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Research Article

The Impact of Economic Growth and Unemployment on Poverty Rates in Indonesia 2011-2024

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Abstract

This study aims to analyze the effect of economic growth and unemployment rates on poverty rates in Indonesia during the period 2011 to 2024. The method used is a quantitative approach with multiple linear regression analysis, where secondary data is obtained from the publication of the Central Statistics Agency (BPS). The results of the study indicate that both economic growth and unemployment have a significant effect on poverty rates. Economic growth has a positive effect on poverty, indicating that an increase in economic growth is actually followed by an increase in the number of poor people, allegedly due to non-inclusive growth. Meanwhile, the unemployment rate shows a strong positive and significant effect on poverty. Simultaneously, both variables have a significant effect on poverty with a coefficient of determination of 68%, meaning the model can explain 68% of the variation in poverty rates. This finding confirms that economic growth needs to be accompanied by an expansion of employment opportunities in order to truly reduce poverty rates.

Introduction

Poverty is one of the structural problems that is still a major challenge for economic development in many developing countries, including Indonesia. As the fourth most populous country in the world, Indonesia faces complexity in eradicating poverty due to regional disparities, income inequality, and other socio-economic dynamics. Poverty is not only related to low income, but also limited access to basic services such as education, health, and decent work. In Indonesia, poverty remains a major challenge to national development, although there has been progress in the last few decades. Data from the Central Statistics Agency (BPS) shows a decline in poverty rates from year to year, but the rate of decline is uneven and is often influenced by macroeconomic dynamics, such as fluctuations in economic growth and high unemployment rates.

Between 2011 and 2024, Indonesia showed a downward trend in poverty rates, from 12.49% in 2011 to around 9.36% in 2023. However, this trend was disrupted in 2020, when the COVID-19 pandemic caused the poverty rate to spike to 10.19% (BPS, 2023). This fluctuation reflects the dependence of poverty on macroeconomic indicators, especially economic growth and unemployment rates. Although various poverty alleviation programs have been carried out by the government, data shows that the poverty rate in Indonesia still fluctuates

from year to year, depending on various macroeconomic indicators, such as economic growth and unemployment rates.

One important variable that is believed to be strongly correlated with poverty rates is economic growth. In theory, positive economic growth is expected to increase national income and expand employment opportunities, thereby reducing the number of poor people. According to Sadono Sukirno (2013), sustainable economic growth reflects an increase in people's production and income, which in turn can strengthen purchasing power and reduce poverty. However, in practice, economic growth is not necessarily enjoyed equally by all levels of society.

In Indonesia, a study by Firdaus and Husein (2017) noted that economic growth in the post-global financial crisis era tends to benefit urban communities and the upper middle class, while the rural poor experience smaller benefits. In other words, economic growth alone is not enough to significantly reduce poverty if it is not accompanied by equitable distribution.

In Indonesia, the highest economic growth in the 2011–2024 period was recorded in 2011 at 6.17%, but experienced a significant decline during the pandemic to -2.07% in 2020. This sharp decline was accompanied by an increase in the number of poor people, indicating a close relationship between economic growth and poverty. In Indonesia, the highest economic growth in the 2011–2023 period was recorded in 2011 at 6.17%, but experienced a significant decline during the pandemic to -2.07% in 2020. This sharp decline was accompanied by an increase in the number of poor people, indicating a close relationship between economic growth and poverty.

In addition to economic growth, another variable that also affects the poverty rate is unemployment. A high unemployment rate indicates a mismatch between the availability of jobs and the number of workers who need jobs. According to Keynes (1936), unemployment is one of the main indicators of the inefficiency of the economic system in distributing resources. A person who is unemployed tends to experience decreased purchasing power and is vulnerable to structural poverty.

In Indonesia, employment dynamics show that although unemployment rates have tended to decline in recent years, many people still work in the informal sector with uncertain incomes. Research by Arsyad and Nugroho (2019) found that open unemployment in Indonesia has a positive correlation with increasing poverty, especially in urban areas. This is exacerbated by the lack of job skills that match market needs, as well as the low quality of vocational education and training.

In Indonesia, the unemployment rate decreased from 7.48% in 2011 to 5.86% in 2019, but increased again to 7.07% in 2020 due to the pandemic. Although it began to decline after 2021, its impact on poverty was still felt in the following years. Research by Arsyad and Nugroho (2019) shows that increasing unemployment directly contributes to increasing poverty in urban areas. Meanwhile, Hidayat and Oktaviani (2020) stated that every 1% increase in the unemployment rate in Indonesia can cause an increase in poverty rates of 0.3% to 0.5%. This confirms that unemployment not only impacts the individual economy, but also the national socio-economic structure.

The combination of weak economic growth and high unemployment are the main factors that worsen poverty conditions, especially when external shocks such as the pandemic occur. Data from BPS noted that in 2020, when economic growth hit its lowest point in the last two decades (-2.07%), unemployment jumped to 7.07% and the poverty rate increased to 10.19%. This shows that the challenge in poverty alleviation is not only about creating growth, but also ensuring the quality of that growth and its linkage to job creation.

Although there have been many studies on the relationship between economic growth and poverty, as well as between unemployment and poverty, research that simultaneously analyzes all three over a long period of time (2011–2023) is still limited. In fact, this time span reflects important dynamics of the national economy, including large-scale infrastructure programs, the global economic downturn, and the response to the pandemic.

With this background, this article aims to empirically analyze the effects of economic growth and unemployment rates on poverty in Indonesia in the period 2011 to 2023. This study uses a quantitative

approach based on national time series data, and is expected to provide a comprehensive picture of the effectiveness of economic growth and labor market stability in alleviating poverty in Indonesia.

Method

This study uses a quantitative approach. This approach is used to test and analyze the influence of economic growth variables and unemployment rates on poverty rates in Indonesia in the period 2011 to 2024. The type of data used is secondary data obtained from the official publication of the Central Statistics Agency (BPS) of Indonesia. In this study, the analysis method used by the researcher is the multiple linear regression analysis method using the analysis tool, namely SPSS. Multiple linear regression analysis in this study is used to determine the condition of the dependent variable (Poverty) when the independent variables (Economic Growth and Unemployment) are indicators and are used to prove the extent to which economic growth and unemployment influence poverty in Indonesia in 2011-2024. The form of the regression equation is as follows:

In theory, the multiple linear regression model is described by the following equation.:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_{\dots} X_{\dots} + e_t$$

Keterangan:

Y	= Variabel Terikat (Dependen Variabel)
X1 , X2	= Variabel Bebas (Independen Variabel)
β_0	= Konstanta
β_1 , β_2	= Parameter
e_t	= error term

Results And Discussion

Result

A. Classical Assumption Test

1. Multiple Linear Regression Test

**Table 1. Multiple Linear Regression Test Results
One-Sample Kolmogorov-Smirnov Test**

		Unstandardiz ed Residual
N		14
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.57131406
	Most Extreme Differences	
	Absolute	.163
	Positive	.112
	Negative	-.163
Test Statistic		.163
Asymp. Sig. (2-tailed)		.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

The table above shows a significance level of 0.200 which is greater than 0.05, which indicates that the data used in this study has a normal distribution and conventional rules have been followed.

2. Heteroscedasticity Test

Table 2. Heteroscedasticity Test Results Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.316	.820		-.386	.707
	Pertumbuhan Ekonomi	.033	.043	.235	.760	.463
	Pengangguran	.108	.121	.275	.890	.393

a. Dependent Variable: ABS_RES

The heteroscedasticity test is carried out by determining the level of significance (Sig.) of the independent variables. If the Sig. value is greater than 0.05, then there is no heteroscedasticity in the regression model.

Based on the table above, the level of significance (Sig.) for the Economic Growth variable (X1) is 0.463, and for the Unemployment variable (X2) is also 0.393. Both values are greater than 0.05, which means that there are no symptoms of heteroscedasticity in the two variables. Thus, it can be concluded that this regression model passes the heteroscedasticity test, because all independent variables have a significance value above 0.05.

2. Multicollinearity Test

Multicollinearity test is done by looking at the Tolerance and VIF (Variance Inflation Factor) values. If the Tolerance value is > 0.10 and the VIF value is < 10 , then it can be concluded that there is no multicollinearity in the regression model.

Table 3. Multicollinearity Test Results Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	Pertumbuhan Ekonomi	.869	1.151
	Pengangguran	.869	1.151

a. Dependent Variable: Penduduk Miskin

Based on the table, the Economic Growth variable (X1) has a Tolerance value of 0.869 (> 0.10) and a VIF of 1.151 (< 10). Meanwhile, the Unemployment variable (X2) also has a Tolerance value of 0.869 (> 0.10) and a VIF of 1.151 (< 10).

Thus, it can be concluded that there is no multicollinearity in the regression model between the Economic Growth (X1) and Unemployment (X2) variables, because all Tolerance values are above 0.10 and VIF below 10.

B. Hypothesis Analysis

Hypothesis analysis is the process of determining whether there is a significant difference between dependent and independent variables in a study. In this analysis, statistical inference is used to evaluate previously proposed hypotheses in order to determine whether or not the hypothesis is acceptable based on the available facts. The relationship between the independent and dependent variables is determined through hypothesis testing, which includes T (partial), F (simultaneous), and coefficient of determination (R²).

1. T-Test (Parsial)

During simple linear regression analysis, T (partial) is used to determine the individual impact of a variable on another variable. The purpose of this study is to determine whether each variable has a significant impact on the other variables.

**Table 1. T-Test (Parsial)
Coefficients^a**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.974	1.731		.563	.585
	Pertumbuhan Ekonomi	.286	.092	.525	3.119	.010
	Pengangguran	1.353	.256	.890	5.282	.000

a. Dependent Variable: Penduduk Miskin

Based on the table above, the Economic Growth variable (X1) has a t-value of 3.119 and a significance level (Sig.) of 0.010 which is smaller than 0.05. This shows that statistically, the Economic Growth variable (X1) has a significant effect on the Poor Population (Y). Furthermore, the Unemployment variable (X2) has a t-value of 5.282 with a significance level (Sig.) of 0.000, which is also smaller than 0.05. Therefore, Unemployment (X2) has a significant effect on the Poor Population (Y).

Thus, based on the results of the partial t-test, it can be concluded that both Economic Growth (X1) and Unemployment (X2) have a significant influence on the Poor Population (Y) in this regression model.

2. F-Test (Simultan)

In regression analysis, the F (simultaneous) test is a statistical method used to determine whether there is a significant difference between two or more sets of data. It is used to test the hypothesis that a particular variable has no effect, or no effect, on all of the regression coefficients in a regression model run simultaneously.

**Table 2. F-Test (Simultan)
ANOVA^a**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.407	2	5.704	14.786	.001 ^b
	Residual	4.243	11	.386		
	Total	15.651	13			

a. Dependent Variable: Penduduk Miskin

b. Predictors: (Constant), Pengangguran, Pertumbuhan Ekonomi

Based on the table above, the level of significance shown is 0.001, smaller than the threshold of 0.05. This shows that the variables Economic Growth (X1) and Unemployment (X2) have a significant effect on the Poor Population (Y) if used together (simultaneously). Furthermore, the calculated F value is 14.786, which is likely lower than the F table value at a significance level of 5% with degrees of freedom (df) of 2 and 8.

This shows that the hypothesis that Exports (X1) and Imports (X2) simultaneously affect Inflation (Y) cannot be accepted. Thus, based on the results of the F test (simultaneous), it can be concluded that the variables Economic Growth (X1) and Unemployment (X2) have a significant effect on the Poor Population (Y) in this regression model.

3. Coefficient Of Determination (R²)

The coefficient of determination (R²) is used in regression analysis to determine how much of a variable can be explained by the independent variable (X) and the dependent variable (Y). The R² value is between 0 and 1, with 1 indicating that the independent variable can explain all of the variables in the dependent variable, and 0 indicating that there is no relationship between the independent and dependent variables.

Tabel 3. Coefficient Of Determination (R²)

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854 ^a	.729	.680	.62108

a. Predictors: (Constant), Pengangguran, Pertumbuhan Ekonomi

b. Dependent Variable: Penduduk Miskin

Based on the table above, the Adjusted R Square value of 0.680 indicates that the variables Economic Growth (X1) and Unemployment (X2) in this model contribute 68% to Poverty, namely the Poor Population (Y). This means that the regression model used is able to explain 68% of the variation that occurs in the dependent variable, while the remaining 32% is explained by other variables outside the model or other factors not observed in this study.

The R Square value of 0.729 indicates that the relationship between the independent variables (Economic Growth and Unemployment) and the dependent variable Poor Population is in the high category. This indicates that this regression model is able to optimally explain the factors that influence Poverty.

Based on the results of the regression coefficient test obtained previously, the following multiple linear regression equation was obtained:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$
$$Y = 0.974 + 0.286X_1 + 1.353X_2 + \epsilon$$

The meaning of the equation is:

- 1) The constant value of 0.974 means that if the economic growth rate and unemployment rate are assumed to be zero, then the number of poor people is estimated to be 0.974 units. Although this number is not statistically significant ($p = 0.585$) and is also less economically meaningful because the conditions of zero unemployment and zero growth are almost impossible in the real world, the constant is still needed as part of the equation. The small constant value indicates that most of the variation in poverty is explained by the independent variables in the model, namely economic growth and unemployment.
- 2) The Economic Growth Coefficient (X1) of 0.286 indicates that every 1% increase in the economic growth rate will actually increase the number of poor people by 0.286%. This value indicates a positive relationship, which in economic theory is somewhat contradictory, because economic growth is generally expected to reduce poverty. However, in this context, this result could be caused by non-inclusive growth, namely economic growth that is only enjoyed by a portion of society without expanding employment opportunities or improving income distribution. Although the coefficient value is relatively small, this result is statistically significant ($p = 0.010$), which means that economic growth in this model does have an effect on poverty, although the direction of the influence is not in accordance with general expectations.

The Unemployment Coefficient (X2) of 1.353 indicates that every 1% increase in the unemployment rate will increase the number of poor people by 1.353%. This value shows a positive and very strong relationship, and is statistically significant ($p = 0.000$). Economically, this result makes sense because the higher the unemployment rate, the more people lose income, so the risk of entering the poverty line increases. This coefficient value is quite high, indicating that unemployment is one of the most dominant factors in influencing the poverty rate. This reinforces the importance of job creation policies in the context of poverty alleviation.

Discussion

This study discusses the influence of economic growth and unemployment rates on poverty in a region. The author uses the multiple linear regression method to see how these two factors affect the number of poor people. Before going into the main results, several initial tests were carried out, called classical assumption tests. First, the normality test shows that the data used is normally distributed, with a significance value of 0.200 which is greater than the limit of 0.05. This means that this data is suitable for further analysis. Then, the heteroscedasticity test also shows good results because the significance value for both independent variables (economic growth and unemployment) is greater than 0.05. This means that there is no problem of uneven data distribution. Furthermore, the multicollinearity test shows that there is no too strong relationship between the independent variables with each other, so that both can be used together in the regression model.

The results of the analysis show that both economic growth and unemployment have a significant effect on poverty rates. The t-test (partial) proves that economic growth has a significant effect on poverty with a positive relationship, meaning that every 1% increase in economic growth is followed by an increase in the number of poor people by 0.286%. This seems inconsistent with economic theory, because economic growth usually reduces poverty. However, in practice, this can happen if the existing growth is uneven or non-inclusive, meaning it is only enjoyed by certain groups. On the other hand, the unemployment rate has a very strong and positive effect on poverty. Every 1% increase in unemployment increases poverty by 1.353%. This makes sense because when many people are out of work, income decreases, and the risk of falling into poverty increases.

Overall, through the F test (simultaneous), both variables (economic growth and unemployment) together have a significant effect on poverty. This regression model is also classified as good because it is able to explain 68% of the variation in poverty, the remaining 32% is explained by other factors outside the model. In conclusion, although economic growth exists, if it is not inclusive and not accompanied by a reduction in unemployment, poverty remains high.

The partial test results show that the economic growth variable has a positive and significant effect on the poverty rate. This is indicated by a significance value of 0.010 which is smaller than 0.05 and a regression coefficient of 0.286, meaning that every 1% increase in economic growth actually increases the number of poor people by 0.286%. This finding shows that the economic growth that has occurred has not been fully able to reduce the poverty rate. This shows that economic growth in the research area is still not inclusive, where the results of development are enjoyed more by high-income groups.

This is in line with the opinion of Siregar and Dwi (2008), who stated that economic growth is indeed a necessary condition to reduce poverty. However, to be a sufficient condition, the growth must be even and touch all levels of society, including the poor (growth with equity). If growth is only focused on certain sectors or groups without being accompanied by equal distribution of income and employment opportunities, then the gap in inequality will widen and poverty will not decrease significantly. This shows that economic growth needs to be directed at inclusive and equitable development, not just pursuing high growth rates.

For decades, development has been based on a classic paradigm known as the trickle down effect. This paradigm uses an instructive development approach and is carried out from the top down. This concept was born from the spirit of development that believes that optimal economic growth and high productivity can be achieved through development that is centered in several main production areas or production development centers (Adisasmita & Rahardjo, 2011). In other words, the benefits or advantages obtained by the wealthy community are expected to flow to the poor, for example through the creation of more jobs or the development of small businesses.

So far, we have been too trusting in various promises that the pro-growth paradigm or economic growth will bring prosperity to all levels of society through the trickle-down effect process. However, in reality, economic growth does not automatically create new jobs or expand business opportunities that can reduce unemployment and poverty. In fact, economic growth itself does not immediately reduce poverty rates. This strategy actually puts us in a dilemma between pursuing economic growth or equitable distribution of development results, even though both are important elements that are often ignored. This means that when development focuses too much on economic growth, the aspect of equity tends to be abandoned, and vice versa. In practice, development policies emphasize more on accelerating economic growth, with the hope that development results will later

be evenly distributed through the trickle-down effect mechanism. However, the results of this study show something different from these theories, namely that economic growth actually has a unidirectional relationship with the poverty rate, in other words, economic growth in Indonesia has a positive effect on increasing poverty rates.

Conclusion

Based on the research results, it can be concluded that both economic growth and unemployment rates have a significant effect on poverty rates in Indonesia. The results of the partial test show that economic growth has a positive effect on poverty, indicating that an increase in economic growth is not always followed by a decrease in poverty, especially if the growth is not inclusive. Meanwhile, the unemployment rate has been shown to have a very strong influence on increasing poverty. Simultaneous tests also show that both variables together have a significant influence on the poverty rate. The coefficient of determination (Adjusted R²) value of 0.680 indicates that 68% of the variation in the poverty rate can be explained by economic growth and unemployment. Therefore, poverty alleviation does not only depend on economic growth, but also greatly requires a strategy to reduce unemployment rates through the creation of equitable and sustainable employment opportunities.

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