Proceedings of the International Conference on Education, Economics, Business, Entrepreneurship, and Finance (ICEBEF)
Volume 4 (2026)

POVERTY DYNAMICS IN INDONESIA: THE ROLE OF INFLATION, POPULATION GROWTH, AND UNEMPLOYMENT

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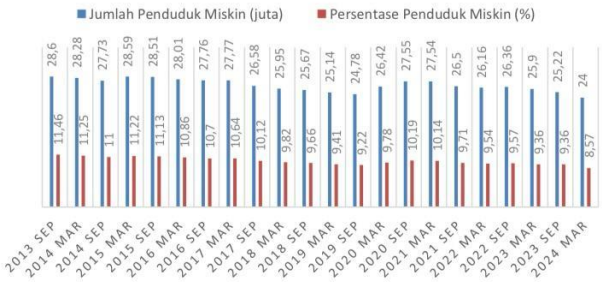
ABSTRACT
This study aims to analyze the effect of inflation, population growth, and unemployment on poverty levels in Indonesia. The background of this study is based on the phenomenon of poverty, which remains a challenge for national development, despite fluctuations in poverty rates over the past few years. This study employs a quantitative approach using secondary time-series data from 2006 to 2024 obtained from the Central Bureau of Statistics (BPS) and the World Bank. The analysis technique used is multiple linear regression with the Ordinary Least Squares (OLS) method. The results of the study indicate that, simultaneously, inflation, unemployment, and population growth have a significant impact on poverty levels. Partially, the variables of unemployment and inflation have a positive and significant impact on poverty levels. Meanwhile, population growth has a negative but insignificant impact. These findings indicate that increases in inflation and unemployment tend to drive up poverty levels, while population growth has not yet shown a strong direct relationship. The implications of this study emphasize the importance of inflation control and job creation as key strategies in poverty alleviation in Indonesia.

Key words: Inflation; unemployment; population growth; poverty

INTRODUCTION

Along with the development of the times, there are more and more challenges that must be faced by countries in various parts of the world, ranging from health, education to the economy. because the United Nations (UN) in 2015 established the Sustainable Development Goals (SDG) program The agenda for achievement until 2030 consists of 17 goals, the first of which is No Poverty (no poverty) which means that the goal of the SDGs is to end poverty in all forms around the world, including extreme poverty, multidimensional poverty, and gaps in access to basic services (World Bank, 2025). In the context of development economics, the concept of poverty is measured by the poverty line approach, which presents the value of minimum needs to meet the basic needs of a decent life. The value of the minimum basic needs is called the poverty line, individuals whose income is below the poverty line can be classified as poor residents (Primandari, 2018). Poverty is a problem in various developing countries, this is in line with Asrar et al (2017) who stated that poverty is a "systematic curse" that influences the economy and policies and planning in developing countries. In Indonesia, the Central Statistics Agency (BPS) determines poverty rates based on the Cost of Basic Needs (CBN) method, which calculates the minimum monthly expenditure to meet basic calorie needs and non-food staples. Indonesia is a very large country, which is 1905 million square kilometers with a wide landscape accompanied by a variety of natural resources owned, in addition to that Indonesia has a large population that ranks as the fourth country with the largest population in the world after China, India, and the United States, with a population of 281.6 million people based on the 2024 projection, with the richness of natural resources and human resources, Indonesia should theoretically be able to become a developed country. However, in reality, Indonesia is still a developing country and faces challenges in the form of a relatively high level of population poverty, based on central statistics data that poverty in Indonesia from 2013 to 2024 both in terms of number and percentage experiences a fluctuating trend as shown in graph 1.



Source: BPS (data processed)

Poverty can affect economic growth and poverty can create the phenomenon of a circle of poverty that occurs in the poor. Because the low level of real income which has an impact on low saving ability and capital capacity

to invest then has an impact on low productivity, it finally has an impact on low income levels. This circular process makes it difficult for the poor to get out of their poverty (Nurkse, 1961). This circular process makes it difficult for the poor to get out of their poverty trap and even tends to be cross-generational, where poverty is inherited from one generation to the next. This is in line with Seran & Hallan (2020) reducing demand to worsen people's ability to make purchases which will result in not all goods being sold in the market, thus causing overproduction that has the potential to reduce the company's profits. This condition can cause a decline in economic growth. Therefore, the problem of poverty needs to be solved by strategies that can strengthen the role of the people in the economy. There are several factors that cause poverty, including inflation, economic growth, population growth, literacy level, unemployment (Primandari, 2018; Pramu & Hutajulu, 2018). Inflation has a regressive effect on low-income groups because it causes a decrease in real purchasing power, especially for basic needs and energy.This is in line with the purchasing power theory by Gustav Cassel which states that inflation can cause a decrease in purchasing power, especially in people with fixed or low incomes, which has an impact on the ability to meet basic needs that push them into poverty. And unemployment contributes to poverty because unemployed individuals have no income. In addition, David Lam (2024) said that population growth, especially in low-income countries, can increase pressure on economic and social resilience, including the potential for poverty. In research by Cruz & Ahmed (2018) it is shown that the number of people in this case an increase in the proportion of the working-age population and a decrease in the ratio of child dependency are related to a decrease in poverty. Based on the description above, there are several factors that affect poverty and the importance of achieving the first goal SDG target. Therefore, this study aims to analyze the partial and simultaneous influence of the variables of unemployment, inflation and population growth on the poverty rate in Indonesia. This research is expected to make an empirical contribution in understanding the dynamics of poverty in Indonesia and provide policy recommendations to overcome poverty more effectively and specifically that can be implemented to accelerate the achievement of the target of the first SDG.

METHOD

This study uses a qualitative approach, the data used in this study is secondary data in the form of annual time series for the period 2006 to 2024, the analysis model used in this study is multiple linear regression. There are four research variables, namely inflation (X1), population growth (X2), unemployment (X3) sourced from the central statistics agency (BPS) and poverty (Y) sourced from the World Bank. All unit variables are in the form of percentages to facilitate interpretation and comparability between variables.

The multiple linear regression model used in this study is formulated as follows:

$$Y = \beta 0 + \beta 1\ X_{1} + \beta 2X2^{*}\ M + \beta 3X3 + \in$$

Where Y is the poverty level, X1 is inflation, X2 is unemployment, X3 is population growth, β0 is constant, β1 to β3 is the regression coefficient and ∈ is the term error. Before the model estimation is carried out, a series of classical assumption tests are first carried out to ensure the validity of the ordinary least square model.

RESULTS AND DISCUSSION

The normality test in this study used kolmogrov-smirnov with an alpa level of 0.05. Based on the results of the analysis, a significance value (Asymp.Sig. 2-tailed) was obtained > 0.05 so that it can be concluded that the data is distributed normally. The heteroscedasity test was carried out with the Glejser test showing a number greater than 0.05 which means that there are no symptoms of heteroscedasity. The multicolonarity test is seen through tolerance values and variance inflation factor (VIF). The results showed that the tolerance value > 0.1 and the VIF value < 10, namely Inflation (VIF= 1.942), unemployment (VIF = 2.167) and population percentage (VIF= 1.252), indicating that there was no multicollinearity between independent variables in the regression model. And finally, the autocorrelation test conducted by looking at the Durbin-Watson value (DW) obtained at 1.912 which is less than 2 cal, indicates that the regression model is free from autocorrelation problems. The results of the Determination coefficient (Adjusted R2) obtained a value of R = 0.965 and adjusted R = 0.985 which means that 95.8% of the variation in poverty can be explained by inflation, unemployment and population while the rest can be explained by factors outside the model. In addition, the test value F (simultaneous) results show that the value F = 138.201 with significance of 0.00<0.05 which means that simultaneously the three independent variables, namely inflation, unemployment, and the number of population, have a significant effect on the bound variable, namely the poverty rate. This is in line with a study conducted by Harianto (2025) which researches the influence of inflation, unemployment and economic growth on poverty levels in Kediri whose results show that inflation, unemployment and economic growth simultaneously affect poverty rates. Economic growth, inflation and unemployment together affect the poverty rate in South Sumatra (Primandari, 2018). Based on the results of the previous research, it consistently supports the findings of this study that macroeconomic variables such as inflation, unemployment, and population have a strong simultaneous influence on the poverty rate in Indonesia.

Table 1 Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Itself.
		B	Std. Error	Beta		
1	(Constant)	5.185	2.203		2.353	.033
	Unemployment (X1)	1.590	.129	.876	12.332	.000
	Inflation (X2)	.126	.050	.168	2.495	.025
	P Population (X3)	-1.404	1.864	-.041	-.754	.463

From the results of the regression above, the following estimation results model can be formed:

$$Y = 5.185 + 1.590\ X1 + 0.129\ X2 - 1.404\ X3$$

Model Interpretation

Unemployment

Unemployment has a positive effect on the poverty rate in Indonesia. This can be seen from the value of the X1 regression coefficient of 1,590 which means that for every 1% increase in unemployment, the poverty rate in Indonesia will increase by 159% with other variables considered fixed (ceteris paribus). This magnitude of coefficient shows a very high sensitivity of the poverty rate to changes in the unemployment rate, indicating that unemployment is the main determinant in the dynamics of poverty in Indonesia.

Inflation

Inflation has a positive effect on the poverty rate in Indonesia. This can be seen from the value of the X2 regression coefficient of 0.129 which means that for every 1% increase in inflation, the poverty rate in Indonesia will increase by 12.9% with other variables considered fixed. Although the inflation coefficient is smaller than that of unemployment, its effect on poverty is still statistically significant. Inflation has a great impact on low-income groups because it is the group that will bear the greater burden than the rich group.

Population Growth

Population growth has a negative effect on the poverty rate in Indonesia. This is shown by the regression coefficient X3, which is 1,404 which means that for every 1% increase in population growth, the poverty rate in Indonesia will decrease by 140.4% with other variables considered fixed. This negative coefficient direction indicates that population growth does not automatically exacerbate poverty.

Partial Regression Coefficient Testing (Statistical t-Test)

Unemployment

Unemployment is a condition when a person who wants to work and is looking for a job but has not found a job (Mankiw, 2012). The unemployment variable obtained a t-calculation value of 12,332 with a sig value. 0.000. So that Ha is accepted because the significance value is smaller than the value of α 0.05 (0.000<0.05) and t calculates > t-table (12.332 > 2.131). It indicates that the unemployment variable has an effect on the poverty rate in Indonesia. This result is in line with classical economic theory which states that unemployment causes a loss of household income, thus potentially reducing purchasing power and increasing poverty rates. These findings are also consistent with the opinion of Todaro and Smith (2011) that the inability of the community to access employment is the root of structural poverty. High unemployment has a direct impact on the increase in poverty rates because individuals who do not work certainly do not have the income to have a decent life. In line with research (Yusuf et al, 2020; Badu & Akib, 2020; Faturohim, 2023) which shows that unemployment has an effect on poverty rates.

Inflation

This is in line with Mankiw (2012) Inflation is a general and continuous increase in prices in an economy, so it can be concluded that inflation is a condition for price increases in the long term. In this study, the inflation variable was obtained with a t-calculated value of 2.495 with a value of sig. 0.025. Thus, Ha is accepted, because the significance value is smaller than α 0.05 (0.025 < 0.05) and t calculated > t-table (2.495 > 2.131) indicates that the inflation variable has an effect on the poverty rate in Indonesia. This means that the increase in the inflation rate has an impact on increasing poverty rates. Inflation causes an increase in the price of goods and services which ultimately reduces people's purchasing power, especially low-income groups. The mechanism of transmission of inflation to poverty occurs through a decrease in people's real purchasing power where the increase in the price of basic necessities is not accompanied by a proportional increase. This condition is very detrimental to poor households because most of their expenditure is allocated to basic needs that are very sensitive to inflation turmoil. These results support the theory of purchasing power and also the view of Samuelson & Nordhaus (2001) on the negative impact of inflation on the welfare of the poor. In line with research by Ghosh Jayati (2023) which states that inflation, especially in food and energy prices, has an impact on poor households in developing countries, which ultimately leads to lower consumption and increased poverty.

Population Growth

The population growth variable was obtained with a t-calculated value of –0.754 with a sig value. 0.463. Thus, Ha is rejected, because the significance value is greater than α 0.05 (0.468 > 0.05) and t calculated < t-table (-0.754< - 2.131) indicates that the population growth variable has no effect on the poverty rate in Indonesia. This means that there is not enough evidence to suggest that population growth directly affects poverty levels in this model. In the context of demographic transition, the demographic bonus phase can provide benefits in the form of economic strength if the population growth is managed properly. This is in line with research by Endang & Rostiana (2020) that demographic transition has a positive impact on economic growth in Indonesia. However, the direction of this negative coefficient can be interpreted as an indication that an increase in the population, when accompanied by an increase in productivity and labor absorption, does not necessarily have a negative impact on poverty. However, these insignificant results may also suggest that the influence of population on poverty is indirect and may be mediated by other variables such as unemployment or quality of education.

CONCLUSION

Based on the results of the analysis, the three independent variables simultaneously had a significant effect on the poverty level which was shown by a significance value of 0.000 < 0.05. This shows that inflation, unemployment and population growth are relevant factors in explaining the dynamics of poverty in Indonesia during the research period. In addition, partial unemployment affects the poverty level, this is in line with Todaro and Smith (2011) who stated that the inability of people to get a job is the root of structural poverty.

Inflation has a significant influence on poverty rates, which means that an increase in inflation has an impact on increasing poverty in Indonesia. Meanwhile, population growth has no effect on the poverty rate. This is in line with the view of demographic transition, where in the demographic bonus phase, the growth of the number of productive age population can be a driving factor for the economy if managed properly. However, insignificant results may reflect that the effect of population growth on poverty is indirect.

Based on the above explanation, the government needs to increase labor-intensive programs, especially in the formal sector to reduce unemployment, to help household income so that people can have purchasing power so that they can overcome the problem of poverty. and Inflation is an important aspect to maintain the welfare of the poor.

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