

**ERIA Discussion Paper Series****No. 426****Digital Technology Adoption and Indonesia's MSMEs during the COVID-19 Pandemic**

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**Abstract:** *The coronavirus disease (COVID-19) pandemic has hit micro, small, and medium-sized enterprises (MSMEs) hard. The estimated economic impact of COVID-19 could exceed the fiscal stimulus package as a percentage of gross domestic product (GDP). Digital technologies have helped them to better navigate the situation. Yet Only 13% of MSMEs adopt the internet for marketing and delivering their products and services. This paper discusses Indonesia's MSMEs during the COVID-19 pandemic and the digital transformation they pursue. We also discuss policy responses and government support to help MSMEs navigate the worst public crisis in our lifetime.*

**Keywords:** MSME, Digital, COVID-19, Indonesia

**JEL Classification:** L26, O14, O23

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## 1. Background

The coronavirus disease (COVID-19) pandemic has become an unprecedented public health crisis. The virus has spread rapidly and triggered dramatic economic shocks across the world (World Bank, 2020). As we may expect, restricted human mobility depresses economic activities. This has created significant disruptions to the global supply chain, which has affected almost all countries' domestic production. Consumers are also becoming more concerned with the health and safety of products, and those concerns have translated into lower consumer confidence.

While the COVID-19 pandemic created tremendous pressures on the business sector, micro, small, and medium-sized enterprises (MSMEs) are now more vulnerable than ever. In Indonesia, around 37 million MSMEs, which provide 54.7 million jobs, are at significant risk of being adversely affected by COVID-19. Significant pressures stem originally from supply and demand shocks happening at the same time. On the supply side, restrictions on the population's mobility through social distancing or working from home reduce the number of workers that operate businesses. For sectors relying on inputs, the spread of COVID-19 has disrupted supply chains, leading to shortages of parts and intermediate goods.

In recent months, however, we have seen how COVID-19 has amplified the demand shock rather than supply (Kimura, 2020). As countries such as China contain the virus, production activities are returning to normal (Dai, Hu, and Zhang, 2020; World Bank, 2020). However, demand remains lagging. In Indonesia, despite being less stringent than other countries, a large-scale social distancing policy (known as *Pembatasan Sosial Berskala Besar/PSBB*) imposed by regional governments adversely affected MSMEs. This is particularly so in sectors relying on close human interactions such as restaurants, trade, and tourism.

In addition, jittery financial markets disproportionately affected MSMEs, with increased uncertainties constraining their necessary access to finance. To respond, the Ministry of Finance supported MSMEs with loan programmes placed in state-owned banks. This policy, which covers credit restructuring, interest rate subsidies, and other initiatives, would reduce a potential credit crunch for MSMEs.

Nonetheless, the extent to which any policy can ease the adverse impact of COVID-19 on MSMEs remains unknown.

Despite significant pressures from COVID-19, some MSMEs appear to have navigated the crisis better than others. Our preliminary analysis suggests that utilisation of the internet and being part of the supply chains have been critical determinants for lessening the impact of COVID-19.

This paper is an attempt to dig deeper into the condition of MSMEs in Indonesia and how they have navigated the pandemic. We also collect important information related to policy responses aimed at helping MSMEs. The following sections will describe our research questions, framework, methodology, and data. We also present some preliminary findings based on our available data.

## **2. The Landscape of MSMEs in Indonesia**

Indonesia's MSMEs contribute 60% of the national output, and their workers account for 43% of employment.<sup>1</sup> Using *Badan Pusat Statistik* (BPS/Statistics Agency) data, our estimate suggests that, in 2019, 88.3% of MSMEs in Indonesia were micro and small businesses and most operated in the informal sector.<sup>2</sup> As in many countries, MSMEs in Indonesia have been the backbone of job creation. The number of workers employed in this segment reached 54.7 million.

Non-agricultural MSMEs are concentrated in trade, followed by hotel and restaurant services and manufacturing. MSMEs in agriculture account for most of the total (around 13.7 million). On the other hand, most non-agriculture MSMEs (around 10.7 million) are in trade. Manufacturing and hotels and restaurants created significant numbers of MSMEs as well: 3.6 million and 3.8 million MSMEs, respectively. As the country has embraced the digital economy, including e-commerce, MSMEs in transportation and warehousing have grown rapidly and begun taking a larger share in services.

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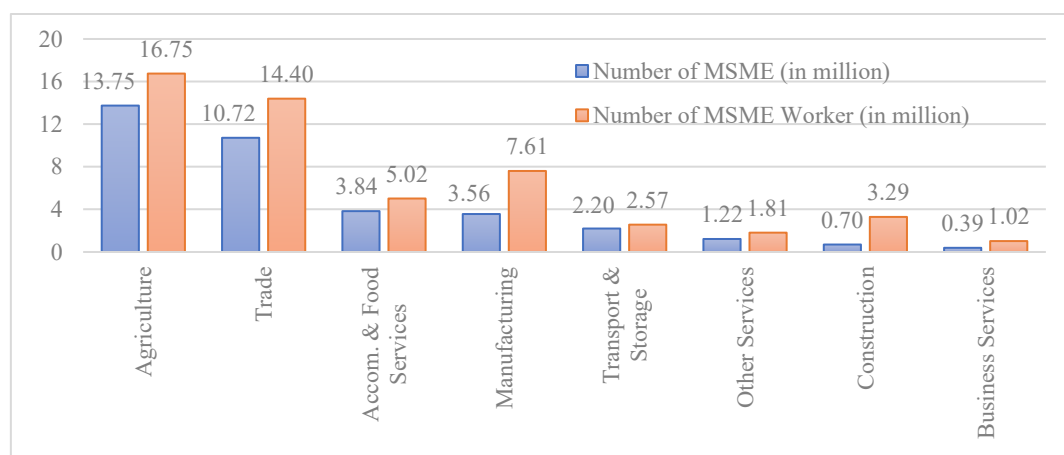
<sup>1</sup> Data on MSMEs' output contribution are from *Perkembangan Data Usaha Mikro, Kecil, Menengah dan Usaha Besar 2017-2018*. Ministry of Co-operation and MSME.

<sup>2</sup> We use Sakernas data. MSMEs are defined here as individuals who are self-employed or are employers assisted with paid and unpaid workers.

A single MSME in Indonesia creates on average 1.5 jobs.<sup>3</sup> The construction sector has the highest job creation rate, i.e. a business unit creates on average almost five jobs. Construction is known as a labour-intensive sector. Surprisingly, MSMEs in the education sector also provide a relatively high number of jobs, i.e. 3.86 (or 4) per unit. These sectors, however, are relatively small compared to the manufacturing and trade sectors. For instance, a manufacturing MSME creates at least two jobs; with 3.56 million MSMEs, it creates 7.6 million jobs.

On the credit side, outstanding loans to MSMEs have continued increasing, with the trade sector taking up a significant share of all credits. Up to February 2020, the total bank loans to MSMEs have reached Rp1,113.86 trillion, or 8.77% growth year-on-year. The trade sector accounted for half of those loans, totalling Rp526.4 trillion. Meanwhile, the number of MSME bank loan accounts has reached 16.05 million, or about one-third of the total.

**Figure 1: Number of MSMEs and Employment (Selected Sectors)**

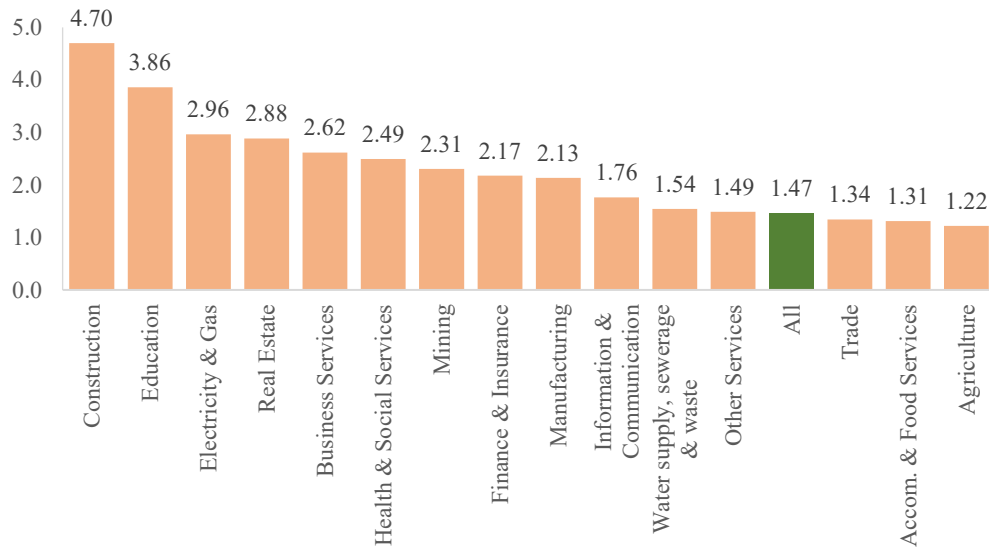


MSME = micro, small, and medium-sized enterprise.

Source: Sakernas 2019 BPS.

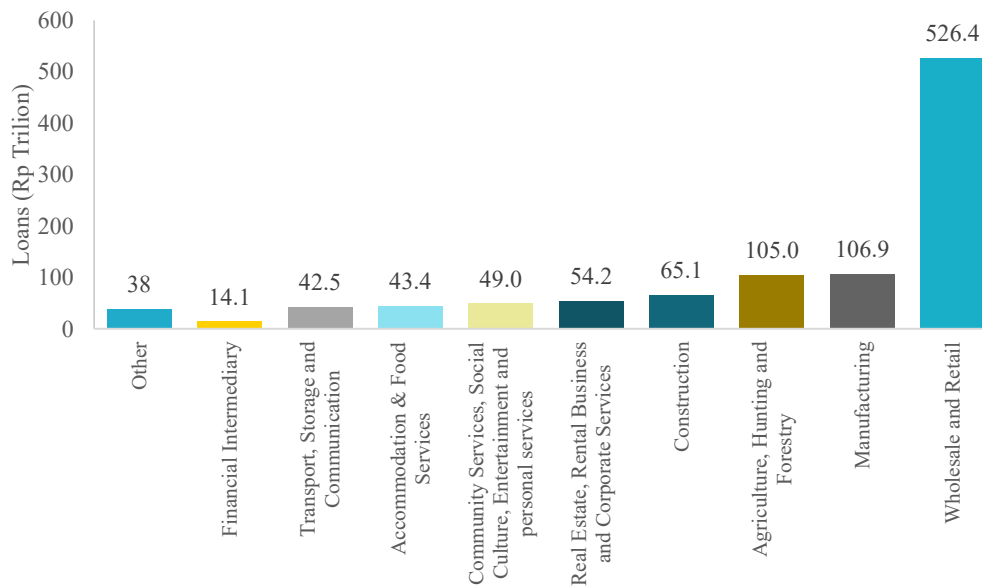
<sup>3</sup> Job creation rate is the number of jobs created by a single MSME.

**Figure 2: Job Creation Rate (Average Worker per Unit)**



Source: Sakernas 2019 BPS.

**Figure 3: MSME Credit by Sector in 2019 (Selected Sectors)**



Rp = Indonesian rupiah; MSME = micro, small, and medium-sized enterprise.  
Source: Financial Services Authority (OJK).

### 3. Policy Framework

Kimura (2020) proposed a policy framework to map the space of issues and necessary responses to COVID-19. The framework also applies in this analysis when it is broken down into a more specific scope, such as with MSMEs. As proposed in the framework, to address lower economic activities due to social distancing, it is important to design policies encouraging more penetration of digital technology.

This policy paper expands upon Kimura's policy framework by approaching MSMEs through two lenses: the role of digital technology and the integration into supply chains. The role of digital technology has been widely cited as allowing businesses to expand markets. Moreover, as we observed further, digital technology, particularly the internet, allows business to transform interactions with customers from person-to-person to digital interactions. This greatly provides ways for small businesses to manage their operations. At the same time, the integration of MSMEs into supply chains has helped them to mitigate supply and demand pressures. MSMEs supplying products to big companies appear to manage the demand shock.

**Figure 4: Policy Framework for Overcoming COVID-19**

Item	Emergency responses	Exit policies	Policies for the new normal
Health policy	<ul style="list-style-type: none"> <li>Conduct social distancing</li> <li>Provide testing</li> <li>Keep medical treatments within capacity</li> </ul>	<ul style="list-style-type: none"> <li>Carefully remove social distancing</li> <li>Set medical services back to normal</li> <li>Develop international collaboration to exit (medical supply, vaccines, quarantine)</li> </ul>	<ul style="list-style-type: none"> <li>Establish long-term healthcare system</li> <li>Disseminate health insurance</li> <li>Develop international cooperation for pandemic prevention</li> </ul>
Macroeconomic policy	<ul style="list-style-type: none"> <li>Stabilise exchange rates and avoid a collapse of asset markets</li> <li>Provide mitigation to help businesses and people at risk</li> </ul>	<ul style="list-style-type: none"> <li>Provide macroeconomic stimulus (monetary, fiscal)</li> <li>Develop international macro policy coordination</li> </ul>	<ul style="list-style-type: none"> <li>Resume fiscal health and accelerate inclusion to improve resilience</li> <li>Develop macro policy coordination framework</li> </ul>
Policies for IPNs	<ul style="list-style-type: none"> <li>Keep IPNs and related industries alive with human distancing</li> </ul>	<ul style="list-style-type: none"> <li>Keep IPNs and related industries alive with worldwide recession and some restriction on people's movement</li> <li>Strengthen location advantages and reduce service link costs (connectivity, trade and investment liberalisation/facilitation)</li> </ul>	<ul style="list-style-type: none"> <li>Better position in IPNs with competitive location advantages (human capital, infrastructure, institutions) and reduced service link costs</li> <li>Make ASEAN a competitive region to attract innovative production networks</li> </ul>
Policies for a digital economy	<ul style="list-style-type: none"> <li>Remove bottlenecks for teleworking and other digital connectivity</li> </ul>	<ul style="list-style-type: none"> <li>Utilise ICT to strengthen international competitiveness in IPNs</li> <li>Apply ICT in traditional industries</li> <li>Encourage digital-related businesses</li> <li>Promote e-government</li> <li>Establish domestic and international policy discipline for the free flow of data and data-related businesses</li> </ul>	<ul style="list-style-type: none"> <li>Effectively utilise ICT for development</li> <li>Develop innovation hubs to promote the application of ICT</li> <li>Establish a secure policy environment for the free flow of data</li> <li>Further develop the ASEAN Digital Integration Framework, E-commerce Agreement, and other initiatives</li> </ul>
Economic situation	<ul style="list-style-type: none"> <li>Forced halting of economic activities for social distancing</li> </ul>	<ul style="list-style-type: none"> <li>Prolonged recession in the world</li> <li>Slow recovery of the cross-border movement of people</li> </ul>	<ul style="list-style-type: none"> <li>The new normal</li> <li>More efficient/thick value-added production networks</li> <li>More penetration of digital technology</li> </ul>

ASEAN = Association of Southeast Asian Nations; IPN = international production network; ICT = information and communication technology.

Source: Kimura (2020).

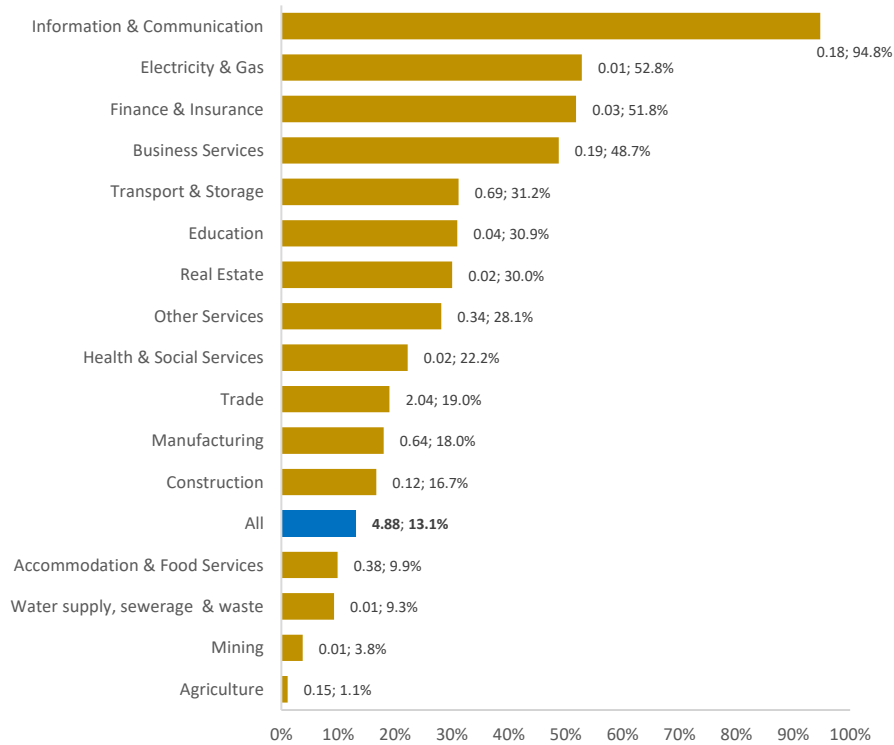
The proposed framework also helps us to formulate policies for specific issues. With the low digital adoption amongst MSMEs, the framework highlights the importance of utilising information and communication technology (ICT). It also raises the need to establish a secure policy environment for the free flow of data. The latter is crucial as a significant portion of MSMEs have joined market platforms with various consumers, where ensuring data protection will be critical. Lastly, in the regional context, the framework calls for further developing the Association of Southeast Asian Nations integration framework, including e-commerce agreements. With a solid growth of e-commerce in the region, the comprehensive framework of e-commerce will be much expected by business players, particularly MSMEs in the region.

#### **4. Digital Technology Adoption amongst MSMEs in Indonesia**

Discussions of the digital economy, particularly aimed at encouraging digital adoption amongst traditional business MSMEs, have taken centre stage in recent months. Our preliminary analysis based on the 2016 economic census suggests that only 13% of MSMEs use the internet for marketing and delivering their products and services (see Figure 5). Low access to the internet constrains MSMEs from expanding their market. It also limits MSMEs' ability to mitigate the impact of COVID-19.

ICT adoption, represented by the access to the internet, in traditional industries or sectors is also very low. MSMEs in agriculture, trade, accommodation, and restaurants (making up to three-quarters of the total) have very low internet utilisation. Only 1% of MSMEs in the agriculture sector use the internet for selling products. Meanwhile, only one out of 10 MSMEs in accommodation and food services – a sector with rapid digitalisation – uses the internet for its business. The trade sector, perhaps supported by growing e-commerce, fares relatively better in terms of internet adoption; that is, almost 20% MSMEs in this sector use the internet.

**Figure 5: Adoption of the Internet amongst MSMEs**



MSME = micro, small, and medium-sized enterprise.

Note: The first figure outside the bar indicates number of MSMEs in million unit. The latter reflects the percentage to the total number of MSMEs in that sector.

Source: The 2016 Economic Census.

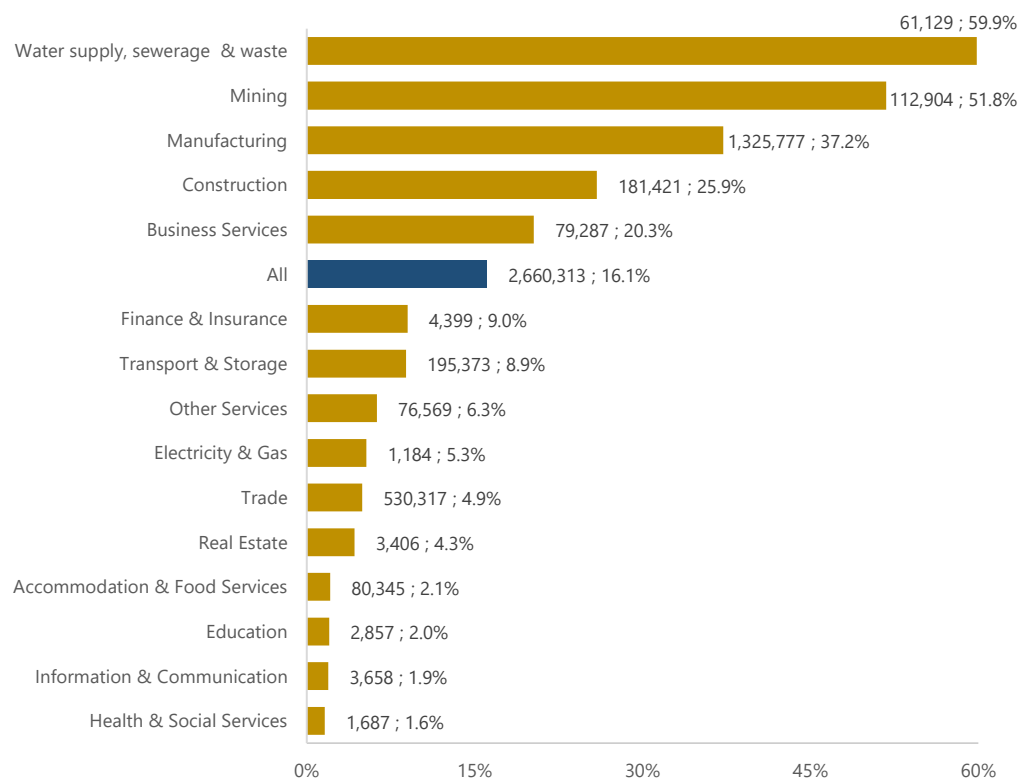
The COVID-19 pandemic appears to have accelerated the adoption of digital technologies. Currently, there are no coherent policies on ICT adoption as a tool to mitigate the impact of COVID-19. The framework described in Figure 4 provides guidelines to design such policies. For example, to address traditional industries such as agriculture, fisheries, cottage industries, transportation, and tourism, we may encourage the introduction of ICT through a so-called ‘feedback’ strategy.

In the space of international production networks (IPNs), although it is not directly related, we also investigate whether participation in the supply chain of larger firms would help MSMEs in navigating the crisis. Based on the 2016 economic census, we found that 16% are part of the upstream supply chain for their sectors (Figure 6). Almost 70% of MSMEs in public services, such as water supply and waste management, provide services to large enterprises. Despite the COVID-19 outbreak, these MSMEs are more likely to continue their contracts with those



large enterprises. Some MSMEs in the manufacturing sector could fare better, as more than a third are suppliers for downstream industries. On the other hand, only 2.1% of MSMEs in hotels and restaurants are suppliers for other businesses. This low share of MSMEs in the industry supply chain is another reason why the hotel and restaurant sector has been hit the hardest.

**Figure 6: MSMEs Integrated to Supply Chain of other Firms**



MSME = micro, small, and medium-sized enterprise.

Note: The first figure outside the bar indicates number of MSMEs in million unit. The latter reflects the percentage to the total number of MSMEs in that sector.

Source: The 2016 Economic Census.

Being integrated into supply chains set these MSMEs in a relatively better shape than downstream MSMEs. Upstream MSMEs provide intermediate goods or services to downstream enterprises. They typically enjoy the advantage of economies of scale. Upstream MSMEs could also rely on capital structures, which makes them relatively bigger in size; thus, they are in a better position.

#### 4.1. Determinants of Digital Adoption and Supply Chain amongst MSMEs

We attempt to understand certain determinants explaining digital adoption amongst SMES. In addition, we also look over variables that may explain certain characteristics explaining variation in the integration of supply chain. We use a simple definition of being in the supply chain. That is, as MSMEs sell products to other firms and not final consumer, we denote them as part of the supply chain. Moreover, we use a linear ordinary least square as follows:

$$y_{ik} = X_{ik}\beta + u_k + \epsilon_{ik}$$

$y_{ik}$  is the binary dependent variables, which are the internet adoption (1 is adopting the internet in their business, 0 otherwise) and the supplier of other firms (1 is supplier to other firms, 0 otherwise). Our parameters of interest are  $\beta$ . All regressions are controlled for with province-fixed effects in order to capture provincial effects on certain characteristics.

Table 1 displays the results. Column 2 exhibits the result of the internet adoption while column 3 shows the result of the supply chain equation. As expected, MSMEs in information and communication are more likely to adopt the internet for their business activities. Controlling for other things as a constant, MSMEs in information and communication have a 20.5% greater likelihood of accessing the internet for their business compared to other sectors. The likelihood is significant at conventional confidence level of 99%. On the other hand, trade, hotel and restaurants, and transportation are less likely to connect with the internet.

The education of the MSME owner explains the variation in internet adoption. Owners completing tertiary education are associated with having their business connected to the internet (9.3%). The legal status of MSMEs also suggests a positive relationship with internet adoption. MSMEs with limited company status are more associated with higher internet adoption. Being a member of an association and having access to credit are also positively associated with internet adoption.

We also find that market outreach beyond provincial boundaries explains variation in internet adoption. Specifically, higher exports are associated with higher internet adoption. We also observe the positive relationship between

products sold outside provincial boundaries and internet usage. While we are not able to tell more about the direction between these two variables, the evidence seems to suggest that MSMEs with extensive market access are more likely to utilise the internet. MSMEs connected to international markets from the input side are associated positively with internet usage.

**Table 1: Determinants of Internet Adoption and Supply Chain**

Variable	Internet for business	Being supplier to other firms
Manufacture (1= manufacturing sector, 0 other)	0.000259 (0.000653)	0.174*** (0.00104)
Trade (1= trade sector, 0 other)	-0.00381*** (0.000571)	-0.0730*** (0.000726)
Hotel & Restaurant (1= hotel sector, 0 other)	-0.0329*** (0.000560)	-0.109*** (0.000723)
Transport & Warehouse (1= transport sector, 0 other)	-0.0157*** (0.000749)	-0.0413*** (0.00117)
Information & Comm. (1= information sector, 0 other)	0.205*** (0.00198)	-0.0964*** (0.000989)
Owner has tertiary education (1= yes, 0 no)	0.0931*** (0.000891)	-0.0122*** (0.000841)
Limited Entities (1= yes, 0 no)	0.270*** (0.0145)	0.298*** (0.0143)
Association Member (1= yes, 0 no)	0.0586*** (0.00184)	0.0891*** (0.00205)
Has access to credit (1= yes, 0 no)	0.0324*** (0.000664)	0.0272*** (0.000860)
Percent of product exported	0.00329*** (0.000130)	0.00203*** (0.000120)
Percent of product sold to other provinces	0.00155*** (2.69e-05)	0.00325*** (3.55e-05)
Percent of input imported	0.000534*** (5.43e-05)	0.00127*** (8.01e-05)

Variable	Internet for business	Being supplier to other firms
Percent of product sold to other firms	0.000309*** (0.00002)	
Percent of product sold to government inst.	0.00143*** (0.00000)	
Percent of product sold to final consumer	5.38e-05*** (0.00000)	
Observations	1,509,890	1,509,890
R-squared	0.079	0.118

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Source: The 2016 Economic Census on MSMEs.

Column 3 of Table 1 also describes the determinants of being in supply chains. We can see that MSMEs in the manufacturing sector are more likely to supply their products to other firms. Specifically, they are 17.4% more likely to be integrated with the supply chain. This contrasts with MSMEs in trade, transport and information and communication sectors. This suggests that MSMEs in the latter sectors are more likely to serve the final consumer.

Interestingly, owners' tertiary education is associated with a lower likelihood of their business being integrated with supply chains. MSMEs with limited company status are almost 30% more likely to be in the supply chain. We also find a positive relationship between access to credit and being integrated with the supply chain.

We again observe that well-connected MSMEs with the international markets, i.e. MSMEs that export and import, are more likely to be in the supply chain. From the regression result, we find that a higher percentage of exports is positively associated with more likelihood of being in the supply chain. Higher imported inputs are also positively associated with being in the supply chain. This reaffirms that trade facilitations will be the critical policy helping MSMEs get integrated with international markets.

To summarise our empirical result, we show that digital adoption and being integrated with supply chains are closely related with international trade. Thus, it calls for greater government roles in facilitating access to the international trade.

#### 4.2. Impacts of COVID-19: Some Estimates and Findings

COVID-19 will impact 20 million MSMEs, and almost 30 million workers are at risk of losing jobs. These figures stem from sectors that are adversely affected by containment policies, such as mandated social distancing or precautionary behaviour. MSMEs in hospitality and food services are amongst the hardest hit by social distancing. Some are negatively affected through supply chain channels and input shortage. The sudden drop in demand has also squeezed MSMEs' sales. An ongoing survey on MSMEs (with the sample size of 177) showed that 70.1% saw their sales fall by more than 50%.<sup>4</sup> Some have started dismissing their workers.

We use the input–output (IO) table analysis – particularly the SME IO table – to estimate several parameters such as output or employment multipliers. These parameters will be used to assess potential impacts of COVID-19 on MSME output. Table 2 exhibits detailed income and output multipliers by sector.

**Table 2: Income and Output Multiplier**

Sector	Income	Output	Total
Agriculture	0.31	2.01	2.32
Mining	0.29	1.98	2.27
Manufacturing	0.38	2.98	3.36
Electricity & Gas	0.26	2.68	2.94
Water and waste management	0.29	2.65	2.94
Construction	0.46	3.31	3.77
Trade & repair of motor vehicles	0.41	2.74	3.14
Transportation and storage	0.38	2.92	3.30
Accommodation & food service	0.39	2.60	3.00
Information and communication	0.29	2.01	2.30
Financial and Insurance	0.35	2.15	2.50
Real Estate	0.29	2.25	2.54

<sup>4</sup> *Implikasi Pandemi Covid-19 dan Peran Dunia Usaha*, Hariyadi Sukamdani, in public hearing between APINDO and representatives.

Professional and business services	0.29	2.25	2.54
Public administration	0.90	3.59	4.48
Education	0.73	3.33	4.06
Health and social work	0.73	3.33	4.06
Other services	0.48	2.94	3.42

Source: SME IO table. Authors' calculation.

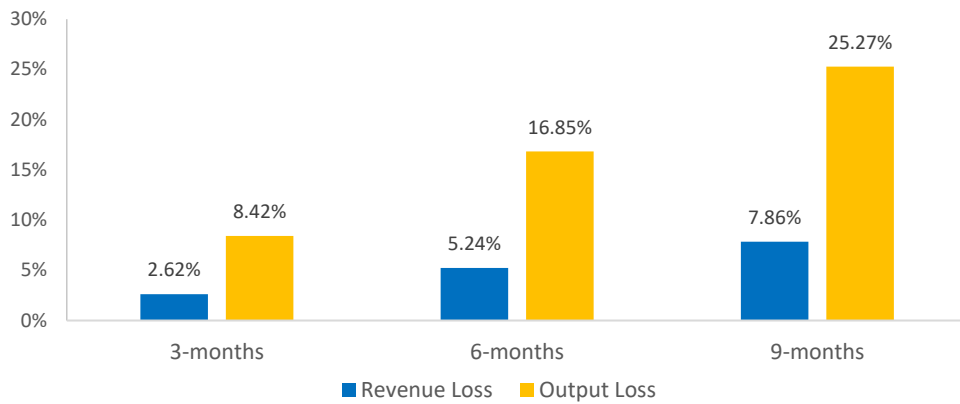
We estimate the impact of COVID-19 on MSMEs by imposing certain assumptions. First, we estimate potential revenue loss from the 2019 Labour Force Survey data. Revenue loss is assumed to be equal to earnings of workers classified as self-employed and as an employer. That is, we assume that COVID-19, including the containment policies, led to complete production stop. The next step is to multiply revenue loss with the output multiplier.

Based on this approach, we find that a production halt for 3 months would cost the national output up to 2.62% from revenue loss and 8.42% from the MSME output loss.<sup>5</sup> Some MSMEs, as some reports suggested, have decided to stop production and sales due to no demand (Kompas, 2020; Jakarta Post, 2020).<sup>6</sup> Our estimate suggests that if all MSMEs faced such extremity, revenue loss from no demand at all would be a huge cost to the economy. Reduced revenue or income would then lead to lower output. Figure 7 shows potential impacts on revenue and output. Our estimate suggests that a 3-month cost to the national output, in such a severe case, would exceed the fiscal stimulus package as a percentage of gross domestic product (GDP). The economy could lose further output by one-fourth of the GDP if MSMEs stopped for 9 months.

<sup>5</sup> Revenue loss is calculated with revenues or earnings of MSMEs from Sakernas data. Meanwhile, output loss is revenue loss multiplied by an output multiplier.

<sup>6</sup> Kompas, 'Kadin: Sekitar 30 Juta UMKM Tutup karena Pandemi Covid-19', downloaded from <https://money.kompas.com/read/2020/07/28/170100126/kadin--sekitar-30-juta-umkm-tutup-karena-pandemi-covid-19>.

**Figure 7: Estimated National Revenue and Output Losses**  
(% of GDP)

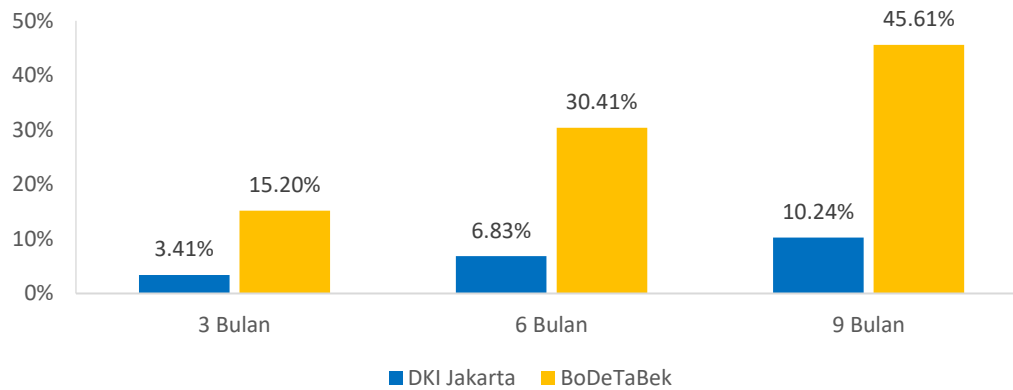


GDP = gross domestic product.

Source: Authors' calculation based on output multiplier in Table 1 and Sakernas (2019).

We use the same approach and apply to the central locus of the pandemic, that is DKI Jakarta and surrounding cities (the Greater Jakarta). Our estimated impacts on the Greater Jakarta is in Figure 8. Based on our estimate, we find that DKI Jakarta may lose 3.41% of its GDP due to a 3-month MSME sales stop. Neighbouring regions, i.e. Bogor, Depok, Tangerang, and Bekasi (Bodetabek), may lose up to 15.2% of their GDP from no demand at all for 3 months. Regions at outbreak centres suffer tremendous economic loss. The potential economic loss from closed MSMEs in DKI Jakarta is much lower than that in Bodetabek, partly because DKI Jakarta's economy is largely made of medium and large companies. On the other hand, MSMEs have flourished in neighbouring regions, since Bodetabek is largely residential. MSMEs in Bodetabek are a critical part of its economy.

**Figure 8: Estimated Output Losses in DKI Jakarta and Bogor, Depok, Tangerang, and Bekasi (BODETABEK)**  
(% of Regional GDP)



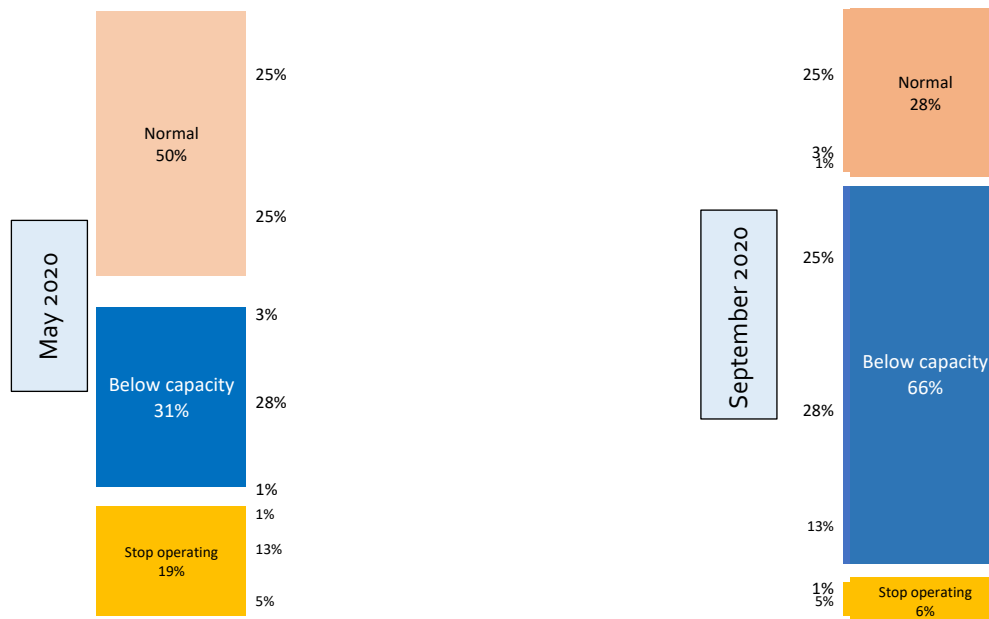
GDP = gross domestic product.

Source: Authors' calculation based on output multiplier in Table 4.1 and Sakernas (2019).

Up to December 2020, MSMEs in Indonesia are still under pressure. We use the Mandiri Institute MSME survey to assess how they have navigated through the COVID-19 pandemic. Based on the survey data, we found that by September 2020, 66% of MSMEs are operating below their full capacity. Meanwhile, only 28% operate normally and 6% already stopped their operations. Figure 9 suggests that almost 25% of MSMEs that had normal operations in May now operate below their full capacity. It is very small, around 3%, the MSMEs that shifted from operating below full to normal by September 2020.



**Figure 9: Condition of MSMEs in May and September 2020**



MSME = micro, small, and medium-sized enterprise.

Source: Mandiri Institute MSME Survey 2020.

It is important to note, however, that the latest condition we observe is in September 2020. Given the very dynamic situation of both the COVID-19 infection and its containment policies, the situations may have changed. Based on the high-frequency data on transaction, we observe some signs of recovery. Notwithstanding this, the recovery trend is not solid enough, particularly for MSMEs. Indeed, with the rising positivity cases of COVID-19, the progress of recovery appears to hold back. This needs more attention from the government.

## 5. The Recovery Path for MSMEs

Some local governments have relaxed containment measures. DKI Jakarta, for example, has relaxed social distancing policy by allowing dine-in restaurants and stores to open at full working hours. Trade and restaurants are two of the largest sectors populated with MSMEs. To understand whether these sectors get better, we construct a spending index based on transaction volumes. The trend of the spending index reflects two important things: First, it shows the extent of household purchasing powers. Second, when the spending trend shows a return to pre-COVID

19 level, it means that demand is back to normal, which then pulls MSMEs to operate at full capacity.

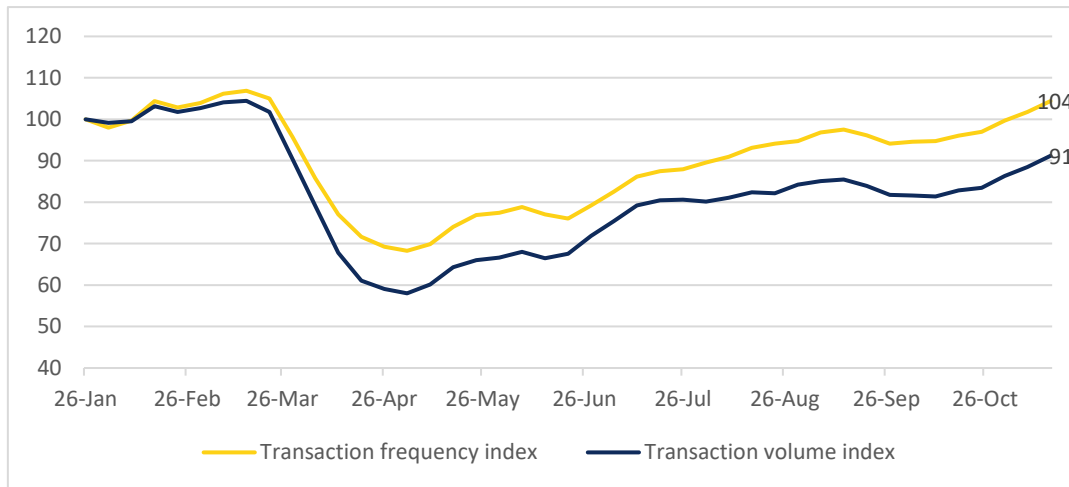
The spending indices also give the most recent and up to date economic situation compared to the official GDP figure. We observe that spending plunged substantially during the first PSBB, suggesting the containment policy was a significant shock to the economy (see Figure 10). It is important that this is the nationwide spending. But as DKI Jakarta typically takes the largest share of national spending, it may reflect that the policy of DKI Jakarta has translated into the national level.

But we see that the increased COVID-19 confirmed cases hold recovery back. When DKI reopened the economy back to the new normal, spending began to improve. But as the confirmed cases of COVID-19 continued to increase in September, local governments in big cities such as Jakarta and nearby cities reimposed stringent measures. DKI Jakarta re-announced the large-scale social distance policies (known as PSBB II). Between September and mid-October, spending dropped precipitously.

Not all sectors are affected equally, and retail and restaurants are amongst the hardest hit. The first round of PSBB significantly restricted economic activities. Shopping malls were asked to close, and no restaurant was allowed to have dine-in. Figure 11 breaks down spending data into merchant category: department stores, restaurant, retail, and supermarket. Spending indices for department store, restaurants, and retail dropped significantly during March–April 2020. Indeed, spending from department stores dropped well below 20% of the January level.

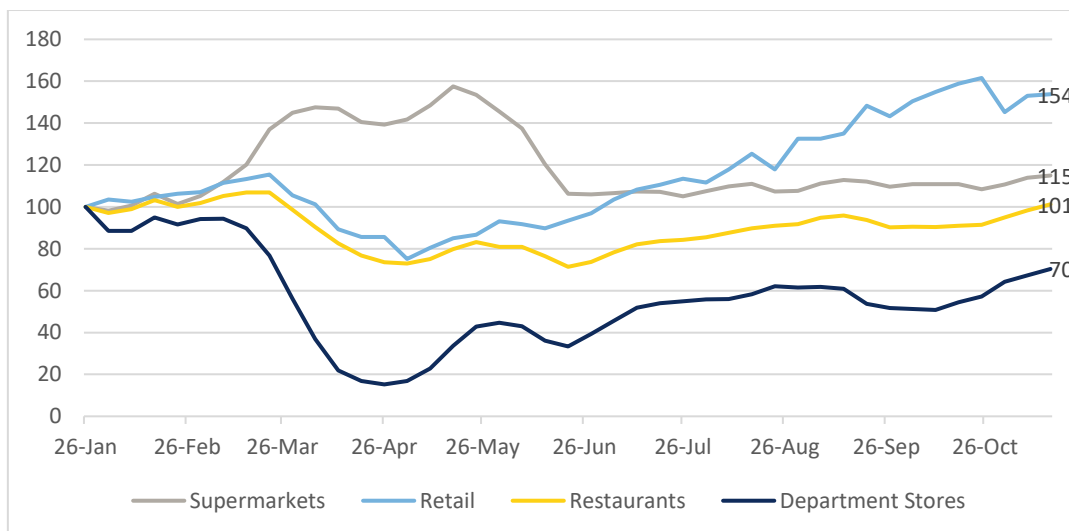
The second round of PSBB disproportionately hit department stores and restaurants. Different from the first PSBB, the second policy was relatively relaxed to certain sectors, such as shopping centres, which the DKI government allowed to open at 50% capacity. Meanwhile a stricter rule applied to restaurants. Dine-in was not allowed and this disproportionately hurt restaurants which rely most of their revenues on dine-in customers.

**Figure 10: Spending Index**



Source: Big data analytics, Bank Mandiri.

**Figure 11: Spending Index by Category**



Source: Big data analytics, Bank Mandiri.

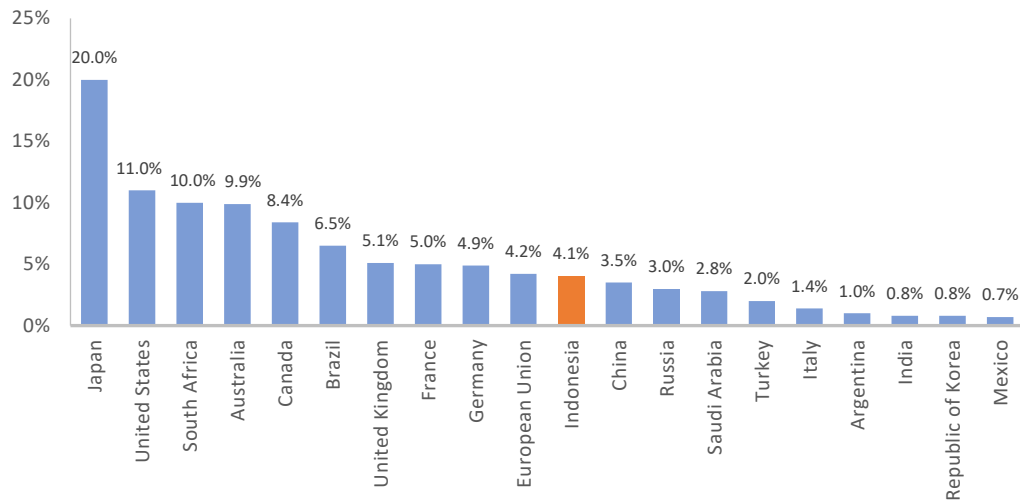
We saw a tumbling spending on restaurants for a while, but it returned on the recovery path. Following the announcement of PSBB II, spending to department stores and restaurants dropped. Although it can operate at normal hours yet with limited capacity, the drop in spending in department stores was deeper than for restaurants. Meanwhile, supermarkets appear to be isolated from the impact of PSBB II. This may not be surprising since supermarkets provided day-to-day household needs. However, as DKI ended the second round of PSBB, spending picked up.

## **6. Government Support through Fiscal Stimulus**

As COVID-19's spread starts easing in some regions, the government has allocated fiscal stimulus amounting to Rp641 trillion for economic recovery. The additional budget will be available to ensure banks open up new financing options for MSMEs and to strengthen working capital of state-owned enterprises, as well as fiscal capacity of local governments. The government has also increased the support for social safety net and tax incentives. In short, the focus of fiscal stimulus has now expanded to address the difficulties of private sectors to generate revenue and to prepare them to restart a business.

Indonesia's fiscal stimulus package is around 4.1% of GDP, which is comparable to emerging markets in the G20 (see Figure 12). There have been genuine concerns that the fiscal stimulus is too little to push the economy out of the crisis. Many agreed that the impact of COVID-19 would be unprecedented. Hence, it calls for greater actions. Yet, by juxtaposing Indonesia's stimulus package size against other G20 countries', the economic package as a percentage of GDP is within the range of those emerging economies. South Africa and Brazil provide large stimulus packages relative to GDP, that is, 10% and 6.5% of their GDPs, respectively. Indonesia's stimulus package, on the other hand, is on par with that of Russia, Saudi Arabia, and Turkey, which spend around 2%–3% of their output for tackling the crisis.

**Figure 12: Fiscal Stimulus Package amongst G20 Countries**

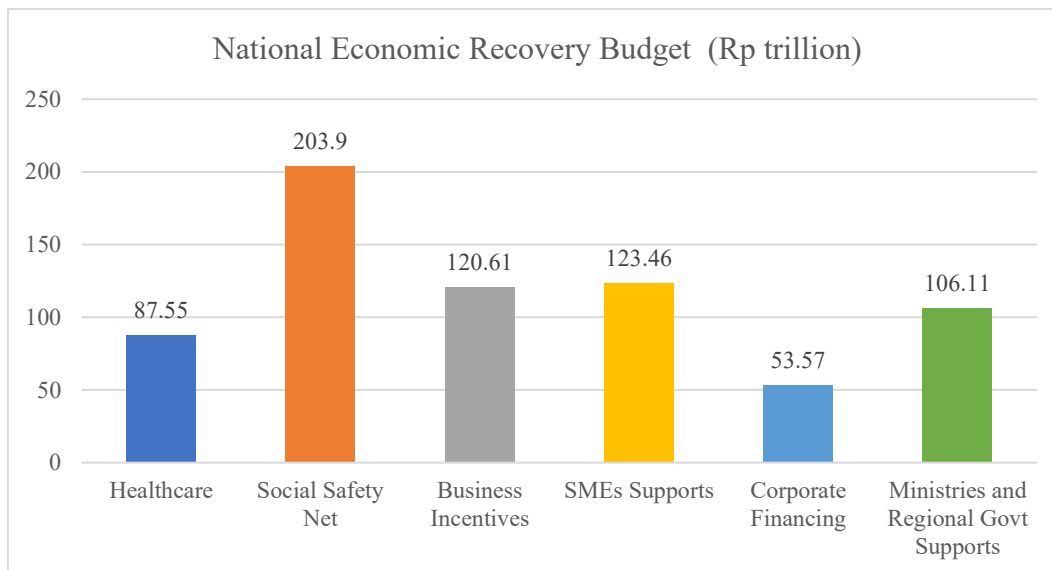


Source: G20.

Figure 13 below shows fiscal supports for the economic recovery programmes. Supports for the poor will be channeled through social safety net of Rp203.9 trillion. Of this figure, around Rp120 trillion will be spent to increase the current social assistance programmes, such as the Family Hope Programme (Program Keluarga Harapan) and in-kind transfers. As part of social assistance, the government has also launched a new programme to support employment, i.e. the pre-employment card programme. To maintain food stocks and prices, the government has allocated Rp25 trillion to the food and logistics sector. The budget for education sector has been adjusted up to Rp20 trillion.

Business incentives amount to around Rp120.61 trillion. In this area, the government has launched tax relief through deferred labour income tax (PPh 21) and value-added tax for up to 6 months. The government has also deferred import duties on several tariff measures. This stimulus aims to target manufacturing industries and those MSMEs that have been badly affected by the pandemic.

**Figure 13: Fiscal Stimulus by Allocation**



SME = small and medium-sized enterprise; SOE = state-owned enterprise.  
Source: Ministry of Finance. As of October 2020.

Up to October 2020, the government allocated up to Rp123.46 trillion for MSMEs (see Figure 13 and Table 3). The support will include Rp34.15 trillion on interest subsidy (Table 3). The subsidy is available along with Rp87.59 trillion for credit restructuring and Rp6 trillion for new credit guarantees. Around Rp27.26 trillion is allocated for MSMEs through the banking sector and other financial institutions in the form of interest subsidy for up to 6 months. This policy is planned to be expanded. For subsidised credit (Kredit Usaha Rakyat/KUR) recipients, the government has allocated Rp6.4 trillion in the form of interest subsidy. The government also provides interest subsidy for MSMEs receiving microcredit through the Ministry of Cooperative and MSME (Kementerian Koperasi dan UMKM) up to Rp489.7 billion.

**Table 3: Government Support for MSMEs**

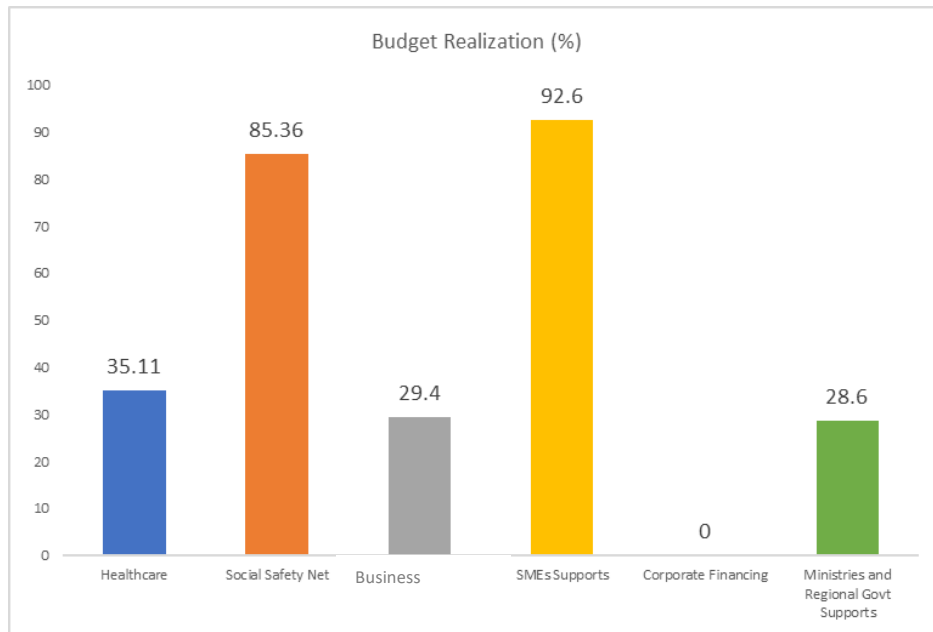
No	Channel	Beneficiary	Benefits	Total Supports
1	Banking sector and other financial institutions	Small and Micro (business with turnover of less than Rp500 million)	1) Postponed payments; and 2) interest subsidy: 6% interest rate for 3 months and 3% for the next 3 months	Rp27.26 trillion interest subsidy and Rp87.59 trillion for credit restructuring
		Medium (Business with turnover of Rp500 million–10 billion)	1) Postponed payments; and 2) Interest subsidy: 3% interest rate for 3 months and 2% for the next 3 months	
2	KUR, UMi, Mekar & Pegadaian	Kredit Usaha Rakyat (KUR) recipients	1) Postponed payment; and 2) Interest subsidy: 6% interest rate for 3 months and 3% for the next 3 months	Rp6.4 trillion interest subsidy
		Beneficiaries of Ultra Micro (UMi), Mekaar PNM, and Pegadaian	1) Postponed payment; and 2) Interest subsidy of 6% for 6 months	
3	LPDB, LPMUKP, UMKM Pemda	Beneficiaries of Lembaga Pengelola Dana Bergulir (LPDB), LPMUKP (Lembaga Pengelola Modal Usaha Kelautan dan Perikanan (LPMUKP), UMKM Pemda	1) Postponed payment; and 2) Interest subsidy of 6% for 6 months	Rp489.7 billion interest subsidy

Source: Ministry of Finance.

Yet the budget realisation for critical spending such as in the health sector has been slow. Figure 14 shows the budget allocated for economic recovery programmes and their budget realisation. By October 2020, the government has allocated around Rp174 trillion or 85.36% of the budget on social assistance programmes. However, the budget realisation for the health sector – the critical sector for fighting the COVID-19 pandemic – has been far behind. Of the Rp87.55 trillion allocated for health, the budget realisation of the sector reached 35.11%, or

the equivalent of Rp30.7 trillion. The relatively low realisation would have a significant impact on the COVID-19 containment and, ultimately, affect the speed of economic recovery.

**Figure 14: National Economic Recovery Programme and Budget Realisation**



SME = small and medium-sized enterprise.

Note: Budget realisation is as of October 2020.

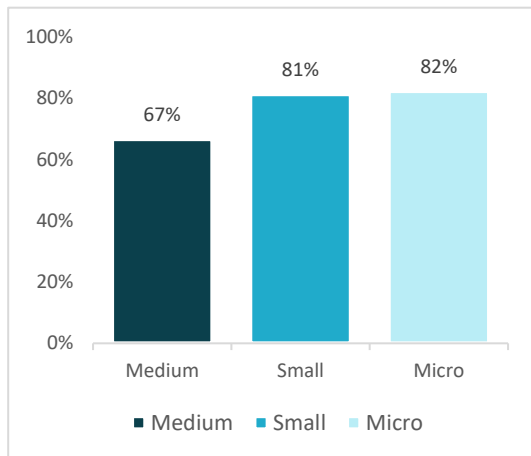
Source: Ministry of Finance.

The government has provided various programmes to support MSMEs to navigate the pandemic. However, the take-up of these programmes depends significantly on the extent that MSMEs are informed about them. Based on the Mandiri Institute's survey, we asked about the knowledge of MSMEs about the National Economic Recovery Programme (Program Pemulihan Ekonomi Nasional). We find that small and micro businesses have higher knowledge of the programme compared to medium-sized enterprises. Moreover, specific programmes that are well known by MSMEs are those with higher take-ups amongst MSMEs. Figure 6.5 shows that more MSMEs know about the loan restructuring programme, i.e. around 72%. Of those who know about the programme, 35% joined it. Meanwhile, only 13% of MSMEs joined the interest subsidy programme out of 33% of MSMEs who were aware of it. Low take-up of

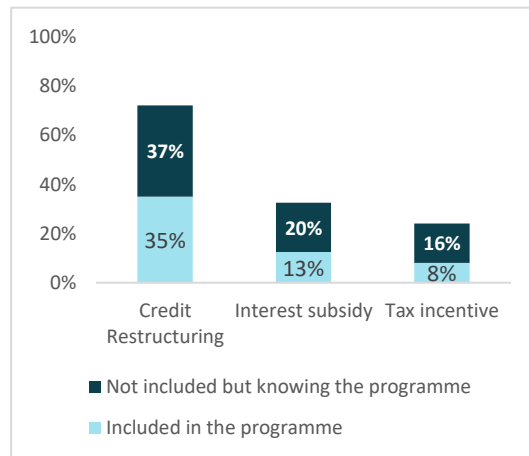


tax incentives may be caused by lower knowledge of the programme amongst MSMEs.

**Figure 15: Percent of MSMEs Knowing about the Government Support by Category**



**Figure 16: Knowledge of the Government Programmes and Take-up**



MSME = micro, small, and medium-sized enterprise.  
Source: Mandiri Institute MSME Survey.

## 7. Policy Recommendations and Key Takeaways

Indonesia is still struggling between maintaining the economy and containing the COVID-19 virus. Although this may present trade-offs, it is imperative to suppress the spread of COVID-19 while delivering economic support aimed at protecting the most vulnerable groups. Controlling the epidemic should be done by slowing the rate of infection. Notwithstanding this, some policy options are available, from specific person-to-person contact reduction on risky population, such as school closures, to stringent social distancing imposed on the whole population. The recent local government policies to contain the virus, such as large-scale social distancing, is a move in the right direction. Recent findings, though, suggest the PSBB has not been effective in reducing social interaction.

Fiscal space is rather limited; as a result, the government needs a policy framework that lays out measurable, targeted, and sustainable policy supports. The pandemic apparently will last for quite some time until the vaccine is ready for public. Consequently, the government needs to build up a policy framework that can tackle the magnitude of the public health crisis, while the fiscal aspect should

also be available and effective when needed. Thus, policy supports should be measurable, meaning that they should comprehend the extent and the depth of the crisis. Fiscal supports for the business sector should also be targeted toward groups and economic sectors that are badly affected by COVID-19. Finally, the policy timing is critical in keeping fiscal policies available at the right time.

Digital technologies offer expanded markets. Thus, a critical programme aimed at supporting MSMEs should encourage connecting with digital platforms, especially in agriculture, trade, and accommodation and food service. Switching from brick-and-mortar stores is essential, especially during this time of pandemic. On the consumer side, many of them tend to search for products online due to social and physical distancing. Accordingly, online product accessibility is very crucial in marketplace platforms. We also find that those who have better product inventories, distribution channels, and logistic shipment arrangements would also have a better chance of surviving this challenging time.

Online platforms play a critical role in encouraging MSMEs to adopt digital technologies or the internet. Streamlining processes and procedures in opening online stores would significantly benefit MSMEs with limited internet skills. Consumers are also more aware about price differences in online markets. Hence, online platforms may find it in their interest as well to partner with warehouse storages and logistics couriers. This would reduce transportation cost and ease the hassle in logistics.

Some MSMEs are agile in switching products and thus capable of delivering new high-demand products. Helping MSMEs find such markets would be a significant support in navigating through the COVID-19 crisis. Amid the COVID-19 outbreak, demand for sanitary products and personal protective equipment is high. Some garment and apparel companies have started producing personal protective equipment, such as masks.

MSMEs may need to look for another potential source of financing. Fintech may provide another venue for credit. Uncertainties in financial markets have increased MSMEs' risk profile, despite their lower non-performing loan rate compared with commercial and corporate segments. Though MSMEs used to have the least access to financial credit and liquidity, advancements in financing and

technology now offer more opportunities for them compared to 20 years ago. Some alternative financial services, such as microfinancing, venture capitals, fintech lenders, and peer-to-peer lending, are now able to channel credit to the micro businesses.

The private sector and large enterprises could play a key role in helping MSMEs as well. Some MSMEs are suppliers for large enterprises. Some large enterprises have also participated in government subsidised training programmes, which now allow MSMEs to join and receive incentivised training programmes. Assisting MSMEs to comply with health safety protocols would help them and consumers as well. In the early weeks of the COVID-19 crisis, Go-jek – a motorcycle ride hailing firm in Indonesia – implemented several health safety protocols. These initiatives assured consumers of the safety of the products and services, and also indirectly helped MSMEs with Go-Jek acting as the intermediary party that ensures the compliance of their suppliers (MSMEs).

Big enterprises could also support MSMEs by integrating them with the global supply chain and speeding up their digital transformation. Another example of the private sector's contribution can be learned from China's Alibaba Corp. Through one of its subsidiaries, Alibaba Cloud, it has launched the Anti-COVID-19 SME Enablement Programme to support the digital transformation of SMEs during the current health crisis. The company is also calling global associations that support SMEs to join the enablement programme and additional benefits until the end of June 2020.

All in all, the government supports have been critical for MSMEs that generally have up to 3 months working capital. The National Economic Recovery Program (Program *Pemulihan Ekonomi Nasional*) that supports MSMEs with certain programmes, including credit restructuring and interest subsidy, allows them to manage their cashflow. However, the government needs to support MSMEs in terms of the digital adoption. Strengthening digital infrastructure is the first important step. But the government has also to utilise ICT effectively for economic development across the country. A secure policy environment for the free flow of data is also another critical area that needs the government support.

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