

## Dealing with the COVID-19 Pandemic in Indonesia: MSMEs' Coping Strategy, Recovery Path, and Business Transformation\*

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### Abstract

Since the first confirmed COVID-19 infection in Indonesia in March 2020, the pandemic has hit the economy hard, especially the Micro, Small, and Medium-sized Enterprises (MSMEs). This study aims to analyze MSMEs' internal coping strategy to mitigate the impact of the pandemic, recovery strategy, and business transformation, as well as the needed government support to enable MSMEs to weather the crisis. Primary data was collected through a questionnaire administered to 2,535 MSMEs in 17 provinces. The results show that MSMEs' coping strategy differs across firm size, sector, region, and owners' gender. MSMEs also differ in their recovery path and medium-term business transformation in production, capital, marketing, and lines of business. Further, MSMEs require both financial and non-financial assistance, in addition to enabling the business environment to recover their businesses sustainably. The policy, academic and managerial implications of the findings are provided.

**Keywords:** MSMEs; Covid-19 pandemic; coping strategy; business transformation; Indonesia

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## 1. Introduction

Micro, Small, and Medium-sized Enterprises (MSMEs)' importance to Indonesia's economy has been evident not only in their contribution to the overall economy but also in their resilience in previous economic crises. In the past, MSMEs have shown strength in economic turbulence, including the 1997/98 Asian financial crisis and the 2008/09 global financial crisis (Sandee, Andadari & Sulandjari 2000; Mavrodieva et al. 2019).

Nevertheless, the COVID-19 outbreak in March 2020 has brought an economic crisis with a higher level of complexity to MSMEs worldwide (Cowling, Brown & Rocha 2020). Reduced people activities and mobility due to fear of virus transmission and the social restrictions imposed by the government have hindered MSMEs' offline business activities (Reardon et al. 2020).<sup>1</sup> Baldwin & di Mauro (2020) showed that the pandemic affects both the demand side (i.e., consumer's purchasing power) and the supply side (e.g., raw materials and labor mobility) of the market. Subsequently, the pandemic has severely affected MSMEs' business, decreasing revenue or business closures.

In Indonesia, in the first several months of the pandemic, ILO (2020) reported that 68% of MSMEs experienced disruptions in business activities, 65% ceased operations, and 3% went out of business. Also, in Indonesia, ABDSI (2020) reported that 48.3% of MSMEs had difficulty maintaining supply lines, 92.6% needed debt restructuring, and 26.6% experienced cash flow problems resulting in indebtedness. Most of those staying in business lost a large share of revenue, while 28% lost half of their incomes.

An enormous number of studies have been carried out to investigate the impact of the pandemic on MSMEs, both worldwide and in Indonesia case alike (see, for example, ILO 2020; ABDSI 2020; Gunadi et al. 2021; UNDP & LPEM FEB UI 2020; World Bank & Bappenas 2021; Tambunan 2020). However, this study aims to provide further comprehensive investigation on the following aspects: (1) the extent to which MSMEs' internal strategy dealt with the pandemic; (2) MSMEs' economic recovery sentiment; (3) MSMEs' business recovery strategies; (4) MSMEs' business transformation strategy in anticipating the post-pandemic business landscape; and (5) Identify the necessary government support to enable MSMEs' recovery and business transformation.

Despite several studies previously investigated the impact of the pandemic on MSMEs in Indonesia, there are still gaps in the extant literature to be filled, which also underline the contributions of this study. First, previous studies mostly drew a small sample of MSMEs or discussed precisely certain areas and sectors. In contrast, by contrasts, this study sampled 2,535 MSMEs across different economic sectors in 17 provinces throughout Indonesia. Second, the extant studies mostly partially investigated the extent of the impact and the effectiveness of government

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<sup>1</sup>In 2020, the Indonesian Government imposed large-scale social restriction on certain activities of residents in several areas with high number of COVID-19 infections.

support programs during the pandemic. By contrast, this study examined MSMEs' sentiment, strategy, and business transformation during the recovery and post-pandemic. Third, this study offers detailed perspectives distinguishing the impact of the pandemic on MSMEs with different business scales, business sectors, regions, and owner's gender.

The remainder of this paper is structured as follows. The second section briefly reviews the relevant extant and recent literature. The third section explains the research methodology, including the data collection and analysis methods. The fourth section provides and discusses the results, while the last section concludes.

### **1.1. MSMEs in Indonesia before the Pandemic**

MSMEs in Indonesia contribute to a significant portion of the informal economy. They are characterized mainly by micro-sized firms that serve the small local market with low productivity, low wages, and low educational attainment of the managers compared to the legal firms. Informality is chosen partly to evade taxes and minimize any registration fees. However, this informality may result in firms not being eligible to receive government support and not having sufficient access to financing. Hence, informality reflects MSMEs' lack of ambition to expand their business (Rothenberg et al. 2016).

Despite having many informal businesses, Indonesian MSMEs have managed to survive various economic shocks. Most Indonesian MSMEs managed to sustain their business activities comparatively better than their counterparts in other Southeast Asian countries after the 1998 Asian Financial Crisis (Wengel & Rodriguez 2006; Mavrodieva et al. 2019). Despite many MSMEs closing, a study shows that the crisis has provided excellent domestic market opportunities for many MSMEs as individuals/households turned to local products which were cheaper (Jellinek & Rustanto 1999). Additionally, Indonesian MSMEs at the time mainly used small-scale production assets and manual production techniques, which made them less dependent on imported capital goods. MSMEs also tended to self-finance; therefore, they were less susceptible to drastic changes in the currency and exchange rates as most of them were not involved with the financial sector, especially foreign investment.

In facing 2008/2009, Global Financial Crisis, not all sectors of MSMEs bore the brunt of the crisis. MSMEs during this period still employed more than 92% of Indonesia's workforce and contributed to 57.12% of GDP (Handayani, Hidayanto & Budi 2013). Most MSMEs that received negative impacts of the crisis were the ones affected by the changes in global demand for their products or had to import their raw materials, such as those producing textile and clothing, footwear and other leather goods, and wood-and/or rattan-based furniture (Tambunan 2018). In managing the crisis, most affected firms prioritized their strategy in exploring new customers or markets, which led them to turn to the domestic market.

Despite being the backbone of the Indonesian economy and being considerably resilient during the economic crisis, MSME development still faces various

constraints. One of the significant issues that most MSMEs need to solve is acquiring access to finance (see, for example, Santoso et al. 2020; Revindo & Gan 2017). Despite the increasing number of Indonesians with an account informal financial institutions increased rapidly from 20% (2011) to 49% (2017), the access to loans for SMEs was still limited, with only 39% of small-sized enterprises dan 50% of medium-sized enterprises using bank services for financing (ILO 2019). In 2017, many SMEs were categorized as not bankable based on their financial management and managerial and financial capability aspects.

MSMEs are also more limited in their access to information and communication technology (ICT) than their larger counterparts. Before the pandemic, most MSMEs still depended on cash-economy and conducted their business offline, with only 3.79 million or approximately 8% of MSMEs using online platforms to market their products in 2017 (*CNNIndonesia.com* 2017). Embracing ICT is crucial for MSMEs, considering Indonesia is an archipelagic nation with the development of MSMEs was still concentrated in several areas, mainly Jawa and Bali Islands. To create a more evenly distributed growth of MSMEs, digitalization (including e-commerce, the sharing economy, social media, and cloud-based analytics or artificial intelligence) may help reach a broader market.

Indonesian MSMEs are also less able to utilize the international markets than their larger counterparts, despite various trade agreements participated by Indonesia (see, for example, Tambunan 2009; Revindo 2017a; Wengel & Rodriguez, 2006; Revindo, Gan, & Nguyen 2017; Revindo & Gan 2018). The low competitiveness in the global market is due to problems in wide-ranging factors, including financial access, price of energy, technology use, inefficient production costs, economic factors, management skills, processes, limitation of sales, and issues with raw materials (Iriyanti & Aziz 2012; Revindo 2017b).

Most MSMEs also did not prepare for any possible disaster to disrupt their business operations. The survey on disaster resilience by Mardanugraha (2016) showed that only 3% of MSMEs considered that pandemic/epidemic a potential hazard for their business. The top coping mechanism to deal with business disruption and emergencies mainly consists of using personal savings (63%), getting loans (34%), or asking for support from family (24%). Furthermore, most respondents did not prepare any risk financing mechanism (43%) to counter possible risks happening to their business.

## 1.2. MSMEs and the Pandemic

### 1.2.1. Impact

The study of the pandemic's impact on MSMEs was initially scarce. Still, over time, as people adapted to the changing policies and restrictions, more and more primary studies on the impact of the pandemic have been carried out in many regions. The pandemic has created a negative impact on MSMEs in many countries. Between February 2020 and April 2021, 70–80% of SMEs across 32 countries lost 30–50% of their revenues (OECD 2021). The effects of the pan-

demical on the demand and supply side do not only affect the manufacturing MSMEs that produce finished products but also MSMEs that supply processed raw materials, components, spare parts, auxiliary goods, semi-finished goods, and other inputs. MSMEs in Pakistan had to face financial difficulties, supply chain problems, dropping demand, and sales and profit reduction (Shafi, Liu & Ren 2020). More than two-thirds of the survey subjects reported that they could not survive if the lockdown lasted two months. An overwhelming majority did not have any plan or preparation for the pandemic scenario. The majority of MSMEs in Batticaloa district, Sri Lanka, suffered from declining production, increasing prices in materials, marketing/sales issues, and disruption of customer communications (Santhirakumar, Narmilan & Puvanitha 2021). The declaration of an emergency state and the suspension of economic activities had also negatively affected MSME performance in Nigeria (Ambrose 2021). However, the government policy of subsidy schemes has positively impacted MSMEs' survival based on the medium-run economic impact. Meanwhile, in developing Asia, MSMEs suffered from declining sales revenues and a reduction of workers in the first few months of the pandemic (Sonobe et al. 2021).

In the case of Indonesia, the COVID-19 pandemic officially began when the Government of Indonesia began to implement extensive COVID-19 measures by issuing Government Regulation 21/2020 on 31 March 2020. These measures affect MSMEs, including (1) social/physical distancing, (2) learning and working from home, and (3) the temporary suspension of business activities in non-strategic sectors. As the government and local government require companies to temporarily halt or reduce their business activities, the operations of MSMEs, mainly consisting of offline business and labor-intensive firms, are automatically disrupted. This signifies policy implication on the supply-side of the market. In the initial period, MSMEs had been hit the hardest by the economic consequences of COVID-19 measures compared to larger companies. The physical non-availability of workers stemmed from MSMEs' inability to secure necessary physical distancing measures or the health protocol in the workplace and their failure to implement remote working in their lines of work. Some workers also could not travel to the firms' location due to the strict restrictions. A survey conducted by ILO (2020) reported that around 70% of Indonesian MSMEs stopped their operation, either temporarily or permanently (*The Strait Times* 2020). Many MSMEs admitted that approximately half of their employees could not work due to physical distancing measures, which resulted in a shortage of workers (UNIDO 2021).

MSMEs' high dependence on cash-economy and offline business also hindered MSMEs in gaining income during the pandemic, especially during strict social distancing measures. As schools turned to online classes and most offices changed their policies to Work from Home (WFH), the demand for goods and services provided by MSMEs, which previously targeted school children and the workforce population, automatically dropped. Most firms stated that the drop in market demand is the biggest threat during this period (UNIDO 2021), with 82% of the firms surveyed admitting to a decline in the number of orders and 92%

expected a drop in revenue. The survey also shows that 81% of firms predicted a loss of 50% in revenue in 2020 compared to the previous year. This resulted in a cash flow shortage as the demand for the goods and services that MSMEs provided dropped considerably during the pandemic, especially with lockdown implementation.

The shortage of cash flows has impacted all kinds of payments, including wages/salaries, interest, loan repayment, and taxes (Gunadi et al. 2021). The liquidity shortages forced them to reduce their staff, delay interest and loan payments, and others. Many MSMEs had to negotiate with banks, suppliers, and workers to keep their businesses running.

With the reduced cash flow of MSMEs, employment has been affected negatively. Many Indonesian workers have been laid off, especially in the first year of the pandemic. Many MSMEs started to close or downsize their businesses to match their products' current post-pandemic market demand. Most firms emphasized that they could not last more than six months with the initial strict pandemic restrictions in place (UNIDO 2021). In 2020, a survey of 5,800 Indonesian small businesses found that 43 percent of companies had temporarily closed, and nearly all these closures were due to COVID-19 (Bartik et al. 2020). With the increase in unemployment and the increase of workers getting pay cuts, a further decrease in the local market demand occurred and hit MSMEs even more. Moreover, as the pandemic struck the whole world, there was a decrease in world demand which caused Indonesia's export to decrease (Asian Development Bank 2020).

Furthermore, the unavailability of raw materials and transport infrastructure also adds to the problems. As several regions faced disruptions in business and restrictions on movement due to COVID-19 measures, shortages in supplies and input materials issues in the shipment of finished goods also occurred for some MSMEs. A joint study of UNDP & LPEM FEB UI (2020) found that more than 45% of MSMEs surveyed had issues in getting raw materials and distributing their products because of the pandemic. In importing raw materials and auxiliary materials, especially from China, problems have also forced some MSMEs to reduce/stop their operation.

After the strict lockdown was lifted, partial lockdown and restrictions were implemented in Indonesia according to the local government's policies. However, the country's measures still negatively impact the business, especially for MSMEs, which are primarily still conducting their business offline. From the data of Bank Indonesia in March 2021, 87% of MSMEs were affected by the COVID-19 pandemic, and most of these MSMEs suffered from a severe decline in sales. Digital adoption and transformation of MSMEs have been on the government's agenda even before the pandemic to empower MSMEs by widening their market reach. However, with the limited knowledge in navigating the digitalization of MSMEs and the lack of internet infrastructure in parts of Indonesia, some MSMEs found it hard to transition to digital platforms. With the strict physical restrictions due to the pandemic, MSMEs are forced to improvise to be able to survive. This includes transitioning to the digital marketplace. Around 44% of the MSMEs

surveyed by UNDP & LPEM FEB UI (2020) had joined online marketplaces or e-commerce platforms after the pandemic, where previously only 28% of these MSMEs went online. Additionally, by October 2021, 15.9 million MSMEs (or 24.9% of total MSMEs) had participated in the digital ecosystem (Afifa 2021). However, the increase in digitalization of MSMEs may also create an adverse effect on the various businesses that remain only available offline.

### 1.2.2. Coping Strategy

Overall, each country has varied responses to managing the impact of the pandemic on MSMEs. The MSMEs' pandemic impact may be worse than other crises due to its substantial ramifications throughout the economy from the supply-side and demand-side of the market with COVID-19 measure policies. A robust policy response in a joint effort from the government and private sector is critical. From the IMF's policy tracker (IMF 2021), which tracks crucial economic responses to the COVID-19 pandemic across 192 economies, the policy responses of the government in terms of financial support can be broadly categorized into (a) loan guarantees and immediate liquidity provision; (b) loan extensions and penalty waivers on repayment delays; and (c) interest rate reductions on future loans. Even though financial support is crucial, in the medium term, MSMEs still need to face many additional challenges to survive, including digitalization, internationalization, logistics, and capacity building.

In 2020, the government of Indonesia allocated IDR123.46 trillion to support MSMEs during the pandemic through several incentives, including interest subsidies and tax incentives (*The Strait Times* 2020). In late July 2020, the government also committed to channeling IDR2.4 million of working capital to each 12 million MSMEs. However, the disbursement of this fund has been relatively slow—only reaching 25% by August 2020. Moreover, some support programs that the government has rolled out are not well-targeted. Tax incentives, for example, cannot help many MSMEs due to the informal nature of the micro-enterprises, of which most do not pay taxes.

Regarding the MSMEs' response to the government programs, 40% of the respondents stated that they had received government support and claimed that the support had been beneficial for their business (UNIDO 2021). However, low-technology and micro-sized firms had less access to the government's stimulus scheme programs. MSMEs' most needed government assistance programs were access to finance and deferral of payment (e.g., utility bills, social security premium, taxes). Among all the support programs offered by the government, the most favored form of government support received by MSMEs was in the form of interest subsidies and recap guarantee relief programs (KUR, PMN, Pegadaian). A 6-month tax exemption or tax-rate reduction was the firms' second most preferred scheme. Many firms in the survey also required government policies to reduce the cost of rent and utilities as a form of additional support in the pandemic.

Liquidity is not the only problem that MSMEs must face in this pandemic.

MSMEs require direct support to help the business be more resilient in this pandemic period and complement the financing schemes. Weakening consumers' purchasing power and issues in market access still hinder MSMEs' sustainability. Programs to support the continuity of MSMEs' business, such as capacity training and business development consultation assistance, had not yet been widely implemented.

The pandemic also pushed the government to provide incentives for businesses; however, not all companies readily accept these incentives. In a study carried out by Nurhayati & Adhi (2021), several factors affect the decisions of MSMEs in applying for a tax relaxation program. In this study, the knowledge, quality, and procedure had a non-significant effect on the decision to apply for a tax relaxation program. However, the service quality of government administrations had a positive impact on the decision to apply for a tax relaxation program. This shows that to facilitate MSMEs in receiving incentives provided by the government, increasing the service quality of the government program.

Meanwhile, in Surabaya, to improve the resiliency of the MSMEs, the local government has already implemented a locality-based approach to sustainable economic development (Puspaningtyas 2021). The business ecosystem there was designed to adapt against shocks such as the pandemic that has severed many networks and production chains. The Surabaya Regional Apparatus Organisation (OPD) also has arranged several pieces of training for MSMEs, with several rooms for improvement.

An incomplete database of existing MSMEs also becomes a problem in the disbursement of the incentives in Indonesia. Many MSMEs still do not have access to government support programs, especially for smaller-sized businesses. In UNDP & LPEM FEB UI survey (2020), more than half of MSMEs did not have any knowledge regarding government assistance for the pandemic, and only 17% of the surveyed MSMEs received or sought help. Some MSMEs were told they were not eligible; some were rejected when they applied; some had difficulties using the program due to a lack of resources (devices, mobile phones, internet connection). Most of the MSMEs in this survey hoped for better targeting of assistance and better provision of information regarding the incentives.

In terms of digitalization, MSMEs across developing Asia has been pushed to pick up the pace to join the online ecosystem and intensify their online sales following the pandemic (Sonobe et al. 2021). In Indonesia, the government has encouraged digital transformation for the MSMEs to strengthen their resilience and increase the economic value of the MSMEs even before the pandemic. However, the pandemic accelerated this process of MSMEs digitalization. Most MSMEs chose to combine face-to-face and digital business models with their customers. By 2021, 15.9 million MSMEs, or about 24.9% of MSMEs in the government database, have accessed the digital ecosystem to support their business (Futri, Afisah & Saputro 2021). Seeing the rapid speed of the digitalization among MSMEs, the government has targeted an increase to 30 million MSMEs or about 50% of the current MSMEs in the database to be included in the digital ecosystem

by 2024. However, to achieve this target, the government must make more accessible information regarding digitalization, simplify the registration and rules for MSMEs in doing online business, provide transparency in the digital environment, and collaborate in a multistakeholder digital ecosystem. Four key aspects of digitalization, including e-commerce, the sharing economy, social media, and cloud-based analytics or AI, must be addressed in empowering MSMEs.

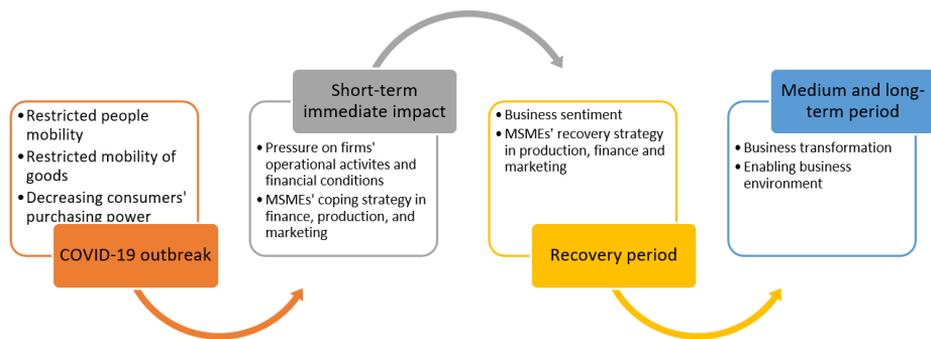
MSMEs' internal strategy in facing the impact of the pandemic may differ depending on the country, business sector, and the region they operate. In Pakistan, Shafi, Liu & Ren (2020) showed several strategies used by MSMEs in facing the pandemic. For the operational aspect, these strategies include shutting down the business completely (31%), partially closing the business (19%), and applying for a loan (18%). Meanwhile, in terms of employment, most the businesses were forced to lay off their employees (43%), some had to cut the salary of the staff (12%), and some had to close the business partially and reduce the work hours to improve cash flow (13%). In Armenia, MSMEs were more likely to lay off their workers and cut work hours and pay than large-scale companies (Beglaryan & Shakhmudaryan 2020), with around a quarter of the total MSMEs' employees being laid off compared to 11% of employees in large-scale companies. This study also verified that employees who worked in sectors that supported remote working and employees in industries that required medium to high professional qualifications were generally less affected by the pandemic than the rest. This implied that more government efforts in assisting businesses might need to be concentrated on SMEs and low-skilled workers.

In Indonesia, UNDP & LPEM FEB UI (2020) reported that about 42% of the surveyed MSMEs coped with the pandemic by cutting the expenses of electricity, water, and gas by using less of the utilities and reducing their transportation costs (30%) for their short-term strategies. Many MSMEs were also forced to lay off their employees by cutting their pay to reduce costs (30%) and cut bonuses (22%). MSMEs also tried to modify their products to create greater demand during the pandemic (25%) aside from temporarily closing their business (22%). The MSMEs' responses to the pandemic were also varied based on the size. For example, more medium businesses were found to lay off their workers by reducing their pay compared to other smaller businesses. For medium and long-term plans, many MSMEs planned to save reserve funds in case of a prolonged pandemic period. In the long term, most micro-business surveyed also intended to formalize their business to increase their chances of accessing government assistance programs. Some of the MSMEs had prepared to change their line of business, especially to micro-level firms. This is due to their greater flexibility in adapting their business models to the changing demand of the consumers compared to larger businesses.

## 2. Methodology

### 2.1. Conceptual Framework

Figure 1 shows the conceptual framework used in this study. The analyses incorporate MSMEs' immediate adjustments (during the pandemic), short-term strategy during the recovery period, and medium and long-term business transformation strategy (two to five years ahead).



**Figure 1: Conceptual Framework of the Study**

Source: BPS, author's calculation

### 2.2. Data

This study mainly uses primary data collected through a survey conducted in August–September 2020 and administered using a survey questionnaire. The survey aimed to collect a sufficient sample of MSMEs across various regions, firm sizes, sectors/products, and owners' gender. The survey yielded 2,535 usable responses, which are given in Table 1.

Table 1a shows the sample distribution by region, in which responses were obtained from 17 provinces in 6 regions. The table also shows that the sample consists of 55% micro, 40% small, and 5% medium-sized enterprises in firm size. In terms of sector, Table 1b shows that the sample includes six categories that MSMEs are likely to run. The total number of responses in Table 1b (2,735), however, it exceeds the number of sampled MSMEs, which is possible since each firm may have more than one line of business. In terms of the gender of the owner, the sample comprises 52.43% female-owned compared to 47.57% male-owned MSMEs.

**Table 1a: Distribution of Sampled MSMEs – Based on Province and Business Scale**

Region & Province	Micro Enterprises	Small Enterprises	Medium Enterprises	Total
Sumatera Region				
Aceh	62	55	6	123
North Sumatera	129	25	3	157
West Sumatera	94	34	11	139
Jawa Region				
West Java	191	111	22	324
DI Yogyakarta	184	123	11	318
East Java	223	149	26	398
Bali & Nusa Tenggara				
Bali	42	21	10	73
East Nusa Tenggara	215	30	6	251
Kalimantan Region				
West Kalimantan	207	40	15	262
Central Kalimantan	46	15	0	61
North Kalimantan	0	2	0	2
Sulawesi Region				
Sulawesi Tengah	57	30	2	89
Sulawesi Selatan	57	41	9	107
Sulawesi Tenggara	9	7	0	16
Maluku & Papua Region				
Maluku	112	37	1	150
Papua Barat	11	1	0	12
Papua	24	18	11	53
Total	1,663	739	133	2,535
Distribution	65,60%	29,20%	5,20%	100%

**Table 1b: Distribution of Sampled MSMEs – Based on Region and Business Sector**

Region	Agriculture, Fishery, Plantation	Processing industry	Wholesale and Retail Trade, Repair and Maintenance of Cars & Motorcycles	Provision of Accommodation and Provision of Food and Drink	Transportation, Warehousing, and other services	Others	Total
Sumatera	70	196	75	57	48	9	455
Jawa and Bali	209	478	200	179	110	26	1,202
Kalimantan	43	116	82	63	40	17	361
Sulawesi	33	111	31	40	16	11	242
NTT Maluku Papua	85	140	104	73	67	6	475
Total	440	1,041	492	412	281	69	2,735

## 2.3. Data Analysis Methods

This study uses mainly descriptive statistics and qualitative approaches. The variables processed from the questionnaire were analyzed using descriptive statistical methods to obtain the complete pictures of MSMEs' coping, recovery, and business transformation strategies to weather the pandemic.

## 3. Result and Discussion

### 3.1. MSMEs' Initiatives to Cope with the Pandemic

#### 3.1.1. Employment-related Strategy

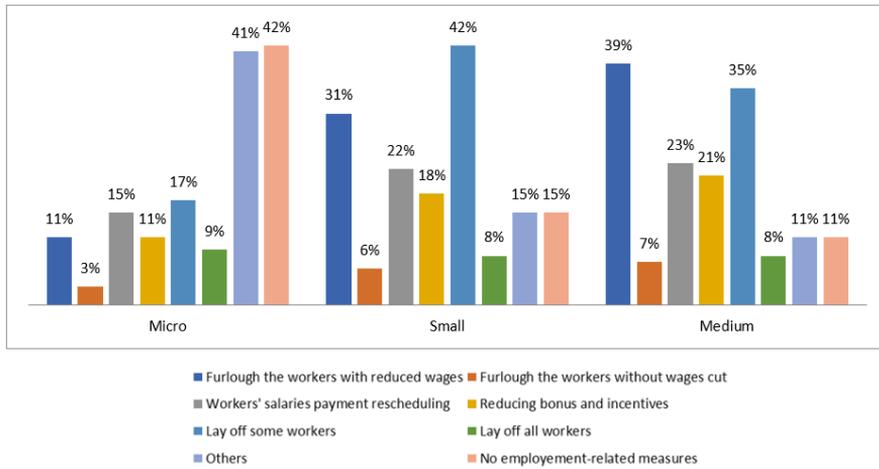
The survey results showed that the larger the enterprise-scale, the greater the tendency to implement specific employment policies (Figure 2a). A large share of micro-enterprises reported that they did not carry out any measure related to employment, and only around 17% laid off some workers. By contrast, small and medium-sized enterprises implemented several strategies, including workers layoff, reducing salaries, salary payment rescheduling, and omitting bonuses.

In terms of business sector, laying off workers was the most dominant strategy in general, with a notable additional strategy of sending home workers with reduced salaries reported by those operating in the agriculture, fisheries, and plantation sectors, and an exception in the trading sector which mostly did not impose any specific measure (Figure 2b). However, the employment-related strategy did not vary significantly across MSMEs owner's gender and location (Java-Bali and the rest of Indonesia).

#### 3.1.2. Production Strategy

MSMEs also had to adjust their production strategy to cope with the pandemic. By firm size, the most dominant strategy opted by micro, and small enterprises were changing/reducing operating hours (partly related to the large-scale social restrictions) and modifying the products or the input composition to minimize cost or to match the customers' changing demand due to the pandemic (Figure 3a). Differently, the medium enterprises opted to change operating hours or temporarily close the business.

In business sectors (Figure 3b), more varied production strategies to deal with pandemics were observed. Changing operating hours was again the most common opted strategy, except for those in the manufacturing sector, which preferred modifying their products or production techniques. Changing business focus (product and services) were also notable strategies for MSMEs in the logistics sector (by tending towards more local-oriented due to movement restriction) and manufacturing sector (by producing healthcare products if possible). However, the production strategy did not vary significantly across MSMEs owner's gender or location (Java-Bali and the rest of Indonesia).



**Figure 2a: Internal Coping Strategy related to Employment and Human Resources – By firm size**  
Source: Survey data

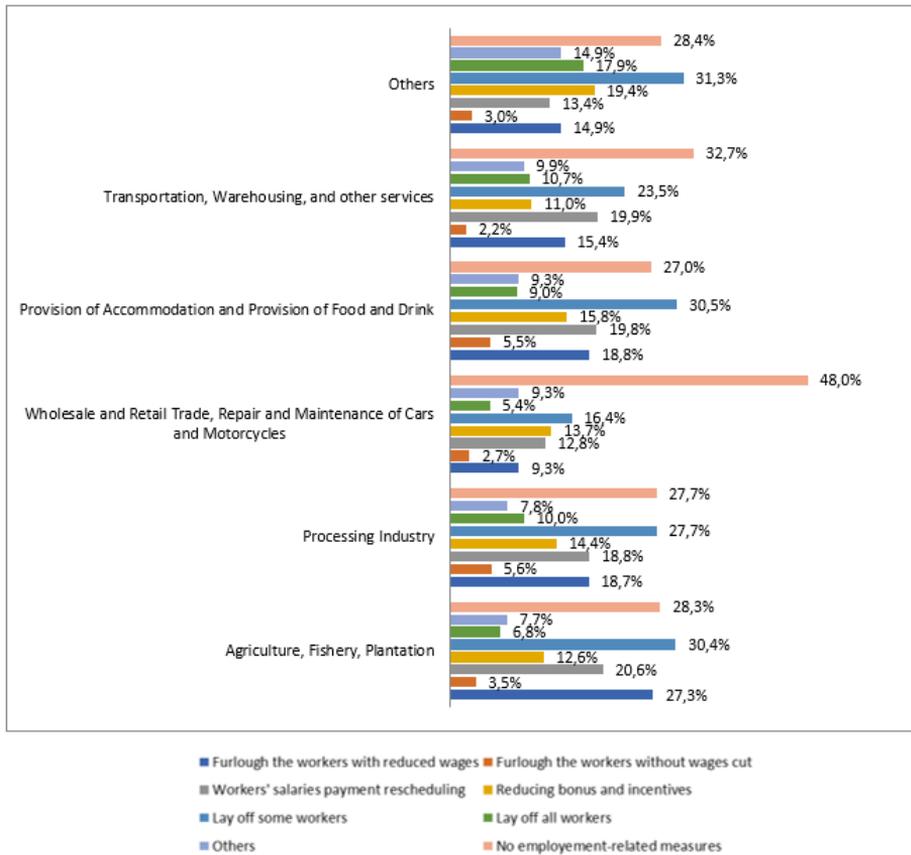
### 3.1.3. Financial Strategy

Figure 4 shows the initial financial strategy carried out by MSMEs to deal with the pandemic. Regardless of the firm size, the three most dominant strategies were reported, including reducing utility costs such as electricity, gas, water, and communication, followed by reducing transportation costs and looking for new loans, respectively (Figure 4a). Those three strategies were also the most opted for by MSMEs across the business sectors (Figure 4b), owners' gender (Figure 4c), and location (Java-Bali and the rest of Indonesia).

### 3.1.4. Marketing Strategy

The pandemic forced MSMEs to adjust their marketing strategies. Figure 5a shows that Regardless of the firm size and business sector, selling by other methods, especially utilizing the information technology (social media or e-commerce platforms), was the most adopted strategy. Another common coping strategy reported was providing discounts or gifts. However, the third coping strategy for small and medium enterprises was making a specific package for a particular occasion (e.g., a national holiday). For micro-enterprises, it was repackaging the products into smaller packages.

When viewed by the business sector, adopting information technology for selling the product was also the primary coping strategy opted for by MSMEs. The second strategy reported was providing discounts or gifts, except for those in accommodation and food-beverages provision who instead opted to repackaging



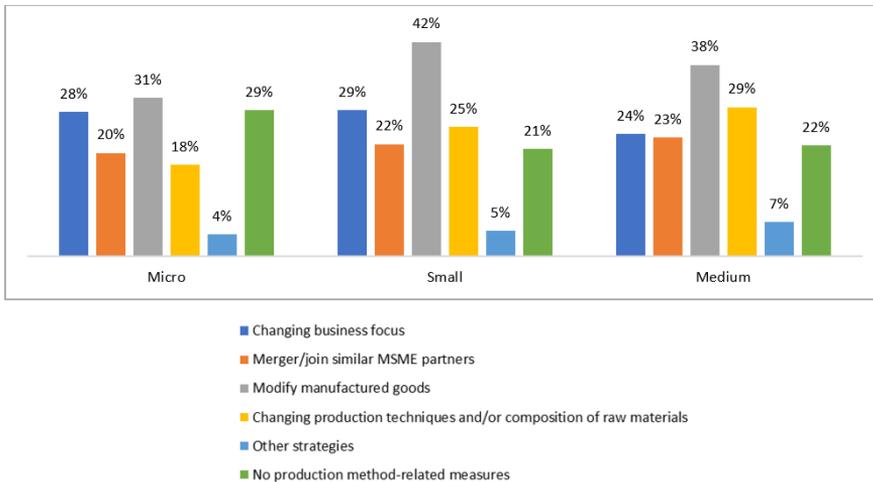
**Figure 2b: Internal Coping Strategy related to Employment and Human Resources – By business sector**  
 Source: Survey data

the products into smaller packages. However, the marketing-related coping strategy did not vary significantly when viewed by region and owners' gender.

### 3.2. Recovery Path and Business Transformation

#### 3.2.1. Economic Recovery Sentiment

While the previous section discusses the survey findings regarding the strategies pursued by MSMEs to mitigate the impact of the pandemic, this section explores MSMEs' perception and plan during the recovery period and beyond. This information is crucial for the government in adjusting and formulating support programs to accelerate MSMEs' business recovery.



**Figure 3a: Internal Initiatives Related to Production – By firm size**

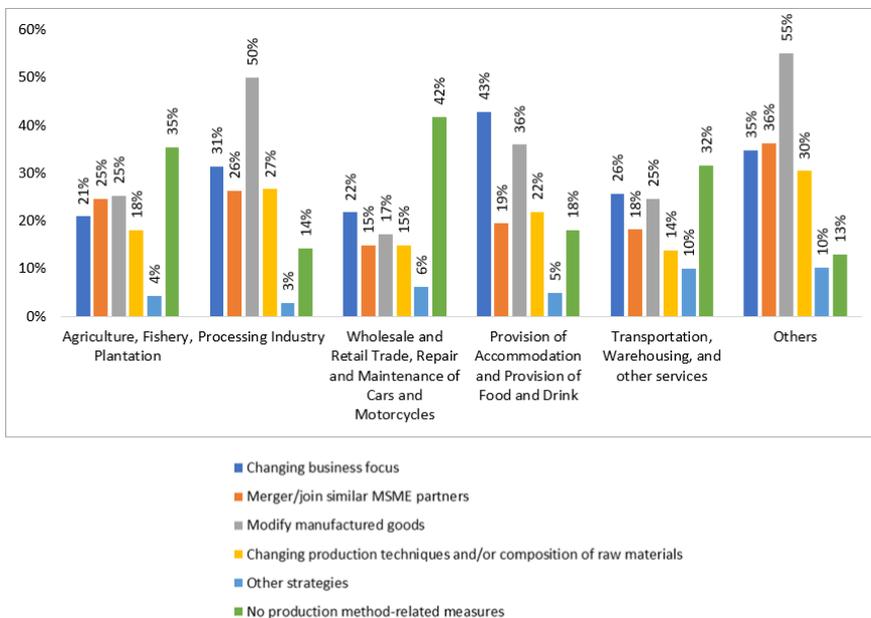
Source: Survey data

Figure 6 captures MSMEs' sentiment towards the economic recovery period. Most respondents perceived that economic activity would return to normal after adapting to the new behavior period. This was expected to happen in the following six months to 1 year from the time of the survey, which means the second until the fourth quarter of 2021. This sentiment was found across business scale, owners' gender, region, and business sector. A considerable share of respondents was more optimistic as they expected the economy would recover within 4-6 months after the survey, and this was evident across gender, region, and business sector, except for medium scale businesses and those operating in primary and logistics sectors which recorded a considerable share of respondents predicting the recovery would take more than a year.

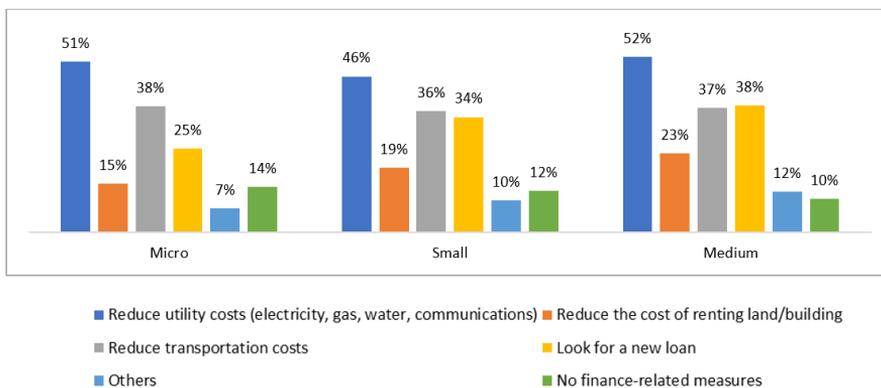
### 3.2.2. Production Method Plans during Recovery

Figure 7 shows the transformation of the MSME business model related to the production process during the recovery period. By business scale, MSMEs generally plan to modify their products, such as making smaller sizes or packages or removing some features of the products, to adapt to changing input costs and consumers' income due to the pandemic. The second most considered strategy for micro and small enterprises was changing the business model. In contrast, the medium enterprises preferred to shift the production techniques or input composition mix or merge with other firms.

More variations of production strategy were observed when The business sector grouped MSMEs. The most preferred method for MSMEs in the manu-

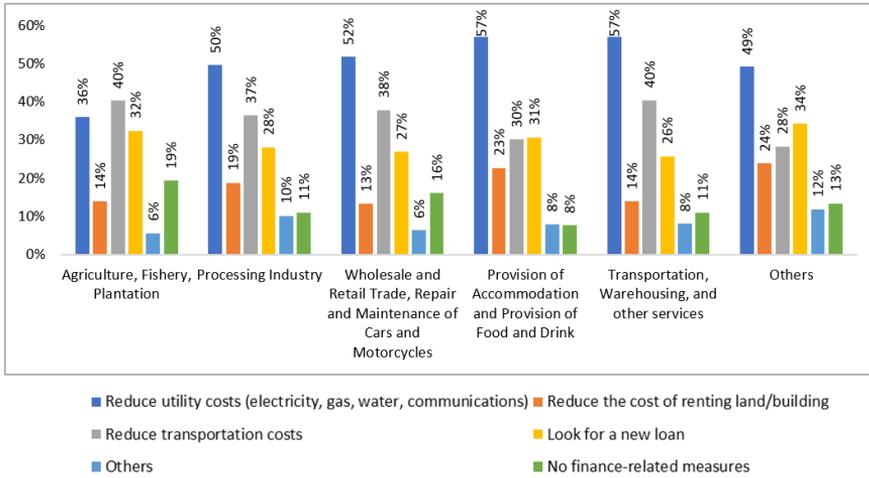


**Figure 3b: Internal Coping Strategy related to Employment and Human Resources – By business sector**  
Source: Survey data

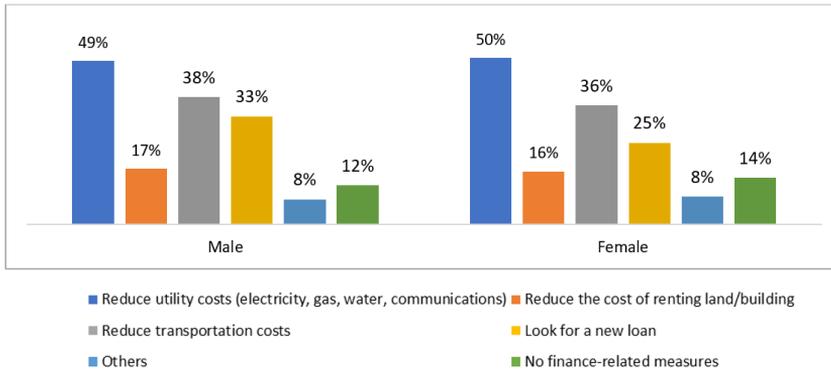


**Figure 4a: Internal Initiatives Related to Finance – By firm size**  
Source: Survey data

facturing sector was product modification, while MSMEs engaged in providing accommodation and food and drinks preferred to change the business model and MSMEs in the remaining sectors had no plans regarding production strategy.



**Figure 4b: Internal Initiatives Related to Finance – By business sector**  
Source: Survey data

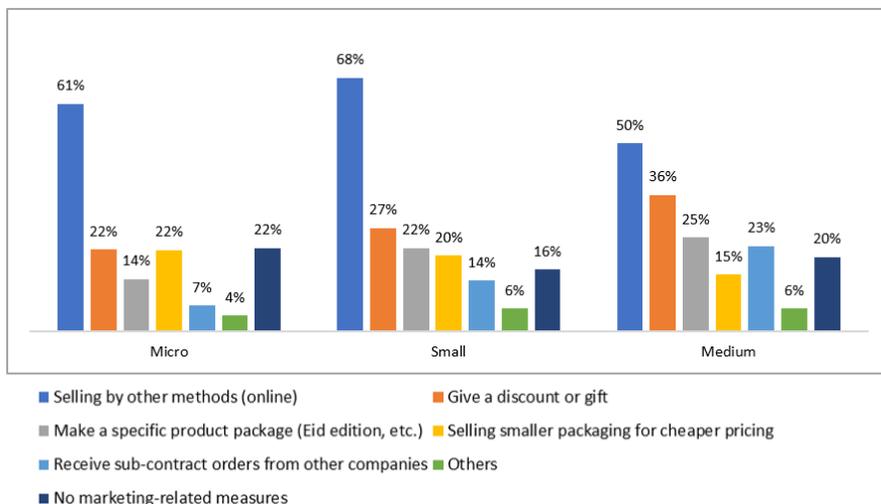


**Figure 4c: Internal Initiatives Related to Finance – By gender**  
Source: Survey data

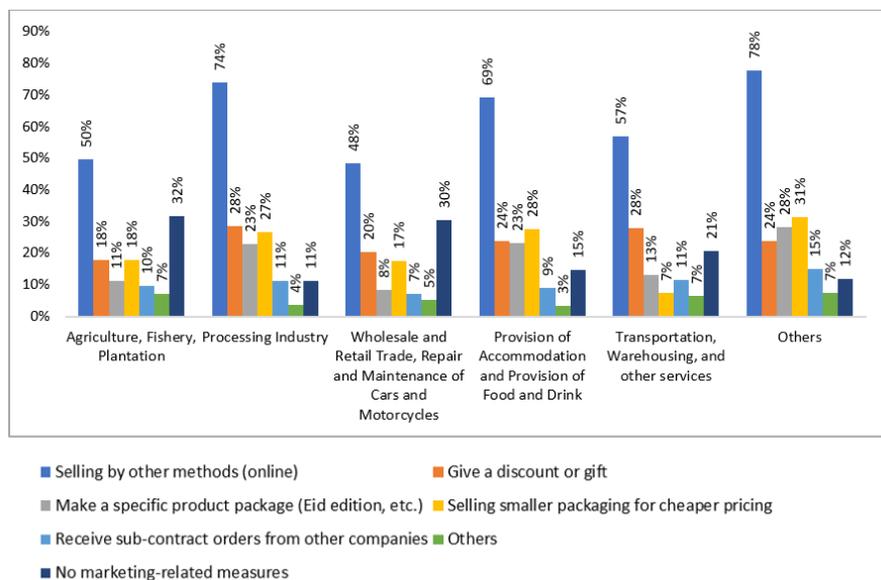
However, the choice of production strategy did not vary significantly across owners' gender and location.

### 3.2.3. Plans to Access Working Capital during the Recovery Period

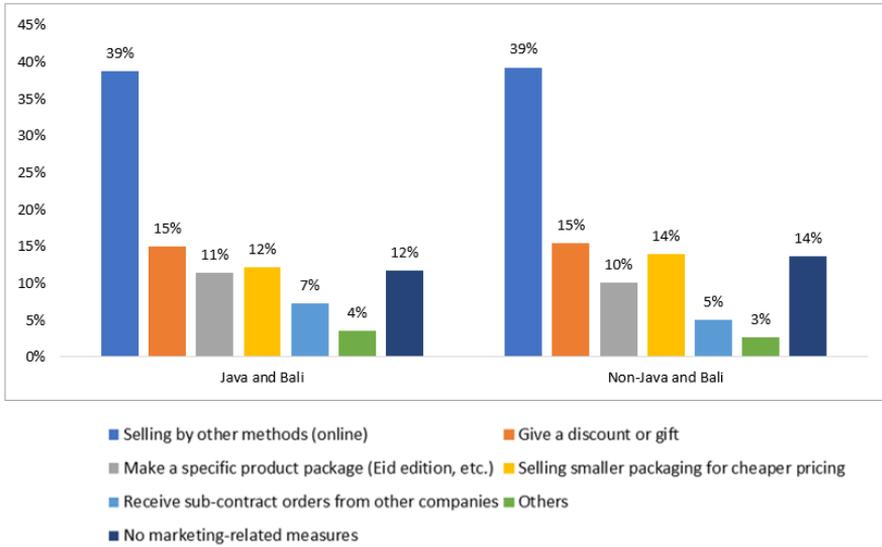
Figure 8 shows MSMEs' plan to access the working capital during recovery. Most MSMEs across scale and business sectors said that they needed additional working capital to continue their business activities. Figure 8a shows that the smaller the firm size, the more needs for additional working capital were reported.



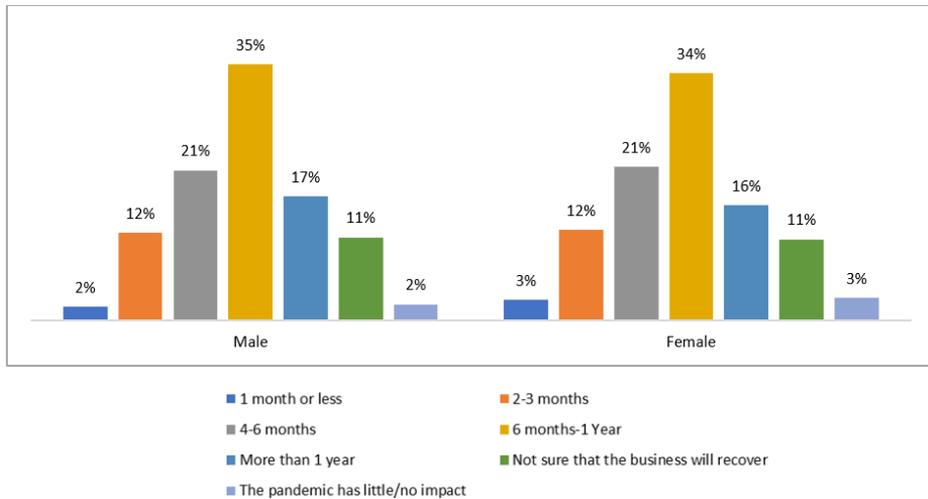
**Figure 5a: Internal Initiatives Regarding Marketing – By firm size**  
Source: Survey data



**Figure 5b: Internal Initiatives Regarding Marketing – By business sector**  
Source: Survey data

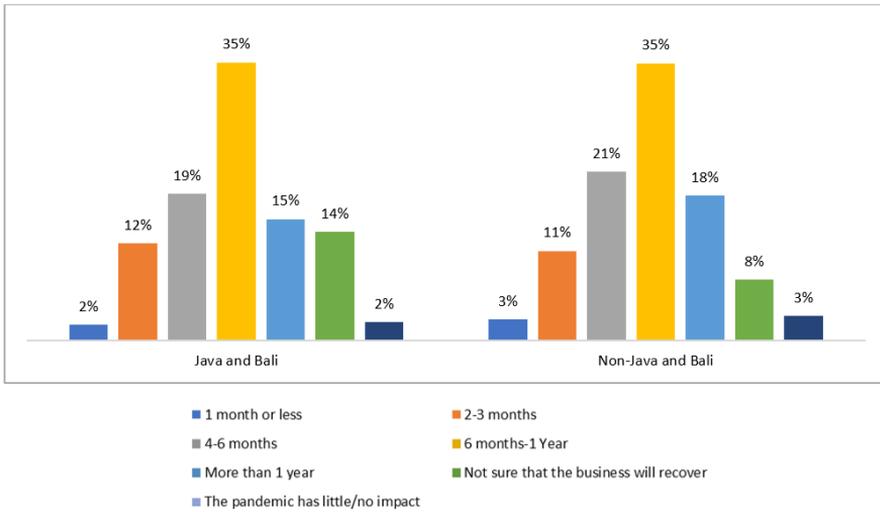


**Figure 5c: Internal Initiatives Regarding Marketing – By region**  
Source: Survey data

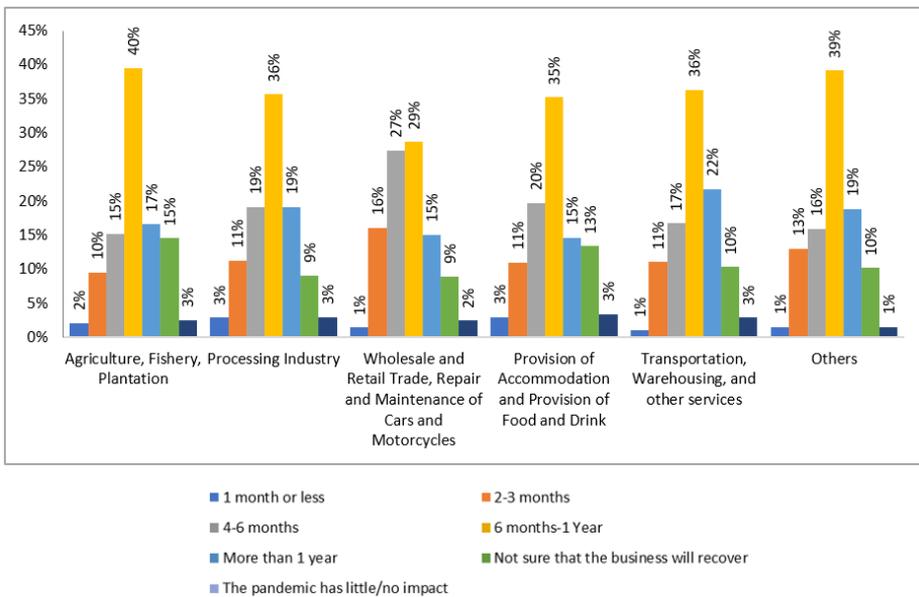


**Figure 6a: MSMEs' Prediction of Economic Recovery – By owners' gender**  
Source: Survey data

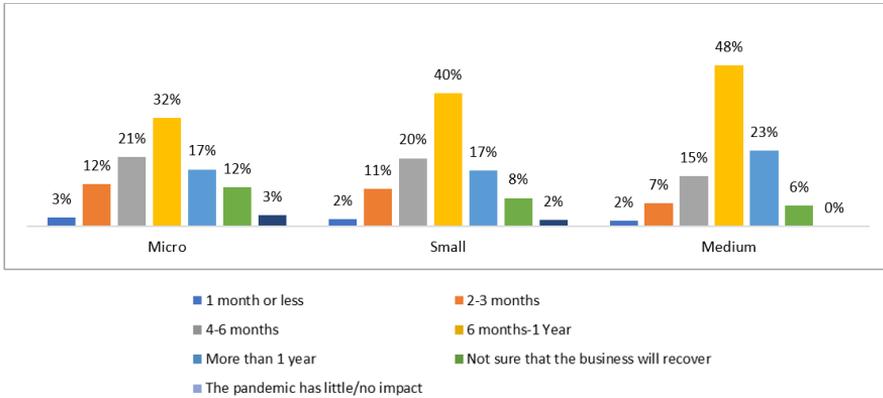
The most considerable lack of working capital was reported by MSMEs in the primary sector when viewed by the business sector. The need for additional



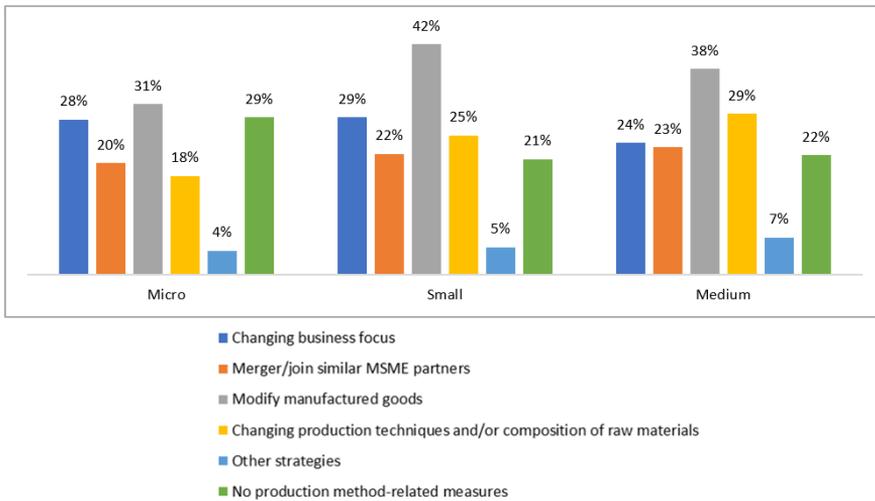
**Figure 6b: MSMEs’ Prediction of Economic Recovery – By region**  
Source: Survey data



**Figure 6c: MSMEs’ Prediction of Economic Recovery – By sector**  
Source: Survey data



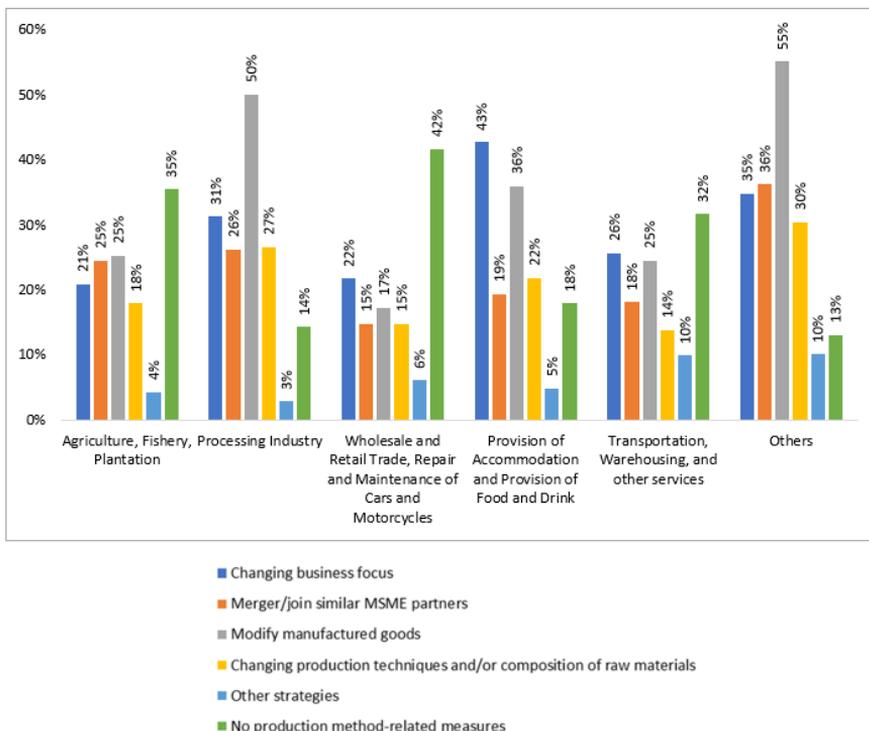
**Figure 6d: MSMEs’ Prediction of Economic Recovery – By business scale**  
Source: Survey data



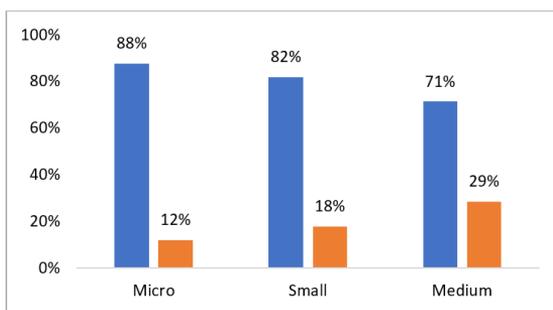
**Figure 7a: Production Method Plan During Recovery Period – By firm size**  
Source: Survey data

working capital during the recovery period was also recorded in most MSMEs regardless of their location and the gender of their owners.

Figure 9 shows the source of funding from which MSMEs plan to access the capital. By business scale, the larger the firm, the more likely it will access the fund from banks and fellow entrepreneurs. By contrast, smaller firms were more likely to access additional funding from families or cooperatives. By business sector and gender, banks were also the primary source of financing planned by

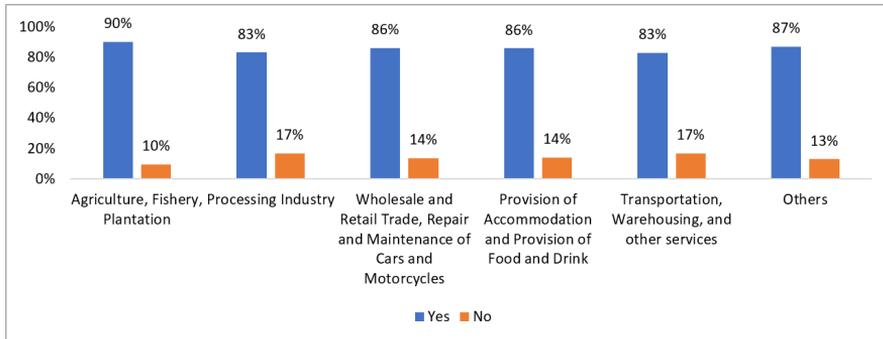


**Figure 7b: Production Method Plan During Recovery Period – By business sector**  
Source: Survey data



**Figure 8a: Access to Capital Plan during Recovery Period – By firm size**  
Source: Survey data

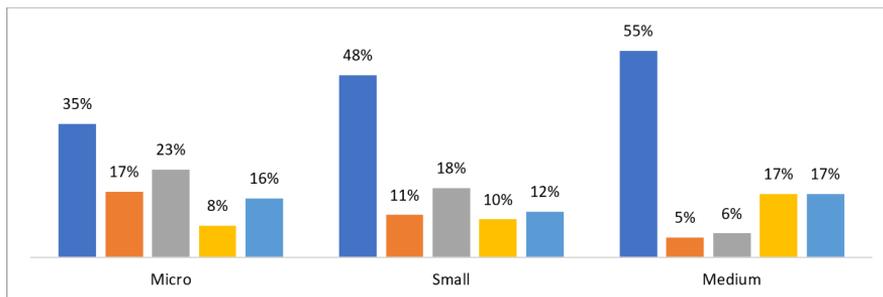
MSMEs across sectors, while family/relatives were the second most dominant source. When viewed by region, banks were again the primary source of capital



**Figure 8b: Access to Capital Plan during Recovery Period – By business sector**

Source: Survey data

to jumpstart MSME's business. Still, the second primary source was cooperatives for those located in Jawa-Bali, while outside Jawa-Bali, it was family/relatives.

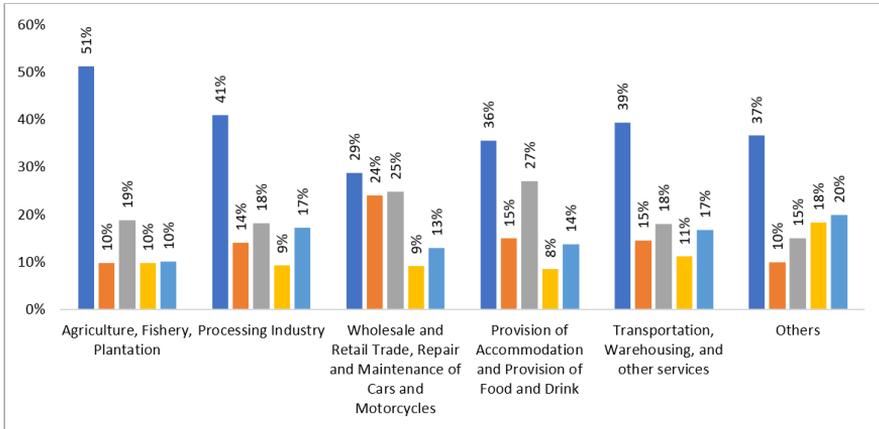


**Figure 9a: Source of Funding Plan during Recovery Period – By firm size**

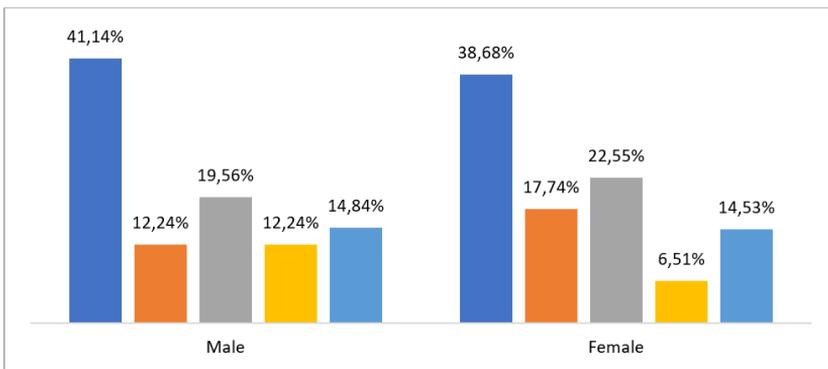
Source: Survey data

### 3.2.4. Marketing Plan during Recovery

Figure 10 shows the marketing plan carried out by MSMEs during the recovery period. Regardless of firm size, business sector, region, and owners' gender, most MSMEs planned to utilize free social media as the main means to market their products. By firm size, the larger the firm, the larger the tendency to plan to use paid social media or join e-commerce programs offered by State-owned Enterprises (SoEs) and large private companies. However, it is worth noting that there was still a considerable share of MSMEs across scale and business sectors that still had no plan to innovate their marketing strategy. This can be one central attention to address to accelerate the economic recovery.



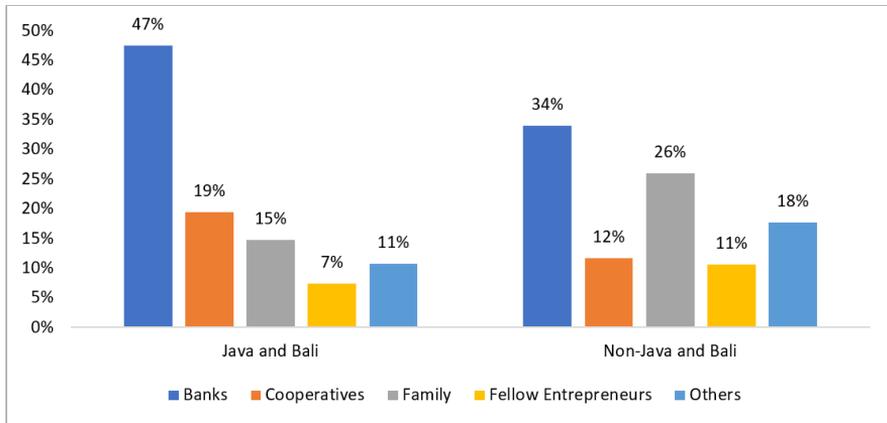
**Figure 9b: Source of Funding Plan during Recovery Period – By business sector**  
Source: Survey data



**Figure 9c: Source of Funding Plan during Recovery Period – By gender**  
Source: Survey data

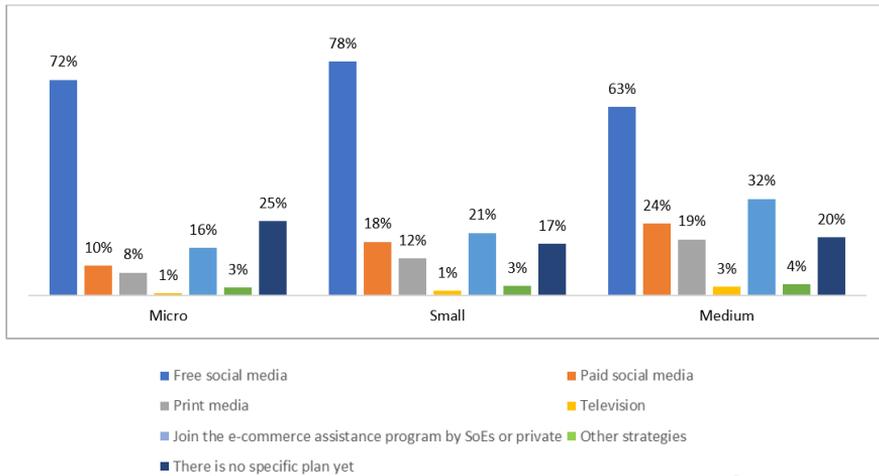
### 3.2.5. Plans to Conduct Other Businesses during the Recovery Period

It is crucial to investigate whether the pandemic has triggered MSMEs to transform their lines of business. The survey asked the respondents whether they planned to run additional business lines after the pandemic and their plan with the current line of business, and the responses are summarized in Figure 11. Most MSMEs, regardless of size, sector, location, and owners' gender, stated that they planned to set up new business lines/products/services while maintaining their current business. A considerable share of respondents said they had no plan for new business lines and instead focused on supporting their existing businesses.



**Figure 9d: Source of Funding Plan during Recovery Period – By region**

Source: Survey data

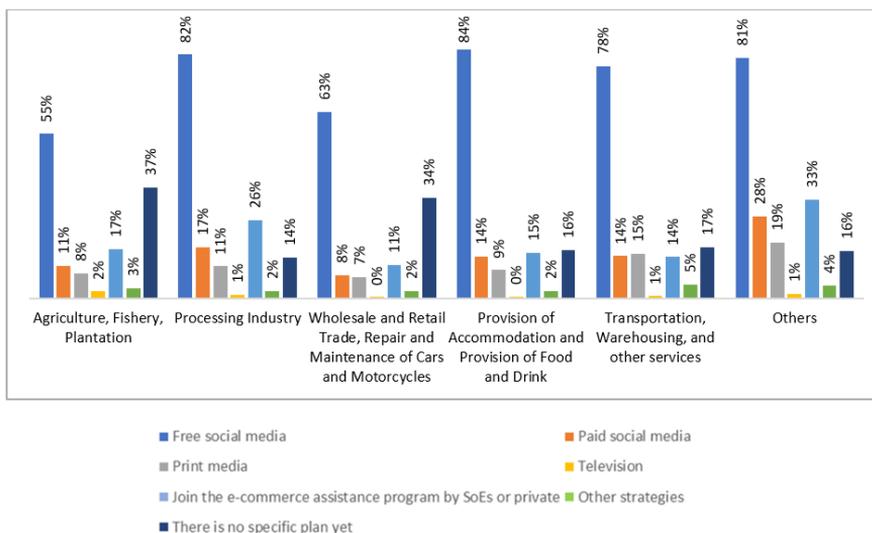


**Figure 10a: Marketing Plan During Recovery Period – By firm size**

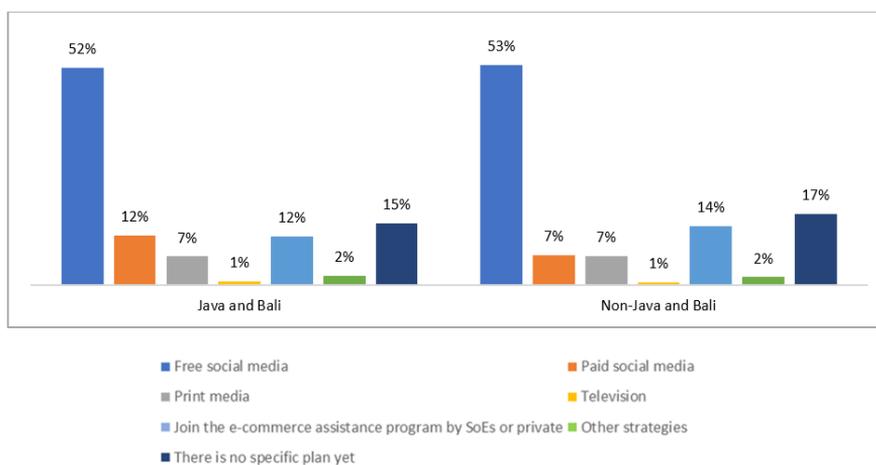
Source: Survey data

Only a tiny percentage of respondents were willing to risk opening new business lines and temporarily closing their current companies. Interestingly, almost none of them planned to close their existing businesses permanently.

Finally, the survey also asked how MSMEs implemented the health protocol in their production facilities and whether they would keep that practice during the recovery period. Figure 12a shows that since the pandemic began, more than half of respondents have already instructed their workers and guests to

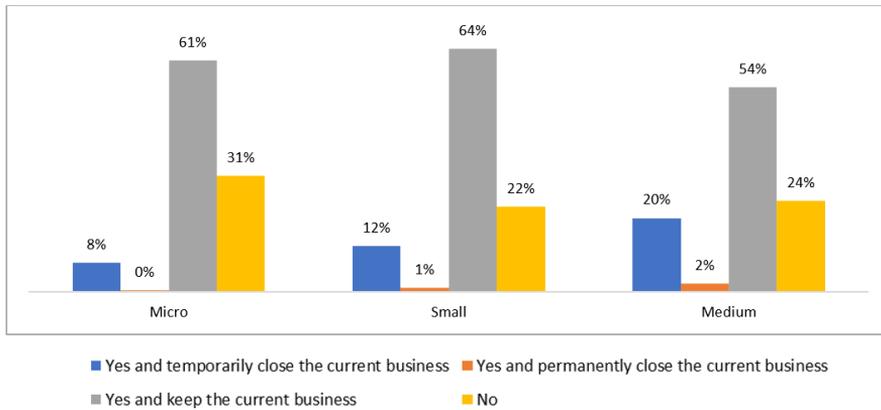


**Figure 10b: Marketing Plan During Recovery Period – By business sector**  
Source: Survey data



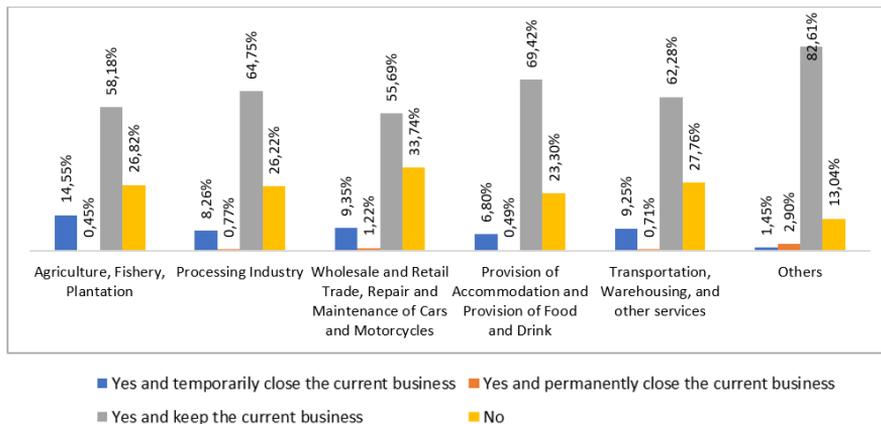
**Figure 10c: Marketing Plan During Recovery Period – By region**  
Source: Survey data

wear a facemask, provided hand-washing facilities, and placed hand sanitizers at several points in the workplace. Many of them offered spare face masks, regularly cleaned the workplace with disinfectant, and ordered some employees to work from home alternately.



**Figure 11a: Plan to Conduct Other Lines of Business – By firm size**

Source: Survey data



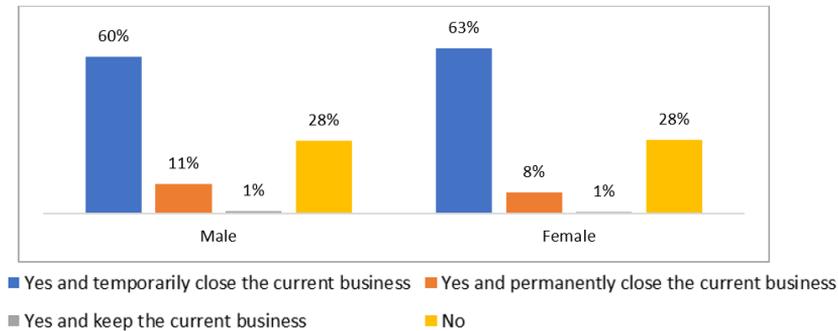
**Figure 11b: Plan to Conduct Other Lines of Business – By business sector**

Source: Survey data

However, these practices may not sustain. Figure 12b revealed that during and after the recovery period, a considerable share of MSMEs probably would relax the health protocol. Some provisions planned to be relaxed, mainly spare face masks, work from home mode, and regular disinfectant cleaning.

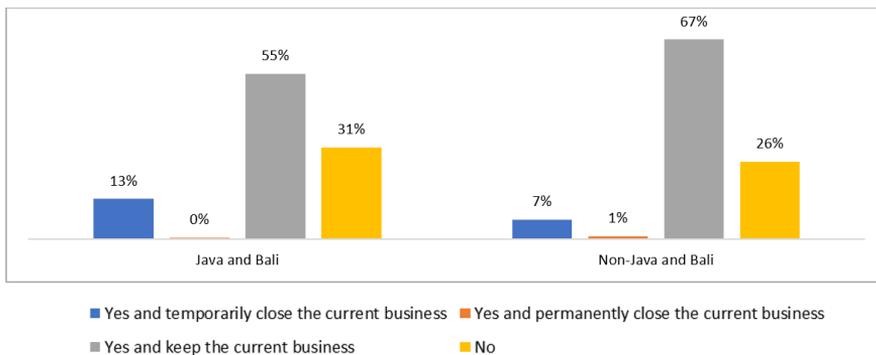
### 3.3. Discussion and Implications

The study's findings have several policy implications, which framework can be divided into three timeframes: short-term response during the pandemic,



**Figure 11c: Plan to Conduct Other Lines of Business – By gender**

Source: Survey data

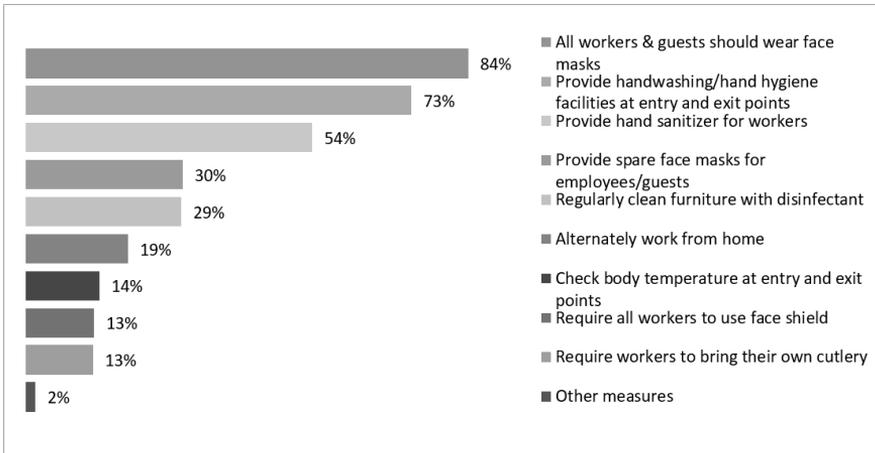


**Figure 11d: Plan to Conduct Other Lines of Business – By region**

Source: Survey data

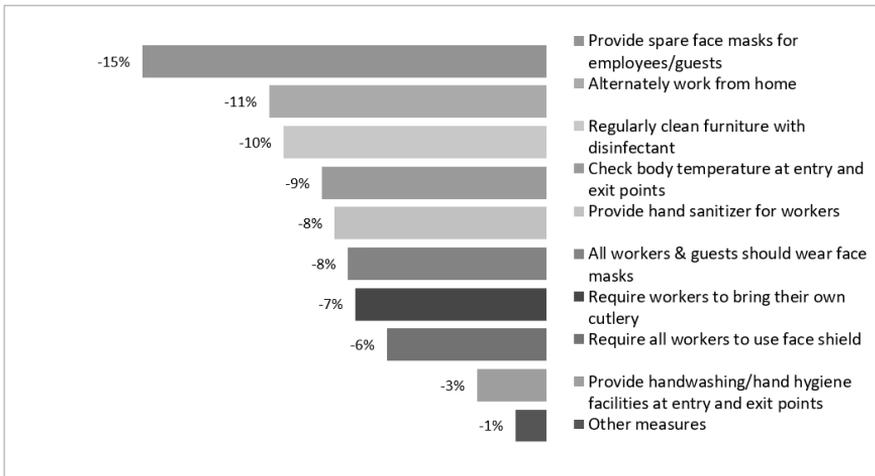
short-term response during business recovery, and medium-term post-pandemic. During the pandemic, the government needs to ensure MSMEs can continue to perform activities through the following policies. First, subsidies or delays in payment of utility costs (electricity and clean water) can be provided, as the findings show that most MSMEs tried to reduce spending during the pandemic. For example, accessible electricity facilities offered by the government (450 VA) can be extended.

Second, assistance is required so that MSMEs do not have to lay off their employees and can continue to pay workers' salaries. This can be done through salary subsidy, preceded by identification of workers, utilizing cross-institutional data. Aid for workers with wages of less than Rp5 million can also be considered as they were probably not enrolled in the Employment Social Security Program. Third, connecting MSMEs with the market/buyers through technology can be



**Figure 12a: Health Protocol Implementation at the Production Plant – Health protocol implemented during the pandemic**

Source: Survey data



**Figure 12b: Health Protocol Implementation at the Production Plant – Plan to relax the health protocol during the recovery period**

Source: Survey data

prioritized. Some e-commerce platforms need to be constantly encouraged to buy and trade MSMEs products. From the MSME side, the Government of Indonesia (GoI) can invite the business associations to encourage MSMEs to

join the marketplaces or use other information technologies (internet, WhatsApp, and social media) for marketing. The GoI can also provide stimulus in the form of subsidies for delivery/shipment of goods across regions and online campaigns targeted at increasing the number of MSMEs transactions.

During the recovery period, the GoI must ensure the fast business recovery of MSMEs. Once the virus infection cases flatten and the pandemic begins to be under control, or at least by the time MSMEs have begun to adapt to the pandemic, there are some supports that the government can provide to MSMEs. *First*, the government can help provide legal protection to MSMEs and their workers by expanding the legal assistance related to delays in the payment of employment contracts, worker layoffs, and legal protections for workers prone to the pandemic in the form of safety law frameworks in the working places.

*Second*, MSMEs can be helped by relaxing regulations, especially in business licensing and product circulation permits. This regulation's easing can help MSMEs return to normal operations faster and help individuals who want to set up new businesses. *Third*, capital access, credit, and taxation assistance can be extended. In the recovery period, MSMEs need capital to expand their business. In addition, the suspension of tax payments needs to be offered at least until MSMEs can reach a point such as before the pandemic or at the break-even point.

*Fourth*, export market assistance can be enlarged. Indonesia's trade balance, which recorded a surplus in 22 consecutive months as of April 2022, in contrast to previous years that always recorded a deficit, shows that the pandemic offers export opportunities due to slowing production activities of competing countries. In addition, the various international cooperation schemes that governments have conducted, such as the Regional Comprehensive Economic Partnership (RCEP) and the Indonesia-Korea Comprehensive Economic Partnership (IK-CEPA), require the readiness of MSMEs to compete globally. Support can be given, for example, in the form of provision of export financing, insurance, and guarantee for businesses that aspire to expand into the international market.

In the medium-term and beyond, when the economic recovery period has begun, MSMEs' support must still be provided so that the development of MSMEs returns to or at least close to the expected track in the national medium-term plan (RPJMN 2020–2024). *First*, it is necessary to increase access to financial markets, one of which is banking services, for MSMEs. The lack of knowledge, economic inclusion, and banking history of MSMEs prevent them from accessing commercial products and facilities provided by banks. In addition, MSMEs also need to be encouraged to register their workers in the *Employment Social Security Program*, which will benefit workers and make it easier for the GoI to record and monitor the conditions of workers in Indonesia.

*Second*, it is necessary to increase the use of technology by MSMEs in marketing and assist other business processes such as procurement of raw materials and inventory management, access to information related to government assistance, financial records, and human resources resource management. In terms of marketing, many MSMEs have not yet utilized online media or social media,

either because of external (internet network) or internal (technological stuttering) barriers. At a higher level, information technology can also direct MSMEs to take advantage of the development of financial technology.

*Third*, external support is needed so that MSMEs can upgrade the skills of their owners, managers, and employees. In this context, providing training to MSMEs is very important, starting from a basic-skill package related to technology, financial management, social media use for business, and other capacity building for MSMEs that have already mastered those basic skills. The familiarities of MSMEs' workers and managers with online training during the pandemic will make the massive training process easier for MSMEs throughout Indonesia.

*Fourth*, improving MSMEs owners' and managers' mindsets and entrepreneurial spirit is necessary. This can be done by encouraging MSMEs to learn from others who have successfully weathered the pandemic. The government can provide consulting services for MSMEs affected by the pandemic by involving MSME facilitators or academics. *Fifth*, it is necessary to improve the overall MSME business process. Regular product modifications based on market needs, quality assurance, marketing through social media, market research related to consumer needs, and financial bookkeeping are some elements of business process improvement.

*Sixth*, support for MSMEs also needs to consider the scale of business, as, within the MSME category, there is a significant variation in terms of turnover, assets, and labor. For micro-scale businesses, support can be focused on using social media for marketing, subsidies for internet quotas and subsidies for shipping costs, requirements for access to capital, business permits, and product distribution permits. For small-scale businesses, the support required is not much different from that for micro-enterprises, with additional product modification capabilities and a legal framework for industrial relations with employees, including employment contracts and termination of employment. For medium-scale businesses, support can be focused on participation in e-commerce programs from SoEs or large private firms, the ability to modify goods and production techniques or use new raw materials, increasing sources of financial access and assistance by involving banks and cooperatives, as well as regulations that make it easier for MSMEs. in their industrial relationships with employees.

In addition to direct intervention, the GoI should also support enabling environment or business ecosystem for business transformation. *First*, it is necessary to enhance the synergy between ministries/institutions at the central government level, particularly those whose policies are related to MSMEs. The survey shows that MSMEs can be found in various economic sectors such as manufacturing, trade, marine, agriculture, forestry, financial services, transportation services, etc. There are currently 20 different ministries/agencies with related tasks to support MSMEs.

*Second*, it is necessary to enhance the synergy between the central and local governments regarding the development of MSMEs. The survey shows the differences in MSMEs' strategy to cope with the pandemic across regions in Indonesia; hence their growth is also under the auspices and responsibility of

local governments, whether the provincial, district or municipality. In addition, the local governments are more likely to be better informed of the actual and latest developments in MSMEs.

*The third* is the establishment of adequate communication infrastructure throughout the region. The pandemic has resulted in a significant disruption in the MSME supply chain: disconnection with consumers and suppliers. One way to overcome disconnection is virtual communication through digital technology. The pandemic has encouraged MSMEs to increasingly use the internet and switch to digital markets through websites, marketplaces (e-commerce), or social media. This will, in turn, also allow for the integration of market access. However, the survey result shows that several MSMEs have not embraced digital technology even after the pandemic outbreak. Hence, MSMEs' capacity building needs to be accelerated so that the utilization of online marketplaces is more widespread and sustainable.

*Fourth*, although marketing and payments can be made digitally, goods delivery activities must still be physical. The survey result shows that product distribution and access to inputs were among the most complex challenges for MSMEs during the pandemic. Thus, the availability of logistics facilities, whether in distribution centers, courier services, cargo consolidators, Warehousing, or inter-regional transportation, is crucial to reach far broader and more dispersed consumers. The synergy between SoEs or collaboration between SoEs and private sectors can be an alternative business model to enhance the logistics of MSMEs.

*Fifth*, digital marketing efforts must not rule out the expansion of offline markets. The synergy between with SoEs can be pursued by utilizing available spaces in public facilities such as airports, rest areas, ports, and bus terminals as showcase spaces for MSMEs products. Special provisions can also be given to room for MSMEs product showcases in shopping centers. Building partnership with large businesses is also a form of market expansion for MSME products. Guidelines for partnership agreements are needed to prevent abuse of market power by large businesses.

*Sixth*, better access to various financial sources is needed. The survey result shows that several MSMEs still rely on internal financing sources (money / personal savings, retained earnings) and /or from informal external institutions (colleagues and relatives) outside the national financial system. The current financial inclusion program focuses more on access to financing from formal financial institutions such as banks, which are characterized by various credit programs but have not resolved the problem of asymmetric information between banks and MSMEs. It is necessary to encourage the use of non-banking financial institutions in the national financial system, such as leasing, capital markets, insurance, co-operatives, venture capital, and fintech, to meet the varied financing needs of MSMEs.

## 4. Conclusion

This study aims to investigate the strategy pursued by the MSMEs to cope with the COVID-19 pandemic and their subsequent strategy for business recovery and transformation. The results reaffirm previous studies reporting on the severe impact of the pandemic on MSMEs (see, for example, Pedauga, Sáez & Delgado-Márquez 2022; Juergensen, Guimón & Narula 2020) and the importance of adequate external support, including the government (see for example Gunadi et al 2021; Razumovskaia et al. 2020; Mustapa & Mohamad 2021).

However, the findings of this study also found that MSMEs' resilience to the pandemic also depends on their internal strategy and business transformation, in line with the results reported by, among others, Caballero-Morales (2021), El Chaarani et al. (2021) and Aidoo et al. (2021). This study contributes to the extant literature by further showing that MSME's coping strategies for employment, production, finance, and marketing vary across business scale, sector, region, and owner's gender. The results also show that MSMEs across business scale, sector, region, and owner's gender during the recovery period also differ in production method adjustment, working capital accession, marketing technique, the decision to open a new business, line, and the way they perceived national economic recovery. Finally, the results show MSMEs require both financial and non-financial assistance, in addition to enabling the business environment to recover their businesses sustainably.

This study owes some limitations upon which future studies can be developed. First, the results of this study have a potential bias towards the early period of the pandemic, as the data was collected in 2020, the first year of the pandemic. As the pandemic has been prolonged to 2022, a similar study is still valuable to be carried out with more emphasis on recovery strategy and support. Second, the results of this study are to be interpreted at the aggregate level; thereby, more profound case studies are required to capture individual MSMEs' strategies that weather the pandemics in various business sectors and regions.

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