

MSMEs IN TIMES OF CRISIS: EVIDENCE FROM INDONESIA

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ABSTRACT

This descriptive study is about micro, small and medium enterprises (MSMEs) in Indonesia. It has two objectives: (i) to estimate the impact of the Covid 19 crisis on MSMEs and compares it with other previous problems. Second, to explore crisis mitigation (CM) measures adopted by affected MSMEs. It shows that different types of crises have different transmission channels through which such situations affected MSMEs. CM measures adopted by affected MSMEs also vary by different types of emergencies and hence various business risks. In the 1997/98 crisis, replacing imported raw materials with local raw materials was widely adopted. The 2008/09 problem was finding new customers or markets in unaffected countries or switching to the domestic market. While in the case of the Covid-19 crisis, switching temporarily to manufacturing medical devices such as masks and changing the marketing system from conventional to e-commerce are the most widely adopted strategies. There is already a lot of literature on economic crises such as the 1997/98 Asian financial crisis and the 2008 global economic crisis. The Covid 19 pandemic's reports and articles impact on the economy have emerged in the past two months. To the best of the author's knowledge, this is the first study on how such crises affected and through what transmission channels, MSMEs.

Keywords: MSMEs, 1997/98 Asian Financial Crisis, 2008/09 Global Financial Crisis, COVID-19 Crisis, CM Measures

JEL Classification: D2, F6, G01, I1

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Introduction

Statement of the problem

The COVID-19 crisis, only a few months old at the time of preparing this manuscript, already has had a devastating effect on the Indonesian economy due to declined consumption and production as a direct consequence of policies on social/physical distance, work, and schools from home, and the necessity for companies in non-strategic sectors to stop their activities. [Suryahadi et al. \(2020\)](#) estimated that COVID-19 would reduce Indonesia's econom-

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ic growth to between 1% and 4%. Simultaneously, the Financial System Stability Committee (KSSK) predicted that the spread of Covid-19 would hit the Indonesian economy in 2020 to reach around 2.3% to - 0.4%.

But this is not the first time that Indonesia faces an economic crisis. The country had experienced two economic problems before, namely the Asian financial crisis that hit several countries in Southeast and East Asia in 1997–1998 and the global financial crisis in 2008–2009. Many companies in Indonesia, including medium, small and medium enterprises (MSMEs), were affected by these crises, especially the first one, which began with the depreciation of the Indonesian rupiah (IDR) against the U.S. dollar (USD) by more than 200% between 1997 and 1998. The crisis's impact was so severe that the country's economy slumped into a deep recession with an overall negative growth of about 13% (T. Tambunan & Busneti, 2016; Tambunan, 1998, 2010b, 2010a, 2011)

During that crisis period, particularly the 1997/98 crisis, it was generally expected that MSMEs, especially micro and small enterprises (MSEs), would suffer severe, depending on types of business, because they were burdened by many problems, chief among them being financing.

Research questions

Based on the problem identified, this study has the following two questions.

1. How was the impact of the Covid-19 crisis on MSMEs, through what channels, and the differences between this crisis and the other two previous crises?
2. Second, what were the primary business risks of the affected MSMEs, and what were their widely adopted crisis mitigation (CM) measures?

The objective of the study

This study aims is to:

- (i) examine the impacts of the Covid-19, the 1997/98 and the 2008/09 crises on MSMEs,
- (ii) to discuss theoretically the transmission channels through which the concerns affected MSMEs,
- (iii) to identify the business risks of the affected MSMEs, and
- (iv) to explore the CM measures most widely adopted by the affected MSMEs

Methodology

This study's nature is descriptive; it does not examine the statistical significance of the correlations between variables but finds answers to these research questions. It is based on (a) a review of the critical empirical literature, (b) secondary data analysis, and (c) stories about affected MSMEs told in newspapers and on the internet.

Significance of the research

There is a lot of literature on the 1997/98 Asian financial crisis and the 2008 global economic crisis. Also, reports and articles impact of the Covid 19 pandemic on the economy have emerged in the past two months. But they do not provide an in-depth look at how such crises affected and through what transmission channels MSMEs and what business risks they faced during the troubles. To the best of the authors' knowledge, this is the first study to fill that research gap. In other words, this is the novelty of this research.

Asian economic crisis 1997/1998

Theoretical framework on key transmission channels of the impact on MSMEs

The 1997/1998 Asian financial crisis gripped most of Southeast Asia, including Indonesia. By mid. 1998 the Indonesian economy slumped into a deep recession with minus 13% of gross domestic product (GDP) growth along with the increase in unemployment and poverty as many employees were laid off in affected (mainly big) companies (Bello, 1999; Tambunan, 2010a,b, 2011).

Theoretically, the impact of the 1997/1998 crisis or, more specifically, the depreciation of Indonesian rupiah (IDR) against the U.S. dollar (USD) by more than 200% per August 1998 on local MSMEs can occur through both demand- and supply-sides (Figure 1). The supply-side (S.S.) effects occur through the market for factors of production and other inputs. The demand-side (D.S.) effects arise through the demand for finished and semi-finished goods and components. The S.S. effects of currency depreciation can be positive or negative. The adverse effects mainly come from two sources. First, the financial market: an increase in the interest rate due to tight national liquidity as a direct policy response to the depreciation or because domestic banks face financial losses in their transactions with foreign banks and increased non-performing loans. As a result, many local MSMEs (as also L.E.s) face financial difficulties because bank credit is no longer available or too expensive. Second, the inputs market: all prices in IDR of imported process raw materials, components, and other inputs increased. This would be detrimental to local MSMEs that depend heavily on imports for their information (Tambunan, 2019)

The positive S.S. effect is through the labor market. If many companies go bankrupt due to IDR's weakening, then many people will become unemployed. In a country such as Indonesia, where there is no unemployment benefit, those without formal jobs are forced to seek employment in the informal sector dominated by micro and small business activities or run their micro or small businesses.

To the D.S. effects, there are four primary sources of demand for MSMEs' products: (a) individuals/households, (b) business communities (companies), (c) national governments (e.g., departments), and (d) exports. The first source is the final domestic demand, whereas the second and third comprise domestic demand for semi-finished or intermediate goods or components. The last source represents both final and intermediate demand from abroad.

Concerning the first source of demand, whether the D.S. effect will be negative or positive depends on the relationship between the type of goods/services purchased from MSMEs and the level of consumer income. If the purchased goods are inferior (or noninferior), which have a negative (positive) income elasticity of demand, then when consumer income declines, the D.S. effect will be positive (negative) for MSMEs. Conversely, if consumer income increases. The D.S. effect will be negative (complimentary).

To the second and third sources of demand, the stability of demand for MSMEs' products during the crisis will depend strongly on the performance or ability to survive the crisis of L.E.s. that used to purchase goods or services from MSMEs (subcontracting arrangements). It happens before The D.S. effect on MSMEs is negative when L.E.s reduce their purchases due to the crisis. But the depreciation of IDR can have a substitution effect that generates market demand opportunities for MSMEs: many L.E.s that used to buy inputs from abroad before the depreciation now have to buy them from local markets produced by MSMEs. Local consumers

may also change their consumption behavior from the usual purchase of imported goods to domestic goods made by local MSMEs at much lower prices.

Finally, concerning export, the D.S. effect can also be positive or negative (or even no effect at all). Theoretically, the depreciation of the IDR will increase the price competitiveness in the international market of Indonesian exporting companies, *ceteris paribus*, other price determinants are constants. But Indonesia relies heavily on importing many goods, including processed raw materials, machinery, equipment, and other industrial goods. So, if exporting MSMEs use many imported inputs to produce their export goods, the depreciation can reduce their exports.

Thus, the net effect of the IDR depreciation on local MSMEs can be positive or negative. It depends on whether the total positive 'substitution effect,' 'export effect,' and 'labor market effect' are stronger or weaker than the real negative 'import effect' and 'financial market effect.'

Empirical Evidence

Based on secondary data provided by the Ministry of Cooperatives and Small and Medium Enterprises, Figure 2 shows clearly that the number of MSMEs decreased from nearly 39.8 million units in 1997 to 36.8 million in 1998. In 1999, the number began to increase again and continued even during the 2008/2009 crisis. This may indicate that the first crisis was more severe than the second crisis for MSMEs. To support this view, Figure 3 illustrates the percentages of change in real GDP and the number of MSMEs in Indonesia during the two problems. As can be seen, the changing pattern of the two variables is the same. In 1998, both percentages of change were both negative, whereas, in the second crisis, both variables continued to grow positively.

Several studies were carried out based on field surveys and direct observations of MSMEs in various industries during the crisis period (Table 1). Whereas reviews after 1999 are mostly based on secondary data analysis. In general, these studies' results support the widespread notion that the 1997 crisis harmed MSMEs. However, (Jellinek and Rustanto, 1999) pointed out interesting facts. They found that the problem has also created more excellent domestic market opportunities for many MSMEs in some industries. Many individuals or households affected by the crisis changed their consumption behavior from the usual purchase of imported goods to domestic goods at much lower prices. This shift in public consumption behavior has resulted in higher demand for local MSMEs.

Global Financial Crisis 2008/2009

Theoretical framework on key transmission channels of the impact on MSMEs

The 2008/2009 crisis was generally regarded as an international trade or export crisis as the export market was the main important D.S. channel through which the situation had caused exports of many developing countries in Southeast Asia to decline significantly (Griffith-Jones & Ocampo, 2009); (Khor & Sebastian, 2009); (Hartono, 2011). Concerning Indonesia, the most affected exports were wood- and rattan-based furniture, textile and clothing, leather products, including footwear. These industries have traditionally been among the major sectors of MSMEs. (Tambunan, 2019). However, compared to the 1997/98 crisis, Indonesia was much better in dealing with the 2008/09 problem (see Figure 3).

Theoretically, in this type of crisis, the most affected MSMEs are those involved in ex-

port activities. However, some domestic market- or indirect export-oriented MSMEs can also be affected by its effect on direct export market-oriented MSMEs and L.E.s (large enterprises) with subcontracting arrangements or market linkages. [Asian Development Bank \(2020\)](#) and [Hurst et al. \(2010\)](#) in [Bauer and Thant \(2010\)](#) state that the 2008/2009 crisis would affect not only 'direct' export-oriented MSMEs and 'indirect' ones that produce or supply inputs to the first ones exporting L.E.s. The impact would through domestic subcontracting or to foreign countries located multinational companies through regional or global supply chain processes. In Indonesia, due to their many limitations, such as lack of capital, lack of skilled workers, and limited knowledge on regional/international marketing, most MSMEs involved in export activities are from the category of indirect oriented ([Tambunan, 2009](#)); ([Wattanapruttipaisan, 2005](#)).

Figure 4 illustrates theoretically how the 2008/2009 crisis may affect MSMEs in Indonesia. There were two main crisis transmission channels: (a) declined world demand for Indonesian MSMEs' products, and (b) declined foreign tourists resulting in decreased demands in the local market for MSMEs products.

Empirical Evidence

Figures 2 and 3 give the impression that MSMEs were not affected by the crisis because the total number of MSMEs increased, not declined as experienced in 1998. However, some case studies based on field surveys or direct observations show different facts. For example, SMERU Research Institute provides evidence that many MSMEs in the textile and garment industry in Bandung and Cimahi, West Java province, were affected. It was found that 150 MSMEs were threatened with bankruptcy due to rising prices of imported raw materials which caused production costs to increase by about 20%. On the demand side, they faced fewer orders, especially foreign buyers ([SMERU, 2009](#)).

Tourism-related handicraft industries were also affected by the crisis. According to this SMERU's (2009) report, in the second half of 2008, several handicraft industries in Bali began to ask their workers to stay home. The most crucial handicraft in this province is the silver-smith. In Celuk village, for example, it was found that 30 of them have been temporarily suspended. In Tegallalang village, Ubud, Bali, many artisans who made wooden masks had to stop their production. Many songket (a traditional fabric of West Sumatra) weavers in Palembang and Ogan Ilir in Sumatra ceased output because some of their overseas buyers, especially from Singapore and the United States, no longer buy their products since October. In the eastern province of Java, production in the brass handicraft industry fell by 50% due to lower demand from many countries (including the United States). It was estimated that the number of workers who lost their jobs increased by 50%.

Wood- and rattan-based furniture was one of Indonesia's primary export goods heavily affected by the crisis. This industry has traditionally been among the major sectors of MSMEs. As foreign demand for Indonesian furniture decreased due to the problem, the industry had to lay off nearly 35,000 workers in early 2009. In the first and second quarters of 2009, compared with the first and second quarters of 2008, Indonesian furniture exports' value fell by, respectively, 35% and 30%. Also, timber exports fell by 28% in the first quarter of 2009 compared with the same quarter of 2008, a 23.2% drop in export volume of wooden furniture, doors, and window sills ([Tambunan, 2009](#)).

Covid-19 crisis 2020

Theoretical framework on key transmission channels of the impact on MSMEs

From a theoretical perspective, the negative impact of the Covid-19 pandemic on MSMEs as well as L.E.s (large enterprises) in Indonesia occurred through four main channels (Figure 5). The first channel is the result of the "anti-Covid 19 impacts" policy, which consists of three main elements: (i) social/physical distancing' (ii) learn and work from home; and (iii) the temporary suspension of business activities in non-strategic sectors. The second element naturally causes the number of buyers in the local market to decrease dramatically (↓). Thus, this policy element affected MSME activities on the demand-side ('demand effect'). Simultaneously, the third element of the policy involves MSMEs on the supply-side ('supply effect'). These demand-side and supply-side effects happen in not only MSMEs manufacturing finished products but also those that supply processed raw materials, components, spare parts, auxiliary goods, semi-finished goods, and other inputs.

The second channel is the decrease in world demand, especially from China, for Indonesian products, which caused Indonesia's exports to decrease ([Asian Development Bank, 2020](#)). The third channel is the decline in imports of processed raw materials and auxiliary materials, especially from China, which forced many companies, including MSMEs, in Indonesia, highly dependent on China's importance to reduce/stop their production ([Kompas, 2020a, 2020b](#)). The fourth channel is the number of poor people increased due to many workers being laid off or wage cuts. This leads further to a decrease in the local market demand, which hit the MSME business.

Empirical evidence

Since March 2020, stories about the impact of Covid 19 on MSMEs in many parts of the country from various sources began to emerge. MSMEs in the tourism sector was the hardest hit, followed by MSMEs in business lines, which were heavily affected by the 'anti-Covid-19 impact' policies such as small shops, restaurants, cafes, and transportation. Table 2 summarizes them for March and April 2020.

Types of Business Risk and CM Measures

It can be argued that when a company faces an unexpected fall in market demand for its products, especially if the decline is not expected as a short-term phenomenon, it will take some adjustment measures to reduce the pressure on its profit. Also, suppose the raw material price has increased significantly due to interference in the supply or distribution or currency depreciation. In that case, companies that depend much on such raw material will take some adjustment measures to be still able to produce. CM measures can be in various forms, such as fewer production volumes, fewer working days or hours per day, laid-off workers, the substitution of raw materials, and change the way of marketing. It's all depending on the type of crisis, the kind of business risks, the apparent impact of the problem, and, perhaps more importantly, the owner's expectation about the prospect of the current condition he or she is facing.

Experiences with the three crises show that different types of problems with varying transmission channels pose different types of business risks, such as production risk, credit risk, or market risk. Therefore, different types of business risks require various alternative forms of CM measures. Table 3 describes the type of business risks faced by MSMEs and conditions of CM measures recommended by the crises.

Concerning the 1997/98 Asian financial crisis, there was only one research done by [Dierman et al. \(1998\)](#) who tried to look at CM measures adopted by affected MSMEs in the furniture and batik industries in various locations in Central Java. Although the crisis posed several business risks, as shown before in Table 3, Bierman et al. found that replacing imported raw materials with local raw materials was the primary CM measure adopted by affected MSMEs in these industries (Table 4).

In the second crisis, [Tambunan, 2019](#) conducted a field survey throughout July–August 2009 on MSMEs in three furniture production centers in Java. During the Covid-19 turmoil, there are many stories in newspapers and the internet about how MSMEs cope with the situation. Table 4 summarises the findings of these studies and reports.

Table 3 confirms that CM measures adopted by affected MSMEs differ according to the type of crisis. During the 1998/99 crisis, the adopted CM measure was mainly to cope with the increased production cost. Whereas during the 2008/09 and the Covid situations, the adopted CM measures were to cope with the declined market demand.

Conclusion: The theoretical and practical contributions

Like most other countries in the world, Indonesia has been hit by the Corona pandemic. Before that, Indonesia has experienced two major economic crises, the 1997/1998 Asian financial crisis and the 2008/2009 global financial crisis. This study empirically examines the impacts of these three crises on MSMEs and to explain theoretically the main transmission channels through which the concerns affected MSMEs, and to explore the main CM measures adopted by the affected MSMEs.

This study has two significant contributions, i.e., theoretical and practical assistance. Concerning the academic contribution, different types of crises have other transmission channels through which the crisis-affected MSMEs pose various business risks and therefore require additional CM measures. An economic crisis may not affect all MSMEs in all sectors; it depends on the crisis's type and hence its transmission channels. For instance, the Covid 19 pandemic crisis can be considered a combination of market demand and market supply (production) crises resulting from the 'anti-Covid 19 impact policy'. From the market demand side, only MSMEs that make finished products (good and service) and are entirely dependent on offline marketing will be hit hard as people are staying at home. Whereas from the market supply-side, generally only large companies with large numbers of workers such as textile and apparel companies became a gathering place for many people. For example, cafes and restaurants, entertainment venues, theaters, hotels, and malls had to close during the pandemic period. Meanwhile, micro- businesses that only use less than five workers such as small car repair shops, small car washes, small shops, or business units without workers such as craftsmen, small traders, and food stalls remain open.

As its practical contribution, if the government wants to assist crisis-affected MSMEs, this study has two policy implications. First, to make its stimulus packages program effective, MSMEs that will be most affected should be identified first. And for that, it needs to know in advance the type of crisis and its main transmission channel and its related kind of business risks. Second, the form of stimulus must be in line with the CM measures adopted by the targeted MSMEs. In other words, the stimulus program must be complementary to the adopted CM measures. Different CM measures in response to various business risks need foreign policy approaches and different stimulus packages.

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Appendixes

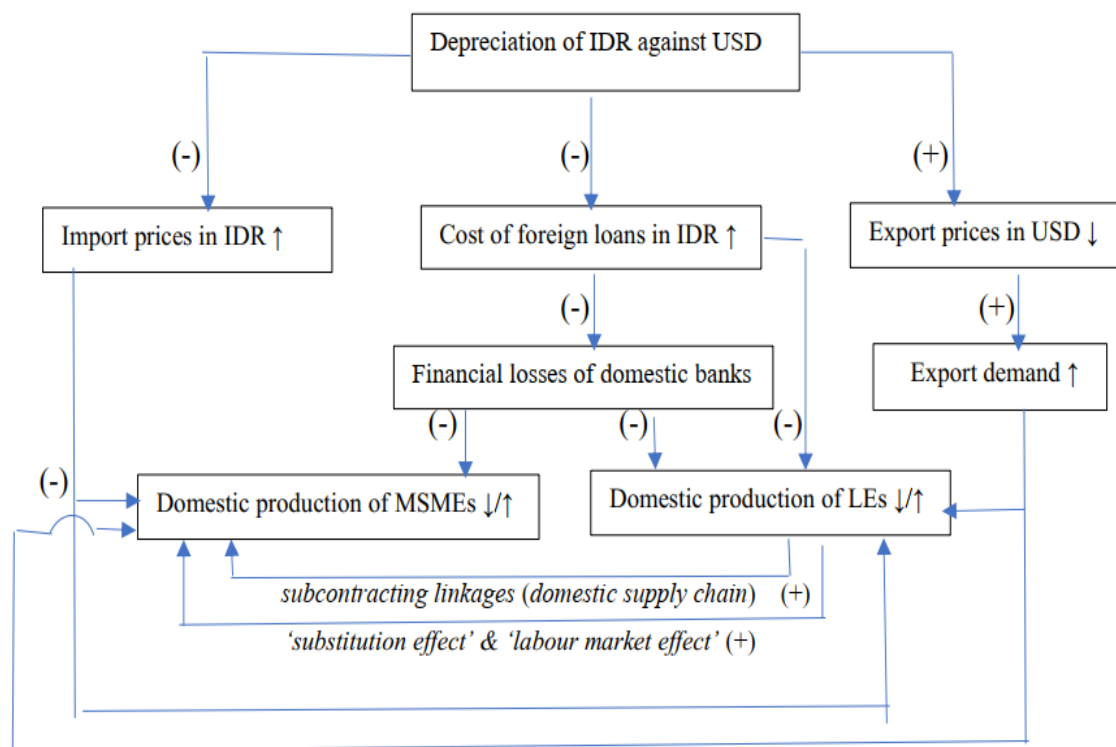


Figure 1: Theoretical framework of the transmission channels of the effects of the 1997/1998 crisis on MSMEs in Indonesia

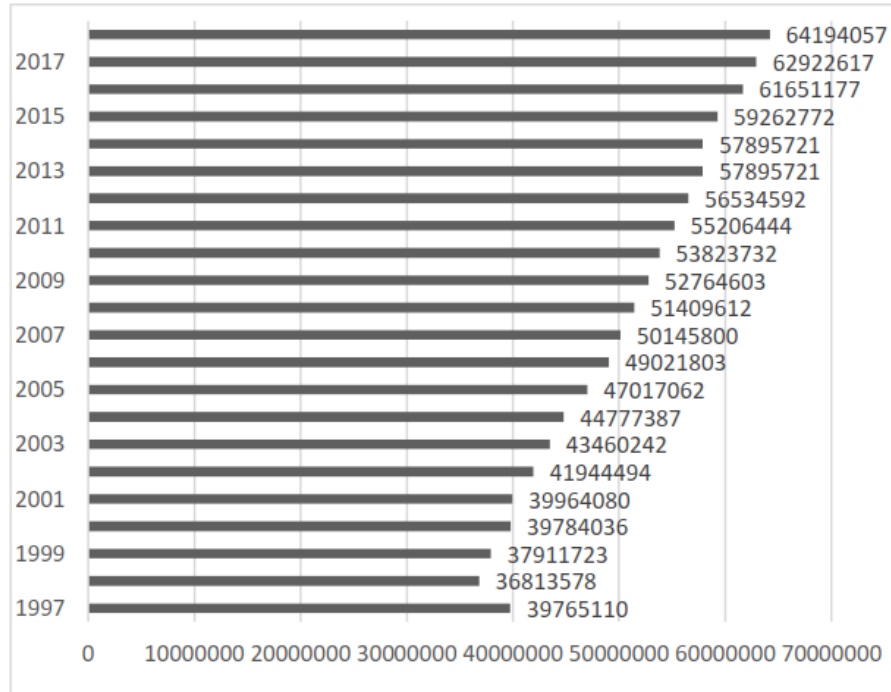


Figure 2: Total number of MSMEs in Indonesia (units)

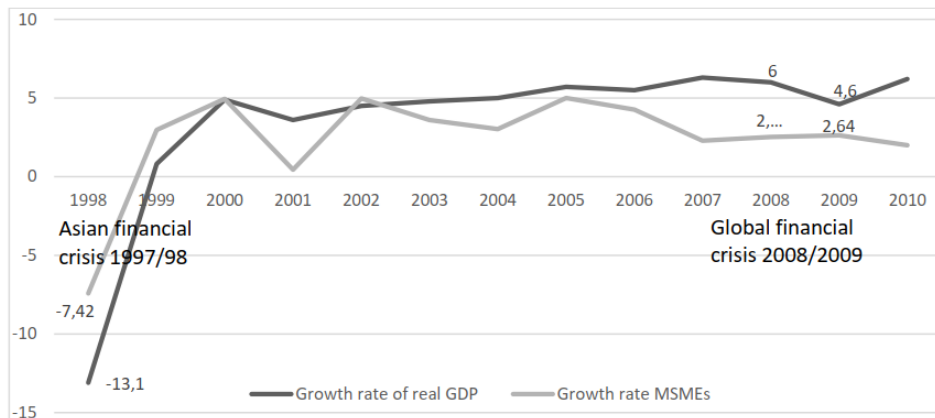


Figure 3: Percentage changes of real GDP and total number of MSMEs in Indonesia

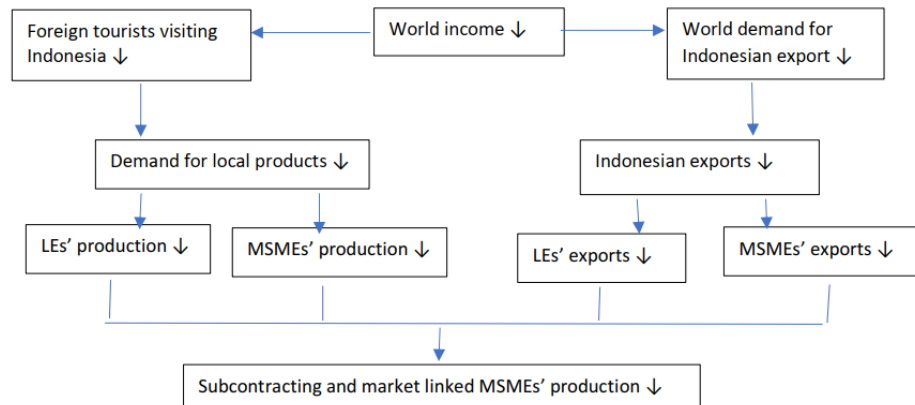


Figure 4: Theoretical framework of the effects of the 2008/2009 crisis on MSMEs in Indonesia

Table 1: Studies on the Impact of the 1997/98 Crisis on MSMEs in Indonesia

Author	Methodology	Industry	Transmission channels
Tambunan (1998), Dierman, van et al. (1998), Jellinek and Jellinek, L., and Rustanto (1999), Musa (1998), Wiradi (1998), AKATIGA & the Asia Foundation (1999), Sandee, et al., (2000) in Manning & Diermen (2001), Berry et al. (2001), Hill (2001a, 2001b), Sato (2000), Thee (2000), and Jan ter & Edgard (2006)	-Field surveys -Direct observations -Secondary analyses	e.g., footwear, furniture, batik (traditional Indonesian cloth), bricks, tofu, cigarette (kretek), and metal industry	-expensive imported raw materials -no access to bank credit -low domestic demand

Table 2: Evidence on the Impact of Covid-19 on MSMEs, March-April 2020

Source	Impact
Rahman (2000), Santoso (2020), Tambunan(2020)	Since mid-March 2020, 163,713 MSMEs have been seriously affected. As many as 56% due to a decrease in sales, 22% difficulty in capital, 15% difficulty in the distribution of products, and 4% difficulty finding raw materials
(Hermansah,2020)	Based on a survey of MSMEs, 96% claimed to have been negatively impacted. As many as 75% experienced a significant decrease in sales, 51 % believe that it is very likely that their business will only last one month to the next three months.
Anwar (2020)	Of the 14,238 MSMEs in Serang City, 10,238 were affected. Only 4,000 MSMEs have survived this epidemic.
(Kompas,2020c)	The decrease in demand for MSME products is expected to decrease by around 60% to 80%. This decrease was caused by a reduction in the number of buyers visiting shops.

Source	Impact
Sundari (2020)	Many MSMEs in Cimahi City have experienced a decline in sales of up to 80%. Even a large number of MSMEs are forced to lay off their employees. Especially those that their businesses rely heavily on daily production activities are severely affected. Also, export-oriented MSMEs are affected.
Nurzaman (2020)	Ms. Tarli Sutarli is the manager of the Buerk stamp coffee plant located in Golempang Hamlet, Ciliang Village, Parigi District, Pangandaran Regency. According to her, her turnover can reach 7 to 12 million IDR per month at regular times. Recently, hit by the corona pandemic crisis, she has almost closed her business because her turnover has dropped dramatically from day to day.
Burhan (2020)	MSME revenues in the culinary, fashion retail, and beauty services sectors fell during the corona pandemic. The culinary industry experienced a decline in daily income of up to 37%, fashion retail by 35%, and beauty services by 43%. Also, food orders at restaurants decreased very significantly by up to 60%. The negative impact of the pandemic was felt most significantly by MSMEs that still ran their businesses offline.
(Kompas, 2020d, 2020e)	By April 2020, 212,394 laid-off workers and 1,205,191 workers were sent home but still paid (not full) from 74,430 companies. The number of workers affected and lost from the informal sector reached 282,000 people from 34,453 enterprises. Most of this number comes from the micro and small enterprise category.

Table 3: Different Types of Business Risks and Different Ideal Alternative Forms of CM Measures by Type of Crisis, 1997/98, 2008/09, And 2020

Type of Crisis	Transmission channels	Type of Business Risk	Forms of CM measures recommended.
1998/98 crisis (currency crisis)	-import -credit -export -domestic supply chain	1) Production risk: -high production costs due to high prices of imported raw materials 2) Credit risk: - high loan interest rate 3) Market risk: -less or no demand from L.E.s (stop subcontracting linkages)	-substitution of raw material -efficiency in using raw materials -Reducing the number of workers/labor costs. -Reducing other non-labor and non-raw material costs -looking for alternative sources of funding -finding alternative sources for subcontracting arrangements at home and abroad
2008/09 crisis(worlddemandcrisis)	-foreign tourists -export	- Market risk: - less export demand - less domestic demand related to less foreign tourists visiting Indonesia	-Exploration of the domestic market -Finding new markets (export market diversification) -Reducing production cost, e.g., lay off some workers or reducing working time Cutting back on production
2020 Covid-19 crisis (production and market demand crisis)	-import -export -domesticdemand	1) Market risk: - less domestic demand 2) Production risk: - stop production (due to 'anti-Covid 19 impact' policy)	-Change business line -Change the way of marketing -Reducing production cost, e.g., lay off some workers or reducing working time -Cutting back on production

Table 4: Evidence on CM Measures adopted by Affected MSMEs during the Three Crises

Type of Crisis	Adopted CM measures	Source
1998/98 crisis (currency crisis)	Replaced imported raw materials with local raw materials	Dierman, vane-tal. (1998)
2008/09 crisis (world demand crisis)	-Finding new markets (export market diversification) in less or not affected countries -Exploration of the domestic market -Halting new recruitment -Reducing non-labor cost or labor cost -Cancelling/delaying facilities upgrading -Reducing working time -Cutting back on production -lay off some workers	Tambunan (2019)

2020 Covid-19 crisis (production and market demand crisis)

-change the business line to those which are not too affected by the crisis or have a chance of survival or even growth,
 -turn to the business of making masks and other personal protective equipment that were most sought during the Covid pandemic,
 -change the way of marketing from offline to online or e-commerce by using existing trading platforms,
 -switch from waiting for buyers to come to the home delivery via a telephone call, SMS, or Whatsapp.

(Affiyah, 2020; Ciremaito-day, 2020; KB, 2020; Kompas, 2020c; Setyowati, 2020; Tambunan, 2020)

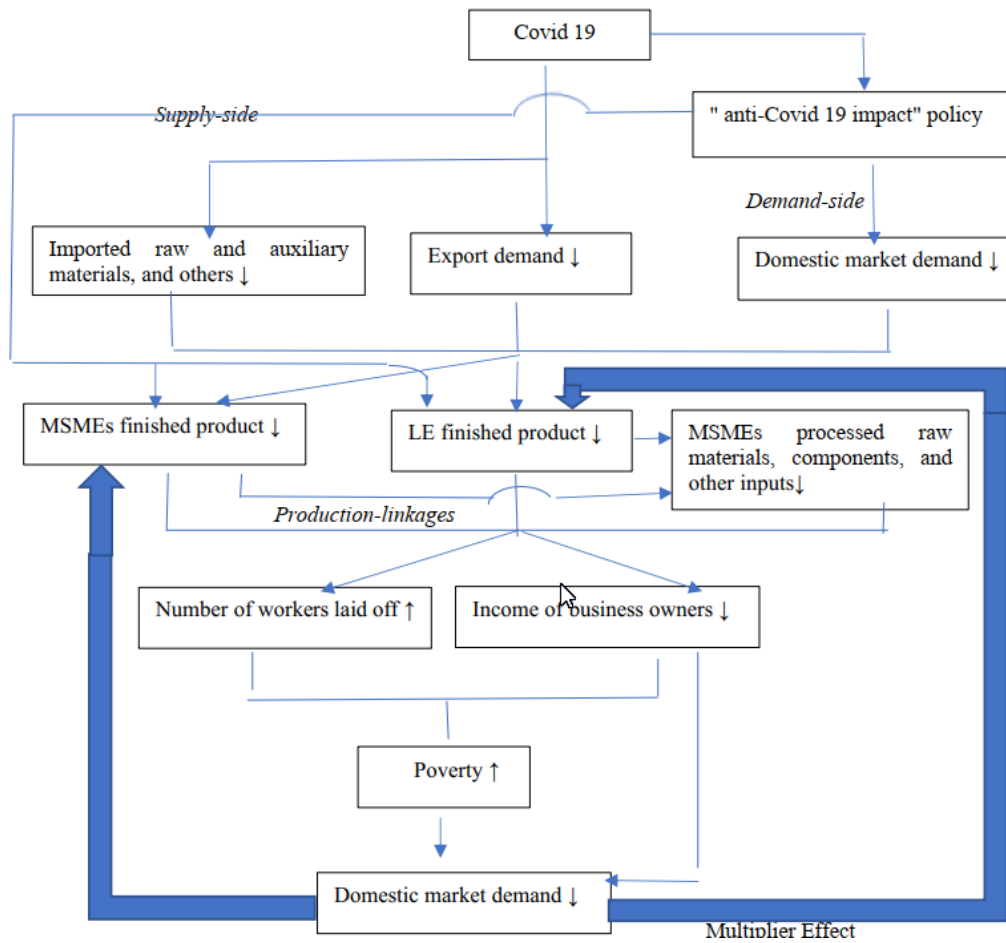


Figure 5: Impact of Covid-19 Pandemic on MSMEs