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ANALYSIS OF FACTORS AFFECTING POVERTY IN CENTRAL JAVA 2016-2019

Atika Sumeitri[1*], Rian Destiningsih[2]

[1,2,3] Development Economics, Faculty of Economics, Tidar University Magelang
E-mail: [1)] riandestiningsih@untidar.ac.id

Abstract

Poverty is a common issue when discussing economic development. Central Java Province has a fairly high number of poor people and is in the 2nd position on Java Island. This study aims to analyze the effect of average length of schooling, population growth, and human development index on poverty. The data used is panel data obtained from BPS Central Java Province in 2016-2019, the method used is regression analysis of Fixed Effect model panel data with the help of the Eviews 10 application. The results show that the average length of school has a positive and insignificant effect. on poverty, HDI has a negative and significant effect on poverty and economic growth has a negative and insignificant effect on poverty.

Keywords: *Economic Growth, HDI, Length of Schooling, Poverty*

1. INTRODUCTION

Development is a policy that is typically carried out by the government to bring about a change for the better and to promote the economic well-being of its people. Economic growth is a phenomenon that occurs at a changing economic level (Nopiana et al., 2022). Panjar Simatupang Saktayanu K (2003) in (Mokodompis et al., 2014) argues that development must be carried out with real, continuous action in accordance with the goals and expectations of each region whose development is highly anticipated through both long-term and short-term development plans. A declining poverty rate in a region may indicate that the region has been successful in achieving national development. Poverty reduction is the objective of all development in a region. Consequently, the selection of a location as the focal point of national development becomes a criterion for evaluating a region's effectiveness in reducing the poverty rate of its population.

Poverty is a common issue when discussing economic development. All countries and even parts of the country try various ways to reduce the poverty level of their population. Alkire & Santos (2014) highlight that poverty as a person's inability to meet their own needs. Poverty can also be interpreted as someone who experiences a shortage in the economy so that they cannot meet their needs. Chambers expresses the concept of 5 dimensions of poverty, namely deprivation, vulnerability to certain situations, disability, dependence, and alienation (Shandu, 2016).

The cause of the perceived shortage of people is related to a theory called the vicious circle of poverty because there is a low level of productivity caused by background, lack of capital, and imperfect markets. This will cause a person to get a low income so that it will cause difficulties for that person's savings. If such things are considered trivial and do not seek to break the chain of poverty, the cycle will continue to revolve. Thus, the way that can be used to break this chain of incompetence is to seek improvements to the community.

Table 1 Percentage of Lack of Population in Java Island 2016-2019

Province	2016	2017	2018	2019
DKI Jakarta	3,75	3,77	3,57	3,42
West Java	8,95	8,71	7,45	6,82
Central Java	13,27	13,01	11,32	10,58
DIYogyakarta	13,34	13,02	12,13	11,44
East Java	12,05	11,77	10,98	10,20
Banten	5,42	5,45	5,24	4,94

Source: (BPS, 2016-2019)

According the percentage table, compared to other provinces, Central Java still has a fairly high number of underprivileged populations. Data from the Central Statistics Agency (hereinafter referred to as BPS) for 2016-2019 recorded that the percentage of poverty in Central Java was the second largest after DI Yogyakarta, but it tends to decrease every year. In 2016 it was 13,27 percent of the poor and decreased until 2019 by 10,58 percent of the poor. This is due to an increase in population, as well as an increase in food commodity prices, which causes people's purchasing power to decline. This high level of poverty requires the Central Java government to carry out efforts that are deemed useful to reduce poverty.

It is important for us to understand the situation that can affect people's poverty in order to determine the policies that will be implemented. One thing that can be done to reduce poverty is by providing policies to improve the education sector. Cooray (2009) in (Awaworyi Churchill et al., 2015) argues that someone who gets a higher education will have a positive influence on economic growth so that it becomes easier for the government to eradicate poverty. Education and growth are connected through a theory of human capital which explains that someone who has better knowledge in the field of education will make him a graduate who has the qualities to take him out of poverty. The following is data on the length of schooling taken by residents of Central Java in 2016-2019:

Table 2 Average Length of School in Central Java Province 2016-2019

Central Java Region	Average Length of School			
	2016	2017	2018	2019
Province of Central Java	7.15	7.27	7.35	7.53
Cilacap Regency	6.9	6.91	6.92	6.93
Banyumas	7.39	7.4	7.41	7.42
Purbalingga Regency	6.86	6.87	7	7.14
Banjarnegara Regency	6.26	6.27	6.28	6.5
Kebumen Regency	7.05	7.29	7.34	7.53
Purworejo Regency	7.66	7.69	7.7	7.91
Wonosobo Regency	6.12	6.51	6.75	6.76

Magelang Regency	7.4	7.41	7.57	7.77
Boyolali Regency	7.17	7.44	7.55	7.56
Klaten Regency	8.22	8.23	8.24	8.31
Sukoharjo Regency	8.58	8.71	8.84	9.1
Wonogiri Regency	6.57	6.68	6.88	7.04
Karanganyar Regency	8.49	8.5	8.51	8.52
Sragen Regency	6.87	7.04	7.22	7.34
Grobogan Regency	6.62	6.66	6.67	6.86
Blora Regency	6.18	6.45	6.46	6.58
Rembang Regency	6.93	6.94	6.95	7.15
Pati Regency	6.83	7.08	7.18	7.19
Kudus Regency	7.85	8.31	8.62	8.63
Jepara Regency	7.32	7.33	7.43	7.44
Demak Regency	7.46	7.47	7.48	7.55
Semarang Regency	7.48	7.87	7.88	8.01
Temanggung Regency	6.55	6.9	6.94	7.15
Kendal Regency	6.65	6.85	7.05	7.25
Batang Regency	6.42	6.61	6.62	6.63
Pekalongan Regency	6.56	6.73	6.74	6.88
Pemalang Regency	6.05	6.31	6.32	6.41
Tegal Regency	6.54	6.55	6.7	6.86
Brebes Regency	6.17	6.18	6.19	6.2
Magelang City	10.29	10.3	10.31	10.33
Surakarta City	10.37	10.38	10.53	10.54
Salatiga City	9.82	10,15	10.4	10.41
Semarang city	10.49	10.5	10.51	10.52
Pekalongan City	8.29	8.56	8.57	8.71
Tegal City	8.28	8.29	8.3	8.31

Source: (BPS, 2016-2019)

The average length of schooling (henceforth RLS) can be interpreted as the number of years the population has attended school. According to Table 2, the level of education attained by Central Java's population has increased. The median age of the RLS population in 2016 was 7,03 years, and it increased to 7,53 years in 2019, this corresponds to seventh

grade Junior High School. Based on the data in the table, it can be determined that the province of Central Java has a population with an average elementary school education level.

Based on research conducted by Elda Wahyu Azizah and Sudarti (2018) proves that there is no relationship between poverty and a person's poverty status. Likewise, Wibowo (2014) mention that education has a negative effect on poverty. The average length of schooling is defined as the total number of years a person over 15 years of age completes his or her education, excluding any repetitions in the educational process. If the average length of schooling is calculated, it requires information in the form of a certificate proving education, type of education taken, level of education ever taken, and activity in education.

Table 3 Human Development Index in Central Java Province 2016-2019

Central Java Region	Human Development Index			
	2016	2017	2018	2019
Province of Central Java	69.98	70.52	71.12	71.73
Cilacap Regency	68.6	68.9	69.56	69.98
Banyumas	70.49	70.75	71.3	71.96
Purbalingga Regency	67.48	67.72	68.41	68.99
Banjarnegara Regency	65.52	65.86	66.54	67.34
Kebumen Regency	67.41	68.29	68.8	69.6
Purworejo Regency	70.66	71.31	71.87	72.5
Wonosobo Regency	66.19	66.89	67.81	68.27
Magelang Regency	67.85	68.39	69.11	69.87
Boyolali Regency	72.18	72.64	73.22	73.8
Klaten Regency	73.97	74.25	74.79	75.29
Sukoharjo Regency	75.06	75.56	76.07	76.84
Wonogiri Regency	68.23	68.66	69.37	69.98
Karanganyar Regency	74.9	75.22	75.54	75.89
Sragen Regency	71.43	72.4	72.96	73.43
Grobogan Regency	68.52	68.87	69.32	69.86
Blora Regency	66.61	67.52	67.95	68.65
Rembang Regency	68.6	68.95	69.46	70.15
Pati Regency	69.03	70,12	70.71	71.35
Kudus Regency	72.94	73.84	74.58	74.94
Jepara Regency	70.25	70.79	71.38	71.88
Demak Regency	70.1	70.41	71.26	71.87

Semarang Regency	72.4	73.2	73.61	74.14
Temanggung Regency	67.6	68.34	68.83	69.56
Kendal Regency	70.11	70.62	71.28	71.97
Batang Regency	66.38	67.35	67.86	68.42
Pekalongan Regency	67.71	68.4	68.97	69.71
Pemalang Regency	64.17	65.04	65.67	66.32
Tegal Regency	65.84	66.44	67.33	68.24
Brebes Regency	63.98	64.86	65.68	66.12
Magelang City	77.16	77.84	78.31	78.8
Surakarta City	80.76	80.85	81.46	81.86
Salatiga City	81.14	81.68	82.41	83.12
Semarang city	81.19	82.01	82.72	83.19
Pekalongan City	73.32	73.77	74.24	74.77
Tegal City	73.55	73.95	74.44	74.93

Source : (BPS, 2016-2019)

In the United Nations Development Program (UNDP): Human Development Report (2001), the HDI measurement aims to determine the achievements that produce satisfactory results from an area in 3 categories, namely a decent standard of living, knowledge, and length of life. The three categories are calculated through per capita income, education, and life expectancy which have been adjusted for each region (BPS, 2020). Based on the table above, the HDI of the Central Java region has increased from 2016-2019. In 2016, Central Java's HDI was only 69,49 and in 2019 it increased to 71,73. Based on the Central Java Statistics Agency in 2019, Central Java continues to strive for improvements in the human development sector, it can be seen from the HDI in 2019 which continues to improve compared to 2010 which in 2018 recorded an HDI of 71,12. In addition, this improvement is also through the life expectancy of newborns which has increased to 74,18. Children 7-year-olds have the potential to pursue education up to the college level or to the DI level, whereas the 25-year-old population has attained the junior high school level, or more precisely the level 2 junior high school level. In addition, Central Java's annual per capita expenditures increased by Rp. 400.000 in 2018 to reach Rp. 10.777.000. This change in the Central Java index affects the people's productivity. If a region has a low index, it can be concluded that its residents have a low level of productivity; consequently, the region's per capita income will increase, and vice versa.

Research on community development has been performed previously by Chalid & Yusuf (2014), Dewi et al. (2016) and Mirza (2012) who found that there was no relationship between HDI and the poverty level of a region. Meanwhile, Putra (2018) discover a positive relationship to the poverty variable.

Table 4 Economic Growth Rate in Central Java Province in 2016-2019

Central Java Region	Economic Growth Rate			
	2016	2017	2018	2019
Cilacap	4.09	1.58	1.99	1.27
Banyumas	5.05	5.34	5.45	5.32
Purbalingga	3.85	4.37	4.42	4.65
Banjarnegara	4.44	4.65	4.67	4.60
Kebumen	4.01	4.15	4.53	4.52
Purworejo	4.15	4.27	4.33	4.44
Wonosobo	4.36	3.14	4.06	4.61
Magelang	4.39	4.50	4.28	4.30
Boyolali	4.33	4.80	4.72	4.96
Klaten	4.17	4.34	4.47	4.50
Sukoharjo	4.72	4.76	4.79	4.92
Wonogiri	4.25	4.32	4.41	4.14
Karanganyar	4.40	4.77	4.98	4.93
Sragen	4.77	4.97	4.75	4.90
Grobogan	3.51	4.85	4.83	4.37
Blora	22.54	4.98	3.38	3.05
Rembang	4.28	5.98	4.89	4.20
Starch	4.49	4.67	4.71	4.86
Holy	1.54	2.21	2.24	2.10
Japan	4.06	4.39	4.85	5.02
Demak	4.09	4.82	4.40	4.36
Semarang	4.30	4.65	4.67	4.39
Temanggung	4.02	4.03	4.13	4.05
Kendal	4.56	4.78	4.77	4.71
stem	4.03	4.55	4.72	4.39
Pekalongan	4.19	4.44	4.76	4.35
Malang	4.43	4.61	4.69	4.80
Tegal	4.92	4.38	4.51	4.58
Brebes	4.11	4.65	4.26	4.72
Magelang	4.23	4.42	4.46	4.44
Surakarta	4.35	4.70	4.75	4.78
Salatiga	4.27	4.58	4.84	4.90
Semarang	4.89	5.70	5.48	5.81
Pekalongan	4.36	4.32	4.69	4.50
Tegal	4.49	4.95	4.87	4.77

According to the previous table, Glora Regency experienced the highest economic development in Central Java Province with a growth rate of 22,54%. The region with the lowest growth rate in Central Java is Cilacap Regency, which has a growth rate of only 1,27% in 2019.

In this case, Wibowo (2014) has conducted research that proves that economic growth does not provide a better direction for there is a poverty rate somewhere. This is also proven by research conducted by Zuhdiyati & David (2015) that the poverty of a region has nothing to do with the rate of economic growth of the region. To reduce poverty in a region, economic growth is the most effective method, so it can be stated that the region is experiencing positive economic growth if poverty levels are low. Additionally, the poverty rate indicates that the majority of people in the region have jobs to support themselves. With more people employed, the region's income will increase, and economic growth will be bolstered by the quantity of goods and services produced.

Poverty is a common issue when discussing economic development. Since, Central Java Province has a fairly high number of poor people and is in the 2nd position on Java Island, hence this study aims how the Average Length of Schooling, Economic Growth and HDI affect the poverty rate in Central Java in 2016-2019.

2. LITERATURE REVIEW

2.1. Poverty

According to the BPS and the Ministry of Social Affairs in 2002, according to its origin, "poverty" comes from the word "poor" which means having no possessions and all in need. According to the National Development Planning Agency (hereinafter referred to as Bappenas), poverty is ais a situation where someone who has responsibility for his lifedo not have the ability to meet their needs for life. According to Bappenas, a person must be able to fulfill his/her needs as a human being, such as:

1) Fulfilling their food needs
2) Health, knowledge, income, housing, clean environment, defense, and natural resources
3) Security from all forms of danger
4) The right to participate in social and political life

Sharp, et al (1996) in (Mudrajad, 2006) suggest that there are three things that give idea about the reasons for the creation of poverty, namely:

1) Poverty occurs because resources are owned unequally which results in differences in the income of each person.
2) People who have lower resources are often not given the opportunity to get decent work so they are not given the opportunity to increase their income due to the low quality of the community.
3) People with low income sources will find it difficult to open new businesses because of the unavailability of capital so they cannot increase their income.

Furthermore, Todaro (1997) in (Uddin et al., 2012) states that developing countries distinguish poverty through its causes, namely: Historical differences, developing countries

have been colonized by different countries; Differences in the country's attachment to other countries; Differences in geographic location, population, and per capita income of the country; difference in the quality of the country's natural resources and human resources; differences in the division of power, political structure, and domestic institutions; differences in policies given by the central and regional parties; as well as differences in industrial structure

Moreover, Sumitro Djojohandikusumo explains the pattern of poverty, namely: Poverty goes down, Poverty of the country as a whole, Poverty that lasts according to the seasons, and Poverty is caused by things that cannot be avoided, such as natural disasters (Djojohadikusumo, 1995).

2.2. Education

Based on the Law of the Republic of Indonesia Number 20 of 2003 concerning the education system, education is defined as an effort to create learning conditions so that a person can develop the skills contained in him. Education has the aim of making a person potential and can become a useful figure for the surrounding environment.

BPS defines the average length of schooling as the number of years it takes an individual to complete his education. If a person successfully completes his education through high school, he has studied for a total of 12 years, from elementary school to high school, regardless of repetitions in the educational process. In 2016, the RLS in Indonesia was 7,95 percent, indicating that over 25-year-old Indonesians have successfully completed up to grade 8 or grade 2 of junior high school.

2.3. Economic growth

According to Sadono, economic growth is a number that describes the economic development of an area from year to year. Tadoro also gave his opinion on population growth, namely developments carried out by an area in the economic field that lasts a long time to try to distribute to the community something they need. Economic growth is usually considered from the GRDP obtained by the area which has been given a price. The method of calculation is also by looking at whether the economy in a certain year has increased or decreased compared to the previous year. The formula used to calculate the rate of economic growth is:

$$\text{PERT GRDP} = \text{x } 100\%\frac{GRDP - GRDP_{t-i}}{GRDP_{t-i}}$$

According to Prof. Simon, economic growth is an improvement that takes a long time to be carried out by an area to provide welfare to its population which is carried out with the help of technology, government institutions, and the understanding used by the community (Jhingan, 2012).

Sukirno expressed his opinion that economic growth is defined as the development of the production of goods and services prevailing in the country, such as the increase and the amount of production of industrial goods, infrastructure development, the increase in the number of schools, the increase in the production of the service sector, and the increase in the production of capital goods. To provide a rough idea of the economic growth achieved by a country, the measure that is always used is the level of real national income growth achieved (Sukirno, 2011).

2.4. Human Development Index

Human development can include components that are familiar to the figure, but it can be realized through an activity that begins with the basic, namely achieving economic growth in the economic, social, political, cultural, and environmental fields and ensuring the welfare of every individual. According to the Human Development Report in 2016, human development is a policy that relates to the freedoms obtained by every human being, namely the freedom to realize or develop every potential that resides within him without restriction.

Comparing human development to conventional development, according to the opinion of some experts, human development has a broader scope. Amartya Sen also released an opinion on human development, in which he argued that human development is a freedom possessed by all humans that is dependent on socioeconomic factors such as health, employment, education, and politics.

According to UNDP (1995) in (Eren et al., 2014), the principal components of human development are as follows:

1) Productivity, every individual must try to improve the abilities that are within him to get a decent income and work for him.
2) Equity, in the individual has the opportunity to get economic and political rights in economic and political opportunities so that there should be no obstacles or prohibitions for someone to participate and get the same benefits.
3) Sustainability, every individual should have equal opportunity, in all available resources.
4) Empowerment, every individuals must be used for making decisions that affect their lives.

3. RESEARCH METHOD

3.1. Data Types and Sources

This research took place in 35 districts/cities in Central Java. This study uses secondary data collected by the Central Java Provincial Statistics Agency which supports this research. The data taken are HDI data, length of schooling, economic growth, and the number of poor people.

3.2. Analysis Tools

This study uses panel data analysis as a data processing tool using the Eviews 10 program. Analysis using panel data is a combination of time series data and cross section data. In the panel data model, the equation model using cross section data can be written as follows:

$$Yi = \beta_0 + \beta_1 X_1 + \varepsilon_i;\ i = 1,2,3\ldots,N$$

where N is the number of Cross Section data.

While the equation of the model with the time series is:

$$Yt = \beta_0 + \beta_1 X_1 + \varepsilon_t;\ t = 1,2,3,\ldots,T$$

where T is the number of time series data.

Panel data is a combination of time series and cross section data, so the model can be written as follows:

$$Y_{it} = \beta_0 + \beta_1 X_1 + \varepsilon_{it}$$

Where: N = number of observations and T = number of times

Data analysis was carried out with regression estimation, which to estimate using panel data with 3 methods, namely: (Widarjono, 2007)

1) Common Effect method, a data processing that combines time series and cross-section data with the Ordinary Least Square (OLS) method. This data processing does not pay attention to individuals or time, but pays attention to the object of research.
2) Fixed Effect method, a data processing that distinguishes one object from another.
3) Random Effect Model, this method uses the relationship between time and object which assumes that each variable is random.

3.2. Panel Data Model Estimation

Research on matters that affect poverty in Central Java using time series data for four years starting from 2016-2019 and 105 data obtained from 35 districts/cities in Central Java Province.

In this study, the influence of the variables that are thought to affect the level of disability of people in Central Java assumes that the best model selection is by estimating using the FEM, REM, and CEM models then selecting the best model using the Hausman test or Chow test. Functional models that will be used to determine poverty in Central Java are:

$$\text{Poverty} = f(\text{YOS, AHH, IMR})$$
$$\text{Poverty}_{it} = \beta_0 + \beta 1\ \text{YOS}_{it} + \beta 2\ \text{AHH}_{it} + \beta 3\ \text{AKB}_{it} + \varepsilon_{it}$$

Information:

Poverty	= number of poor people in soul
YOS	= average length of school in years
AHH	= Life expectancy in years
IMR	= total infant mortality rate
I	= cross section
T	= Time series
0	= Constant
β_0	= error

3.3. Panel Data Regression Model Selection

Basuki & Prawoto (2016) argues that to choose an effective data processing model, several tests need to be carried out, namely:

1) Chow test

The Chow test is a test to determine the most appropriate fixed effect or common effect model used in estimating panel data. If the calculated F value is greater than the critical F,

the null hypothesis is rejected, which means that the correct model used for panel data regression is the fixed effect model. The hypotheses formed in the Chow test are:

H_0 : Probability value of Chi Square F > 0.05 then Common Effect Model

H_a : Probability value of Chi Square F < 0.05 then Fixed Effect Model

2) Hausman test

Hausman test is a statistical test used to choose whether the fixed effect or random effect model is the most appropriate to use. If the value of the Hausman statistic is greater than the critical value of Chi Suare, the correct model used for panel data regression is the fixed effect model. The hypotheses formed in the Hausman test are:

H_0 : Chi Square probability value > 0.05 then the chosen model is Random Effect model

H_1: Chi Square probability value < 0.05 then the chosen model is Fixed Effect model

3) Lagrange Multiplier (LM) Test

The LM test is a statistical test used to determine whether the Random Effect or Common Effect model is more appropriate to use in panel data regression. If the calculated LM value is greater than the critical value of Chi Square, the most appropriate model to use is the random effect model. The hypotheses formed in the LM test are:

H_0 : Common Effect Model

H_1 : Random Effect Model

3.4. Hypothesis testing

R^2 is used to determine the close relationship between the independent variable and the dependent variable. The value of R^2 lies between 0 to 1 ($0 \leq R^2 \geq 1$). The purpose of calculating the coefficient of determination is to determine the effect of the independent variable on the dependent variable. If R^2 is close to 1 (100%), then the calculation results show that the more precise the regression line is obtained. On the other hand, if the value of R^2 is close to 0 then it shows that the regression line is getting more and more inaccurate to measure the observation data.

The t test is used to determine whether or not there is an effect of the independent variable on the dependent variable partially or per variable. the t-test has criteria, namely If t-table < t-statistic, then H0 is accepted and H1 is rejected, which means that there is no significant effect between the independent variable and the dependent variable. If t-statistic > t-table, then H0 is rejected and H1 accepted which means that there is a significant effect between the independent variable and the dependent variable.

The f test is used to determine the effect simultaneously or jointly between the independent variable and the dependent variable. the f test has criteria, namely If F-statistic > F-table, then H0 is rejected and H1 is accepted, which means that there is a simultaneous influence between the independent variable and the dependent variable. If F-statistic < F-table, then H0 is accepted and H1 is rejected, which means that there is no simultaneous effect between the independent variable and the dependent variable.

4. RESULT AND DISCUSSION

4.1. Best Model Selection

4.1.1. Hausman test

Table 5 Hausman test calculation results

Test Summary	Chi-Sq Statistics	Chi-Sq df	Prob.
Cross-section random	3.459752	3	0.3260

Source: Data processed with Eviews 10.2021

Based on the results of the Hausman test, the Chi-Square distribution value from calculations using Eviews 10 is 3,459752 with a probability of 0,3260 more than 0,05 (5%), so that the most relevant model approach to use is the random effects model approach.

4.1.2. Chow test

The Chow test is used to select the most appropriate model to use between the Fixed Effect Model or the Common Effect Model. The Chow Test Hypothesis is as follows:

H_0 : The probability value of Chi Square F > 0.05 then Common Effect Model

H_a : The probability value of Chi Square F < 0.05 then Fixed Effect Model

Table 6 Chow test calculation results

Effect Test	Statistics	df	Prob.
Cross-section F	149.271021	(34,102)	0.0000
Cross-section Chi-square	549.786955	34	0.0000

Source: Data processed with Eviews 10.2021

The table shows that the probability value of Cross Section F is 0,0000 or less than 0,05. Then H_0 is rejected and H_a is accepted. This means that the Fixed Effect Model is better to use than the Common Effect Model.

4.2. Panel Data Regression Results Interpretation

Based on the Chow test and Hausman test, the most appropriate model in this study is the fixed effect model. The following are the results of panel data regression testing using the Fixed Effect Method (FEM), which can be described as follows:

Table 7 Fixed Effect Model Calculation Results

Variable	Coefficient
C	1109.519
RLS	4.810746
HDI	-14.36443
PE	-0.288628

Source: Data processed with Eviews 10.2021

Based on the results of the panel data regression estimation using the Fixed Effect technique, the equation model is obtained, namely:

$$Y = 1109.519 + 4.810746\ X_1 - 14.35443\ X_2 - 0.288628\ X_3 + e$$

To determine the significant effect of each variable on average length of school, human development index and human growth on the poverty variable as follows:

Table 8 The results of the significance test of the fixed effect method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1109,519	81.50003	13.61372	0.0000
RLS	4.810746	2.997726	1.604799	0.1116
HDI	-14.35443	1.267958	-11.32090	0.0000
ECONOMIC GROWTH	-0.288628	0.522322	-0.552586	0.5818

Source: Data processed with Eviews 10.2021

Based on the results of the t test, it is known that:

The RLS variable has a t-statistic of 4.810746 with a probability value of 0.1116 which means that the probability is greater than an alpha coefficient of 0,05. Therefore, RLS has had an influence on the poverty rate in Central Java over the last 4 years, but is not taken seriously.

The HDI variable has a t-statistic of -14.35443with a probability value of 0,000. This means that the probability is smaller than the alpha coefficient of 0,05. Therefore, HDI does not have much impact on the poverty level of Central Java, but it is considered important to continue to be improved.

The variable of economic growth has a t-statistic of-0.288628 with a probability value of 0,5818. This means that the probability is greater than the alpha coefficient of 0,05. Therefore, economic growth is considered to have no effect and is not considered important to poverty in Central Java Province.

If you want to know whether the length of schooling, infant mortality rate, and life expectancy have an effect on poverty, the following variables are:

Table 8 Fixed Effect Model Calculation Results

R-squared	0.988398	Mean dependent var	118.5564
Adjusted R-squared	0.984189	SD dependent var	69.09629
SE of regression	8.688179	Akaike info criterion	7.387991
Sum squared resid	7699,414	Schwarz criterion	8.186437
Likelihood logs	-479.1594	Hannan Quinn Criter.	7.712456
F-statistics	234.8534	Durbin-Watson stat	1.609891
Prob(F-statistic)	0.000000		

Source: Data processed with Eviews 10.2021

4.3. Coefficient of Determination R-Squared (R^2)

In this study, the R^2 test was conducted to determine the ability of the independent variable to explain the dependent variable. It is known that the value of the determinant coefficient (R^2) is 0.988398 or 98,83%. This can explain that the variables of average length of schooling, human development index, and economic growth are able to explain the dependent variable, namely poverty. While the remaining 1,17% is explained by other factors not included in the model.

To determine the significant effect of each variable on average length of school, human development index and human growth on the poverty variable as follows:

Table 9 The results of the significance test of the fixed effect method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1109,519	81.50003	13.61372	0.0000
RLS	4.810746	2.997726	1.604799	0.1116
HDI	-14.35443	1.267958	-11.32090	0.0000
ECONOMIC GROWTH	-0.288628	0.522322	-0.552586	0.5818

Source: Data processed with Eviews 10.2021

4.4. Partial Test (t Test)

The RLS variable has a t-statistic of 4.810746 with a probability value of 0,1116 which means that the probability is greater than an alpha coefficient of 0.05. Therefore, RLS has had an influence but not significant on the poverty rate in Central Java over the last 4 years.

The HDI variable has a t-statistic of -14.35443with a probability value of 0,000. This means that the probability is smaller than the alpha coefficient of 0,05. Therefore, HDI does not have much impact on the poverty level of Central Java, but it is considered important to continue to be improved.

The variable of economic growth has a t-statistic of -0.288628 with a probability value of 0.5818. This means that the probability is greater than the alpha coefficient of 0,05. Therefore, economic growth is considered to have no effect and is not considered important to poverty in Central Java Province.

4.5. Simultaneous Test (f Test)

This f test is used to determine whether it is significant or not significant between the independent variable and the dependent variable as a whole. The value seen is the value of F-Statistics and prob (F-Statistics) on the results of the regression test. Based on table 8, it is known that the probability value of F-Statistics is 0.00000, where $0.00000 < \alpha = 0.05$ so that it can be concluded that the average length of schooling, human development index, and economic growth have a significant and significant effect on poverty.

4.6. Average Length of School (RLS)

The results of the regression test show that the Average Length of Schooling variable has no effect on poverty, this is indicated by the probability value of the average length of schooling of 0,1116or greater than 0.05. Based on the results of data processing, it can be seen that the higher the education of the population of Central Java does not guarantee that poverty will decrease and vice versa.

Education is a very important investment in human beings, as important in physical terms as it aims to ensure the success of a country in the long term. Capital made to humans, both in terms of education and physical, is very important because if someone only invests in one aspect, it will give unsatisfactory results. If someone takes a higher education, then he will give himself the opportunity to get a better life.

4.7. Human Development Index (HDI)

The Human Development Index hasresults that do not have much impact on poverty in Central Java, but are considered important for continuous improvementwith a t-value of -14.35443. This means a higher HDI will reduce poverty by14.35443.

From the regression results it was found that the Human Development Index (HDI) showed that the HDI did notdoes not affect poverty, but is considered important to continue to be improved. Yani Mulyaningsih also argues that the HDI is a collection of things that are considered important for the development of a region, namely the fulfillment of the needs of a healthy and long life, access to resources to fulfill one's life needs, and knowledge.Three important thingsIt is very influential on human development to reduce poverty.

4.8. Economic growth

The variable economic growth has no effect on poverty, this is indicated by the probability value of economic growth of 0,5818 or greater than 0.05. Based on the results of data processing, it can be seen that the higher the economic growth of Central Java does not guarantee that poverty will decrease and vice versa.

The research that has been carried out has resulted in a statement that economic growth has no effect and is not considered important for reducing poverty in Central Java. This study agrees with the opinion (Idham & Pananrangi, 2012) about the Effect of Economic Growth on the Poverty Level in the Province of South Sumatra that to reduce poverty one cannot rely solely on the aspect of economic growth which is considered incapable due to things that can be considered more influential. In addition, investment that has not been able to be directed optimally to increase income and human resources.

5. CONCLUSION

This study analyzes how the variables of Average Length of Schooling, Economic Growth and HDI influence the poverty rate in Central Java in 2016-2019. Based on the discussion that has been given, it can be concluded that:

1) The average length of schooling has an impact on poverty, but until now it is still considered trivial. This means that even if the population of Central Java receives a higher level of education, it will not guarantee that it will reduce poverty in Central Java.

2) The human development index has no effect on poverty, but its improvement is deemed essential. Therefore, if the HDI is increased further, it will be possible to reduce poverty in Central Java. Education, per capita expenditure, and health are HDI indicators.
3) Economic growth demonstrates that it has no significant effect and is not regarded as essential for reducing poverty. This can explain why a further increase in Central Java Province's economic growth is not a guarantee that poverty will decrease in Central Java, and vice versa.

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