The Importance of MSMEs for Poverty Alleviation: A Story from Indonesia

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ABSTRACT
Objective: This study examines poverty in Indonesia from an economic approach and discusses the importance of micro, small, and medium enterprises (MSMEs). It focused on the impact of these enterprises on poverty in the country.
Methodology: The analysis incorporated an autoregressive model wherein total workers in MSMEs and economic growth rate as explanatory variables. Annual time series data for the period of 2007-2019 has been used. The study also reviews the earlier empirical studies on the relationship between the growth of MSMEs and poverty alleviation in many other countries/regions. It represents the descriptive analysis of the explanatory variables and trends in poverty and MSMEs’ workforce. The poverty-reducing impact of the increase in MSMEs’ workers has been examined.
Findings: The result is significant which implies that MSMEs can play a very important role in poverty alleviation in Indonesia. The results of the study imply that a strong MSME base is required for the development of the economy and poverty alleviation in the country.
Poverty: There are many studies regarding MSMEs in Indonesia. However, empirical research regarding the impact of the growth of employment opportunities in MSMEs on poverty levels in Indonesia is still very rare. Therefore, this research fills this gap and at the same time stimulates further research.

KEYWORDS: Economic growth, MSMEs, MIEs, poverty, poverty alleviation.
JEL code: C32, E26, I.32

1. INTRODUCTION
Poverty is a complex and multidimensional problem because closely related to a person's powerlessness in accessing economic, political, and socio-cultural, and participating in social life. Poverty is also a humanitarian issue, which brings consequences and moral responsibility for every human being to pay attention to the lives of other people living in poverty (Husnah, 2023) There is poverty constitutes a violation of human rights, “...human rights become a constitutive element of development and human rights violations become both a causes and symptoms of poverty” (O’Neil, 2006: p.1).

The issue of poverty is indeed very troubling, it's no wonder that poverty became the central issue that put it first in the 17 Sustainable Development Goals (SDGs). Eliminating all forms of poverty is the world's challenge to move toward sustainable development. The problem of poverty is a problem very complex and relevant to discuss, especially the relationship in the development process of a country (Husnah, 2023).

Poverty in Indonesia is still a serious problem. Although the poverty rate in the country has shown a declining trend since the 1970s, in absolute terms Indonesia's poverty rate is still large. In 1999 the poverty rate reached 24.43% and continued to fall to only one digit in 2019 at 9.22% or a total of 24.7 million people. Based on World Bank Standards out of a total of 24.7 million of the poor, 9.9 million of whom are included in the category of poverty extreme. On the other hand, in early 2020, the world was shocked by the emergence of the epidemic coronavirus or COVID-19 which infects almost all countries. This pandemic has had an extraordinary impact on the global economy including Indonesia (Husnah, 2023). Suryahadi et al. (2020) stated that the impact of COVID-19 on economic growth was increasing the poverty rate from 9.2% in September 2019 to 9.7% at the end of 2020. This means that there are around 1.3 million people who fall into poverty. Furthermore, the poverty rate continues to increase to 12.4%, so it is estimated as many as 8.5 million people will fall into poverty.

All efforts have been made by the Indonesian government in an integrated manner since 1995 to reduce or eliminate poverty, especially extreme poverty, namely by issuing a Presidential Instruction (Inpres) for Disadvantaged Villages and Presidential Regulation (Perpres) of the Republic of Indonesia number 15 of 2010 concerning the Acceleration of Poverty Reduction, and has
the formation of the National Team for the Acceleration of Poverty Reduction (TNP2K). This team is led directly by the Vice President. This national effort shows that poverty is still a serious problem in Indonesia (Ishartono and Raharjo, 2016).

Under such conditions, one of the most strategic efforts to solve the problems of poverty in Indonesia is the empowerment of micro, small, and medium enterprises (MSMEs). Indeed, supporting the development of MSMEs has become an important element of the poverty alleviation policy in Indonesia. The empowerment programs include production capacity expansion and human capital capability improvement through training, capital assistance, and technology support. The Indonesian government has a reason for this. Based on the database from the Minister of Cooperative and SMEs, the number of MSMEs is huge, accounting for about 99% of total enterprises in the country and they are, especially micro enterprises (MIEs) and small enterprises (SEs), scattered widely throughout rural areas. Similarly, the contribution of MSMEs to the Gross Domestic Product (GDP) showed a significant average annual improvement of 54% in 2019. As it is populated largely by firms with considerable potential for employment growth, their development or growth constitutes a significant element of policies to create employment, generate income, and reduce poverty.

Based on this background, this study aims to examine the role of MSMEs in poverty alleviation in Indonesia. It is to answer the research question of whether MSMEs have a significant influence on economic the alleviation of poverty. By examining their role, this study supports the view that MSMEs, not only in Indonesia but in other developing countries as well, have a crucial role in achieving the SDGs in 2030, especially Goal no.1, i.e. no poverty. Research aimed at studying the importance of MSMEs in poverty alleviation in Indonesia in the peer-reviewed literature is rare until now based on the authors’ search. This study will fill the gap and provoke further research on the role of such enterprises in reducing poverty in Indonesia.

Methodologically, in this study, annual time-series secondary data from 2007 to 2019 have been used to carry out the empirical analysis. The econometric analysis has been performed employing OLS techniques to investigate the impact of MSMEs on poverty alleviation. The secondary data are from two official sources, i.e., the Minister of Cooperative and Small and Medium Enterprises Republic of Indonesia for data on MSMEs and the National Statistics Agency (BPS) for data on poverty.

2. LITERATURE REVIEW

2.1 Determinant Factors of Poverty

There are three factors that cause poverty when viewed from an economic standpoint. First, poverty occurs due to differences in patterns of resource ownership which results in unequal distribution of income. The poor have only limited and low-quality resources. Second, poverty occurs due to inequality in the quality of human resources (HR). Low-quality human resources will result in low productivity, all of which will lead to low wages/income. The low quality of human resources is caused by low education, disadvantaged fate, and hereditary discrimination. Third, poverty occurs due to differences in access to capital (Sharp et al., 2000; Biyase and Zwane, 2017; Borko, 2017; Ehnberg et al., 2020; Husnah, 2023).

From the explanation of these three factors, wages/everything boils down to the theory of the Vicious Circle of Poverty that ensnares poor people. The causes include a low level of real income causing a lack of ability to save and a lack of capital capacity for investment which causes low productivity, resulting in a low level of income. This incident continues to circle, which makes it difficult for the poor to get out of poverty if there is no intervention from outsiders (Nurkse, 1961). The poverty trap has become a barrier for someone to get access to good and decent education and health. This condition is weakened by the poor condition of infrastructure that does not support its activities and the lack of access to electricity and its supporters. This is exacerbated by other factors that lead to a person's low productivity which then leads him back into poverty (Husnah, 2023). This reciprocal relationship is called the vicious cycle of poverty (Figure 1).
2.2 MSMEs and Poverty

Employment and poverty are closely related and a part of the poverty reduction strategy. The employment-reducing poverty strategy starts with job creation to employ the poor. As the greatest employment generator in the economy, MSMEs obviously play a vital role in alleviating poverty by providing employment opportunities and contributing to economic growth (World Bank, 2020). Many believe that the development of MSMEs can absorb more labor, provide business opportunities, especially for women and disadvantaged ones, improve income, and push economic growth to further reduce the number of poor people and improve their socioeconomic condition (e.g. Hussain et al., 2017; Manzoor et al., 2019; Geremewe, 2018). Many empirical studies have demonstrated a strong correlation between the role of MSMEs and the reduction of poverty, both in developed and developing countries. (e.g. Harvie, 2003; Gebremariam and Gebremedhin 2004; Koshy and Prasad, 2007; Ali et al. (2014); Adeyemi and Lanrewaju, 2014; Manzoor et al., 2019).

Distanton & Khongmalai (2018) state that the empowerment and development of MSMEs is one way to overcome poverty. MSMEs provide access to the poor to be involved in business and active in productive business activities and socialize entrepreneurship, especially among poor families or disadvantaged areas. As emphasized by Dahliah and Tjan (2023), these businesses are the backbone of the people's economic system, which is not only aimed at reducing the problem of disparities between income groups and between business actors, or poverty alleviation and employment.

Wider economic and socio-economic objectives such as poverty alleviation can be achieved by developing the MSMEs (Cook and Nixon, 2000). Since MSMEs are labor intensive and they are more likely to be based in rural areas and smaller urban areas the development of this type of enterprise may be helpful for employment creation, improvement of income distribution, and poverty alleviation (e.g. Kayanula and Quartey, 2000; Ali, et al., 2014). Beck et al., (2004) argue that entrepreneurial and innovative ventures in MSMEs help to reduce the poverty levels in developing economies. Mukras (2003) states that MSMEs should be strengthened not only for economic growth but also to reduce poverty.
Most Asian developing countries are heavily relying on MSMEs. The development of these enterprises which are dominated by microenterprises (MIEs) is essential for the reduction of poverty in the region. Such as Begum and Abdin (2015) and Ahmed and Chowdhury [2009] highlighted that MSME development has a positive and significant role in poverty alleviation and employment generation in Bangladesh. Ali (2013) used time series data from 1972 to 2008 to investigate the role of the MSME sector in poverty alleviation in Pakistan and found that these enterprises have a significant contribution to economic development, poverty alleviation, and employment creation in the economy. As 98% of the private sector of Bhutan consists of MSMEs, Moktan [38] believed that this category of enterprises can play an essential role in reducing poverty in this small country. Hassaas (2017) explored the effect of MSMEs on poverty reduction in Afghanistan and stated that the role of the enterprises is very important in employment generation, poverty alleviation, gross domestic product (GDP), and economic growth which automatically reduces poverty in a country. In Sri Lanka, in their study, Vijayakuma et al. (2012), cited from Manzoor et al. (2019), found that MSMEs have played a vital role in poverty reduction. Rajeevan et al. (2015) highlighted the role of MSMEs in the Indian economy towards employment generation and poverty alleviation. Their study revealed that the growth of employment is higher by SMEs and it is helpful for economic growth and reducing poverty in the country.

In Indonesia, Nursini (2020) analyzed the effect of MSMEs on poverty reduction, both directly and indirectly, through labor absorption from 1997 to 2018. In general, the results show that MSMEs statistically affect poverty reduction in Indonesia both directly and indirectly. Nevertheless, different business scales offer various implications for poverty reduction. MSMEs play a bigger role in alleviating poverty than MSEs as they reduce not only the percentage of poor people but also the Poverty Gap and Severity Index. Most recently, by using secondary data (time series) for 2010-2020, Dahliah and Tjan (2023) analyzed the effect of MSMEs on poverty alleviation in Makassar City, South Sulawesi, Indonesia. The results show that MSMEs have a negative effect on overcoming or reducing the unemployment rate and poverty levels in Makassar City.

In Africa, MSMEs have been playing a very important role in development, employment generation, and poverty alleviation. By using the ordinary least square (OLS) analytical technique with Nigerian data from 1991 to 2010, Edom et al.’s (2015) study, for instance, revealed that there is a significant relationship between MSME development and poverty reduction in the country. Kowo et al. (2019) also examined the role of MSMEs in poverty eradication in Nigeria by using primary data and found that MSME development affects poverty alleviation. Aina and Amnes (2007) suggest a more effective and fully funded policy program for the development of MSMEs in Nigeria, for generating employment opportunities for economic growth, to empower the poor and deprived. Such as Abor and Quartey (2010) and Agyapong (2010) argue that MSMEs especially those located in rural areas in Ghana and South Africa help to generate employment and increase the income of the poor.

However, employment in such does not necessarily enough to reduce poverty if the wages or income received are lower than the standard of living (see e.g. Feder and Yu, 2019; ILO, 2019; Fibæk, 2021). In other words, to escape poverty, poor people must have decent and productive work to increase their income, even though the relationship between low-paid employment and poverty is not straightforward (Feder and Yu, 2019). From his research, Singh (1999) found that the relationship between employment and poverty reduction could be attained on three conditions. First, the overall growth rate of labor must be able to absorb new workers with high levels of productivity. Second, the creation of new jobs must produce an equitable job distribution between the poor and non-poor. Third, the jobs created must have a wage standard or at least a livable, satisfactory wage, or above the current poverty line. Nursini (2020) states that if laborors could produce a high level of work productivity, they would presumably see a raise in their real wage, which in turn could contribute to reducing poverty. Hence, the key that strengthens the relationship between employment generation and poverty reduction lies in labor productivity (Islam, 2004).

Faharuddin and Darma Endrawati (2022) argue that while work is the best route to escape poverty, having a job is not enough. The problem now is, on the one hand, it is recognized and indeed proven in much literature that MSMEs absorb many workers so they have the potential to be the main motor of poverty alleviation. However, on the other hand, many MSEs generally operate in the informal sector which only provides low-productive/-earning jobs. So these MSEs do not reduce poverty but instead act as a source of poverty, where poor people work.

Studies on working poverty have recently been growing in the last decade, especially in developed countries (see e.g. Lohmann, 2009; Herman, 2014; Thiede et al., 2016; Lyon, 2018; Filandri et al., 2020, among many others). According to ILO (2019), the proportion of working poor in developing countries is higher than in developed countries. In Indonesia, the most recent study is from Faharuddin and Darma Endrawati (2022). They estimated the scale of working poverty using a nationwide
household survey, and they found that the scale of the working poverty problem is equivalent to the scale of the poverty, although the in-work poverty rate is lower than the poverty rate in all provinces.

3. THEORETICAL FRAMEWORK

Theoretically, the relationship between MSMEs and poverty reduction can be analyzed via economic growth and the absorption of labor (or employment increases). The relationship suggests that the growth of MSMEs positively impacts not only the income of MSME actors but also through job openings and economic growth so that it contributes to the reduction of poor people (Adeyemi and Lanrewaju 2014). As illustrated in Figure 2, the growth of MSMEs can be in two forms: the production volume in existing MSMEs increases (marked with a symbol ‘↑’ in the figure) and the number of MSMEs increases due to new firms. The increased production volume increases the owner's income and the demand for labor. Likewise, newborn MSMEs increase labor demand. Job opportunities in the economy and people's incomes increase, and as a result, the poverty level decreases (‘↓’). However, the impact of the growth of MSMEs on reducing poverty does not stop here. There is an indirect effect too, namely that increasing people's income results in an increase in demand for goods and services in the economy which then increases production in many sectors which overall increases economic growth and employment opportunities and people's income increases for the second time, third time, etc., and which ultimately increases the reduction the number of people living below the poverty line, ceteris paribus. This effect can be considered as ‘the multiplier effect of MSMEs on poverty.'

![Figure 2: The Total Impact of MSMEs Growth on Poverty](image)

4. MODEL OF ANALYSIS

To examine the effects of the MSME on the eradication of poverty in Indonesia, a quantitative research methodology was adopted and secondary data in the form of time series from the period 2007–2019 was used. The data were obtained from the statistical yearbook of Indonesia issued by the Indonesian Central Bureau of Statistics (BPS) and the Ministry of Cooperatives and SMEs of the Republic of Indonesia. Secondary statistics include poverty data, total workers in MSME, and economic growth. In this study, the unit of analysis contains total workers in MSMEs. Poverty was measured by number of people living below the current poverty line. The poverty line, or poverty threshold, is the average cost of living for ‘basic needs.’ That necessarily includes food (including water), shelter, and clothing.

The functional model of the analysis can be seen in equation (1) as follows:
where $t$: 13 (time period), Pov: number of poor people, L-MSMEs: total workers in MSMEs, ECG: percentage change in GDP (economic growth).

The analysis uses a simple regression equation in which the effects of the growth of labor employed by MSMEs on poverty in Indonesia were examined statistically. So, the functional equation (1) is formulated as below,

$$\text{Pov}(t) = \alpha_0 + \alpha_1 \text{L-MSMEs}(t) + \alpha_2 \text{ECG}(t) + \varepsilon(t)$$  \hspace{1cm} (2)

where $\varepsilon(t) = \text{error term}$.

5. RESULTS AND DISCUSSION
5.1 Economic Growth and Poverty
Economic growth during the New Order era (1966-1998) and since the recovery from the 1998 Asian financial crisis until the Jokowi era (Figure 3) made a major contribution to poverty reduction (as measured by the number of people living below the poverty line as a percentage of the total population) in Indonesia, as can be seen in Table 1. In general, in the period March 2011–March 2023, the poverty rate in Indonesia has decreased, both in terms of numbers and percentages, with the exception of September 2013, March 2015, March 2020, and September 2020. The increase in the number and percentage of poor people in the September 2013 period and March 2015 was triggered by an increase in the price of staple goods as a result of the increase in the price of fuel oil. Meanwhile, the increase in the number and percentage of poor people in the period March 2020 and September 2020 was due to the COVID-19 pandemic that hit Indonesia. The number of poor people in Indonesia in March 2023 reached 25.90 million people, or 9.36% of the country’s total population.

![Figure 3: Indonesia’s Economic Growth, 1970-2022](http://www.bps.go.id)

Table 1: Poverty in Indonesia, 2007-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Poor People (Million)</th>
<th>Percentage of poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>2007</td>
<td>13.56</td>
<td>23.61</td>
</tr>
<tr>
<td>2008</td>
<td>12.77</td>
<td>22.19</td>
</tr>
<tr>
<td>2009</td>
<td>11.91</td>
<td>20.62</td>
</tr>
</tbody>
</table>
5.2 Growth of MSMEs

MSMEs are the backbone of the Indonesian economy, representing more than 99% of all companies in the country. As shown in Figure 4, the total number of MSMEs increased every year from 37.912 million units in 1999 to more than 65 million units by 2019. The growth rate of the number of MSMEs reached around 5% in 2000 and 2005 but after that, it averaged a low of between 2% and 3% per year (Figure 5).

![Figure 4: Total number of MSMEs in all sectors, 1999–2019 (million units). Source: Ministry of Cooperative and SME (http://www.dekp.go.id/berita-informasi/data-informasi/data-umkm/)](image-url)
In Table 2 it can be seen that the majority of MSMEs are microenterprises (MIEs) that continue to dominate domestic economic activity despite facing increasingly fierce competition not only from larger companies but also from imported products (such as massive ones from China). This means that the goods produced or services provided by MIEs are still of interest to the majority of the Indonesian population. As also shown in Table 2, in 2019 the total number of workers in MSMEs reached more than 119 million people, compared to large enterprises (LEs) only around 3.8 million workers.

Table 2: Number of Enterprises and Employment by Size, 2016, 2018, 2019

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of enterprises</td>
<td>Share (%)</td>
<td>Number of enterprises</td>
</tr>
<tr>
<td>-MIEs</td>
<td>60,863,578</td>
<td>98.71</td>
<td>63,350,222</td>
</tr>
<tr>
<td>-SEs</td>
<td>731,047</td>
<td>1.19</td>
<td>783,132</td>
</tr>
<tr>
<td>-MEs</td>
<td>56,551</td>
<td>0.09</td>
<td>60,702</td>
</tr>
<tr>
<td>LEs</td>
<td>5,370</td>
<td>0.01</td>
<td>5,550</td>
</tr>
<tr>
<td>MSMEs + LEs</td>
<td>61,656,547</td>
<td>100.00</td>
<td>64,199,607</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of workers</td>
<td>Share (%)</td>
<td>Number of workers</td>
</tr>
<tr>
<td>MSMEs</td>
<td>112,828,610</td>
<td>97.04</td>
<td>116,978,631</td>
</tr>
<tr>
<td>-MIEs</td>
<td>103,839,015</td>
<td>89.31</td>
<td>107,376,540</td>
</tr>
<tr>
<td>-SEs</td>
<td>5,402,073</td>
<td>4.65</td>
<td>5,831,256</td>
</tr>
<tr>
<td>-MEs</td>
<td>3,587,522</td>
<td>3.09</td>
<td>3,770,835</td>
</tr>
<tr>
<td>LEs</td>
<td>3,444,746</td>
<td>2.96</td>
<td>3,619,507</td>
</tr>
<tr>
<td>MSMEs + LEs</td>
<td>116,273,356</td>
<td>100.00</td>
<td>120,598,138</td>
</tr>
</tbody>
</table>

Source: Ministry of Cooperative and SME (http://www.depkop.go.id/berita-informasi/data-informasi/data-umkm/)

In Table 2 it can be seen that the majority of MSMEs are microenterprises (MIEs) that continue to dominate domestic economic activity despite facing increasingly fierce competition not only from larger companies but also from imported products (such as massive ones from China). This means that the goods produced or services provided by MIEs are still of interest to the majority of the Indonesian population. As also shown in Table 2, in 2019 the total number of workers in MSMEs reached more than 119 million people, compared to large enterprises (LEs) only around 3.8 million workers.
MSMEs have the largest employment share in the country, reaching 97.3% in the period 2007-2010 (Figure 6) and with the highest-ever growth rate at 8% in 2015 (Figure 7).

![Figure 6: MSME employees to total, 2007-2019 (%)](http://www.depkop.go.id/)

![Figure 7: MSME employees growth, 2008-2019 (%)](http://www.depkop.go.id/)

5.3 The Impact of MSME Growth on Poverty
This analysis consists of a time series data set for 13 years from 2007 to 2019. The descriptive statistics displayed in Table 3 show that POV averaged around 29.63 million people during 13 years with a standard deviation of 3.5 million people. The average of the L-MSMEs is 106.7 million people with a standard deviation of almost 11.1 million people. The mean value of ECG is 5.47 percent with standard deviation of 0.60 percent. The results show that only the variable L-MSMEs is negatively skewed. The peakedness or flatness relative to the normal distribution of the data set is measured by kurtosis. As can be seen in Table 3, the
distributions of both independent variables have negative kurtosis (called platykurtic) which means that it has a flatter peak and thinner tails compared to a normal distribution.

**Table 3: Descriptive statistics of the variables**

<table>
<thead>
<tr>
<th></th>
<th>POV</th>
<th>L-MSMEs</th>
<th>ECG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2963207.69</td>
<td>10674729.8</td>
<td>5.47</td>
</tr>
<tr>
<td>Median</td>
<td>2860000</td>
<td>10765750.9</td>
<td>5.21</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3519934.076</td>
<td>11079334.23</td>
<td>0.60</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>1,23899E+13</td>
<td>1,22752E+14</td>
<td>0.36</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.518458267</td>
<td>-1.625767673</td>
<td>-1.71</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.918841761</td>
<td>-0.018162704</td>
<td>0.20</td>
</tr>
<tr>
<td>Minimum</td>
<td>2478000</td>
<td>90491930</td>
<td>4.6</td>
</tr>
<tr>
<td>Maximum</td>
<td>3717000</td>
<td>123229386</td>
<td>6.3</td>
</tr>
<tr>
<td>Observation</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Confidence Level(95.0%)</td>
<td>2127074.874</td>
<td>6695174.669</td>
<td>0.36</td>
</tr>
</tbody>
</table>

The correlation matrix reported in Table 4 shows that total workers employed by MSMEs is negatively associated with total poor people but economic growth is highly but negatively correlated with total labor in MSMEs. Economic growth and poverty are positively correlated.

**Table 4: Correlation matrix**

<table>
<thead>
<tr>
<th></th>
<th>POV</th>
<th>L-MSMEs</th>
<th>ECG</th>
</tr>
</thead>
<tbody>
<tr>
<td>POV</td>
<td>1</td>
<td>-0.854135672</td>
<td>1</td>
</tr>
<tr>
<td>L-MSMEs</td>
<td>-0.854135672</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ECG</td>
<td>0.541730389</td>
<td>-0.699958116</td>
<td>1</td>
</tr>
</tbody>
</table>

Time trends of poverty and total workers in MSMEs are shown in Figure 8. The trend lines shown in the figure show a negative association between poverty and employment generated by MSMEs in Indonesia. Poverty levels have been declining in the years of increase in MSMEs’ employment. But this is a direct association between the number of poor people and the number of people who find work in MSMEs. As explained in the theoretical framework, MSMEs also have an indirect impact on reducing poverty levels through increasing other business activities outside of MSMEs due to the presence or growth in the number of MSMEs or increased production in MSMEs. For example, MSMEs do subcontract with LEs, or many new economic activities emerge, for example in the service sector, which serves the needs of newly established MSMEs, or trade activities increase due to increased production volumes in MSMEs. Apart from that, there is also a multiplier effect through an increase in people’s average income which then increases the total demand for goods and services in the economy, which ultimately makes the total increase in employment opportunities greater than the direct employment effect from MSMEs.
The model at equation (2) has been estimated using a simple regression method to analyze the direct impact of employment generated by MSMEs (L-MSMEs) on poverty (POV) in Indonesia. The results are given in equation 3 which shows that all estimated coefficients reveal as expected theoretically, and the t-value is above the threshold which shows the significance of the results that employment generated by MSME is inevitable to alleviate the poverty in Indonesia. However, the estimated model is not significant as the value of R-squared and Adjusted R-squared is only 0.736 and 0.683, respectively. It implies that only approximately 68 percent of the variations in the explained variable are explained by the two explanatory variables included in the model. This means that apart from job opportunities generated by MSMEs and economic growth, there are many other determinant factors that can be thought of theoretically to influence the level of poverty in Indonesia, such as education and health of the workforce (which is greatly influenced by the education and health systems in Indonesia, and family financial conditions), infrastructure development; government expenditure, especially the availability of funds to finance poverty alleviation programs; and inflation.

\[
Pov(t) = 64755729(t) - 0.29583 \times L\text{-MSMEs}(t) - 648006 \times ECG(t)\]  

\[\begin{align*}
13887444* & \quad 0.072317 & \quad 1340392 \\
4.662898** & \quad -4.09078 & \quad -0.48345 \\
0.00089*** & \quad 0.002176 & \quad 0.63919 \\
\end{align*}\]

R-square \quad 0.735724
Multiple R \quad 0.857744
Adjusted R-square \quad 0.682869
Std. Error \quad 1982228
F-statistic \quad 13.91964
Observations \quad 13

where: *= Std. Error
** = t-Statistics
*** = Probability
However, the regression results give a strong impression that the biggest determinant of poverty reduction in Indonesia comes from the growth of MSMEs as the largest generator of employment opportunities in the country. It means that more of an inclination towards the development of this group of enterprises especially in the rural areas has positive significant effects on poverty.

6. CONCLUSION

Many factors cause poverty directly and indirectly. However, from an economic approach, the absence of job opportunities and business opportunities are the two most important factors. Here, as proved empirically in this study, is the importance of MSMEs. This study focused on the impact of these enterprises on poverty in Indonesia. The analysis incorporated an autoregressive model wherein total workers in MSMEs and economic growth rate as explanatory variables. Annual time series data for the period of 2007-2019 has been used. The study reviews the earlier empirical studies on the relationship between MSMEs and poverty. This paper represents the descriptive analysis of the explanatory variables and trends in poverty and MSMEs’ workforce. The poverty-reducing impact of the increase in MSMEs’ workers has been examined. The result is significant which implies that MSMEs can play a very important role in poverty alleviation in Indonesia. The results of the study imply that a strong MSME base is required for the development of the economy and poverty alleviation in the country. The economic policymakers in Indonesia should focus on the establishment of formal financial markets to overcome the financial constraints faced by the MSME sector, particularly microenterprises in rural areas. Simplification of lending procedures, enforcement of credit rights, and reduction in credit costs would be helpful for the establishment of MSMEs in Indonesia. Moreover, the provision of health services and a more educated and technically skilled labor force would accelerate the growth of MSMEs and would be helpful in the process of poverty reduction.

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