



# The Influence of MSME Performance and Inclusive Finance on Poverty Reduction in Indonesia

Agustina Suparyati<sup>1\*</sup>, Nurhayati Nurhayati<sup>1</sup>, Sumiyati Sumiyati<sup>1</sup>, and Astrid Maria Esther<sup>1</sup>

<sup>1</sup> Applied Finance Undergraduate Study Program, Faculty of Economics, Trisakti University  
Jakarta, Indonesia

agustina\_suparyati@trisakti.ac.id

**Abstract:** The purpose of this study is to analyze the effect of MSME performance, financial inclusion, economic growth, and income distribution inequality on poverty levels in 33 provinces in Indonesia during the 2016-2021 period. MSME performance is measured by the level of internal efficiency as measured by the ratio of added value to the input value of a company. The financial inclusion variable is the result of a composite index calculated based on the ratio between the Financial Inclusion Index (IFI) which is a composite index of 3 components consisting of the Banking Service Penetration Index, Service Availability Index, and Banking Service Usage Index. The panel data model chosen is the random effect model. The results of panel data regression show that the performance of MSMEs, Financial Inclusion, and economic growth have a significant adverse effect on the poverty level. In contrast, the inequality of income distribution has a positive effect on the poverty level.

**Keywords:** MSME Performance, Financial Inclusion, Economic Growth, Inequality, Poverty.

## 1 Introduction

The *Millennium Development Goals (MDGs)* program to eradicate global poverty **ended** in 2015. However, many still leave the global economy "homework" because high growth has not been able to reduce poverty. India and China are the two countries that contribute the most to global poverty, namely 33% and 13%, with an average growth rate of 7.1% in 2017 and the magnitude of inequality in income distribution as measured by the Gini Ratio Index of 0.470 and 0.38. This condition shows that the relatively high level of economic growth does not automatically reduce social and economic inequality and poverty because the results of development are not enjoyed equally by only a few wealthy people. Extreme inequality will cause various impacts, including economic inefficiency, weakening social stability and solidarity, and high inequality, which is generally considered unfair [1].

In essence, development is a series of activities carried out as an effort to realize integration in the development of sharing resources in order to achieve sustainable development goals. Development at the global level has referred to sustainable development goals, more popularly known as the Sustainable Development Goals (SDGs), as a succession of the MDGs program, including ensuring a healthy life, ensuring a fair and

inclusive quality of education, and increasing economic growth. To improve the welfare of all humankind.

To increase economic growth as well as poverty alleviation, the government seeks to develop economic activities that can become a driving force for economic growth. One of the economic activity units pursued by the government that is recognized as being capable of driving economic growth through community empowerment is Micro, Small, and Medium Enterprises (MSMEs) because MSMEs have an essential role in labor growth, innovation and trade in various countries. From a worldwide perspective, it has been recognized that Small and Medium Enterprises (MSMEs) play an essential role in economic development, because MSMEs have become the primary source of job creation and output growth, so there is no doubt that MSME performance is vital for economic development in developing countries. In low-income countries, MSMEs can generate 31 percent of employment and 15% of GDP; in middle-income countries, MSMEs can contribute about 55% of employment and almost 40% of GDP, but in high-income countries, making MSMEs a critical aspect. MSMEs also contribute 65% in generating employment and have an impact of 50% on the GDP of high-income countries.

MSMEs have a crucial role in the national economy. In 2021, there will be more than 64.2 million MSME actors who contribute to the Gross Domestic Product in Indonesia by 61.07%, or equivalent to Rp. 8,573.89 trillion. MSMEs can absorb 97 percent of the workforce and collect up to 60.42 percent of the total investment. Various programs are implemented to improve the quality of MSMEs, including in the context of increasing financial inclusion, namely the availability of access to various institutions, financial products, and services that are tailored to the needs and capabilities of the community. Financial inclusion aims to provide a boost to the financial system that is more accessible to the public and is expected to be able to encourage more equitable and quality economic growth. This effort to increase financial inclusion is essential because currently, there are still many MSME actors who have yet to be covered by comprehensive financial services, both from banks and other financial institutions. Reach access to credit services.

Much research on financial inclusion and poverty has been carried out. Financial inclusion Although financial inclusion has been proven to reduce poverty, some studies still doubt the role of financial inclusion in reducing poverty. Economic growth as a positive impact of increasing financial access only sometimes has an impact on reducing poverty. Poverty because it can create inequality in income distribution that can create poverty. Neaime and Gaysset (2018) also state the same thing, according to them, that financial inclusion does not have a significant effect on poverty reduction [2]. This doubt is also supported by different research results between developed and developing countries. Developing countries. Increasing financial inclusion can reduce poverty significantly in high and middle-income economies but not in middle-low and low-income economies. This study measures financial inclusion by combining three indicators, such as the financial inclusion index coined by Sarma (2012), but with an inclusive financial component relevant to MSMEs [3].

In this study, apart from examining the influence of MSME performance and financial inclusion on poverty, it also examines the effect of inequality in income distribution and economic growth on poverty levels. Economic growth is still the primary reference in assessing the success of a country's economic development. Economic growth reflects that

at least there is a pull in consumption from the public, exports are squirming, or investment is booming. These three indicators become the main preferences of both the government and entrepreneurs, and as a result, economic growth will reduce poverty through job creation. However, on the other hand, there is a residual threat that arises from a mindset that is pursuing economic growth, namely income distribution inequality. The relationship between economic growth, poverty, and inequality is a problem that often arises when determining development goals [4].

## 2 Methods

This study uses three types of variables, namely the dependent variable, the independent variable, and the control variable. The dependent variable in this study is poverty; the independent variable is the MSME Performance and Financial Inclusion Index. In contrast, the control variables in this study are economic growth and income distribution inequality. The operational definitions of these variables are: 1) Poverty (POV): Poverty in this study is measured using the Head Count Index (HCI), which is the percentage of poor people living below the poverty line; 2) MSME performance is measured by internal efficiency which is obtained by dividing the added value by the input value of a company where the higher the internal efficiency value, the more efficient it is so that the better the performance of a company; 3) Financial Inclusion Index (IFI) is a composite index of 3 components in financial inclusion with components consisting of: 3a) Banking Services Penetration Index which looks at financial inclusion in terms of public access to banking services as measured by the number of people's savings accounts in Indonesia. Banks; 3b) Banking Service Availability Index to see the ease of access to banking services in terms of physical banking infrastructure as measured by the number of Rural Bank (BPR) bank offices in an area and; 3c) Banking Service Usage Index in terms of public utilization of banking services as measured by the value of MSME credit in each region; 4) Economic Growth (GE) as measured by the growth of gross regional income per capita and 5) Inequality (GR) as measured by the Gini Ratio. The data used in this study is panel data consisting of time series data from 2016 to 2021 and cross-section data from 33 provinces in Indonesia. The specifications of panel data regression in this study are as follows:

$$POV_{i,t} = \theta + \alpha SMEs_{i,t} + \beta IFI_{i,t} + \gamma GE_{i,t} + \delta GR_{i,t} + e_{i,t} \dots \dots \dots [1]$$

The symbol t represents the year, and the i represents the province. POV is Poverty, SMEs is MSME performance, IFI is financial inclusion index, GE is economic growth, and GR is income distribution inequality. Before conducting data analysis, it is necessary to measure the indices that represent financial inclusion. The measurement of the financial inclusion index in this study uses the method created by Sarma (2012) but with data adjusted to the performance of MSMEs [3]. Each dimension of financial inclusion can be measured using the following equation:

$$di = Wi \frac{Ai - mi}{Mi - mi} \dots, i = 1,2,3 \dots \dots \dots [2]$$

Where:  $I_i$  = index dimension  $i$ ;  $w_i$  = weight for dimension  $i$ ,  $0 \leq w_i \leq 1$  = actual value of dimension  $i$ ;  $L_i$  = lower limit of dimension value  $i$ ;  $U_i$  = upper limit of dimension value  $i$ . The calculation of each dimension in the financial inclusion index requires a weight. The weights are determined based on the role of each dimension in forming the financial inclusion index. The determination of the weights, according to Sarma (2012), is 1 for the banking penetration dimension, 0.5 for the banking service availability dimension, and 0.5 for the banking service usage dimension [3]. After measuring the financial inclusion index, the next step is to analyze panel data.

Panel data is a combination of time series data and cross-section data. The use of panel data has advantages compared to studies that only use time series or cross-section data. Three ways can be used to estimate panel data, namely the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Determination of the model can be done through several tests, namely the Chow test, the Lagrange Multiplier (LM) test, and the Hausman test.

### 3 Results and Discussion

The percentage of Indonesia's poor population has reached single digits in 2021, which is 9.71%, but there is an imbalance in poverty levels between provinces in Indonesia. South Kalimantan (4.56%) and DKI Jakarta (4.67%) are the provinces with the lowest poverty rates, while the provinces with the highest poverty rates are Papua (27.38%) and West Papua (21.82%).

MSME performance data shows that the three provinces with a high level of internal efficiency in 2021 are Papua, West Papua, Maluku, and North Maluku. The development of MSMEs is often hampered because of the many institutions involved in empowering MSMEs. The agencies that handle MSMEs include the Ministry of Cooperatives and MSMEs, the Ministry of Industry, the Ministry of Trade, the Creative Economy Agency, and the Regional Government. At the practical level, these various agencies have different regulations and policies, so the opportunity for overlapping arrangements is enormous. It is feared that this condition will have implications for the MSME empowerment system, which is fragmented, not comprehensive, and hinders investment. At the end of 2020, the government issued Law No. 11 of 2020 on Job Creation, which aims to create jobs and increase foreign and domestic investment by reducing regulatory requirements for business permits and land acquisition.

The results of the composite index calculation for financial inclusion show that the five provinces that get the most extensive Financial Inclusion Index are DKI Jakarta, East Java, West Java, Central Java, and North Sumatra. In comparison, the five provinces with the lowest Financial Inclusion Index are Maluku, West Papua, and Gorontalo, West Sulawesi and North Maluku. These results show that financial inclusion is still primarily focused on the provinces on the island of Java.

The control variables in this study, namely economic growth and income distribution inequality, show significant differences between regions in Indonesia. North Maluku (16.40%), Papua (15.11%), and Central Sulawesi (11.70%) are the three provinces with the

highest economic growth rates. In contrast, the three provinces with the lowest growth rates are West Nusa Tenggara (2, 30%), West Papua (-0.51%), and Bali (-2.47%). Meanwhile, inequality in income distribution as measured by the Gini Ratio shows a number that varies significantly between provinces in Indonesia. In 2021, the provinces with the highest Gini Ratio values were DI Yogyakarta (0.436), DKI Jakarta (0.411), and Gorontalo (0.409), and the three provinces with the lowest Gini Ratio values were West Sumatra (0.300), North Maluku (0.278) and Bangka Belitung Islands (0.247).

The research model used in this study is the Random Effect Model (REM) after going through the model selection test using the Chow and Hausman tests. The results of the Chow test and Hausman test.

**Table 1.** Test results for selection of estimation models.

| Test         | Probability | Decision            | Information                |
|--------------|-------------|---------------------|----------------------------|
| Chow Test    | 0.0000      | H0 rejected         | <i>Fixed Effect Model</i>  |
| Hausman Test | 0.2486      | H0 failed to reject | <i>Random Effect Model</i> |

Source: Data processed, 2022

The results of the *Chow Test* obtained that the probability value of *Chi-square* is less than 0.05; thus, the null hypothesis ( $H_0$ ) is rejected, so all models that are better used are estimates with *Individual Effects* represented by the *Fixed Effect Model*. The determination of *individual effect* is better estimated by using *fixed effect* or *random effect*, so it is tested using the *Hausman test*. By doing a test using the *Hausman Test*, the probability value of *Chi-square* is more significant than 0.05 so that the null hypothesis ( $H_0$ ) fails to be rejected, so the better model used is the estimation with the *Random effect model*.

**Table 2.** Poverty model estimation results.

| Variable                 | Theory | Coefficient | Std Error | T-stat    | P-value (2 Tails) | Decision       |
|--------------------------|--------|-------------|-----------|-----------|-------------------|----------------|
| <b>Constanta</b>         |        | 6.653720    | 1.720908  | 3.866401  | 0.0002            |                |
| <b>SMEs</b>              | -      | -0.005662   | 0.001256  | -4.506894 | 0.0000            | H1 accepted*** |
| <b>IFI</b>               | -      | -0.057187   | 0.025899  | -2.208120 | 0.0284            | H2 accepted**  |
| <b>GE</b>                | -      | -0.031812   | 0.013574  | -2.343629 | 0.0201            | H3 accepted**  |
| <b>GR</b>                | +      | 16.27002    | 3.761306  | 4.325631  | 0.0000            | H4 accepted*** |
| <b>Rsquare</b>           |        |             | 0.2254    |           |                   |                |
| <b>Adj R<sup>2</sup></b> |        |             | 0.2093    |           |                   |                |
| <b>Statistics</b>        |        |             | 14,044    |           |                   |                |
| <b>Prob Fstat</b>        |        |             | 0.0000    |           |                   |                |

Source: Processed Data, 2022

Remarks: Significance Level \*\*\*1%; \*\*5% and \*10%

The results of data processing using the panel data regression method resulted in the following poverty regression equation:

$$\text{POV} = 6.653720 - 0.005662.\text{SMEs} - 0.057187.\text{IFI} - 0.031812.\text{GE} + 16.27002.\text{GR} \dots \dots [3]$$

The results of the coefficient of determination test obtained an R-squared value of 0.2093, which means that independent variables can explain 20.93% of the poverty variable, and variables outside the model explain the rest. Based on the results of the F test that uses a significance level of 5%, it is known that the significant value is  $0.00000 < 0.05$ , which means that at least one of the independent variables affects the dependent variable of the Poverty Level.

The MSME performance variable has a negative and significant effect on poverty. Based on the test results, the coefficient value is **-0.005662** and is significant at **(0.05)**. The results of this study are in line with the research of Ayyagari et al. (2003), which explains the role of MSME in increasing employment and increasing people's income to reduce poverty [4].

The financial inclusion index variable has a negative and significant effect on poverty, which, based on the test results, has a coefficient value of  $-0.057187$  at  $\alpha_{0.05}$ . The results of this study are in line with research by Neaime & Gaysset (2018) and Sin-Yu et al. (2012) which state that the financial inclusion index affects poverty [2][5]. In the development of financial inclusion, there are two obstacles faced by people with low incomes: financial constraints and non-financial constraints. Non-financial constraints in the form of distance from residence to the bank office. Financial constraints are in the form of fees charged by banks to customers, such as account opening fees, administration fees, transfer fees, credit fees, and account closing fees. These costs can then reduce funds that should be used to meet the needs of people experiencing poverty. These results are consistent with the initial hypothesis, which states that financial inclusion is vital in reducing poverty levels.

The variable of economic growth has a significant role in alleviating poverty. The results of the t-test show that economic growth can reduce poverty either through an increase in income, which has an impact on increasing consumption expenditure, or through production, which increases income for owners of production factors. The results of this study are supported by research from Datt and Ravallion (2002) and Rana et al. (2012), which conclude that an effective strategy to reduce poverty is through high economic growth [6][7].

The variable income distribution inequality significantly has a positive effect on the poverty level, following the results of Kuznet's observations, which found an inverted U-shaped pattern. This pattern requires that at the stage of development (represented by GDP per capita, which is still low), the growth process is followed by a worsening income distribution. After reaching a certain point, development will be followed by improved equity. Development with outcomes, as described by the inverted U hypothesis, is primarily based on a dualistic development model.

## 4 Conclusions and Recommendations

The performance of MSMEs and the financial inclusion index have been proven to be able to reduce the level of poverty in Indonesia. Improving the performance of MSMEs impacts

increasing labor absorption; it will improve the community's welfare and reduce poverty. The increase in the financial inclusion index shows that more and more people can enjoy and take advantage of banking products, so this will improve people's welfare and reduce poverty. Based on the results of panel regression analysis, it was found that there was a positive and significant effect of development inequality on poverty reduction.

## 5 Suggestion

Based on these results, it is time for the government to carry out a crash program to solve the problem of income distribution inequality in Indonesia, one of which is by improving financial inclusion performance in various regions in Indonesia, especially in the provinces in eastern Indonesia. In addition, to develop MSMEs is to develop infrastructure to open access for MSMEs to expand their market share, especially in the eastern part of Indonesia. The infrastructure consists of the construction of ports, road repairs, additional power and electrical capacity, reliable hospitals, and health centers, and essential is the construction of educational facilities and infrastructure. With this, it will be easier for eastern Indonesia to catch up with western Indonesia.

## References

1. Todaro, MP, & Smith, SC (2006). *Economic Development* (Ninth Edition ed.). Pearson Addison Wesley.
2. Neaime and Gaysset (2018), Financial inclusion and stability in MENA: Evidence from poverty and inequality, vol. 24, issue C, 230-237.
3. Sarma, M. (2012). Index of Financial Inclusion - A measure of Financial sector inclusiveness. Berlin Working Paper on Money, Finance, Trade and Development No. 7.
4. Ayyagari, M., Kunt, AD, & Maksimovic, V. (2011). Small vs. young firms across the world: contribution to employment, job creation, and growth. *The World Bank*.
5. Sin-Yu Ho, Nicholas M, Odhiambo, "Finance and Poverty Reduction In China: An Empirical Investigation", *International Business and Economics Research Journal*, 10(8), The Clute Institute, 2011, (<http://journals.cluteonline.com/index.php/IBER/issue/view/608.pdf>, accessed 10 September 2012).
6. G. Datt, & Ravallion, M. (2002). Is India's Economic Growth Leaving The Poor Behind? *Journal of Economic Perspectives*, 16 , 89-108.
7. Rana Hassan, and MG Qulibria, "Poverty and Pattern of Growth", ERD Working Paper Series, 18, ADB: Economic and Research Department, 2002, ([http://www2.adb.org/Documents/ERD/Working\\_Papers/wp018.pdf](http://www2.adb.org/Documents/ERD/Working_Papers/wp018.pdf), accessed 28 August 2012).

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

