

Analysis of Relationship between Socio-Economic Factors and the Level of Poverty Inequality in Indonesia

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ABSTRACT: This research was conducted at Makasar with the research region was Indonesia which consisted of 34 provinces by using secondary data from 2017 to 2022. The research aim was to study the influence of on education, economic growth, wage, unemployment and the number of MSMEs on poverty Inequality in Indonesia.

The result of analysis show that the education and number of MSMEs on a significant negative influence on poverty both the depth and severity of poverty. Whereas wages and unemployment have a positive influence on the severity of poverty, but economic growth, education and MSMEs do not affect it in Indonesia. It was shown that economic growth did not influence significantly on the two kind of poverty significantly.

Keywords: *Economic growth, unemployment, poverty, wages, education and micro, small and medium enterprises*

I. INTRODUCTION

Poverty is a frightening condition for developing and developed countries, because poverty can hit every country and region. Poverty is a situation where humans are unable to meet basic needs such as food, clothing, shelter, education and health[1]. Poverty is a problem of closed access to various opportunities for productive resources, including capital, natural resources and even jobs opportunities[2]. Poverty in Indonesia is still one of the main problems in development, even though the number of poor people in Indonesia is decreasing every year both in terms of numbers and in terms of percentage.

Indonesia has quite high economic growth (an average of more than 5 percent per year) compared to several countries in the world. Indonesia is a candidate for an upper-middle income country, so it is worth expanding its focus beyond extreme poverty by moving to a poverty line of US\$ 1.9 PPP per capita per day from 1 dollar[3]. If this limit is applied, Indonesia will experience a poverty rate of 40% with a poor population of 110 million people. However, Central Bureau of Statistics continues to use the poverty line that has been set so that the percentage of poor people in March 2023 was 9.36 percent, decreasing by 0.21 percentage points compared to September 2022. The number of poor people in March 2023 was 25.90 million people, decreasing by 0.46 million people in September 2022 and decreasing by 0.26 million people in March 2022. In March 2023, the average poor household in Indonesia will have 4.71 household members[4], Thus, the average Poverty Line per household is IDR 2,592,657/poor household/month.

Poverty inequality indicators, the Poverty Gap Index (Poverty Gap Index-P1) is a measure of the average gap between the expenditures of each poor population relative to the line. The Poverty Severity Index (P2) provides an overview of the distribution of expenditure among the poor. The development of these two indices can be seen in Figure 1.



Figure 1. Development of depth and severity of poverty

Looking at Figure 1, it shows the average development of poverty depth (P1) from 2017 to 2022. It can be seen that in 2018, there was a very sharp decline compared to subsequent years. However, after this period P₁ experienced a slight fluctuation from year to year and tended to increase. Likewise with P₁, the poverty severity index experiences a fluctuating but still tends to increase from year to year.

One way to reduce poverty is the development of micro, small and medium enterprises (MSMEs) which are understood as the sector that absorbs the most labor compared to other sectors, which is expected to have an impact on poverty alleviation. Currently, MSMEs are in a positive trend with their numbers continuing to increase every year with a contribution in 2022 to National GDP of 60.5% [5]. As an illustration, from 2017 to 2019 the MSME sector achieved growth of 2.51 percent and in 2020 it fell to 4.65 percent, but after that year the sector continued to experience positive growth.

II. LITERATURE REVIEW

The concept of poverty is multidimensional. Sidadivides poverty into 4 dimensions, namely: Resources, power and voice, opportunity and choice and human security[6] So the problem of poverty is not only in the form of material fraud but also other dimensions. Poor people are individuals who do not have sufficient income and consumption to lift them from the minimum adequate level. So in short, poor people are those who live below the poverty line, which is determined by a national or international institution[7]. So understanding of poverty covers not only economics, but has expanded to cover various aspects of life, including other social dimensions, such as health, education and even entering the political dimension, although the definition of poverty is the inability to meet minimum standards of needs, both food and non-food. This kind of poverty is also called absolute poverty which is contrasted with relative poverty. Apart from that, Indonesia is known for structural poverty and temporary poverty. Structural poverty is certainly worse than temporary poverty, because in this type of poverty it is difficult to get out of poverty, because it has become chronic (chronic poverty) which is characterized by deprivation, discrimination, and living in areas that do not support the improvement of life[8].

One indicator of economic development is economic growth as an instrument for alleviating poverty. Several studies show that economic growth has a negative relationship and impact on poverty [9];[10];[11];[12]. This means that the increase in economic growth is followed by a decrease in poverty. However, there is also research that states the opposite, economic growth does not have a negative influence[13]. Furthermore, economic growth is also expected to create opportunities or reduce unemployment. This is shown by Ade Mulya Pratomo's research and Andryan Setyadharma who stated that the results showed that the minimum wage and the number of industries have positive and significant effects on unemployment, while economic growth has not significant effect on unemployment

The problem of unemployment is a classic problem that is always inherent and characterizes most countries, including Indonesia. Meanwhile [14] stated that the high economic growth and a sufficient percentage of IT mastery do not guarantee a decrease in most provinces' unemployment rates in Indonesia. This study also concluded that the factor that could reduce the unemployment rate is the average school duration. It is shown that the main reason for high unemployment in France is a slow down in the demand for labor due to high labor and energy costs in the early 1980s and to tight aggregate demand over the whole period. Changes in the labor supply have had an increasing impact in recent years[15].

MSMEs have the characteristic of being able to absorb labor thereby reducing unemployment which has an impact on poverty alleviation. It was shown that the relationship between MSMEs and poverty can be positive or negative [16], while, [17] shows that MSMEs statistically affect poverty reduction in Indonesia both directly and indirectly. Nevertheless, different business scales offer various implications for poverty reduction. SMEs 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. Furthermore, of the four control variables, only economic growth has a significant effect on poverty reduction, both direct and indirect. Hence, policymakers should support the market certainty of SMEs products to sustain the production cycle. Several previous studies have shown that the growth of MSMEs has a positive effect on poverty alleviation, [18]; [19]; [20]; [21]. However, there are also surprising facts that MSMEs do not have a positive impact on poverty reduction[22];[23].

Measuring the level of poverty can basically be done using approaches, namely Head-count and Poverty gap. Head-count is estimating the number of people who are below the poverty line, while Poverty gap is calculating the amount of funds needed to overcome the problem of poverty. Both approaches are used to determine the poverty level of a community. The measure of the poverty gap takes various forms depending on the desires to be achieved with that measure. In addition to estimating the amount of funds that must be provided to eradicate poverty, it is not uncommon for this measure to be expressed relatively, namely a comparison between the amount of the poverty gap and other variables such as GDP (Gross Domestic Product), total income of the poor, total income of the non-poor, total government spending, the amount of foreign aid, or the value of exports.

The differences in poverty are caused by factors, namely: (i) differences in geography, population and income; (ii) historical differences, some were colonized by different countries; (iii) differences in natural and human resources; (iv) differences between the private and state sectors; (v) differences in industrial structure; (vi) differences in the degree of dependence on the economic and political power of other countries, and (vii) differences in the distribution of power, political structures and domestic institutions [24]. Furthermore [25] stated that there are five factors that cause poverty, namely: (i) poverty caused by deficiencies within the individual himself, (ii) poverty caused by poor cultural systems and poor subcultural support; (iii) economic, political and social distortion or discrimination (iv) differences in geographical conditions, and (v) cumulative and cyclical dependency between individuals and resources.

Poverty inequality can be measured by an index of poverty and an index of poverty severity. BPS, the Central Bureau of Statistics 2020 defines the Poverty Gap Index (P_1) as a measure of the average gap between the expenditure of each poor person and the poverty line. The higher the index value, the further the average population expenditure is from the poverty line. z = poverty line. The Poverty Severity Index (P_2) provides an overview of the distribution of expenditure among the poor. The higher the index value, the higher the expenditure inequality among the poor. The Poverty Severity Index is an index that provides information regarding the distribution of expenditure among the poor.

Based on theory and the results of previous research using an inductive or deductive mindset, the relationship between independent variables or antecedent variables, intervening variables and consistent variables can be seen in Figure 1.

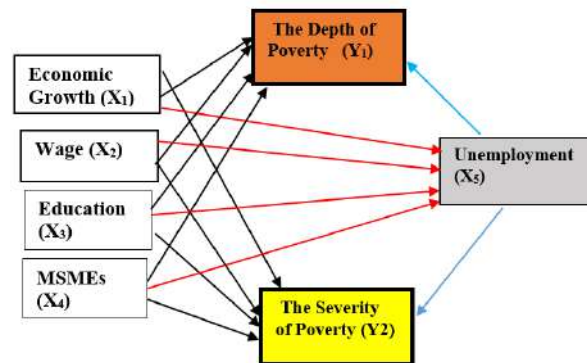


Figure 1. Framework of Thought Scheme

III. RESEARCH METHOD

This type of the research is quantitative, take the type of study of comparative causality that processes numerical data that can be calculated using statistical formulas. The data analysis technique used in this study is path analysis which estimates of the direct and indirect influence of exogenous variables on endogenous variables. This study uses secondary data, namely data that is already available and collected by other parties and it was panel data. The data was taken and used 2017-2022 from the Indonesia Central Statistics Agency (BPS Jakarta) which covers. The statistical analysis technique used is path analysis using the Amos 18 statistical application program.

Based on the conceptual relationship in the framework of thinking, mathematically functional relationships can be written as

$$Y_1 = f(X_1, X_2, X_3, X_4)$$

$$Y_2 = f(X_1, X_2, X_3, X_4, Y_1)$$

$$Y_3 = f(X_1, X_2, X_3, X_4, Y_1)$$

Whereas:

X_1 = economic growth

X_2 = wage (minimum wage of provinces)

X_3 = education (the average length of schooling of the population aged 15 years and over)

X_4 = UMKM (growth of small medium and micro businesses)

Y_1 = Unemployment (unemployment rate)

Y_2 = Poverty Gap Index-P1

Y_3 = Poverty Severity Index-P2

The structural equation can be rewritten:

$$Y_1 = f(X_1, X_2, X_3, X_4)$$

$$Y_2 = f(X_1, X_2, X_3, X_4, Y_1)$$

$$Y_3 = f(X_1, X_2, X_3, X_4, Y_1, Y_2)$$

$$Y_1 = \alpha_0 + \alpha_1 X_1 + \alpha_2 \ln X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \mu_1 \dots \dots \dots (3.1)$$

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 \ln X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 Y_1 + \mu_2 \dots \dots \dots (3.2)$$

$$Y_3 = \delta_0 + \delta_1 X_1 + \delta_2 \ln X_2 + \delta_3 X_3 + \delta_4 X_4 + \delta_5 Y_1 + \delta Y_2 + \mu_3 \dots \dots \dots (3.2)$$

IV. RESULTS AND DISCUSSIONS

4.1. Analysis results

The results of the analysis show the influence of one variable on another variable according to the research objectives, both before and during the pandemic, which can be summarized as shown in Figure 2.

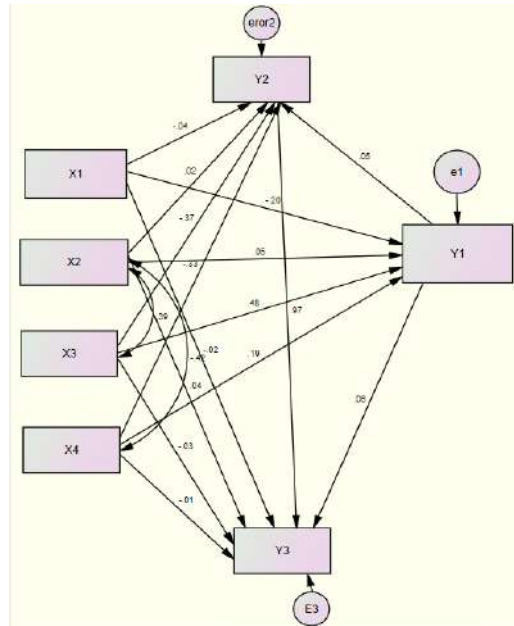


Figure 2. Data Processing Results, Coefficient between Exogenous and Endogenous Variables

Chi-square statistic, as stated earlier, is the most fundamental test to measure overall fit, it is very sensitive to the size of the sample used. The model is considered good if the Chi-square value is small. The smaller the value, the more feasible the research, meaning that the more it describes the match between the variance of the sample taken and the research population. The results of data processing that have been carried out using the AMOS 18 program are as shown in Table 1 and Table 2.

Tabel 1. Goodness of Fit Index

No.	Goodness of fit Measure	Cut-off Criteria	Estimation (cut off Value)	Fit Situation
1	Chi-Square (χ^2) Significance Probability (p)	smaller the better ≥ 0.05	3.247 0.03	Fit
2	RMSEA (the Root Mean Square Error of Approximation)	≤ 0.05	0.041	Fit
3	NFI (Normed of Fit Index)	≥ 0.95	0.969	Fit
4	IFI (Incremental Fit Indices)	≥ 0.95	0.992	Fit
5	CMIN/DF (the minimum Sample Discrepancy Function)	≤ 2.00	0.812	Fit
6	TLI (Tuckler Lewis Index)	≥ 0.95	1.005	Fit
7	CFI (Comparative Fit Index)	≥ 0.95	1.000	Fit
8	Hoelter's Index	≥ 200	594	Fit

Sumber: [26]; [27]. and Amos Result

Table 2. Coefficients of the variables

No	The Relation of the variables		Coefficient	Prob.
	Independent variables	Dependent variables		
1	Economic growth	1. Unemployment	-0,084	0.000
		2. Depth of poverty	-0.014	0.522
		3. Severe of poverty	-0,002	0.326
2	Wage	1. Unemployment	0.322	0.449
		2. Depth of poverty	0.100	0.781
		3. Severe of poverty	0.063	0.040
3	Education	1. Unemployment	0.870	0.000
		2. Depth of poverty	-0.524	0.000
		3. Severe of poverty	-0,013	0.180
4	MSMEs	1. Unemployment	0,155	0.003
		2. Depth of poverty	-0.209	0.000
		3. Severe of poverty	-0.003	0.410
5	Unemployment	1. Depth of poverty	0.042	0.474
		2. Severe of poverty	0.018	0.000

Source: Data Processing output

Based on Table 2 and Figure 1, the regression equation can be written:

- $Y_1 = 7,495 - 0.014X_1 + 0,100 \ln X_2 - 0,524X_3 - 0,209 \ln X_4$
- $Y_2 = 7,495 - 0.014X_1 + 0,100 \ln X_2 - 0,524X_3 - 0,209 \ln X_4 + 0,042X_5$
- $Y_3 = \delta_0 + \delta_1 X_1 + \delta_2 \ln X_2 + \delta_3 X_3 + \delta_4 \ln X_4 + \delta_5 Y_1 + \delta Y_2 + \mu_3$

4.2. Discussion

Economic growth, education and the number of MSMEs have a negative influence on the depth of poverty in Indonesia, but the influence of economic growth is not significant at the confidence level $\alpha=0.05$. This fact is in accordance with the results of research which states that the economic growth rate factor has a negative but not statistically significant effect on the poor [28]. This was emphasized again by [29] who stated that economic growth only has a significant negative influence on poverty if it can create employment opportunities. Meanwhile, unemployment and wages have no influence on the depth of poverty in Indonesia. The regression coefficient of 0.524 shows that if education increases by 1 year it will have an impact on reducing poverty by 52.4) assuming the other variables in the model remain constant. Meanwhile, if the number of MSMEs increases by 1 percent, it will have an impact on reducing the depth of poverty by 0.21 units. In the same table it can also be seen that wages do not have a real influence on unemployment, this fact is confirmed by [30], which states that unemployment is not influenced by wages either before or during the pandemic. This fact contradicts the results of research which states that wages have a significant and influential effect on unemployment [31].

Similarly to the influence on the depth of poverty, economic growth, education and the number of MSMEs have a negative influence on the severity of poverty in Indonesia, but the influence of economic growth is not significant at the confidence level of $\alpha=0.05$. Meanwhile, unemployment and wages have no influence on the severity of poverty in Indonesia. The regression coefficient of 0.193 shows that if education increases by 1 year it will have an impact on reducing the poverty index by 0.19 units or 0.0019 percent, assuming the other variables in the model remain constant. Meanwhile, if the number of MSMEs increases by 1 percent, the poverty severity index decreases by 0.21 units or 0.0021 percent.

VI. CONCLUSION AND RECOMMENDATION

Based on the analysis and the results of the previous discussion, the following conclusions are drawn:

6.1. Conclusions

- The poverty rate in Indonesia continues to decline from year to year, so that the poverty rate is far below the national rate several years ago. However, the poverty depth index and poverty severity index had a slight fluctuation from year to year and tended to increase.
- Economic growth has a negative influence on unemployment, whereas education and MSMEs have a positive influence but wages did not affect it.

3. Education and MSMEs have a negative influence on the depth of poverty but do not have an influence on the severity of poverty
4. Wages and unemployment have a positive influence on the severity of poverty, but economic growth, education and MSMEs do not affect it in Indonesia.

6.2. Recommendation

Based on the conclusions stated previously, suggestions can be made:

1. Efforts to increase economic growth need to continue because research results show that this variable has a positive influence on GDP per capita. High economic growth can be achieved by increasing investment from both the government and the private sector and increasing domestic financing sources.
2. Access to education needs to continue to be maintained and improved through skills and quality of teaching as well as the need to reduce the educational gap between rich and poor groups
3. MSMEs need to continue to be fostered, empowered and encouraged because they have a negative influence on poverty inequality

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