Finance & Banking Studies

MSMEs as mediation in the effects of investment credit, interest rates, and labor on economic growth: Evidence from Indonesia

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Abstract

An increase in MSMEs in large numbers is very instrumental in increasing economic growth in developing countries, including Indonesia. The research objective is based on identifying the effect of investment credit, interest rates, and labor on economic growth through the role of MSMEs. The design of this research is descriptive-verification to present a structured, factual and accurate picture and test hypotheses empirically through the MRA model. Empirical analysis proves that investment credit and interest rates through the role of MSMEs can influence positively and significantly on Indonesia's economic growth. In other results, it appears that the role of MSMEs is less able to mediate the effect of labor on Indonesia's economic growth. This fact is based on a negative and insignificant relationship. In a sentence or two, enter the implications and limitations of your research. In Indonesia, increasing bank lending to MSMEs in practice is undermined by lending policies by banks and by macroeconomic factors (economic growth, interest rates, investment credit, and labor). From this study, the fulfillment of investment credit, interest rates, and labor needed in the Indonesian economy through MSMEs come from the availability of funds to finance investments that can be collected from various sources of lending and business capital from banks and non-bank institutions.

Introduction

In the last few decades, several previous studies on micro, small, and medium enterprises (MSMEs) have attracted attention, because this business sector has a fundamental contribution to economic performance. In total, there are 90 - 99% of companies in various parts of the world are small and medium enterprises (MSMEs), including most small or micro-businesses. Business trends so far, such as flexible production, downsizing, outsourcing, and franchising, support MSMEs, and, as a result, MMSME plays a more important role in stability, creating employment and economic development of a country (Gutierrez et al., 2015).

The MSMEs have a significant correlation with the increase of GDP (Arunagiri et al., 2015; González-Loureiro & Pita-Castelo, 2012). Also, Liang et al. (2017) and Selcuk (2001) showed that MSMEs can contribute to addressing the employment problem. However, MSMEs still face external barriers in terms of financial problems due to bad access to formal financial sources (Schmitz, 1982; Hayashi, 2002; Yoshino & Taghizadeh-Hesary, 2017).

UMKM has played an important role and is contributing to the Indonesian economy because it can absorb around 97% of the national workforce and contribute to the Gross Domestic Product (GDP) of around 57%. As one of the agents of economic growth, MSMEs are considered to have great potential due to their resistance to fluctuations in economic conditions, as during the 1997-1998 and 2008-2009 economic crises 96% of MSMEs remained resilient from crisis shocks (Bank Indonesia, 2015). The existence of great potential at MSME does not mean that MSME has no problems or problems. The classic issues surrounding financing and business development are still attached to MSMEs.

In addition, in 2008 MSMEs contributed GDP of Rp 1,505,308 trillion or 30.39%. This number is quite large and very promising, especially considering the average growth rate of business units from 2006-2008 of 2.70% per year. Microbusiness development also has a positive impact on job creation. In 2008 micro businesses absorbed 83,647,711 workers or around 86.89% of the workforce. This figure also experienced a positive trend with an average increase of around 2.26% during the period 2006-2008 (BPS-Statistics of Indonesia, 2009).

Banks as financial institutions have a big role to run a country's economy. This can be seen from the function of the bank as an important intermediary in people's lives. The bank is also an institution to collect funds from the public and channel funds back to the community in the form of credit. Many people need funds to meet their needs. Therefore, credit is one of the productive activities that provide the largest contribution to the banking world because, with the existence of credit, banks will obtain a source of income that is from interest and credit provision. In a bank, the largest income is interest income from lending. Thus, this has caused many banks to compete in increasing lending and ultimately have an impact on capital development. This increase in the capital can maintain the existence of the bank itself, but which can affect the development of capital is not only from lending but from the burden of banks that can adversely affect capital development (Hasibuan, 2005).

Credit demand is directly affected by the large interest rates on loans. The higher the estimated interest rates in the future, the lower the demand for credit (Mishkin, 2009). There is a way to improve and develop the role of MSMEs for the Indonesian economy through lending with a relatively small interest rate policy to MSME actors. The role of banks as lending institutions is important. The facts show that from year to year, the number of MSME credit volumes continues to increase. However, the ratio of productive MSME loans (investment and working capital) to consumer credit continues to decline. It can be concluded, with the increase in the volume of MSME credit in Indonesia, more due to the high lending for consumption.

In the context of expanding employment, the development of the industrial sector is expected to be able to absorb labor, both those who have been moved from the agricultural sector or who have just entered the labor market. The agricultural sector is currently too heavy in terms of employment. A lot of agricultural lands have been turned into offices and also become settlements so that there are many underemployed workers and relatively low productivity and income.

Referring to some of the problems previously presented, the objective of the research is to see the role of MSMEs as a mediating variable in influencing investment credit, interest rates, and labor towards economic growth in Indonesia.

Theoretical and Conceptual Framework

With this investment credit, it will certainly make it easier for the industry to find capital for company development. The development of the industry will certainly require a lot of manpower. That means more workers are absorbed and have an impact on improving the state of the economy.

However, the performance and the target of this scheme are still questionable. In 1998, approximately 75% of loans failed despite being protected by the credit guarantee corporation in Indonesia (Hiemann & Noorjaya 2001). In contrast, the studies by Graham (2004), Boocock & Shariff (2005), Riding et al. (2007), and Zecchini & Ventura (2009) argued that such a credit guarantee scheme is effective. Nevertheless, credit has become a support for MSME activity, mainly for investment financing and capital goods (Liang et al., 2017; Quartey et al., 2017). Several studies on MSMEs have focused on access to credit. Surveys conducted by the OECD found that MSMEs are facing difficulties in gaining access to credit. Moreover, the surveys emphasize that collateral is the most significant barrier (World Bank, 2012).

To get a large output, of course, large industry and is in need of large capital. It is not uncommon for industry players to open wide doors for external parties to enter to become investors or investors in their companies. They even lend funds and investment loans at commercial banks or other credit institutions.

The interest rate as a measure of return on investment that can be obtained by the owner of capital and also represents the cost of capital that must be incurred by the company on the use of funds from the owner of capital. For investors, deposit rates are very profitable, because interest rates are relatively higher compared to other forms of deposits. Besides, the deposit interest rate is without risk. Low-interest policies will encourage people to choose investment and consumption rather than saving. Conversely, a policy of increasing deposit rates can cause people to prefer saving rather than investing or consuming.

The implications of the deterioration of the banking sector and rising interest rates do not significantly affect the sector. Unlike the troubled banking sector, the MSME participated in its business activities. While large businesses can survive. In Indonesia, MSME uses its own capital from savings and its access to banking is very low. The MSME has limited capital and a competitive market, its impact MSME has a strict production specialization (Syapsan, 2019).

As the price level, interest rates can be seen as a mechanism for allocating resources and the economy. The interest rates applied by Bank Indonesia (SBI) are the interest rates of Bank Indonesia signaling instruments and monetary policy rates. An increase or decrease in SBI will affect interbank interest rates and deposit rates which results in changes in lending rates. Thus, the BI-rate signals that the government expects the banking sector to drive the real sector, to drive the pace of economic growth in Indonesia. The increase in the BI-rate has led to an increase in interbank funds and deposit rates which will increase lending rates. Meanwhile, if the BI-rate is lowered, it is feared that it will trigger a short-term flow of funds, which could disrupt the stability of the rupiah exchange rate and economic growth.

Furthermore, the labor market can be divided into informal and formal sectors in Indonesia. In particular, the informal sector is an indication of MSMEs (Cahyono, 1983). MSMEs in Indonesia is very important especially in terms of creating job opportunities. This argument is based on the fact that on the one hand, labor is very abundant following a large population. On the other hand, big business is not able to absorb all the inability of job seekers to create great job opportunities. The factor, in general, is more caused by this business group being relatively capital intensive, whereas MSMEs are labor-intensive.

The existence of MSMEs, plays an important role in the village economy and employs a local workforce and provides opportunities to develop business skills (Tambunan, 2006; Hill, 2001; Hayashi, 2002; Huda, 2012). For Indonesia, this also happened and the contribution of MSMEs to the rural and rural economy was very significant.
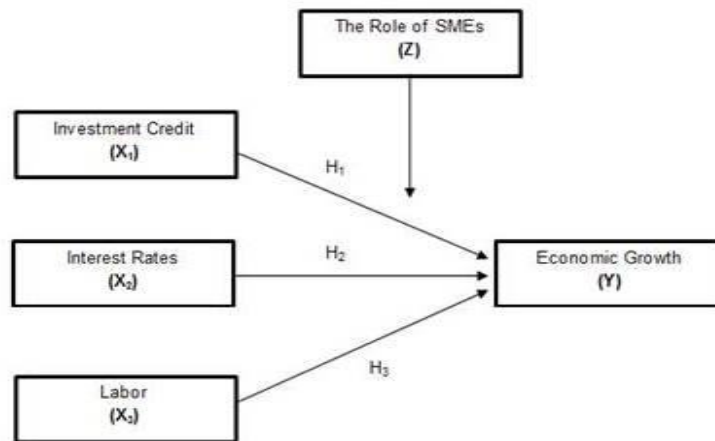
Figure 1: Variable model

This research conceptual framework, formulated based on the elaboration of the concept of research thinking, refers to previous research and supporting theories related to this research. Thus, this research emphasizes the influence of investment credit, interest rates, and labor on economic growth, with the role of MSME as mediation (see Figure 1).

Research Methodology

The design of this study is descriptive-verification to present a structured, factual and accurate picture and test hypotheses empirically. Descriptive research was conducted to obtain clarity about the characteristics of the variables studied to describe the behavior of the observed variables based on data obtained in the field, while verification was carried out to test hypotheses with statistical analysis tools during 2011-2019.

To examine the influence of the role of MSME variables in the relationship in the relationship between investment credit, interest rates, and labor on economic growth with a regression equation through an interaction test or often referred to as Moderated Regression Analysis (MRA). According to Ghozali (2011), MRA is a special application of linear multiple regression, where in the regression equation it contains an element of interaction (multiplication of two or more independent variables).

This study consists of 3 (three) independent variables, 1 (one) dependent variable, and 1 (one) moderation variable. For this reason, MRA is used. The analysis is used to see whether the moderating variable (Z) influences the influence between variable X, which is a variable that suppresses / explains other variables and is called an independent variable (independent variable) against Y variable (dependent / dependent variable), which is a variable that is determined or explained by other variables this variable is called the dependent variable (dependent variable). This influence can then be used to look for the effect of variable X on variable Y. Then, see whether the variable (Z) influences the relationship between variable X to Y. Operationally, MRA is used to look for the effect of variable X (investment credit, interest rates, and labor work) on the Y variable (economic growth) through the Z variable (the role of MSME).

MRA or interaction test is a special application of multiple linear regression, where the regression equation contains interaction elements (multiplication of two or more independent variables) with the following equation formula (Liana, 2009):

$$Y = a + b1X1 + b4Z + b5X1Z + e1$$

$$Y = a + b2X1 + b4Z + b6X2Z + e2$$

$$Y = a + b3X1 + b4Z + b7X3Z + e3$$

Where,

Y is the predicted value a is a constant;

b1 is the regression coefficient for X1;

b2 is the regression coefficient for X2;

b3 is the regression coefficient for X3;

b4 is the coefficient of the mediating variable;

b5 is the moderation regression coefficient for X1;

b6 is the moderation regression coefficient for X2;

b7 is the moderation regression coefficient for X3;

X1 is the first free variable;

X2 is the second free variable; and

X3 is the first free variable Z is a moderation variable e is the residual value.

Interaction testing testing in testing moderating variables usually causes problems caused by the occurrence of high mulcholinearity between independent variables and moderating variables. For example between the investment credit variable (X1) and the moderating variable (X1*Z) there is an element of investment credit itself and the role of MSMEs in economic growth. Therefore, to overcome the multicollinearity problem in this regression by centering the data. Then, in analyzing subsequent hypotheses the data used is the data center, that is, the amount of nominal data obtained for each variable, will be reduced by the average of each (Aiken & West, 1991; Hoyle & Robinson, 2003).

In addition to using the criteria for the level of significance of the regression coefficient of interaction variables in determining moderating variables, to identify and analyze these variables in more detail, you can use the framework proposed by Sharma et al. (1981) and Ghozali (2011) by referring to the following regression equation this:

$$Y = \alpha + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X1 X2 X3 Z + \varepsilon$$

Where,

Y is economic growth;

X1 is an investment credit;

X2 is the interest rate;

X3 is labor; Z is the role of MSMEs;

X1X2X3 is the interaction of X1, X2, and X3 through moderation;

α is a constant (intercept); and

β1β2β3 is the regression coefficient.

Testing the research hypothesis proposed by using the MRA method to determine the effect between variables using Statistical Product and Services Solution (SPSS) software.

Findings

The multiplication variables between X1, X2, and X3 for Z in each model, are moderating variables that describe the influence of moderating variables Z on the relationship of each independent variable to Y. Meanwhile, the independent variables (X1, X2, and X3) is a direct influence on the variable Y. Criteria for determining the role of MSME as a mediating variable in the relationship of investment credit, interest rates, and labor on economic growth ie if the beta coefficients (b1, b1, and b3) are significant at the 0.05 or 5% level.

Correlation value (R) is obtained that is 0.897, indicating a correlation interval between> 0.75-1.00 (very strong relationship level). The amount of R-squared (R2) obtained is 0.805. The figure shows that the model

can explain the relationship with the strong category between the variable Credit Investment, Interest Rates, and Labor through the role of MSMEs on Economic Growth that is 80.5%. The remaining 0.195 or 19.5% is explained by other factors that are outside the research model.

Table 1: Highlights of MRA calculations on economic growth variables

Model	Unstandardized Coefficients	Sig.	Std. Error	t-value
Constant (α)	2.939	0.203	2.006	1.465
IC*MSMEs	0.933	0.018	0.018	3.761
IR*MSMEs	0.878	0.003	0.003	3.683
L*MSMEs	-0.075	0.771	0.002	-0.308
F Sig. = 0.032				
F-value = 6.874				
R = 0.897				
R Square = 0.805				
Durbin-Watson (DW) = 2.276				

Source: SPSS output (2020)
*Noted: *significant at α = 5%*

Violations of the assumption of autocorrelation can result in an unbiased but inefficient estimation of MRA. To find out the presence or absence of these symptoms, a Durbin Watson test was performed. The magnitude of the Durbin-Watson figures shows the results of the residual statistics. Based on these results, showing the results of the DW-test, the Durbin-Watson value is 2.276. The Durbin-Watson value is below the provisions (du <d <4), it is concluded that there is no autocorrelation. Thus, the variable model does not have an autocorrelation problem.

Based on the analysis of the data shown in the ANOVA test through the F-test, it is known that Investment Credit, Interest Rates, and Labor through the role of MSMEs have a significant effect on Economic Growth simultaneously. This is evidenced by the F-value of 6,874 and F-table α (k) (n-k-1). Then, with a significance of 5%, a significance level of 0.032 was obtained. These results indicate that the F-value is greater than the F-table (6.874> 6.39). So, it can be concluded that simultaneously the significant influence or linear relationship on the MRA between the variable Investment Credit (X1), Interest Rate (X2), and Labor (X3) on the variable Economic Growth (Y) through the role of MSME (Z).

The analysis results also show that Investment Credit through the role of MSMEs has a significant effect on Economic Growth in a positive direction. With a coefficient of 0.933 and a t-test is greater than t-table (3,761> 2,132), so it is known that the probability is 0.018 (sig <0.05). Similar to the previous results, the Interest Rate with the role of MSME also has a significant effect on Economic Growth with a positive path. Achievement coefficient of 0.878 and t-value is greater than t-table (3.683> 2.132), so we get a probability that is 0.003 (sig <0.05). On the other hand, Labor through the role of MSME has no significant effect on Economic Growth in a negative direction. This can be seen through the coefficient of -0.075 and the t-value smaller than the statistic provisions (-0.308 <2,132). The probability of the relationship between these variables is 0.071 or sig> 0.05.

Loans from banks to the MSME sector are fundamental to supporting the Indonesian economy. Law of the Republic of Indonesia Number 20 the Year 2008 states that the financing of Micro, Small and Medium Enterprises regarding the provision of funds by the government, regional governments, the business world, and the community through banks, cooperatives, and non-bank financial institutions to develop and strengthen MSME capital. In the beginning, there were not many commercial banks that extended credit to the MSME sector because it was less profitable for banks, compared to large-scale businessmen.

Table 2: Investment credit position, Indonesian interets rates, labor force participation rate, number of MSMEs, and Indonesia's economic growth rate, 2011-2019

Year	Investment Credit (Rp Billion)	Indonesian Interest Rates (%)	Labor Force Participation Rate (%)	Number of MSMEs (Unit)	Economic Growth (%)
2011	662,681	6.50	68.36	207,114	8.04
2012	578,708	6.58	68.77	233,973	7.93
2013	619,764	5.77	64.67	276,005	7.99
2014	760,569	6.48	63.81	290,282	6.75
2015	816,753	7.54	64.71	304,898	5.47
2016	897,472	7.52	66.07	333,746	4.38
2017	1,072,023	6.00	65.92	346,163	6.23
2018	1,081,751	4.56	66.06	357,205	5.94
2019	1,181,515	4.25	67.49	385,692	7.08
Average	*722,658*	*6.13*	*66.21*	*303,898*	*6.65*

Source: BPS-Statistics Indonesia and Bank Indonesia (2020)

Noted: The use of 7-Day Repo Rate as a reference interest rate will take effect on August 19, 2016

Conditions of investment credit, Indonesian interest rates, labor force participation rates (LFPR), and economic growth fluctuate from year to year. On one hand, the performance of MSMEs in Indonesia empirically experienced a positive increase. The increase in the MSME sector was not followed by other supporting macroeconomic variables. However, the role of investment credit flow in the highest observation period was in 2019 reaching Rp 1,181,515 billion, the interest rate in 2015 was 7.54%, LFPR right in 2013 (68.77%), and the level of economic growth even touched 8.04% (making the highest level in 2011). As for the achievements of MSMEs in Indonesia, there has been a surge in the last period of 385,692 units for 2019 (see Table 2).
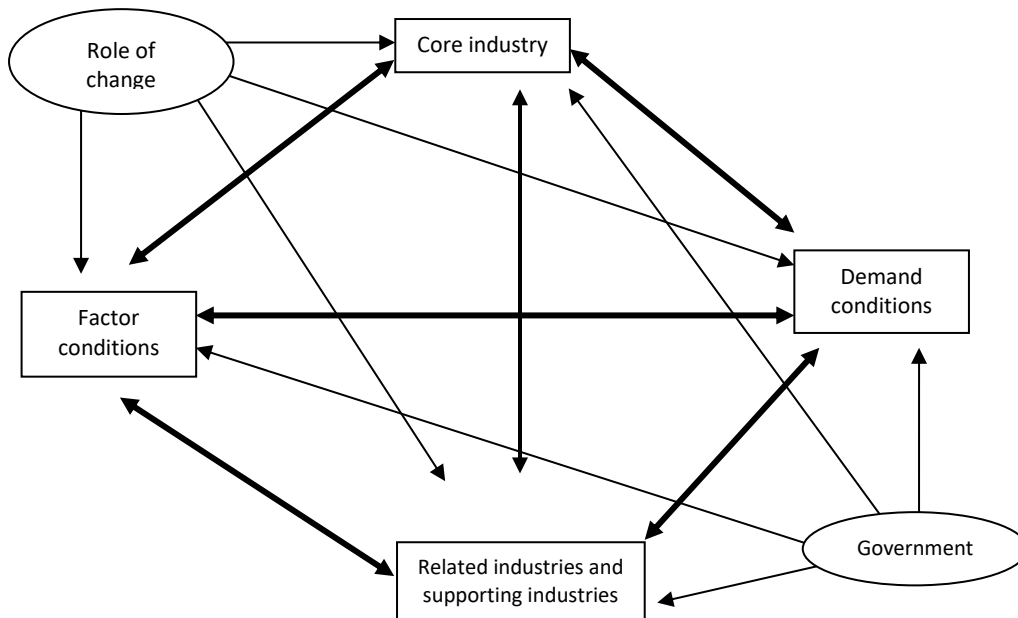

Figure 2: Diamond Porter model
Source: Neven & Dröge (2001)

When viewed from the side of customers as borrowers / creditors, in general they will use more credit services provided by banks if the interest rates offered are at a low percentage, and vice versa. Fluctuations in interest rates in the first quarter always increase every year, and then continue to fall until the final quarter of the

year. One factor that makes most small entrepreneurs unable to develop their business is limited funds / venture capital. To increase business activities or the expansion of MSMEs in Indonesia and Indonesia, capital assistance is needed. Government business in the economic field is intended to improve the ability of micro, small and medium entrepreneurs, regarding capital and credit, it is inseparable from the role of the banking sector, as banks are needed as institutions that regulate the flow of payments and the circulation of money because benefits are no longer limited to general function only, but directed to the function of the institution that is used as an apparatus that must also serve specifically to the capital requirements for development.

Bank lending with certain interest rate restrictions, including MSME loans, is influenced by several factors, both in the demand and supply sides. Factors such as customer quality, loan interest rates, and business risks can affect demand-side lending. While from the supply side, the amount of credit can be influenced by internal banking factors (such as capital adequacy, problem loans, and asset quality) and also external factors such as high credit risk.

As explained by the Diamond Model, the role of MSMEs in Indonesia has provided 4 (four) interconnected things, which illustrate the determinants of regional excellence, as listed in Figure 2. From the core industry, demand conditions, factor conditions, supporting industries and related industries are determinant components for an industry (such as MSMEs). Meanwhile, there are 2 opportunities for the government to influence the four determinants, but not the determinants. These four factors can form a system that distinguishes an industry/company, so there is a chance of success in a particular location (Porter, 1990).

Discussions

The role of investment credit and bank income shows that the debtor is the main product of the bank which is sold to the public in the form of credit, especially investment credit which is able to increase income for the bank. Thus, if the company profits increase, the return of installments and interest on investment loans to banks will also have a positive impact on cumulative national income, or in other words, bank revenues are expected to increase to channel more credit to business actors.

The MSME sector is one of the supporting factors to drive the economy. Judging from its role, MSME is always described as a sector that has an important role. Some residents have low education and live in small and medium business activities in both the traditional and modern sectors. Indirectly, this can also boost Indonesia's economic development.

Small businesses and household businesses in Indonesia have played an important role in absorbing labor, increasing the number of business units, and supporting household income opinions about MSMEs, or the informal sector (Kuncoro, 2000). At least, if it is related to its role in minimizing the social impact of the economic crisis, especially the problem in increasing the number of business units, unemployment, and the loss of people's income (middle income trap).

As explained from the research of Wardhono et al. (2019). The role of microfinance as a bridge for MSMEs to access credit. However, our results show that this role does not function optimally for MSMEs that have no credit guarantee. MSMEs that do not have a credit guarantee do not have much opportunity to access credit from formal microfinance institutions.

The reasons for MSMEs can survive and tend to increase in number during the study period because: (1) Most MSMEs produce consumer goods and services at a relatively low demand for income elasticity; (2) Most MSMEs use their own capital and do not use capital from banks. The implication during the banking downturn crisis and rising interest rates did not affect MSMEs; and (3) With the prolonged economic crisis, many formal sector workers have been laid off. The unemployed turn to the informal sector by opening a small-scale business, so that MSMEs increase (Partono & Soejodono, 2004).

The main role of MSMEs is as the main driver of the wheels of Indonesian economic activity, employment opportunities that absorb a lot of labor, an important actor who makes the regional economy and community development develop, which creates a developing market and always strives to innovate among company activities and finally the as a player in improving the international balance of payments through an

increasingly tangible role in the composition of exports, as well as saving foreign exchange through imported substitute products linked to MSMEs (Urata, 2000).

Interest rates will have an impact on sluggish investment and economic activity, thus causing a decline in lending to commercial banks. This means that the higher the interest rate, the lower the credit channeling or decrease. Conversely, when interest rates decline, lending will increase.

Empirical findings are in line with previous research. Islam & Ganguly (2019) in their study discussed the use of loans to play a mediating role in the relationship between loan service utilities and the establishment of venture capital. It was explained, that entrepreneurs have sufficient reasons to emphasize the use of funds for future growth and the performance of the companies they run.

MSMEs have been proven successful in maintaining the activist business and carrying out rescue functions in various sub-sectors. This rescue function is immediately visible in the supply sector of basic needs through normalization of production and distribution. Through this reality, it sometimes raises new optimism to support people who control a small portion of resources (because of their ability) to become engines of growth within the framework of economic recovery. This hope is getting stronger, a compilation of courage appears to enhance recovery with the motor of the growth of MSMEs. Estimating for a moment in the contribution of MSMEs to GDP in times of crisis, some agreed have not been successful. This raises the question of what is the dominant factor that makes these expectations unfulfilled. Regarding MSMEs in Indonesia, various parties have collected complete information on all economic sectors including agriculture, using asset criteria, and assessing sales according to MSME sizes.

A population that increases from time to time can be both a driver and an obstacle to economic development. Increasing the population will increase the number of workers and the addition allows the country to increase production. In addition, the impact of education causes the skills and expertise of the population to increase. This will cause productivity to increase and then cause a faster increase in production than an increase in labor.

Factors vary regarding statistical significance and magnitude between small and medium-sized businesses. Empirical evidence about the multidimensional nature of company performance through the use of multiple, not a single performance measure in assessing corporate performance results has been proven by Ndiaye (2018). Five performance measures or indicators used are capacity utilization, annual employment growth, the percentage of companies that buy fixed assets, annual labor productivity growth, and real annual sales growth.

Conclusion

Economic development in Indonesia is an integral part of national development efforts that must be implemented and harmonized in an integrated manner between one sector and another sector. To spur economic growth in Indonesia, in order to achieve full employment, strategic steps would be needed. One way that can be done is to encourage the growth of MSMEs because this sector absorbs the most labor and encourages increased investment. For this effort to be more effective, a study of the development of the MSME sector in Indonesia is needed.

Using MRA, we found that the role of MSMEs as a mediating variable in influencing investment credit and interest rates on economic growth in Indonesia is positive and significant. Meanwhile, labor actually has a negative and not significant effect on economic growth in Indonesia, so that the role of MSMEs in influencing these two variables is still not optimal.

The role of knowledge-based resources to support sustainability in these small and medium-sized businesses is a contentious topic. As additional information, financial literacy must be approved as an important source of knowledge for financial decision making. However, questions that arise are still less attention given to them and the sustainability of SME financial literacy as assistance (Ye & Kulathunga, 2019).

MSMEs are expected not only as an important source of increasing employment opportunities but also can encourage the development and growth of exports in Indonesia, especially in the manufacturing industry sector. Unfortunately, until now, Indonesia's MSMEs are still not strong in exports even though the value of

exports has increased every year. The development and growth of MSME are one of the crucial drivers for development and economic growth in many regions and countries. The role of MSMEs in economic growth in Indonesia is indicated by the growth of the Gross Domestic Product (GDP). GDP growth is influenced by several variables related to the development of MSMEs in this study consisting of investment credit, interest rates, labor, and economic growth.

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