

The Impact of Monetary Policy and Export Levels on Economic Growth in the MSME Sector in Indonesia

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Abstract

The number of Micro, small and medium enterprises (MSMEs) is greater than large enterprises in Indonesia. The number of Gross Domestic Product (GDP), exports and labor absorption in the MSME sector is more distinguished than large enterprises. Although the number of MSMEs, labor and exports is more than large enterprises, MSMEs still have problems. This research was purposed to examine the short-term and long-term relationship of monetary policy and exports on the GDP in the MSME sector. The method used an error correction model. The variables used in this research were interest rates, exchange rates, exports as independent variables, whereas the GDP of the MSME sector as dependent variable. The data used were from 1997 to 2019. The results of this research showed that in the short-term, the variables of interest rates, exchange rates and exports had no effect on the GDP of the MSME sector in Indonesia. But in the long term, the independent variable had an influence on the GDP of the MSME sector. It is hoped that a more in-depth study of the types of products exported and GDP per MSME sector become the main attraction for further researchers.

Keywords: *Micro, small and medium enterprises, Gross Domestic Product, Monetary Policy, Exports.*

1. Introduction

Micro, small and medium enterprises (MSMEs) have a very important role in the Indonesian economy. This can be proven when the economic crisis hit Indonesia, the government relied on the role of MSMEs to minimize the negative impact of the economic crisis (Sujarweni and Utami, 2015). From year to year, the turnover of MSME sector has increased. It was recorded that in 2019 the turnover of MSMEs reached 7,034.1 trillion Rupiah (Ministry of Cooperatives & SMEs of the Republic of Indonesia, 2020). Likewise, the absorption of labor in the MSME sector in Indonesia also has increased every year. At the end of 2019, the number of workers in the MSME sector reached 119,562,843 people compared to 3,805,829 in large enterprises sector (Ministry of Cooperatives & SMEs of the Republic of Indonesia, 2020). If seeing the data population of Indonesia reaching 271 million people (Central Bureau of Statistics Republic of Indonesia, 2020), then 44% of Indonesia's population has worked in the MSME sector. With such a large number of MSMEs, it is certainly absorbing many workers in Indonesia. However, MSMEs still has obstacles such as low human resources, product marketing and traditional management (Abor & Quartey, 2010; Riani, 2011). Gross Domestic Product (GDP) and the number of MSMEs in Indonesia are the dominant factors in the absorption of labor in the MSME sector (Gusnadri et al., 2019 and Azhari, 2021).

Interest rates can affect the real sector (output) through the mechanism of the effect of changes in short-term interest rates which are transmitted to long interest rates through the supply and demand balancing mechanism in the money market. Changes in interest rates will affect the cost of capital which will then affect investment expenditure. Although Keynes initially emphasized this way worked through business decisions regarding investment expenditure, however, the new approach views that consumer decisions about consumer durables spending and housing is also investment decisions. The increase of investment and consumption will eventually encourage an increase in aggregate demand and output (Mishkin, 2008:

The economy is always driven by aggregate demand and supply. The balance between the two will produce an equilibrium price and output. Adherents of the supply side believe that what drives the economy comes from the aggregate supply side. On the other hand, adherents of the demand side assume that the purchasing power of goods and services is more dominant in driving the economy, so it is assumed that production will decrease if there is a decline in aggregate demand. The variables which can affect aggregate demand are monetary, fiscal, and international policies. In

a sluggish economy, monetary, expansionary fiscal policies and exchange rate stabilization policies can be carried out to encourage an increase in output (Astuti, 2014).

Export growth in the MSME sector has also increased from year to year. Data from the Ministry of Cooperatives and SMEs of the Republic of Indonesia (2020) recorded that in 2019 MSME exports reached 339,190 trillion compared to in the year of 2018 which reached 293,840 trillion. This meant that there was an increase of 15.43%.

Several studies have been carried out to find out the impact of monetary policy on economic growth in Indonesia. Long-term economic growth is significantly affected by exports and the exchange rate, while the effect of the import variable is not significant (Astuti & Ayuningtyas, 2018 and Nurlinda et al., 2018). The consistent research results are also obtained by (Rinaldi, Jamal, & Seftarita, 2017) which states the exchange rate and the current account have a significant effect on economic growth. This is different from the research conducted by Pratiwi, Dzulkiran and Azizah (2015), which revealed that the exchange rate has a negative effect on economic growth, while the interest rate variable has a positive and significant effect on economic growth in Indonesia.

Furthermore, a research conducted by Asnuri (2013) shows that short-term of Certificate of Bank Indonesia (CBI) has a negative impact on economic growth, otherwise the total financing and export contributions have no impact on economic growth. In the long term, total financing, Certificate of Bank Indonesia, and export contributions have a negative impact on Indonesia's economic growth. Indriyani (2016) export variables also affect economic growth in Indonesia

This research on the impact of monetary policy is very interesting to be studied, because based on several studies that have been done, there are differences in the implications for monetary policy, making this research become interesting to take further. In addition, based on our knowledge, the reserach on the impact of monetary policy on the real sector is rarely carried out, especially the MSME sector. The research conducted by Hakim (2012) which focuses on the object of research in the financial sector. Likewise, Budiyanti (2014) examines the impact of monetary policy on the growth of the manufacturing sector in Indonesia. This research aims to determine which monetary instruments have the most influence on growth in the MSME sector in Indonesia, with several variables used, including interest rates, exports, exchange rates and GDP of the MSME sector.

2. Literature

Monetary policy is the central bank policy or monetary authority to maintain macro economic stability. Basically, monetary policy is aimed to keep the liquidity in the economy at the appropriate amount so that trade transactions can be smoothed without creating inflationary pressures. In the economy, several indicators that are usually used to assess monetary policy include the money supply, inflation, interest rates, exchange rates, and public expectations. Interest rates affect investment in the industrial sector which will encourage production. While the exchange rate affects prices (products and production inputs). Interest rates and exchange rates are monetary policy instruments that greatly affect trade in industrial products, both domestically and internationally. If it is being done is to increase the money supply, so the government takes an expansionary monetary policy. Otherwise, if the money supply is reduced, the government takes a contractionary monetary policy (Sukirno, 2012).

The exchange rate or often known as the exchange rate between two countries according to (Mankiw, 2003) is the price level agreed upon by residents of the two countries to do transaction with each other. The exchange rate according to Mankiw (2003) is divided into real exchange rates and nominal exchange rates. The real exchange rate shows the relative prices of goods between two countries, while the nominal exchange rate shows the relative prices of the currencies of two countries. There are 3 types of exchange rate system: 1. Fixed exchange rate is the exchange rate of a country's currency whose value does not regard to the balance of supply and demand in the money market, but it is directly determined by the country (central bank). 2. Managed Floating Exchange Rate is the exchange rate of a country's currency which, apart from being influenced by supply and demand in the money market, is also affected by government intervention. 3. Free Floating Rate is the exchange rate of a country's currency which is allowed to reach the equilibrium of supply and demand in the money market in accordance with the country's internal and external conditions. The government does not directly intervene in the value of the currency. In addition to exchange rates, this study uses a literature review of international trade. Indonesia adheres to an open economic system. This means that the

fulfillment of domestic needs does not only rely on domestic production, but also imports when it is necessary. Likewise, when the production of goods and services exceeds domestic needs, then the exports can be carried out. According to Suryanto (2017) international trade greatly affects the domestic economy of a country because it creates competition between countries in the world. Thus, countries can be encouraged to specialize and increase efficiency. Countries that are successful in international trade benefit from rising incomes, capital transfers and absorption of labor, while developing countries which are exploitation-prone, import dependence and the destruction of local industries.

According to the Ministry of Trade of the Republic of Indonesia states that export is an activity of removing goods from the Indonesian customs area to another country' customs area. Thus, the definition of import can be concluded as the activity of importing goods from abroad to the Indonesian customs area. Certainly, export and import activities are carried out in accordance with applicable laws and regulations.

Economic growth is the most common economic indicator to describe the progress of a country in a certain period of time. Economic growth shows a greater added value than the previous period. Economic growth is calculated from the percentage increase in Gross Domestic Product (GDP) at constant prices in a year against the previous year. There are several approaches to calculating GDP, namely; production, income and expenditure approaches. The calculation of GDP with a production approach is carried out by calculating all added values that occurs in a domestic area within 1 year from various business fields. The calculation of GDP with the income approach is to calculate national income by calculating all income of economic actors in a domestic area within 1 year. The calculation of GDP with the expenditure approach is carried out by calculating all expenditures of various economic sectors in a domestic area within 1 year. Several studies have been done before. One of them is by Aliman & Purnomo (2001) who conducted a causality test between exports and economic growth in Indonesia. The result of this study shows that economic growth is driving exports. The test conducted by Aliman & Purnomo (2001) is a test of empirical data from 1969-1997.

The results of other researches support the conclusions of Aliman & Purnomo (2001) and Dewi (2018) which show that in the short term GDP has an effect on exports. Hakim (2012) conducted a similar research on the relationship, imports and GDP, but the study was conducted for the banking financial sector. The results generally indicate that exports and imports affect the GDP of the banking financial sector and the relation between exports and imports is relatively small. In general, Astuti & Ayuningtyas (2018) research examines the relationship between exports, imports, exchange rate and economic growth in Indonesia by observing the data from 2000-2016. The results show that in the long term, exports and exchange rates affect economic growth, while imports do not. However, in the short term, exports and imports affect economic growth, while the exchange rate does not. Unfortunately the research period was too short. The effect of the exchange rate on economic growth has also been studied by Rinaldi, Jamal, & Seftarita (2017) whose research findings show that the exchange rate has a negative and significant effect on economic growth. Unfortunately, the research period used is only from 2000-2015.

Furthermore, Sugiartiningsih (2015) conducted research on the relationship between the exchange rate and imports. As a result, the exchange rate has a negative effect on imports. Another study by Ginting (2013) examined the effect of the exchange rate on Indonesian exports. The data used is the data for the period 2005-2012. The results showed that both in the long term and in the short term, the exchange rate had a significant negative effect on exports. Another research conducted by Dewi (2018) with data for a longer period, it was from 1980-2016, the results of this research indicate that the exchange rate has a significant effect on exports only in the long term. These various studies show various variations in results regarding the relationship between the variables of exports, imports, exchange rates and economic growth. However, the object and the research data used all sectors. This is different from previous research, where the data and objects of economic growth were in the MSME sector. This is not an exaggeration because the MSME sector in Indonesia has a large number and high labor absorption.

3. Research methods

This research analyzed the impact of monetary policy and export on economic growth in the MSME sector in Indonesia using the Error Correction Model (ECM) analysis method. The data was secondary data sourced from Central Bureau of Statistics Republic of Indonesia, the Ministry of Cooperatives and SMEs and Bank Indonesia. The data used

was time series data from 1997 – 2019 namely; data of interest rates, exchange rates, exports of the MSME sector and GDP of the MSME sector.

The data analysis method of this research used several steps, namely: (1) conducting a stationarity test on the independent and dependent variables; (2) testing the degree of integration; (3) cointegration testing; (4) ECM estimation analysis; and (5) interpretation of the estimation results. The estimates in this research used the Error Correction Model (ECM) developed by Engle-Granger. The estimation model used from the ECM method for both short and long term which is described as follows:

$$DPDB_t = \alpha_0 + \alpha_1 DSBI_t + \alpha_2 DKurst + \alpha_3 DExport + \alpha_4 SBI_{t-1} + \alpha_5 Kurs_{t-1} + \alpha_6 Export_{t-1} + \alpha_7 ECT$$

or

$$PDB_t = \alpha_0 + \alpha_1 DSBI_t + \alpha_2 DKurst + \alpha_3 DExport + \alpha_4 BSBI + \alpha_5 BKurs + \alpha_6 BExport + \alpha_7 ECT$$

D is the first difference, B is the backward lag operator, GDP is the gross domestic product of MSMEs, Certificate of Bank Indonesia is the interest rate, the exchange rate is Rupiah exchange rate and Exports is the number of MSME exports. CT is an error correction, with the formula:

$$CT = \alpha_7(\alpha_4 SBI_{t-1} + \alpha_5 Kurs_{t-1} + \alpha_6 Export_{t-1} - PDB_{t-1})$$

Next, the analysis model of multiple linear regression for long term is:

$$PDB_t = C + \beta_1 SBI + \beta_2 Kurs + \beta_3 Export + e_t$$

GDP is the gross domestic product of MSMEs, certificate of Bank Indonesia is the interest rate, the exchange rate is Rupiah exchange rate and Exports is the number of MSME exports. Meanwhile, α is a constant, $\beta_{1,2,3}$ is the estimated coefficient, and e is the error term.

4. Results and Discussion

4.1. Results

The initial step taken was a stationary test of each variable, this aimed to anticipate the occurrence of spurious regression (Gujarati, 2014). If the test result was non-stationary at level, then it was continued to level of integration testing so that the variable became stationary. The way to get the result was by comparing between ADF value and the critical value. When the ADF value was greater than the critical value, then the variable was stationary;

However, if the ADF value was less than the critical value, then the variable was non-stationary.

Table 1. The Result of Stationary Test of Research Variables

Variable	Level			1 st Difference		
	ADF Value	Critical Value	Result	ADF Value	Critical Value	Result
GDP	-1.1826	-3.0048	Non stationary	-4.4598	-3.0123	Stationary
CBI	-3.1129	-3.0048	Stationary	-8.7095	-3.0123	Stationary
EXCHANGE RATES	-3.3639	-3.0048	Stationary	-7.7884	-3.0123	Stationary
EXPORT	-1.6190	-3.0048	Stationary	-7.7189	-3.0123	Stationary

Source: Data Processing, 2021.

Table 2. The Result of Cointegration Test of Research Variables

Johansen Fisher Test	p-value	Critical Value	Prob.
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<i>Trace Statistic</i>	82,2023	47,8563	0,0000
<i>Max Eigen Test</i>	61,6935	27,5843	0,0000

Source: Secondary Data Processing, 2021.

Table 2 shows the results of the stationary test at the level, only the GDP variable is not stationary; while the variables of interest rates, exchange rates (exchange rates) and exports are stationary. However, at the level of first difference, all variables are stationary.

To see whether or not there is a long-term correlation tracking inter variables, then the cointegration test was conducted using the Johansen Test method. The step to find out the cointegrated variables was by comparing the statistic value with the critical value (0.05). If the p-value was less than the critical value, then the data variables were not cointegrated; otherwise, if the p-value was greater than the critical value, then all variables were cointegrated.

The results shown in Table 3 illustrate that the critical p-value was greater than the value, either it was through the results of trace statistic test or through Max-Eigen test. Thus, the variables of MSME gross domestic product, interest rates, exchange rates and exports were stationary in long-term relationships.

4.1.1. Short Term Equation Estimation

This section described the short-term estimation results using the error correction model (ECM), which were summarized in Table 3. The test results in Table 3 stated that in the short term, all variables had no effect on the MSME GDP sector. This was proven with the value of Prob. (F-stat) of 0.006 which was greater than 0.05. Furthermore, the results of the partial analysis showed that the variables of interest rates, exchange rates and exports had no effect on labor absorption, with imbalance value of 31% of the data used.

The results are similar to several previous studies, including Asnuri (2013) which states that CBI has a negative impact on economic growth. However, the results of this research were not consistent (Rinaldi, Jamal, & Seftarita, 2017) where the exchange rate and the current account were significant on economic growth. And Ayuningtyas (2018), stated that in the short term the exchange rate did not have any effect on economic growth.

Basically, economic growth will encourage exports in the short term. Research conducted by Aliman & Purnomo (2001) is a test of empirical data from 1969-1997. The results of other studies support the conclusions of Aliman & Purnomo (2001) and Dewi (2018) which show that in the short term GDP has an effect on exports.

Table 3. The result of Short Term Regression Estimate

<i>Variable</i>	<i>Coefficient</i>	<i>t-stat</i>	<i>Prob</i>
Constant	-0,2776	-1,6937	0,1086
D(CBI)	-0,0434	-1,5217	0,1465
D(EXCHANGE RATE)	2,5641	1,0809	0,2948
D(EXPORT)	2,9154	1,1706	0,2579
RES(-1)	-0,3145	-2,2327	0,0393
R^2	0,3912		
<i>Adj R²</i>	0,2479		
<i>Prob.(F-stat)</i>	0,0636		

Source: Secondary Data Processing, 2021.

Table 4. The result of Long Term Regression Estimate

<i>Variable</i>	<i>Coefficient</i>	<i>t-stat</i>	<i>Prob</i>
Constant	16,0116	1,8121	0,0858
CBI	-0,0046	-0,0990	0,9221
EXCHANGE RATE	5,0016	1,3677	0,1874
EXPORT	-5,5235	1,8183	0,0068
R^2	0,9564		
<i>Adj R²</i>	0,4073		
<i>Prob,(F-stat)</i>	0,0045		

Source: Secondary Data Processing, 2021.

4.2. Discussion

The next step was to make a long-term estimation using an error correction model (ECM). The results were shown in Table 4. The results of the long-term test between the variables of interest rates, exchange rates and exports in the MSME sector in Indonesia have a significant effect on gross domestic product (GDP). This was proven by the value of Prob. (t-stat) of 0.0045 which was greater than 0.05. But partially, only export variables had an influence on GDP of MSME, while interest rates and exchange rates have no effect on GDP of MSME.

In the long term, the total financing, CBI and export contributions had a negative impact on Indonesia's economic growth. Indriyani (2016) export variables also affect economic growth in Indonesia. Long-term economic growth is influenced by exports and the exchange rate, while the influence of the import variable is not significant (Astuti & Ayuningtyas, 2018).

In contrast to the research conducted by Pratiwi, Dzulkiran and Azizah (2015), which revealed that the exchange rate has a negative effect on economic growth, while the interest rate variable has a positive and significant effect on economic growth in Indonesia. Basically, economic growth will encourage exports.

5. Conclusion

The results of the research indicates that in the short-term estimates of interest rates, exchange rate and exports do not have a partial and simultaneous influence on the GDP of MSMEs sector in Indonesia. However, in the long term, all variables have an influence on the GDP of MSMEs sector. Partially, only export variable which have an influence on GDP. The results of this research recommends the importance for doing a more in-depth study to the types of products exported and GDP per sector owned by MSMEs in Indonesia. In order to obtain the most dominant results in the MSME sector in Indonesia. Definitely, it will have an impact on the policies that will be taken by policy makers in this country. In addition, the limitation of this research is the 23-year-time series data. Panel data will be used in future research is particular interest.

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