

# Determinants of Poverty in Java Island 2015-2020: Unemployment, HDI, Education or Economics Growth?

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## Abstract

A process of improvement towards a better direction in order to realize the goals of the community in an area is called development. To improve the general welfare of the people of Indonesia, it is called National Development. Poverty alleviation is the first priority in development. Java in 2015-2020 is the goal of this research. Using secondary data sourced from BPS. The data analysis method uses Panel data regression with FEM and performs t test, F test and coefficient of determination ( $R^2$ ). significant to poverty in Java in 2015-2020. Unemployment (Open Unemployment Rate) is negative and insignificant to poverty in Java in 2015-2020. Human Development Index (HDI) is negative but significant to poverty in Java in 2015-2020. Literacy Rate has an insignificant negative value to poverty in Java in 2015-2020. While economic growth (GRDP) is negative but significant to poverty in Java Island in 2015-2020.

**Keywords:** *Poverty, Unemployment, Human Development Index (HDI), Literacy Rate, Economic growth.*

## 1. Introduction

### 1.1 Background of The Study

There are still many problems faced by Indonesia even though the central government or local governments are trying to carry out various policies and activities in overcoming poverty, so that a systematic and harmonized way of poverty control is needed which in the end can handle the problem perfectly because there is still a gap between plan with the achievement of a goal (Aziz, Rochaida, & Warsila, 2016). The problem of poverty combines and relates to various points of view of life such as economic, social, and cultural perspectives or perspectives. The

multidimensional problem faced by a country or region is poverty. A developing country must have problems that cannot be separated from poverty, namely Indonesia. The dense population causes poverty so that there is an imbalance in the economy. With that situation, it is very necessary to have regulations organized by the government to handle these problems.

The number of poor people every year tends to increase, if there is no appropriate solution or policy to solve this problem from the government, it will be difficult for developing countries to overcome the poverty problem. The number of poor people faced by the country. The most populous area in Indonesia will certainly be difficult to overcome the problem of poverty, namely Java Island. On the island of Java, it is divided into 6 provinces, including Central Java, Banten, West Java, East Java, DKI Jakarta, and the Special Region Yogyakarta. As an island that contains a large number of poor people, the governments of each province immediately seek solutions and establish policies so that the problem of poverty can be resolved.

Unemployment, Human Development Index (HDI), literacy rate, and economic growth are factors that can affect poverty in Java. If the population with per capita expenditure per month is below the poverty line, it can be said that the population is classified as poor. Java Island is the island with the highest poverty rate because the population on the island of Java is the highest and people living on the island of Java do not want to move. The decline in poverty and inequality in Java can be seen from the largest number of poor people, the province Yogyakarta is recorded with the highest inequality, Java Island is classified as the most densely populated in Indonesia.

One of the components that can ensure the prosperity and comfort of the citizens is the maximum level of income if the situation of full use of labor can be formed is called unemployment (Agustina, Syechalad, & Hamzah, 2018). The Open Unemployment Rate is often abbreviated as one of the indexes used to measure unemployment in this study and the Open Unemployment Rate can provide an indication of which working age population is classified as unemployed.

Unemployment can be seen through how much the Open Unemployment Rate in an area in accordance with this study uses the Open Unemployment Rate indicator, which can give an indication of the working age population and are classified as unemployed. the number of the workforce but the absorption of labor in an area that is available does not increase, even the employment opportunities are very narrow so that the population belonging to the new labor force is not absorbed properly. This can be interpreted, the higher the number of unemployed people, the more people will increase. who are classified as poor, because those who are unemployed do not get wages and are not able to make a living.

HDI is a factor that can affect the number of people who are classified as poor as well as a benchmark in regional development towards poverty in the area. Having a high HDI value and a high quality of life is the hope of an area so that it can be said that if the HDI is high, then the HDI level should be high. poverty in an area is low (Alhudori, 2017). Based on the literacy rate, life expectancy, people's purchasing power for a number of daily needs and level of education.

Education is an aspect that affects poverty in addition to the unemployment rate and HDI. Education is a bridge to the future of a nation, because education concerns the character of nation building. Humans must have the highest possible education in order to get a job. The education they have must also be high. If someone has a high education, they can fulfill their needs (Giovanni, 2018). In carrying out a development process, quality human resources are also needed. With a high level of education, they can help the nation's development process by improving the quality of education in an area through reading activities so that people become smart and creative individuals. Because education can develop a skill ability and creativity that a person has. If the community itself lacks interest in reading activities, it can create problems for the government in carrying out the development process. The benchmark for choosing the level of education in each province of Java Island, and in the future it will affect poverty in an area, namely Figures Literacy or often abbreviated as literacy rate. It can be seen through the aspects used in this study, namely the literacy rate of the population (literacy rate) can describe the educational situation.

One of the most important indications to be able to assess the success of an area's economic development is economic growth. With a high GRDP, it can change an area for the better and can have a positive impact on poverty problems. But not all residents of an area can be guaranteed prosperity with high GRDP. GRDP only describes the general condition of the welfare of the community. Statistical data that summarizes the value-added income that arises due to a process of producing goods and services in a particular area, which is usually a year or so Quarterly is GRDP. One aspect of the economic growth of a region in this study, namely the ADHK GRDP Growth Rate in 2015-2020.

Previous research that has been researched by M. Alhudori (2017) which examined the Effect of HDI, GDP and Total Unemployment on the Poor in the Province, where the results showed that the HDI variable had a positive effect on the poor while GRDP had a negative relationship with the number of poor people and Unemployment has a positive relationship with the number of poor people in Jambi Province. Eny, Warsilan and Gamal (2016) related to poverty in Kutai Kertanegara Regency, the results showed that the variable rate of economic growth had a negative effect on poverty and education or literacy rate had a negative effect on poverty in Kutai Kertanegara Regency.

Ridzky G (2018) who observed the influence of GDP, Education and Unemployment on poverty levels in Java Island in 2009-2016, the results of this study are that unemployment and education variables do not have a significant effect on poverty but on variables GRDP has a significant influence on poverty in the Provinces of Java. Renta and Unggul (2014) research related to economic growth, Unemployment and capital expenditures on poverty in the Regency/City of East Java Province in 2007-2011, the results of this study are the variable economic growth has no significant effect on poverty, while Open Unemployment Rate has a significant effect on poverty in East Java.

## **1.2 Research Objectives**

On the background that has been described, therefore researchers are interested and motivated to discuss poverty in Java island, Indonesia. The purpose of this study is to analyze the factors that can

affect the poverty rate in Java in 2015-2020 and find out Unemployment, HDI, Literacy Rate, Economic Growth simultaneously on poverty in Java in 2015-2020. Then this study also wants to see how the influence of Unemployment, HDI, Literacy Rate, Economic Growth on poverty in Java in 2015-2020. This study uses secondary data, namely panel data from 2015-2020 as many as 36 data representing 6 provinces in Java, namely DKI Jakarta, Banten, East Java, Central Java and West Java. The secondary data was obtained from BPS Indonesia online through the BPS website. Indonesia. This study uses a descriptive explanation that provides a general description of the process of data obtained and quantitative methods, namely research methods systematically and accurately related to the object under study, in order to test hypotheses and at the same time find out whether there is a relationship between two or more variables by using one the dependent variable is the poor (PM) and the four independent variables are Unemployment, HDI, Literacy Rate, Economic Growth data for 2015-2020 on the island of Java.

## **2. Poverty**

What is meant by poverty is the limitations possessed by a person, family, community or state that can cause discomfort in their lives, the loss of youth, the dark future of the nation and the enforcement of law and justice is threatened. from poverty. This understanding is a broad understanding of poverty (Aziz, Rochaida, & Warsila, 2016). Poverty is a problem experienced by Indonesia. The State of Indonesia is a country where many people are still classified as poor, even though Indonesia is a country that has abundant natural resources. In a series of economic development, it can be used as capital to improve welfare and increase people's income. Economic development can also be measured through the level of economic growth in an area. The low income of the community to be able to meet the needs of clothing, food, shelter, health and education is a picture of poverty (Mubyarto, 2014). A successful development of a country or region is one of the important indicators of poverty. In order to reduce poverty and achieve economic growth The maximum is an effort that must be carried out by every country.

Based on (Todaro & Smith, 2006) poverty is calculated in 2 parts, namely: Relative poverty, Seeing poverty in terms of social inequality, this is because there are people who are able to meet the minimum needs but are still lower than other residents, it is called relative poverty. So that relative poverty is closely related to income distribution conflicts. Absolute poverty, Absolute poverty is seeing this poverty associated with the situation of the number of people who are less able to obtain sufficient resources to meet their basic needs and live below the poverty line or a certain level of real income. Absolute poverty itself can be measured by comparing the level of income received with the level of income. The income needed to obtain basic needs, namely clothing (clothes), food (food) and housing (housing) in order to ensure a life (Ferazagia, 2018).

More details about the number of poor people in Java by province can be seen in Table 1.

**Table 1.** Number of Poor Population by Province 2015-2020 (%)

PROVINCE	Number of Poor Population by Province (in %)						Average
	2015	2016	2017	2018	2019	2020	
DKI Jakarta	3.61	3.75	3.78	3.55	3.42	4.69	3.80
West Java	9.57	8.77	7.83	7.25	6.82	8.43	8.11
Central Java	13.32	13.19	12.23	11.19	10.58	11.84	12.06
Yogyakarta	13.16	13.10	12.36	11.81	11.44	12.80	12.45
East Java	12.28	11.85	11.20	10.85	10.20	11.46	11.31
Banten	5.75	5.36	5.59	5.25	4.94	6.63	5.59

Source: Central Statistics Agency Indonesia, Data Processed

From table 1. it can be seen that in DIY Province, on average 12.45% is the highest percentage of the poor from 2015-2020. This happens because the Special Region of Yogyakarta is indeed not easy to eradicate and lacks natural resources. the second is Central Java with an average of 12.06%, Central Java is a province that is classified as high because. The third number of poor people is East Java with an average of 11.31%. Then followed by the fourth, fifth and sixth poor people respectively from West Java with an average of 8.11%, Banten with an average of 5.59% and the lowest is DKI Jakarta with an average of 3.80%.

According to (Kucoro, 2010) the triggers of poverty seen from the economic aspect are divided into 3, namely as follows: The effect of differences in access to capital can lead to poverty, because there is an asynchronous pattern of resource holders that can lead to a skewed income distribution, which can lead to poverty, Poverty can arise due to the effects of variations in the quality of human resources. If the quality of human resources is low, it means that productivity is also weak, which can cause income to be smaller, this can happen because of weak education, discrimination or descent and unfortunate fate.

The most complicated problem and the government's concern is poverty, because poverty can cause various kinds of disturbances to the lives of local people. Poverty alleviation is one of the important aspects to achieve community welfare (Annur, 2013). The situation of people who are less able to carry out the process of change and those who do not have expertise in the quality of production factors and in their ownership capabilities so that they do not benefit from the results of a development process, this is a view of poverty (Arsyad & Lincoln, 2010).

### 3. The Effect of Unemployment on Poverty

People who are categorized in the active labor force who are looking for work with a certain income, but do not get the desired job are called unemployed. There is a close relationship between the extent of poverty and high levels of unemployment. in poverty and the unemployment rate. The number of people whose income or consumption level is below the minimum level that has been set can reflect the size of the poverty dimension (Aziz, Rochaida, & Warsila, 2016).

From the regression results above, the t-count < t-table is -0.317444 which means it is smaller than 1.69552. It can also be seen in the probability value that is 0.7534 which means > from 0.05 or  $\alpha = 5\%$ . It is concluded that the Open Unemployment Rate is negative and insignificant to poverty in Java in 2015-2020.

To see more details about Open Unemployment Rate by Province 2015-2020 in table 2:

**Table 2.** Open Unemployment Rate by Province 2015-2020 (%)

PROVINCE	Open Unemployment Rate by Province 2015-2020 (in %)						Average
	2015	2016	2017	2018	2019	2020	
DKI Jakarta	7.23	6.12	7.14	6.65	6.54	10.95	7.44
West Java	8.72	8.89	8.22	8.23	8.04	10.46	8.76
Central Java	4.99	4.63	4.57	4.47	4.44	6.48	4.93
Yogyakarta	4.07	2.72	3.02	3.37	3.18	4.57	3.49
East Java	4.47	4.21	4.00	3.91	3.82	5.84	4.38
Banten	9.55	8.92	4.28	8.47	8.11	10.64	8.33

Source: Central Statistics Agency Indonesia, Data Processed

Based on Table 2, the percentage of Open Unemployment Rate by province from 2015 to 2020 is the highest in West Java Province, which is an average of 8.76%. The second order is Banten Province with an average of 8.33%. The third order is DKI Jakarta Province which has an average of 7.44%. Then the fourth, fifth and sixth ranks are Central Java, East Java and Yogyakarta Provinces with sequential averages of 4.93%, 4.38% and the lowest is DIY Province which has an average of 3.49%.

If the population increases rapidly and is not followed by an increase in employment, it will reduce the amount of savings, income and investment (Jhingan, 2014). Human Development Index, a combined index of three indicators, namely knowledge (knowledge) which is measured by a combination of literacy, longevity which is a measure of life expectancy and a decent standard of living as measured by real GDP per capita and expressed in PPP, this is the meaning of the Human Development Index according to (Kucoro, 2010).

#### 4. The Effect of HDI on Poverty

The Human Development Index (HDI) is a breakthrough in assessing the human development of a country to determine whether the country is a developing country, a developed country or a poor country (Julia, 2019). The Human Development Index (HDI) can explain how the population can access the results of development in obtaining health, education, income and others, according to BPS. An important indicator to calculate a success in developing the quality of life of the community is the HDI as well as to determine development rankings.

From the regression results above, it shows that the  $t\text{-count} < t\text{-table}$  is  $-3.788612$  which means it is smaller than  $1.69552$ . It can also be seen that the probability value of  $0.0008$  means  $<0.05$  or  $\alpha = 5\%$ . And it is concluded that HDI is negative but significant to poverty in Java Island in 2015-2020. According to BPS, the three basic dimensions to form the HDI are knowledge, a decent standard of living and a long and healthy life.

It can also be seen in details in the following Table 3:

**Table 3.** HDI by Province 2015-2020

PROVINCE	HDI by Province 2015-2020						Average
	2015	2016	2017	2018	2019	2020	
DKI Jakarta	78.99	79.60	80.06	80.47	80.76	80.77	80.11
West Java	69.50	70.05	70.69	71.30	72.03	72.09	70.94
Central Java	69.49	69.98	70.52	71.12	71.73	71.87	70.79
Yogyakarta	77.59	78.38	78.89	79.53	79.99	79.97	79.06
East Java	68.95	69.74	70.27	70.77	71.50	71.71	70.49
Banten	70.27	70.96	71.42	71.95	72.44	72.45	71.58

Source: Central Statistics Agency Indonesia, Data Processed

In table 3. the HDI values in the six provinces of Java Island by province in 2015 to 2020 show that the highest percentage of HDI scores is DKI Jakarta which has an average of  $80.11\%$ , then the second is in the Province of the Special Region of Yogyakarta, which is an average of  $79.06\%$ . and the third, fourth, fifth and sixth places are Banten Province, West Java Province, Central Java Province which have an average of  $71.58\%$ ,  $70.94$ ,  $70.79\%$  and East Java in the lowest position, which has an average HDI of  $70.49\%$ .

#### 5. The Effect of Literacy Rate on poverty

Literacy rate, One of the main factors in increasing the poverty rate is the literacy rate factor. The existing human resources (HR) are still very low, the level of knowledge and skills is also very low due to the lack of educational facilities in remote areas, so they have not been able to find a decent

life. pioneer in the future development of a nation or state. If education in a nation declines, then the nation will also be destroyed, because that education concerns character building and maintaining the human identity of a nation.

From the regression results above, the t-count < t-table is -1.229628 which means it is smaller than 1.69552. It can also be seen in the probability value, which is 0.2298, which means > from 0.05 or  $\alpha = 5\%$ . It can be concluded that literacy rate is negative or even insignificant towards poverty in Java in 2015-2020.

**Table 4.** Literacy Rate Population aged 15 years and over by Province (%)

PROVINC	Literacy rate Population aged 15 years and over by Province (in %)						Average
	2015	2016	2017	2018	2019	2020	
DKI Jakarta	99.59	99.64	99.67	99.72	99.74	99.69	99.67
West Java	98.01	98.22	98.23	98.48	98.53	98.63	98.35
Central Java	93.12	93.3	93.39	93.45	93.54	93.62	93.40
Yogyakarta	94.5	94.59	94.64	94.83	94.96	95.09	94.76
East Java	91.47	91.59	91.82	91.85	92.32	92.5	91.92
Banten	97,37	97.55	97.57	97.62	97.62	97.88	97.64

Source: Central Statistics Agency Indonesia, Data Processed

In table 4. it can be seen that the literacy rate population aged 15 years and over according to the highest province in 2015-2020, namely DKI Jakarta has an average of 99.67% and even almost reaches 100%. The second place is occupied by West Java Province with an average of 98.35%. Then the third, fourth, fifth and sixth places are Banten Province, DI Yogyakarta, Central Java, East Java, each of which has an average of 97.64, 94.76%, 93.40% and 91.92%.

So if education becomes a top priority, then the nation Foolishness is experienced by many poor people, therefore it is important to understand that poverty can lead to human stupidity which is identical to poverty. There is one main key element namely education, with education will be able to erase ignorance and even poverty in a nation (Aziz, Rochaida, & Warsila, 2016). The Literacy Rate, can be seen and used as an indicator in the development of a region's education. The Literacy Rate in every province on the island of Java is a benchmark to determine how big the level of education in each province of Java Island is, which will later be affect poverty in an area. The proportion of the population aged 15 years and over who can read and write Latin letters is called the Literacy Rate (Tisniwati, 2012).



## 6. The Effect of GRDP on Poverty

Growth from economic activity can cause goods and services produced by the community to increase called economic growth. From the regression results above, it can be seen that the  $t$ -count  $<$   $t$ -table is  $-3.914175$  which means it is smaller than  $1.69552$ . It can also be seen that the probability value is  $0.0006$  which means  $<0.05$  or  $\alpha = 5\%$ . It can be concluded that GRDP is negative but significant to poverty in Java in 2015-2020. Production factors that can increase the quality and quantity that can increase these capabilities. Long-term macroeconomic conflict can be viewed from the problem of economic growth in the region or country (Sukirno, 2017) (Sukirno, *Makroekonomi Teori Pengantar*, 2017).

GRDP Growth Rate in 2015-2020. It can be described in the table below:

**Table 5.** GRDP ADHK Growth Rate (%)

PROVINCE	GRDP ADHK Growth Rate (in %)						Average
	2015	2016	2017	2018	2019	2020	
DKI Jakarta	5.91	5.87	6.2	6.11	5.82	-2.36	4.59
West Java	5.05	5.66	5.33	5.65	5.07	-2.44	4.05
Central Java	5.47	5.25	5.26	5.3	5.4	-2.65	4.01
Yogyakarta	4.95	5.05	5.26	6.2	6.59	-2.69	4.23
East Java	5.44	5.57	5.46	5.47	5.52	-2.39	4.18
Banten	5.45	5.28	5.75	5.77	5.29	-3.38	4.03

Source: Central Statistics Agency Indonesia, Data Processed

In table 5. It can be observed that during the period 2015 to 2020, the economic growth of all provinces on the island of Java was dominated by DKI Jakarta, having the highest average GRDP level of DKI Jakarta, which was  $4.59\%$ , then DIY Province, which had an average GRDP of  $4.23\%$ . East Java has an average GRDP value of  $4.18\%$ , West Java has an average GRDP value of  $4.05\%$ , Banten has an average value of  $4.03\%$  and the lowest is Central Java which has an average GRDP value of  $4.01\%$ .

## 7. Conclusion and Recommendations

Based on the results of hypothesis testing and research on the analysis of the effect of Open Unemployment Rate, HDI (Human Development Index), literacy rate, and GRDP on poverty in Java Island in 2015-2020, with the panel data regression analysis method, the results obtained :

Judging from the Open Unemployment Rate in all Provinces in Java Island in 2015-2020, the value is negative and not even significant to poverty. Judging from the HDI (Human Development Index) in all Provinces in Java Island in 2015-2020, it is negative but significant to poverty. Literacy rate in

all Provinces in Java Island in 2015-2020 had a negative or even insignificant effect. Meanwhile, GRDP in all provinces in Java Island in 2015-2020 had a negative but significant value. In the F-count obtained simultaneously,  $F\text{-count} > F\text{-table}$  and probability  $< 0.05$ , then all independent variables namely Unemployment, HDI, Literacy Rate and Economic Growth (GRDP) can simultaneously affect the dependent variable, namely poverty in Java Island in 2015-2020. Goodness Of Fit with significance level of significance 0.05, the regression model is feasible to use and predict the dependent variable, namely poverty.

The government must be able to issue policies that can create jobs, and carry out the consistent policy seriously until it is seen maximum result. A much broader concept of development is needed compared to the concept of economic growth which only emphasizes on the growth of basic needs, social welfare or human Resource Development. The need to strengthen the role of libraries in improving the quality of human resources through improving literacy skills, thereby increasing community creativity and reducing poverty in access to information. Policies to strengthen the agricultural, transport and financial sectors can become one of the weapons in eradicating poverty

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