Factors Influencing Poverty in East Java Province, Indonesia Year 2000-2013

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Abstract

Poverty is a great classic problem and fundamental in most developing countries, including Indonesia. More than 50 percent of poor people in Indonesia live in Java Island. East Java in the first position as the province with the highest number of poor people in Indonesia, where in 2013 about 4.87 million people live below the poverty line.

The objective of this research is to analyze and explain factors influencing poverty in East Java province Year 2000-2013. This research is quantitative descriptive research uses multiple linier regression analysis with backward method. Dependent variable of this research is poverty, and the independent variables are education, health, economic growth, and income inequality.

The result of this research shows that the factors influencing poverty in East Java province 2000-2013 are education and income inequality variables. While the variables of health and economic growth, are not influencing poverty in East Java province year 2000-2013.

Keywords: poverty, education, health, economic growth, and income inequality.

1. Introduction

Poverty is a great classic problem and fundamental in most developing countries, including Indonesia. Poverty reduction has been the center of attention in policy discussions at the local government level, national, and even international. Poverty reduction became the greatest global challenge facing the world today and a prerequisite for sustainable development. Even, the leaders of the world at the Summit Millennium in the United Nations in 2000 set the goal of poverty reduction as the first in the Millennium Development Goals (MDGs) (UN, 2007, p.1).

More than 50 percent of poor people in Indonesia live in Java Island. East Java in the first position as the province with the highest number of poor people in Indonesia, where in 2013 about 4.87 million people live below the poverty line. A large number of poor people in East Java have certainly contributed significantly to the national poverty level. In contrast condition, East Java is the second biggest contributor to the formation of the Gross Domestic Product (GDP) of Indonesia. The role of GRDP in East Java in 2013 was 14.8 percent. This number is under DKI Jakarta about 16.4 percent (CBS, 2013, p.8).

Various efforts have been made to alleviate poverty and become a major concern for the government of East Java province. The results of efforts to alleviate poverty in East Java showed a positive effect. It is seen from the level of poverty had a declining pattern. But the successes of East Java province in alleviating poverty have not been entirely successful. Because it has not met the RPJMD target of East Java, that is achieving poverty reduction to 10 percent (CBS, 2013, p.3).

Nowadays issue of human development achievements have been of concern to the government as a poverty alleviation program. The United Nations has set a standard measure of human development that is the Human Development Index (HDI), which are including index of education and health. Human capital is an asset relating to one's intellect and conditions obtained through formal and non-formal education which supported by physical and spiritual health of the prime and the ability to make relationships or interactions between people are good, profitable and sustainable. According to Todaro and Smith (2006, p.124) that education and health are fundamental development goals which a form of human capital which be fundamental to forming human capability broader that is at the core of the meaning of development. So the success of education and health investments can be correlated with the progress of the macro development that could alleviate poverty.

Besides that, the factors influencing poverty can be seen from economic factors. Welfare can be obtained if economic growth can be uneven in its distribution process, all of the people can enjoy the fruits of economic growth. Furthermore, according to Todaro and Smith (2006, p.66), argues that the poverty in a country depends on two main factors: (1) The level of the average national income and (2) The width and narrow of the gap in income distribution. Any high level of per capita national income is achieved by a country, as long as the unequal distribution of income, the level of poverty in the country would remain severe.

2. Conceptual Explanation

The World Bank, (1991, in Todaro and Smith, 2006, p.35) stated that the primary purpose of development is to improve the quality of life. While the United Nations Development Programme, (1991, in Todaro and Smith, 2006, p.36) states that the best way to achieve human development is to promote economic growth through a more equitable and participatory development.

The other definitions given by Seers (1969, in Conyers & Hill, 1990, p.29):

> "The questions to ask about a country's development are therefore: what has been happening to poverty? What has been happening to unemployment? What has been happening to inequality? If all of these have declined from highs level, then beyond doubt this has been a period of development for the country concerned. If one or two these central problems has been growing worse, especially if all three have, it would be strange to call the result "development" even if per capita income doubled."

For people living in poverty, the MDGs represent the potential for a better life in two ways: First, the goals are ends in themselves, in that reduced hunger, gender equality, improved health and education and broader access to safe water and sanitation are of direct benefit to the people. Second, the achievement of the goals could also contribute to economic growth and further development. An educated and healthier worker is a more productive worker. As such the MDGs contribute to productivity and thereby to economic growth. Achieving the goals will require core investment in physical infrastructure and human capital that enable poor people to join the mainstream economy and empower them with economic, political and social rights to fight their way out of poverty (UN, 2007, p.5)

2.1. Education toward Poverty

According to Arsyad (2004, p.223) that education (formal and non-formal) can play an important role in decrease poverty in the long term, either indirectly through improved productivity and efficiency in general, as well as directly through skills training that needed the poor to improve their productivity and increase their revenue. Higher education level of people, the knowledge and expertise will also be increased so that it will encourage an increase in human productivity. Finally someone who has a high productivity will obtain a better well-being, which can be shown through increased income and consumption. According to Simmons (in Todaro and Smith, 2006, p.132) education in many countries is a way to save themselves from poverty. Furthermore Todaro and Smith (2006, p.133) stated that education is a fundamental development goals. In which education plays a key role in shaping a country's ability to absorb modern technology and to develop the capacity to create growth and sustainable development.

2.2. Health toward Poverty

Health development is a process of change in the level of public health degree unfavorable to better comply with health standards. Therefore, health development is a development that made the investments to build quality human resources (Sitepu & Sinaga, 2004, p.65). In comparing the welfare levels among community groups is essential to look at life expectancy. According Arsyad (2004, p.223) that in countries with better health levels, each individual has on average live longer, thus economically have the opportunity to obtain a higher income. Furthermore, Arsyad explain the intervention to improve the health of the government is also an important policy as tool to reduce poverty.

2.3. Economy Growth toward Poverty

According to most economists agree that economic growth is essential for poverty reduction. Benefits of rapid economic growth will spread to all segments of the society (Perry et al, 2006, p.87). This view is based on the theory of Trickle Down Effect. Trickle Down Effect theory says the stream trickle down from the rich to the poor through the functions in the economy. High economic growth will increase the capacity of the economy and increasing per capita income. Income per capita which increasing means the poor will be reduced. According to Warr (2000, p.13) poverty reduction can be achieved by economic growth or income redistribution. Economic policy can do to spur economic growth or redistributing income, or both, to alleviate poverty. Economic policies and external factors will have an impact on economic growth and income distribution. Economic growth will reduce poverty, with the growing capacity of the economy, it can alleviate poverty.

2.4. Income Inequality toward Poverty

Poverty can also be defined as inequality in the distribution of income (Dinitto, 2005, p. 92). Economic growth in general does tend to reduce poverty. Kakwani, Khandker and Son (2004, p.16) argues that economic growth affects poverty through growth not only itself, but also through the manner of distributing the benefits of growth to the entire population. The combination of growth and income redistribution in the right portion needed to make growth benefit the poor so that the process of poverty reduction to be more optimal. Economic growth which more pro-poor (pro-poor growth) will be able to reduce the level of poverty is more real. Furthermore according to Kakwani, Khandker and Son, there are two possibilities of increase in inequality due to the

economic growth. First, the largest part of economic growth enjoyed by people are not poor, while the rest enjoyed by the poor. Second, the largest part of economic growth enjoyed by the poor, while the rest enjoyed by people which are not poor. Both of these possibilities carry different implications on poverty reduction. If the first possibility occurs, then economic growth will not reduce poverty, whereas if the second possibility occurs, so economic growth will reduce poverty.

3.   Statement of Problem

East Java province is the first position as the province with the highest number of poor people in Indonesia, where in 2013 about 4.87 million people live below the poverty line. A large number of poor people in East Java have certainly contributed significantly to the national poverty level. The contrast condition, East Java is the second biggest contributor to the formation of the Gross Domestic Product (GDP) of Indonesia. Role of GRDP in East Java in 2013 was 14.8 percent. This number is under DKI Jakarta at 16.4 percent (CBS, 2013). So, the problems can be stated as what the factors influencing poverty in East Java province year 2000-2013?

4.   Methodology

This research is quantitative descriptive research uses multiple linier regression analysis with backward method. Dependent variable of this research is poverty with the indicator is number of poor people, and independent variables are education variable with the indicator is mean years of schooling, health variable with the indicator is life expectancy, economic growth variable with the indicator is percentage of economic growth, and income inequality with the indicator is gini index. The data used are time series data for the period 2000-2013. The data is sourced from the Central Bureau of Statistic and Regional Planning Board of East Java Province, Indonesia.

To see the influence of education, health, economic growth, and income inequality toward poverty in East Java province 2000-2013, used multiple linear regression analysis. In general, the form of multiple linear regression equation is:

$$Y = \beta_0 + \beta_1 X1 + \beta_2 X2 + ... + \beta_k Xk + \varepsilon$$

Where:

Y	= dependent variable
X	= independent variable
β	= parameter
ε	= disturbance

Many explanatory variables cause problems when there is no strong partial correlation and not give contribution (significant influence) toward change the independent variable. Therefore, in this research used method to select the explanatory variables entered into the regression equation in order to obtain the best model, namely the Backward Elimination Procedure. The Backward Elimination Procedure begins with the largest regression using all the explanatory variables and gradually eliminates the explanatory variables in the regression equation to achieve a decision to use the best models obtained.

4.1. Feasibility Testing of Regression Equations (R^2)

The coefficient of determination (R^2) was essentially measures how far the model's ability to explain variation in the dependent variable. The coefficient of determination is zero to one. Small value of R^2 which means the ability of the independent variables in explaining the variation in the dependent variable is very limited. Value close to one means that the independent variables give almost all the information needed to predict the variation in the dependent variable.

4.2. Partial Coefficient Regression Test (t test)

Partial coefficient regression testing is used to determine whether each independent variable individually have a significant influence on the dependent variable or not. To test the influence partially used t-$_{test}$ that is *p-value* < 0.05.

4.3. Overall Coefficient Regression Test (F test)

Overall coefficient regression testing is conducted to see the influence of independent variables on the dependent variable as a whole (simultaneously). To test the simultaneously influence used F-$_{test}$ that is *p-value* < 0.05.

5.   Result And Discuss

5.1. Result

Based on the results of data processing by using SPSS software obtained summary as follows:

Table 1. Summary of Regression Analysis Result

Relation among variables		Coefficient (B)	t test	*p-value*	Decision
Independent variable	**Dependent variable**				
Education (X1)	Poverty (Y)	-3.570	-5.266	0.001	Significant
Income Inequality (X4)		36.181	3.335	0.009	Significant
Constant = 19.229 R = 0,887 R^2 = 0,786 Adjusted R^2 = 0,739 F_{test} = 16.534 Sig. F = 0,001					

Source: Researcher, 2013 (data processed)

Regression models were obtained based on the table 1 as follow:

Y = 19.229 – 3.570X1 + 36.181X4

Where:

Y   : Poverty
X1   : Education
X4   : Income Inequality

5.1.1. Feasibility Testing of Regression Equations

From the results of regression of the influence of education, health, economic growth, and income inequality, toward poverty in East Java province year 2000-2013, obtained R^2 values 0.786. It means that variations in poverty, explained of 78.6 percent by the explanatory variables, and the remainder are explained by other variables outside the model.

5.1.2. Partial Coefficient Regression Test (t test)

Based on the table 1 it can be seen that the variable of education and income inequality have a significant influence on the number of poverty partially in East Java province. It said have a significant influence partially because of *p-value* < 0.05. The *p-value* of education variable is 0.001, and *p-value* of income inequality is 0.009 less than 0.05. While the variable of health and economic growth have not significant influence partially on the level of poverty in East Java province because of health and economic growth variable was excluded from the model.

5.1.3. Overall Coefficient Regression Test (F test)

From the result of SPSS processing, can be seen that significance F is 0.001 less than 0.05. It means that, variables of education, health, economic growth, and income inequality are significantly influence toward poverty in East Java province 2000-2013 as a whole (simultaneously).

5.2. Discuss

5.2.1. Education and Poverty

Based on the results of multiple linear regression analysis, it can be seen that the influence of education variable which measured using mean years of schooling of population aged 15 years and above in East Java province, significant negative toward the number of poor people in East Java province, with coefficient (B) is –3,570, and probability value is 0.001 < 0.05 (α=0.05). It is means that if mean years of schooling of population aged 15 years and above increase one point, so the number of poor people will decrease of 3,570 point.

This result supported the theory by Arsyad (2004, p.223) that education (formal and non-formal) can play an important role in decrease poverty in the long term, either indirectly through improved productivity and efficiency in general, as well as directly through skills training that needed the poor to improve their productivity and increase their revenue. Higher education level of people, the knowledge and expertise will also be increased so that it will encourage an increase in human productivity. Finally someone who has a high productivity will obtain a better well-being, which can be shown through increasing of income and consumption. According to Simmons (in Todaro and Smith, 2006, p.132) education in many countries is a way to save themselves from poverty. Furthermore Todaro and Smith (2006, p.133) stated that education is a fundamental development goals. In which education plays a key role in shaping a country's ability to absorb modern technology and to develop the capacity to create growth and sustainable development.

In East Java province there are several programs and educational activities in order to improve the Human Development Index, for example: non-formal education program, the expansion program of learning opportunities both in junior high school / MTs or vocational school, as well as the School Operational Assistance (SOA) for senior high school. All of the programs are for increasing public education in East Java as well as capital in getting a decent job.

In general, Indonesia's first budget was aimed to the areas of health, then the below grade is education. However, in East Java, the first budget aimed to education because according to experience that opportunity of open job opportunities that should be filled by formal ones, but due to lack of stock, then filled by people from outside of East Java. While the poor people of East Java instead work to TKI / TKW. It's very ironic. So that, East Java provincial government build an educated human resources, coupled with improved health. And evidence of its success can already be seen by the reduction in the number of poor people in East Java.

Education as capital in human development is very influential on decrease the number of poor people in East Java province. The level of education in East Java province which has relatively high, give contribute significantly in the reduction of the number of poor people in East Java province. Thus, in this case, education in East Java province need to improvement and distribution even rural areas that have not been reached. In order to education in East Java became the capital in breaking the chain of poverty.

5.2.2. Health and Poverty

Based on the results of multiple linear regression analysis, health variable measured by life expectancy is not significantly influence toward number of poor people in East Java province. Because of health variable is excluded from the model.

The result of this study is not accordance with the theory by Arsyad (2004, p.223) that in the countries with better health levels, each individual has on average live longer, thus economically have the opportunity to obtain a higher income. Furthermore, Arsyad stated that the intervention to improve the health of the government is also an important policy as a tool to reduce poverty. One factor underlying this policy is health improvement will increase the productivity of the poor, better health will improve hard working, reduce days not worked, increase energy output, and increase their revenue. Health development is a process of change in the level of public health degree unfavorable to better comply with health standards. Therefore, health development is a development that made the investments to build quality human resources (Todaro and Smith, 2006, p.147). But in East Java the high life expectancy not coupled by high productivity, so health measured by life expectancy is not significant to reduce poverty.

Health measured by life expectancy is not significantly influence on the number of poor people in East Java province due to several factors, among others, because of the morbidity rate of the poor people in East Java is still high, the level of public health services in East Java for poor people is still less on target, as well as the level of social welfare of the poor in East Java still low.

5.2.3. Economic Growth and Poverty

Based on the results of multiple linear regression analysis, variable of economic growth does not significantly influence on the number of poor people in East Java province. Because of economic variable is excluded from model.

This result is not accordance with the theory by Warr (2000, p.13) that economic growth will reduce poverty, with the growing capacity of the economy, it can alleviate poverty. This result is not accordance too with Perry et al (2006, p.87), that benefits of rapid economic growth will spread to all segments of the society. This view is based on the theory of Trickle Down Effect. Trickle Down Effect theory says the stream trickle down from the rich to the poor through the functions in the economy. High economic growth will increase the capacity of the economy and increasing per capita income. Income per capita which increasing means the poor will be reduced.

Investors which comes to East Java province is an advantage out of prediction. This makes the chances of East Java to encourage economic growth. Economic growth which sped exceeds the national rate, had not fully cover the poverty rate in East Java province, because the sector which growing rapidly just certainly sectors. They are the sector of industry, sector of trade, hotels and restaurants, and sector of services which has occurred only in urban areas. So that the poor people who mostly live in rural areas which still very minimal access to job opportunities in these sectors because of human resources are still inadequate, so that people in rural area remained work as farmer and fisherman. So that high economic growth in East Java province that is 6.55 percent in 2013 is only grown in urban areas. While rural areas still tend to stagnate.

So it is clear that economic growth in East Java occurred inequality. It was occurred inequality of income distribution between urban and rural area. So it can be concluded that cause of high economic growth in East Java has not able to reduce poverty significantly, it caused by the inequality of income distribution.

5.2.4. Income Inequality and Poverty

Based on the results of multiple linear regression analysis, income inequality which measured by gini index is significant positive influence on the number of poor people in the province of East Java, with coefficient (B) is 36,181 and a probability value is $0.009 < 0.05$ ($\alpha = 0.05$). It is mean that each increase gini index of one point it will increase the number of poor people in East Java province as many as 36,181 points.

This result is accordance with the theory by Kakwani, Khander and Son (2004, p.16) that economic growth affects poverty not only through growth itself, but also through the manner of distributing the benefits of growth to the entire population. The combination of growth and income redistribution in the right portion needed to make benefit growth more optimal to reduce poverty. Furthermore according to Kakwani, Khandker and Son there are two possibilities of increase in inequality due to the economic growth. First, the largest part of economic growth enjoyed by people which not poor, while the rest enjoyed by the poor. Second, the largest part of economic growth enjoyed by the poor, while the rest enjoyed by people which not poor. Both of these possibilities carry different implications on poverty reduction. If the first possibility occurs, the economic growth will not reduce poverty, whereas if the second possibility occurs, the economic growth will reduce poverty.

Gini index of East Java from 2000 until 2010 is in the low category. However, in 2011-2013 the gini index of East Java province is in the medium category that is 0.37. This indicates that income inequality in East Java province is expanding. In accordance with the results of this research, which occurred in East Java is economic growth not reduce poverty. So what happened in East Java province is the first possibility that the largest parts of economic growth enjoyed by people are not poor. So that economic growth in East Java 6.55 percent in 2013, not significant influence in reducing the number of poor people, because the higher level of income inequality. So that the effectiveness of economic growth in reducing poverty to be reduced due to the higher income inequality.

6. Conclusion

The result of this research shows that the factors influencing poverty in East Java province 2000-2013 are education and income inequality. While the variables of health and economic growth, are not influencing poverty in East Java province year 2000-2013.

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