its functional worth, with organizations in the business using the tech to make face shields and different PPEs currently being utilized by laborers and others (Ali et al., 2020).

Notwithstanding all the previously mentioned advantages of innovation, the beginning of COVID-19 has brought specific computer-related issues and inadequacies that need to be addressed (European Digital SME Alliance, 2020). For instance, fake news and deception keep increasing through online media, which could spell the distinction between a safe return to normal and an extended pandemic. Specific autonomous information investigation programming uses calculations that have erroneously classified a few products as trivial, bringing about pushed-back conveyance dates with negative ramifications on traders and conceivably customers (Qu et al., 2016). Additionally, there are conveyance stages that exploit the circumstance by charging steep commission rates for their services, consuming the generally small profit margin of eateries and food sources (Karr et al., 2020).

Digital Platform for MSMEs Strategies

The Yogyakarta government has integrated public information in the city area. The local government's innovation, namely the Jogja smart service as an integrated information provider, is one form of implementing digital economy in the city. The utilization of this public information integration is expected to facilitate obtaining

accurate information by the public. The purpose of this application is to facilitate the wider community in obtaining information about the development of the city of Yogyakarta in a precise and fast manner. However, the application needs to be evaluated in relation to the provision of integrated information and its use.

Sibakul Jogja is an online platform and is part of the Jogja Smart Service application. The development of the *Sibakul Jogja* portal is a professional effort of online marketing activists in Yogyakarta to make SME products one of the products of choice on the Internet. *Sibakul Jogja* is an Indonesian acronym for the Information System for Cooperatives and Business Actors Development, while Jogja is a popular word from the Yogyakarta Government Region.

Figure 4

The Digital Platform of SMEs in Yogyakarta



Source: sibakuljogja.jogjaprov.go.id, (2020).

Sibakul Jogja (Figure 4) has 4 roles supporting the development of MSMEs: 1) integrated MSME Data Collection. Through several forms, the latest information about MSME profiles can be found. 2) MSME clustering system, namely the grouping of MSMEs based on the type of business so that guidance is easier to carry out. 3) MSME curriculum, here are recommendations or standard guidelines that can be implemented by MSMEs. And 4) MSME management application where MSME progress can be supported by developing this application to make it more feasible for all groups to access.

Another benefit of the *Sibakul Jogja* application is facilitating online transactions between MSMEs and potential consumer communities. In Yogyakarta, IT serves as an online directory of MSME businesses and products that makes it easier for people to get business information, profiles and products of MSME owners, and strengthening business content of Yogyakarta MSME owners on the internet.

From the results of observations and interviews of researchers who initially had difficulties with buyers, *Sibakul Jogja* made it easier for sellers to meet buyers because the process works online. MSMEs affected by the pandemic are provided with appropriate, effective, and sustainable guidance. In this way, people who have lower and middle-income businesses are able to build and compete in the business world in the Yogyakarta region or beyond. The head of the Yogyakarta Cooperative and MSMEs Office and cooperate with Department of Communication and Information has this to say:

“There are already 400 MSMEs participating in Sibakul Jogja program out of around 9,000 MSMEs entering. MSMEs must have ID Number (cooperative registration number-ed) and type of business and turnover because there is guidance in this program”. (As B1 & B2 said)

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From the results of an interview with one of the MSMEs in Yogyakarta who registered for *Sibakul Jogja*:

“I registered with the government-owned Sibakul Jogja and also became a Food merchant. Within one month after that, sales of Sweet Sundae Ice Cream had increased by 70% and I could still employ 25 of my employees.” (As A1 said)

With the digitization of MSMEs in Yogyakarta, MSME owners feel helped and can still produce or sell products. In line with the goals of the digital economy, the platform has the aim of facilitating people’s lives, especially in the economic sector. It seems that if this platform is utilized optimally, the economy of the community, especially MSMEs, can be maintained during COVID-19 as long as the sale and purchase cycle can be completed.

This program helps get MSME products quick to market without visiting consumers or conventional transactions. Everything is supported through a web-based system. In short, consumers are entirely free of shipping costs for products purchased from MSMEs. This is a real action towards empowering MSMEs that have slumped over the last few months. Marketing for MSMEs trying to survive during the COVID-19 pandemic is facilitated by marketing through *SiBakul Jogja* and obtaining convenience in selling MSME products. As mentioned by A1:

“The existence of SiBakul Jogja has a very significant impact on orders. Usually, consumers who are mostly in the city of Jogja often object to this shipping cost, especially since I live in southern Bantul”.

Public enthusiasm for the development and usage of *SiBakul Jogja* is relatively high. During one month (August), there have been 1,700 transactions between MSMEs and consumers. Meanwhile, the range of shipping costs incurred in the amount of IDR forty million can facilitate the economic business of the community (consumers, MSMEs, and online delivery) worth nearly IDR two hundred forty million or six times that. This means that this MSME empowerment scheme is the answer to reviving the economy for the lower class, especially businesses which are still struggling through the COVID-19 pandemic.

In addition, this is positive for building human capital, since almost all MSMEs must be forced to be technology literate, understand

stock availability, at all times must be careful about the online trading application model, and always maintain the quality of their products (including management to maintain product quality according to health protocols in handling the impact of COVID-19). A3 states that:

“I didn’t understand the technology before, so I learned how to use my smartphone. Several years ago, I decided to open a small shop, but it only sells daily necessities”.

At the point when confronted with change, MSMEs should embrace digital innovations and promote digitalization. They should likewise gain from effective organizations in E-commerce, sharing economy, IoT, and other new business of action to look for occasions to build additional incentive in the tide of digitalization. MSMEs ought to likewise conquer the absence of assets, absence of involvement with the execution of innovations which will permit them to get useful and arrive at a more extensive market.

What should be improved for the Digital Economy used for MSMEs?

Even though the Jogja Smart Service application is managed properly and displays all information clearly and accurately, the Yogyakarta Government feels that there are still obstacles that have followed the launch of the Jogja Smart Service application. As mentioned by the interviewees, the public sees that the Yogyakarta government has not carried out detailed socialization to the wider community so that the branding of *Sibakul Jogja* is still not maximal. The majority of people only know about the Jogja Smart Service application through the internet and media. Some people already know the Jogja Smart Service application and apply it in their daily life, including being able to buy MSME products through the application. In addition, there are several factors that hamper the development of the Jogja Smart Service application, especially on *SiBakul Jogja*, including the lack of synergy between City/Regency Governments. In its implementation of *SiBakul Jogja*, the City Government often clashes with various problems in the area of government. This can be seen from several complaints listed in the Jogja Smart Service application. Some public reports arise outside the border area of Yogyakarta, so the officers find it difficult to resolve since the area lies outside the control of the Yogyakarta Government.

There are still many people in Yogyakarta who are unfamiliar with the internet. This was conveyed by the Deputy Mayor of who stated there are still many people who are not internet connected because there are still around 7.60 percent residents (~55,000 people) of Yogyakarta who are still living below the poverty line (Priatmojo, 2020). Unhindered internet implies that all information must be dealt with similarly, without segregation because of cause or substance. Thus, the web is now a solitary assistance rather than an organization with various classifications. Singular clients need to get to all data without channels; however, they additionally need upgrades and advancement in the frameworks they use at the least cost conceivable.

Looking forward, MSMEs that can use digital devices will all the more effectively have the option to modify and relaunch their businesses. Going advanced is not discretionary — it is fundamental. However, hindrances to digitization exist — including cost, access, and absence of commonality. The compelling digitization of MSMEs will require industry cooperation to create successful computerized stages, offer preparation for MSMEs to use these stages, and give monetary instruments and assets to assist them with anticipating what is to come.

CONCLUSION

Medium Small Medium Enterprise (MSMEs) are the critical driver of employment and economic growth of Indonesia, and almost 99 percent of total business establishments in Indonesia are MSMEs. It is crucial to enable Indonesia MSMEs to move towards digitalization to continue accelerating the Digital Economy. In Yogyakarta, as a result of the Covid-19 pandemic, the economic sector, especially MSMEs and the tourism sector declined heavily. *Sibakul Jogja* is an online platform of the digital economy and is part of the Jogja Smart Service application. The development of this portal is a professional effort of online marketing activists in Yogyakarta to make MSME products one of the products of choice on the internet. This application of digital economy helps products quickly get to market without visiting consumers or making conventional transactions. Everything is supported through a web-based system and consumers are entirely free of shipping costs for products purchased from MSMEs. Marketing for MSMEs trying to survive during the COVID-19 pandemic is

facilitated through *Sibakul Jogja* providing convenience in selling MSME products.

However, there are still a number of shortcomings of the implementation of *Sibakul Jogja* to provide MSMEs a platform in the digital economy to help their life in the pandemic condition, especially in the case of unhindered internet. Our findings demonstrate the importance of the digital economy for the MSMEs sector in helping the pandemic situation through the digital platform. In many cases, the MSME sector struggles with limited budgets and capacity, and, of course, faced several problems during the pandemic of COVID-19, which we hope further studies will address.

AUTHOR CONTRIBUTION

Helen Dian Fridayani researcher in the field, contributed to the literature review stage, collecting data, analyzing the collected data along with providing background details, insights and translation.

Li-Chun Chiang analyzed the data and elaborated by providing the relevant theoretical literature. The author is also actively involved in the formulation of research problems, make the framework of the research, and adds a variety of relevant literature to strengthen the analysis and findings in the article.

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