

# The Nexus of Economic Growth and Poverty Reduction in East Java

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## ABSTRACT

This study aimed at knowing the correlation between economic growth and poverty in East Java. This study used panel data from the regency/municipality from 2013 to 2018 using the simultaneous method. The results showed that the economic growth in East Java stimulated by consumption, investment, and government expenditure. It is in line with the theory by Keynes. Meanwhile, poverty can slow down economic growth. It was also found that economic growth and education played a role in poverty reduction

**Keywords:** *economic growth, poverty, East Java, simultaneous, TSLS*

## 1. INTRODUCTION

The development program by the government is aimed at the efforts for poverty alleviation, primarily, to increase the people's welfare. It is in line with the forth paragraph of the 1945 Constitution in which the Indonesian government attempts to create a just and prosperous society. The local development stimulated by regional autonomy is one of the efforts in increasing the people's welfare.

Economic growth is one of the success parameters of a region for development activity. The growth in the economy can be defined as the development of economic activities that result in a larger number of goods and services produced in the community. In a regional area can be measured by the growth level Gross Regional Domestic Product (GRDP).

The theory of Keynes states that economic growth is affected by the factors in the demand side. Keynes in Jhingan [1] emphasizes the importance of aggregate demand or effective demand as the main factor that drives the economy, in which both government and private sectors play an important role. The components in economic growth according to Keynes are as follows: consumption (C), private investment (I), government expenditure (G), total exports (X), and total imports (M).

In line with economic growth, poverty also becomes an important factor in assessing the success of development activity in a region. The reduction in poverty in a region can indicate that the community in a region becomes more prosperous. Sharp in Kuncoro [2] states the three factors of poverty from an economic standpoint. First, in microeconomics, poverty occurs because of the difference in resources from each individual that results in an inequality of income. Secondly, poverty occurs because of

the difference in the resource quality of each individual. Thirdly, poverty is caused by the differences in access to capital. These three factors of poverty will lead to a theory by Nurske, the vicious circle of poverty.

Economic growth and poverty become an interesting and strategic discussion in policymaking. Economic studies, generally, state that the reduction in poverty is strongly correlated with economic growth. Some studies reveal that economic growth has an important role in poverty alleviation. A study by Lin [3] and Fosu [4] state that economic growth can reduce poverty, yet it can also increase inequality.

The economic growth in East Java was satisfactory with an average growth of 5.68% within 2013 – 2018. That number is still above the average national economic growth. Nevertheless, East Java as a province with the second largest population in Indonesia, poverty alleviation becomes one of the challenges for development activity in this region. With a total population of 39,293,000 people, this region is susceptible to poor people. It has been recorded that around 4,332.59 people in East Java live below the poverty line. The total is the highest number in all provinces in Indonesia. Can economic growth play a role in reducing poverty in East Java?

The objective of this study is to analyze the correlation between economic growth and poverty in East Java province. The second section of this paper will discuss the research methodology and the data source used in this study. Moreover, the results of this study and the discussion will be presented in the third section. Finally, the conclusion and suggestion will be presented in the fourth and fifth sections of this study.

## 2. RESEARCH METHODS

This study used secondary data in the form of the panel data of regency/municipal in East Java from 2013 to 2018. Those data were taken from the Central Bureau of Statistics of East Java Province, Directorate General of Fiscal Balance of the Ministry of Finance of the Republic of Indonesia, and Investment Board and One-Stop Service in East Java Province.

Since economic growth and poverty are correlated, the analysis of econometric used here was the simultaneous equation method. In that method, each variable has structural similarities as follows:

$$Y_{it} = \alpha + \beta_1 C_{it} + \beta_2 I_{it} + \beta_3 G_{it} + \beta_4 P_{it} + u_{it} \quad \dots (1.1)$$

$$P_{it} = \alpha + \beta_5 Y_{it} + \beta_6 EDUC_{it} + \beta_7 POP_{it} + e_{it} \quad \dots (1.2)$$

In which: Y interpreted as economic growth, C explained as household consumption, I described as investment in private sector, G represented government expenditure, P defined as poverty, EDUC described as how long does it last for education, POP described as population in regency or municipality,

Furthermore, in the simultaneous equation method, the variables would be identified first using the order condition to determine the accurate method for speculating the equation.

In the identification stage, equation (1.1) was collected and categorized as the exactly identified category and equation (1.2) in the over-identified category. The method used in speculating the statistical parameter of the simultaneous equation was, therefore, the Two-Stage Least Square (2SLS) method.

## 3. RESULT AND DISCUSSION

In the approach of the simultaneous equation, testing for simultaneity was done by estimating the residual/error value in each equation. It was said that it was simultaneous if the residual value in equation (1.1) had a significant influence on equation (1.2) and vice versa. Testing for simultaneity in this study can be seen in the table below;

Table 1. Simultaneous test results on both equations

Model	Variable	Coef.	T	p value
Economic Growth	Residual2	-0.2266628	-3.52	0.001***
Poverty	Residual1	-0.3204502	-2.98	0.003***

Source: Data Processing Result

Note: \*) significant at  $\alpha$  10%; \*\*) significant at  $\alpha$  5%; \*\*\*) significant at  $\alpha$  1%;

Then, the simultaneous analysis in equation (1.1) and equation (1.2) was done using software called Stata 14.2. The result of the statistical analysis of the simultaneous equation is presented in the table below;

Table 2. Result of Simultaneous Model Estimation with Two Stage Least Square

Model	Variabel	Coef.	T	p value	R Square
Economic Growth	Constants	-50.2555	-4.02	0.000***	0.8722
	Consumption	0.275313	11.92	0.010***	
	Investment	0.0025675	10.66	0.000***	
	Government Expenditure	29.71051	2.26	0.000***	
	Poverty	-0.0967221	-2.65	0.008***	
Poverty	Constants	195.1493	14.63	0.000***	0.8609
	Economic Growth	-0.2188702	-3.22	0.001***	
	Education	-21.22359	-14.07	0.000**	
	Population	9.152717	17.6	0.000**	

Source: Data Processing Result

Note: \*) significant at  $\alpha$  10%; \*\*) significant at  $\alpha$  5%; \*\*\*) significant at  $\alpha$  1%;

Based on Table 1.2 on the model of economic growth (1.1), consumption, investment, and government expenditure have a positive and significant influence on economic growth. On the other hand, poverty had a negative and significant influence on economic growth. Those results are in line with the growth theory by Keynes, stating that economic growth will increase along with the increase in consumption, investment, and government expenditure.

Consumption had a positive influence on economic growth, showing that the increase of consumption in the community will be balanced by the supply of goods and services, so economic growth will also increase. This result is supported by a study by Adams (5), stating that household consumption will significantly increase economic growth.

Investment had a positive influence on economic growth. In a book written by Jhingan (6), it is stated that investment plays a role in creating income and can enlarge the capacity of economic production by increasing the supply of capital. According to Jhingan, through investment, economic activities will develop and the people's welfare can be increased. This result is similar to a study by Acharya & Nuriev [7], concluding that public investment and foreign capital investment strongly support economic growth.

Government expenditure has a positive influence on economic growth. It is in line with research by Fan et al., [8] and Sasmal [9], stating that government expenditure through capital expenditure in the form of infrastructure will increase economic growth. Meanwhile, poverty had a negative influence on economic growth. Todaro [10] also stated that poverty would inhibit the economic growth rate. According to Todaro, poor people tend to have limited access to instalment credit and investment. With low income, poor people will certainly get a low standard of

life. It can be seen from their health, nutritional status, and low education that can cause low productivity and slow down economic growth.

Meanwhile, in a model of poverty (1.2), economic growth and the duration of formal education had a negative and significant influence on poverty. Instead, the population had a positive and significant influence on poverty.

If economic growth showed a negative influence on poverty, it indicated that the increase in economic growth could reduce poverty. Suparmoko and Irawan [11] stated that economic growth is a requirement for people's welfare in a country. A study by Lin [12], Fosu [13], and Ruch [14] also reveal that economic growth has an important role in reducing poverty. The duration of formal education also showed a negative influence on poverty, indicating that the higher the education level can reduce poverty. Education becomes an important method to increase human resource quality. Good quality of human resources can lead to an opportunity to get a job. Consequently, it can increase income. It is in line with a study by Jonaidi [15], stating that the duration of formal education is an important thing to be able to climb out of poverty.

Meanwhile, the population showed a positive influence on poverty, indicating that the high number of population can increase the poverty level. This condition is believed to occur because the number of people with low income is more than the number of people with high income. It also indicates the inequality in East Java during the year when conducting this study.

#### 4. CONCLUSIONS

Based on the explanation in the previous section, it can be concluded as follows:

- Household consumption, investment, and government expenditure have a positive influence on economic growth in East Java. Meanwhile, poverty has a negative influence on the economic growth in East Java.
- Economic growth and the duration of formal education have a significant role in reducing poverty in East Java.
- The increase in population results in the increase of poverty in East Java. It is believed that the increase in population is dominated by people with low incomes.

#### 5. POLICY IMPLICATION

Based on the result of the analysis and discussion in the previous section, there are some implications. The economic growth in East Java is stimulated by household consumption, investment, and government expenditures. Controlling inflation will, therefore, help to control the purchasing power so that the consumption can

continuously grow. Then, the investment climate should also be investor-friendly, starting from permits to project realization to be finished faster. Government expenditure also plays a vital role in economic growth. Consequently, the government programs can be allocated to activities aiming at accelerating the growth such as infrastructure development.

Economic growth in East Java should be maintained at high performance. High economic growth can reduce poverty. Education has a central role in poverty alleviation. The government can provide an educational facility that can be reached out by the community with low income. Accordingly, a good education is expected to be able to increase the standard of living. The government should control the total population, provide an adequate number of job vacancies based on the number of workforces, and provide basic service programs for poor people.

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