



The Relationship of Indonesia's Poverty Rate Based on Economic Growth, Health, and Education

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Abstract

Poverty is one of the most common problems in each country. This poverty phenomenon occurs in all countries that are not divided into developed countries in the world. This poverty occurs due to several factors, such as the low level of economic growth, health, and education of a country. This study aims to analyze Indonesia's poverty level seen through economic growth, health, and education from 2004-2017. This research is a quantitative study using secondary data obtained from Badan Pusat Statistik (BPS) Indonesia and Statistik Ekonomi dan Keuangan Indonesia (SEKI). In analyzing the data, use the application of E-Views 10 with the Ordinary Least Squares (OLS) method. The results showed that: (1). Economic growth has a positive and not significant influence on Indonesia's poverty level, (2). Health has a negative and significant influence on Indonesia's poverty level, (3). Education has a negative and insignificant influence on Indonesia's poverty level, (4). Economic growth, health, and education affected the Indonesian poverty rate of 88.5% which was indicated by the R-squared value of 0.885.

Keywords: Poverty; Economic Growth; Health; Education

JEL Classification: I10, I18, I21, I22, I25, I32, I38

1. Introduction

Indonesia is one of the countries with high poverty rates. High levels of poverty occur in several factors such as low economy, health, and education growth. Measures of poverty not only live in poverty and low-income levels, but see a level of health, education, and a just movement before the law and so on (Adisasmita, 2005). Poverty is an economic problem that must be overcome from what is seen from the number or level of poverty that is not yet at a low level (Candra and Emilia, 2018).

Poverty is determined as an inability that is needed because of powerlessness in accessing or controlling economic resources, therefore alleviating poverty and equitable development are important sources for the government (Firdaus, 2014). According to (Engle, 2008), discussing economic poverty based on income measures, "poor" means only material and health but also capabilities, such as social, cultural identity, respect, dignity, information, and education. The linkage of poverty and education is very large because education provides the ability to develop through mastery of knowledge and skills (Suryawati, 2005). A country cannot develop properly without education. (Raja, 2005) Education is a two-way process, one side to encourage economic growth and the other to reduce poverty and increase

productivity. This education plays a very important role in building people and encouraging economic growth through skills and knowledge.

Education is an important part of human competence and state sovereignty (Sen, 1999). (Kim & Terada-Hagiwara, 2010) understand the importance of educated workforce understanding in diffusion and adopting new technologies and new production methods. So this education can help increase GNP per capita, reduce poverty, and support the dissemination of knowledge. Education also plays an important role in reducing income (Danacica et al, 2010). While (Afzal et al, 2012) found education increased positive and significant growth only in the long run. In implementing an efficient and effective education health factor must be needed for a country's population. Health is one of the most important assets owned by humans because health makes it possible to develop human capacity fully. If these health assets are not fully developed, it can weaken the causes of physical and emotional barriers in one's life (Andres et al, 2005). Where before a person's health cycle can determine income, wealth, and future consumption (Lilliard and Weiss 1997; Smith 1998; Smith 1999). According to (Bloom et al, 2001; and Mayer et al, 2000) they found that health is a variable that is significantly stronger than school or education for a country's economic growth. While that was found (Nenik, 2018), health represented by life expectancy at birth had a negative and significant effect on the poverty level.

Education and health will have a good impact on economic growth in a country so that economic growth is one way to overcome poverty so that it can reduce poverty. (Nurul, 2018) The purpose of economic growth as a process of increasing economic production is realized in the form of increasing national income. While according to (Jhingan, 2007) economic growth is a long-term and steady change that occurs through increasing savings and population. The increasing rate of economic growth is the key to reducing poverty in an area (Andri, 2018) in contrast to the research conducted (Akoum, 2008) explaining how some developing countries have high economic growth and are able to reduce poverty.

Based on the problems discussed above, we can discuss reducing the level of poverty needed and educated and having good health. The population with education and health care has a positive impact on the country's economic growth, with good economic growth reducing the country's own poverty level. The author aims to find evidence about health, education, and economic growth that affects poverty levels in Indonesia. In analyzing the data using E-views 10 with the Ordinary Least Squares (OLS) model with four variables (economic growth, health, education, and poverty). The time period used starts from 2004-2017 so that it can contribute to seeing variables that increase the level of poverty.

Poverty

Poverty has a very diverse concept. Minimum poverty standards, both food and non-food, are called the poverty line (poverty line) or also called (poverty threshold), (Novita, 2017). Poverty is a macroeconomic problem that must be avoided by the government. This is from numbers or levels of poverty that are still not at a low level (Candra and Emilia, 2018).

According to the World Bank, one of the causes of poverty is the amount of income and assets to meet basic needs such as food, housing, health, and education that are acceptable. In addition, poverty is also associated with limited employment and is usually categorized as poor people without jobs, and public education and health are generally inadequate. In determining poverty, the World Bank uses two criteria in determining the poverty line. First, use the national poverty line based on the consumption pattern of 2,100 calories per day. Second, the international poverty line is based on PPP (Purchasing Power Parity) of US \$ 1 and US \$ 2 (Kuncoro, 2006).

According to Adisasmita, (2005) the poverty indicators used in general are wages, income, consumption, mortality rates, under-fives, immunization, malnutrition, fertility rates, maternal mortality rates, average life expectancy, children's risk level for the government, for fulfillment food (calories / protein), clean water, population growth, literacy, urbanization, per capita income, and income distribution.

According to (Arsyad, 2010) poverty is divided into two criteria, namely: absolute poverty and relative poverty. Absolute poverty is determined based on the level of income of the community to meet minimum basic needs. If you cannot meet Poko's minimum needs with the income received then he will

receive poverty, while poverty is relatively related to the inequality of income distribution. The minimum amount specified is less than the minimum amount, so the minimum amount is higher than it should be.

Relationship Of Health With Poverty

Health has a significant influence on a country's poverty level. Health is one of the important factors in carrying out economic processes, where health must be owned by all citizens in meeting their needs will have a positive impact on state revenues and can reduce poverty. (Mariyanti and Mahfudz, 2016) in the context of health, consumption of poor nutrition can increase the level of poverty, a healthy country, also manages a "healthy" economy. According to (Wyk and Bradshaw, 2017) people who have a life expectancy to get higher.

While (Ataguba et al, 2013; Bakhtiari and Meisami 2010) in their study found an increase in the health sector would increase the level of welfare. Similar findings were found (Aria and Nenik 2018; and Andri, 2018), which represented life expectancy at birth and had a negative and significant effect on poverty. (Andres et al, 2005) found that health is very important as a determinant of economic growth. Meanwhile, according to (Muhammad et al, 2018), in his research, improving health in economic growth must be supported by local capacity and political factors in increasing the level of welfare. the opposite is found (Biswajit and Mukhopadhyay,2013).

Relationship of Education with Poverty

Education is a need needed for all levels of society. Based on Law No. 20 of 2003, the meaning of education is a conscious struggle and to realize the learning and learning process of students who try to develop their potential to increase spiritual strength, control themselves, control, motivate, relate to talent, and need what is needed from themselves, society, the nation, and country. (Sanz et al, 2017) Education is less which can cause money problems for a higher change. (Nenik, 2018) in his study found that education has a negative and significant effect on poverty, while (Nowak and Gangadhar, 2016) found that education contributes to economic growth in improving welfare.

According to (Todaro, 2013) showing the educational structure needed for the region can affect the social and economic character of the community in the desired area. Bakhtiari and Meisami (2010), Ataguba et al, (2013), Mariyanti and Mahfudz (2016), and Pandey et al (2007) in their study gathered people with higher levels of education so that it was impossible to become poor. (Ehigiamusoe and Uyi, 2013; Biswajit and Mukhopadhyay, 2012) found that seeking education has a positive and significant influence on economic growth. One of the determinants of poverty reduction is education. Educational institutions, investment education, quality of education, and access play important roles in poverty and encourage economic growth (Surya, 2013; Chaudhry and Rahman, 2009; Santos, 2009; Moay and Neeman, 2008).

Relationship of Economic Growth and Poverty

Some economies are one indicator to see development success and are a requirement for prosperity. economic growth in research (Andri, 2018) that individual economic growth has a negative and significant influence with a probability value of 0.0059 towards the level of welfare. (Anggit and Fitri, 2012) in the studio economic growth proposed by GRDP has a negative and significant effect on poverty, which means increasing GRDP growth will reduce poverty levels.

According to (Aria and Nenik, 2018) in his study found that GRDP has a positive effect on poverty levels, these results indicate that economic growth that is not followed by welfare will cause economic inequality in some regions. (Stephanie, 2017) Finding economic growth contributes to poverty alleviation. In the study (Pradeep, 2008) showed provinces with higher growth rates achieved faster poverty levels. While the research conducted (Akoum, 2008, Prasad, 1998) obtained non-concrete results

between economic growth and poverty, various countries with high economic growth rates also had high poverty rates.

2. Methodology

2.1. Research Data

This study uses data from the Badan Pusat Statistik Indonesia (BPS Indonesia) in the form of Poverty, Education and Health data, while the Economy is excluded from the Statistik Ekonomi dan Keuangan Indonesia (SEK Indonesia) which has been carried out during the 14-wave period from 2004 to 2017.

2.2. Research Methods

This research is a quantitative research design that provides an overview of the effects of health, education and economic growth on poverty levels in Indonesia for the period 2014 to 2017. In the analysis of this study using the application of E-Views 10 with the Ordinary Least Squares (OLS) method. To estimate and answer the phenomena and problems in this study. The models used in this study are: Poverty = f(GR, AHH, RLS)

The statistical model used in this study is:

$$\text{Poverty} = \beta_0 + \beta_1\text{GR} + \beta_2\text{AHH} + \beta_3\text{RLS} + \varepsilon$$

Whereas for Ordinary Least Squares (OLS)

$$\text{Poverty} = \beta_0 + \beta_1\text{GR} + \beta_2\text{AHH} + \beta_3\text{RLS}$$

3. Findings

The table (1) below is a part of the calculation to find out identical poverty from 2004-2017 seen from health, education and economic growth through the Ordinary Least Square (OLS) method by using the E-Views 10 application.

Table 1. Results of Regression

Variable	Coefficient	Std. Error	t-Stat
Constanta (C)	24.700	0.950	25.986
Economic Growth (GR)	0.036	0.029	1.229
Health (AHH)	-0.122	0.023	-5.275
Education (RLS)	-0.113	0.117	0.959
R-Squared	0.885		
Adj R-Squared	0.850		
F-statistic	25.685		
Prob(F-statistic)	0,000		
DW	1.557		

Source: Data Processed from Eviews 10

From the results of the calculation of the constant 24,700 which means economic growth, health, and education can reduce Indonesia's poverty rate by 24.70%. While the coefficient of economic growth (GR) has a positive and not significant effect on Indonesia's poverty level, this supports the value of 0.036

coefficient and the t-statistic probability value 1.229 greater than 0.05 critical value. So each level of economic growth will reduce the growth rate by 0.036%.

The health variable (AHH) has a negative and significant influence on Indonesia's poverty level where the coefficient value is -0.122 which means that each level of health improvement (AHH) only contributes 0.122% in Indonesia's poverty level depletion. Meanwhile, the Education variable (RLS) has a negative and not significant influence on the Indonesian poverty level with a coefficient of -0.113 which means that each level of educational attainment (RLS) only increases 0.113% in the level of Indonesian welfare. For the value of the R-squared table, the results of the study show a value of 0.885, which means that 88.50% of the variables of economic growth, health, and education increase the level of welfare of Indonesia. While the remaining 11.50% is approved or resolved by other variables outside of this study. Likewise, the F-statistic value is 25,685 with a P value of 0,000 where <0.05 or critical limit. So it can be concluded that the independent variable depends on the dependent variable.

4. Discussion

Based on the results obtained in the study, the variables involved show economic growth, health, and education have an influence on the level of welfare. Below will be discussed one by one from each variable increasing at the poverty level starting from economic growth, health, and education.

Economic growth (GR) in this study positively and not significantly affect the level of poverty in Indonesia. Results have taken with the research conducted by (Aria & Nenek; 2018; Stephanie, 2017; Goff and Singh, 2014; Pradeep, 2008) Areas so that in each region it becomes faster in reducing poverty levels. The different results of the research conducted by (Andri, 2018; and Anggit and Fitri, 2012) in which they found economic growth had a negative and significant relationship to poverty. Meanwhile (Akoum, 2008; and Prasad, 1998) where they find results that have not found between economic growth and poverty, between countries with high economic growth rates also have a high level of welfare. This means that most developing countries have not succeeded in achieving economic growth which is categorized as qualified or acceptable to the poor from social, institutional, and political aspects.

Health described by (AHH) has negative and significant influence on the level of poverty. (Aria and Nenek; 2018; and Andri, 2018) where health is represented by life expectancy at birth has a negative and significant effect on the level of well-being. This is also supported by (Ataguba et al, 2013; Bakhtiari and Meisami; 2010) about them in their research finding that improving health will reduce poverty. A suitable study was found by (Mariyanti and Mahfudz, 2016; Wyk and Bradshaw, 2017) where discussing health would have a "healthy" economy to get a higher translation. Different things were also found by (Muhammad et al, 2018; Biswajit and Mukhopadhyay, 2013) in their research on health improvement in economic growth needed by local capacity, politics, and health care so as not to increase poverty. Based on previous research with an increase in the health sector, it will have significant importance on the level of poverty, in reducing poverty levels also related to factors such as local capacity, politics, and improving health services that increase the yield on the life expectancy (AHH) level of poverty.

Education represented by (RLS) has a negative and not significant influence on the level of poverty so that each change in one education unit will reduce poverty. This is related to research (Nenek, 2018; Bakhtiari and Meisami; 2010; Ataguba et al 2013), Mariyanti and Mahfudz (2016), and Pandey et al (2007) who find research related to the grouping of significant effects on the facts proposed by (Sanz et al, 2017; Nowak and Gangadhar, 2016). While what was found by (Ehigiamusoe and Uyi, 2013, Biswajit and Mukhopadhyay, 2012) is education spending which has a positive and significant influence on economic growth. One of the determinants of poverty reduction is education. In his opinion (Surya, 2013; Chaudhry and Rahman, 2009; Santos, 2009; Moay and Neeman, 2008) that education, education, quality of education, and access play an important role in alleviating poverty and promoting economic growth.

The relationship between economic growth, health, and education increase the economy begins and high economic growth can be done by all levels of society including the poor, in high and healthy economic growth is needed by people who improve health and quality of education for economic growth in a region or country able to reduce poverty.

Conclusion

Based on the results and discussion of the research in this study shows that (1). Economic growth has a positive and not significant influence on Indonesia's poverty level, (2). Health has a negative and significant influence on Indonesia's poverty level, (3). Education has a negative and insignificant influence on Indonesia's poverty level, (4). Economic growth, health, and education increase the level of Indonesian welfare. Where the R-squared value is 0.885, which means that 88.50% of economic, health and education growth variables affect the level of poverty. This makes a clear contribution to the government regarding economic growth, health, and education that has a large level of growth in poverty alleviation.

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