

# Determinantes de la pobreza en Indonesia

## Determinants of Poverty in Indonesia

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**Resumen:** En Indonesia, el perfil de pobreza es relativamente sólido y se ha convertido en un problema nacional, especialmente la brecha de desigualdad entre ricos y pobres se está ampliando. En este sentido, el objetivo principal de este estudio fue analizar los factores que han influido en la pobreza en Indonesia desde 2013 hasta 2019. La pobreza se midió con base en el enfoque de necesidades básicas. Se utilizaron los datos secundarios, obtenidos de la Oficina Central de Estadísticas y el Ministerio de Finanzas de la República de Indonesia. El porcentaje agregado de pobreza de 34 provincias de Indonesia se utilizó como variable dependiente. Mientras tanto, las variables independientes fueron el índice de desarrollo humano, la protección social, el programa y el desempleo. Se aplicaron modelos de regresión lineal múltiple para probar las hipótesis. Esta investigación reveló que el índice de desarrollo humano y el programa de protección social tuvieron un impacto significativo pero negativo sobre la pobreza. Por el contrario, el desempleo tuvo un impacto positivo, pero menos significativo

**Abstract:** In Indonesia, the poverty profile is relatively robust and has become a national problem, especially the inequality gap between rich and poor is widening. In this wake, the main purpose of this study was to analyze the factors that have influenced the poverty in Indonesia since 2013 until 2019. The poverty was measured based on the basic needs approach. The secondary data, retrieved from Central Bureau of Statistics and the Ministry of Finance, Republic of Indonesia, were used. The aggregated percentage of poverty from 34 provinces in Indonesia was employed as dependent variable. Meanwhile, the independent variables were the human development index, social protection, program, and unemployment. Multiple linear regression models were applied to test the hypotheses. This research revealed that human development index, and social protection program had significant but negative impact on poverty. In contrast, the unemployment had a positive but less significant impact on the poverty. Thus, the government must improve HDI, promote social protection, and apply innovative employment programs to alleviate poverty.

sobre la pobreza. Por lo tanto, el gobierno debe mejorar el IDH, promover la protección social y aplicar programas de empleo innovadores para aliviar la pobreza.

**Palabras Clave:** Pobreza, Índice de Desarrollo Humano, Protección social y Programa de desempleo, Indonesia

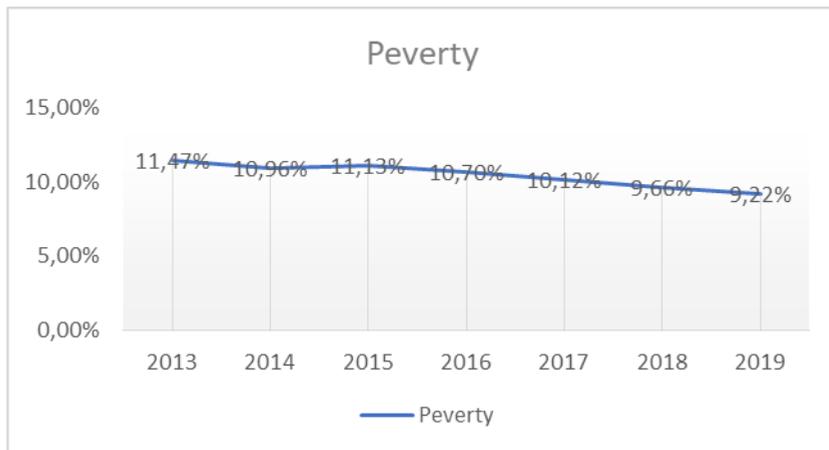
**Keywords:** Poverty; Human Development Index; Social protection, and Unemployment program; Indonesia.

## 1. INTRODUCTION

The World Bank defines poverty based on established international poverty line standards of individual earns USD 1.90 (Rp. 25.995 with exchange rate Rp 13.681 per US Dollar). The World Bank has actively recorded poverty data since 1990 that continues to show poverty reduction. The latest World Bank data in 2015 shows that there are still around 900 million people (12.8% of the world's population) in the low category below the international poverty line (World Bank, 2019)

In Indonesia, the poverty profile is relatively robust and has become a national problem and also the gap between rich and poor has increased (OIC Report, 2015; Priebe, 2016). Indonesia's poverty line is calculated from the total value of expenditure of minimum food needs of 2,100 kilocalories and the minimum needs for housing, clothing, education, and health per capita per day. In March 2019, Indonesia's poverty line was recorded at IDR425,250 per capita/month (around \$ 1 per capita/day).

**Figure 1. The Poverty Rate in Indonesia**



**Source: Central Bureau of Statistics (2020)**

Based on the nominal poverty line, the percentage of poor people in Indonesia is 9.22% or around 25 million people, and rural populations still dominate the origin of the low population. In 2019 the poverty rate in rural areas had doubled, which is 12.60% compared to 6.26% for urban poverty. On an annual basis, the poverty level does decline since 2015;

various factors positively influence this decline. However, in 2014 there is an increase of 0,17% amount of poverty in Indonesia. Efforts to accelerate poverty alleviation in Indonesia are carried out by cross-agency coordination by *Tim Nasional Percepatan Penanggulangan Kemiskinan* (TNP2K) or National Team for the Acceleration of Poverty Reduction to improve the implementation of government spending on poverty reduction programs, improve the living standards of the poor and vulnerable, and reduce inequality among income groups because government spending and well-targeted policies will have a significant impact on poverty alleviation (Anderson et al., 2018; Cecchini, 2014). Efforts to improve the quality of human resources, supporting programs in alleviating poverty, and reducing the unemployment rate continue to run by the government.

The quality of a country's human resources can be measured through the human development index (HDI). HDI is an indicator that consists of three major dimensions: level of life expectancy and healthy living, knowledge, education, and a decent standard of life. HDI is a significant indicator in the pattern of regional development, including efforts to reduce poverty. High HDI becomes a benchmark of high quality of life so that ideally, a high HDI in a country will lower the poverty rate.

The government has spent a significant budget on programs of social protection and poverty alleviation. This program is divided into several programs owned by various institutions and ministries in Indonesia. There are ten programs in the framework of social protection and poverty alleviation policy, namely (1) Smart Indonesia Program (PIP) (2) *Bidikmisi* (3) Poor Family Program/PKH (4) Non-cash Food Assistance /BPNT (5) National Health Insurance (6) Cash Direct Assistance (7) *KUBE/UEP* (8) Non-tax Subsidies (9) Village Funds (10) Microfinance Program. Since 2015 the program's budget has continued to increase by an average of 4% every year. The programs like this are seen as effective strategic policies for developing country that can reduce poverty in Southeast Asia, especially for Indonesia (Cook & Pincus, 2014; Klasen & Waibel, 2015; Olken, 2019)

Another indicator that affects poverty levels in Indonesia is the level of unemployment (TPT). Unemployed are those who do not have a job and are looking for work, do not have a job and prepare a business, do not have a job and do not look for work, because they feel it is impossible to get a job and those who already have a job, but have not

yet started working (Central Bureau of Statistics, 2020). Indonesia's unemployment rate is relatively high. In 2019, the TPT level was recorded at 5.28% or around 7.05 million and it was lower compared 2018 with a percentage of 5.34%. The high unemployment rate will undoubtedly affect the low income and low expenditure per capita, impacting meeting the living standards (Setiawan, 2017). Furthermore, the following annual minimum wage of workers can lead to a renewed decline in poverty and inequality. This show that unemployment can indicate an increase in poverty (Sotomayor, 2021).

This paper explores the factors that determine poverty in Indonesia. By identifying these factors, the government is expected able to release decisions quickly in the context of accelerating poverty reduction. The paper is organized as follows. Section 1 has introduced the background. Section 2 elaborates related literatures. Section 3 explores the data and methodology. Section 4 discusses the findings and Section 5 concludes the paper.

## **2. LITERATURE REVIEW**

### **2.1. Previous Study**

Zuhdiyaty & Kaluge, (2018) in their study "Analysis of Factors Affecting Poverty in Indonesia for the Last Five Years 2011-2015" used the variables of the human development index (HDI), economic growth, and the level of open unemployment (TPT). The analysis used is a multiple linear regression test. This study found that the HDI variable had a negative and significant effect on poverty. In comparison, economic growth and unemployment variables are not significant with poverty variables.

In addition, Prasetyoningrum (2018) conducted a study entitled "Analysis of the Effect of the Human Development Index (HDI), Economic Growth, and Unemployment Against Poverty in Indonesia 2013-2017" using the path analysis method using the WarpPLS5.0 software. The result is that HDI has a significant and negative effect on poverty levels. The unemployment variable has a direct and positive effect.

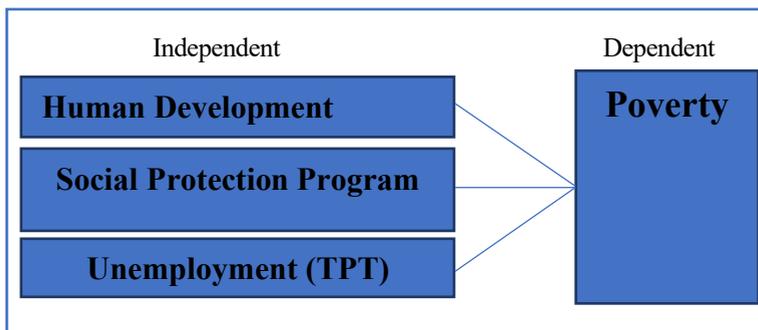
Giovanni (2018) conducted a study entitled "Analysis of the Effects of PDRB, Unemployment, and Education on Poverty Rates in Java in 2009-2016" using panel data regression analysis. This study found out that unemployment and education are not significant on the poverty level variable on the island of Java.

Mustaqimah, and Hartoyo, (2017) researched the impact of human development and government capital expenditure on reducing Indonesia's poverty. The model was estimated using the 2SLS method. The results showed that government capital expenditure and human development (HDI) had significant impacts on reducing poverty in Indonesia.

Lindiasari, and Ramadhani, (2017) conducted a study entitled "The Effectiveness of Social Assistance in Poverty Alleviation in the Middle of Indonesia's Economic Slowdown with a Non-Parametric Approach" from 2007 to 2017. This study found that social assistance has a strong relationship with reducing the number of poor people in Indonesia.

## 2.2. Research Framework

**Figure 2. Multiple linear regression eviews 10.0**



**Source: Author Research Framework**

Based on the intensive literature, the hypotheses were framed keeping in view the above-mentioned framework. The human development index and social protection programs were found to be negative and significant effect on poverty. On the contrary, the unemployment variable was found to be positive and significant effect on poverty. The independent variables simultaneously and partially affected Indonesia's poverty for the period 2013 to 2019.

## 3. MATERIAL AND METHODS

### 3.1 Data and Research Objective

This study aimed to analyze the impact of the Human Development Index (HDI), the social protection, and unemployment on poverty in Indonesia. The secondary data was collected from 2013 to 2019. This period was chosen because of different economic and political dynamic changes that affected economic stability. Table below provides data source

**Table 1. Data sources**

No	Variable	Explanation	Sources
1.	Poverty (PVT)	Percentage of poverty in Indonesia (34 provinces)	Central Bureau of Statistics (BPS) <a href="https://www.bps.go.id/dynamictable/2016/08/18/1219/persentase-penduduk%20miskin-menurut-provinsi-2007--2019.html">https://www.bps.go.id/dynamictable/2016/08/18/1219/persentase-penduduk%20miskin-menurut-provinsi-2007--2019.html</a>
2.	Human Development Index (HDI)	New Method Human Development Index by 34 Provinces	Central Bureau of Statistics (BPS) <a href="https://www.bps.go.id/dynamictable/2020/02/18/1772/indeks-pembangunan-manusia-menurut-provinsi-metode-baru-2010-2019.html">https://www.bps.go.id/dynamictable/2020/02/18/1772/indeks-pembangunan-manusia-menurut-provinsi-metode-baru-2010-2019.html</a>
3.	Social Protection Program (SPP)	Budget issued for 10 inter-agency and ministerial poverty alleviation programs	Ministry of Finance  <a href="http://www.data-apbn.kemenkeu.go.id/Dataset/Details/1016">http://www.data-apbn.kemenkeu.go.id/Dataset/Details/1016</a>
4.	Unemployment (TPT)	Unemployment rate by 34 provinces in Indonesia	Central Bureau of Statistics (BPS) <a href="https://www.bps.go.id/dynamictable/2020/02/19/1774/tingkat-pengangguran-terbuka-tpt-menurut-provinsi-1986--2019.html">https://www.bps.go.id/dynamictable/2020/02/19/1774/tingkat-pengangguran-terbuka-tpt-menurut-provinsi-1986--2019.html</a>

**Source: Author (2020)**

### 3.2 Multiple Linear Regression

This analysis is used to discuss the relationship between more than two variables. Regression analysis is performed to determine whether two or more variables have cause-effect relations and make predictions for the topic by using the relation (Uyanık & Güler, 2013).

The function of the equation is:

$$Y = f(X_1, X_2, X_3) \dots \dots \dots (1)$$

With the following equation model:

$$Y_t = \beta_0 + \beta_1 \cdot X_{1t} + \beta_2 \cdot \ln X_{2t} + \beta_3 \cdot X_{3t} + e_t \dots \dots \dots (2)$$

Where:

$\beta_0$  = Constant a

$\beta_1$  = Coefficient Human Development Index (HDI)

$\beta_2$  = Coefficient Social Protection Program (SPP)

$\beta_3$  = Coefficient Unemployment (TPT)

$Y_t$  = Poverty (PVT)

$X_1$  = Human Development Index (HDI)

$X_2$  = Social Protection Program (SPP)

$X_3$  = Unemployment (TPT)

$e_t$  = Standard Error

### 3.3 Statistic Test and Classical Assumption

#### 3.3.1 Statistic Test

##### a) Coefficient of Determination ( $R^2$ )

The coefficient of determination is used to measure how much variation of the dependent variable (Y) can be explained by the independent variable (X). If the coefficient of determination = 0 (Adjusted  $R^2 = 0$ ), it means that the variation of the dependent variable (Y) cannot be explained by the independent variable (X). Meanwhile, if  $R^2 = 1$ , it means that the variation of the dependent variable (Y) as a whole can be explained by the independent variable (X). Furthermore, if Adjusted  $R^2 = 1$ , then all observation points are right on the regression line. Thus, the good or bad of the regression equation is determined by its Adjusted  $R^2$ .

##### b) F-Test

The f-test is used to determine whether all independent variables affect the dependent variable at the significance level of 0.05 (5%). Testing all regression coefficients together is done by the f-test with the test, as follows:

Model Hypothesis Test:

- $H_0$ : means that the independent variable has no effect and is rejected with the condition  $> \alpha = 5\%$ .
- $H_1$ : means that the independent variable influences and is accepted with the condition  $< \alpha = 5\%$ .

The F test was used to compare the F-statistic probability with a significance of  $\alpha = 5\%$  between the overall independent variables. This

means that if  $F\text{-statistics} > \alpha = 5\%$  then  $H_0$  is accepted while if the probability of  $F\text{-statistics} < \alpha = 5\%$  then  $H_1$  is accepted.

### c) T-Test

A statistical t-test is a partial test (individual) where this test is used to test how well the independent variable can explain the dependent variable individually.

Model Hypothesis:

- If probability  $> \alpha = 5\%$ , then  $H_0$  is accepted, which means that the independent variable has no significant effect and is not significant on the dependent variable.
- If the probability  $< \alpha = 5\%$ ,  $H_1$  is accepted or significant, which means that the independent variable significantly influences the dependent variable.

## 3.3.2 Classical Assumption

### a) Normality Test

This normality test aims to find out the data in the variables used in research whether the variable is normal or not. Good data and feasible to use in research are data that have a normal distribution. The Jarque-Bera test or Histogram Test can see the normality of data. The steps to test data normality are as follows:

Hypothesis:

- If the Jarque-Bera probability  $> 0.05$  data is normal.
- If the Jarque-Bera probability  $< 0.05$  means data is not normal

### b) Heteroscedasticity Test

Heteroscedasticity is detection to see whether the interference variable is not constant or changing. The heteroscedasticity test aims to test whether there is an inequality of variance from the residuals of one observation to another in the regression model. If the variance from one observation residual to another observation remains, it is called Homoscedasticity, and if the variance is not constant or variable, it is called Heteroscedasticity. A good regression model is one that does not occur Heteroscedasticity. If the probability of  $\text{Obs} * R^2 < 0.5$ , then Heteroscedasticity occurs. If the probability of  $\text{Obs} * R^2 > 0.05$  means that it is not significant or Heteroscedasticity does not occur (Kurniawan, 2008)

### c) Autocorrelation Test

Autocorrelation is a condition where there has been a correlation between the residuals of this period and the previous period's errors. To find out whether or not there is autocorrelation in a model. If the probability of  $\text{Obs} * R^2$  is more significant than 0.05, then the model does not have autocorrelation. If the probability of  $\text{Obs} * R^2$  is less than 0.05, there is autocorrelation.

### d) Multicollinearity Test

The multicollinearity test is used to detect the presence or absence of relationships between some or all of the independent variables in the regression model. Multicollinearity is a condition where one or more independent variables are expressed as a linear condition with other variables. If the independent variables that are used do not correlate with each other, then it can be said that there is no multicollinearity. Tests can be seen from the Variance Inflation Factor provided that if the VIF centered exceeds ten, then there is a multicollinearity problem. If the centered VIF is less than ten, then there is no multicollinearity problem (Marcus et al., 2012)

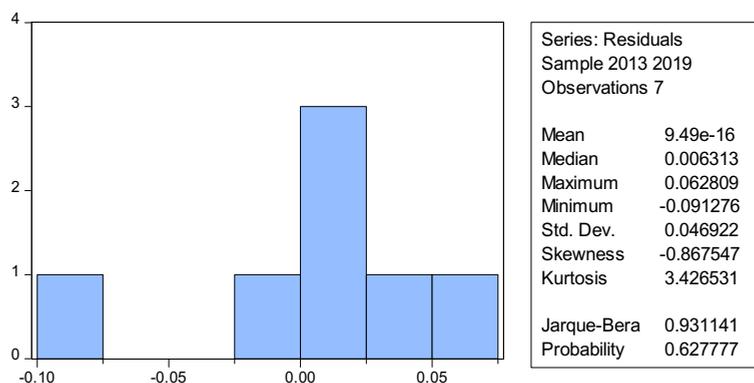
## 4. RESULT AND DISCUSSION

### 4.1. Regression Result-Classical Assumption Test

#### 4.1.1 Normality Test

The normality test used in this study is to use the Jarque Bera test by looking at the probability value. If the probability value is greater than the degree of error  $\alpha = 5\%$  (0.05), then in this study, there is no problem of normality, or in other words, the data is normal. If the probability  $<0.05$ , then this study is not normally distributed.

### Figure 3. Normality test result



Source: E-views 10.0

Based on Figure 3, the tested data are normally distributed shown by the probability value of Jarque Bera (JB) of 0.627777, which is greater than the degree of error that is equal to 0.05 (0.627777 > 0.05).

#### 4.1.2. Heterocedasticity Test

Table 2. Heteroskedasticity test result

Heteroscedasticity Test: Glejser			
F-statistic	4.973582	Prob. F(3,3)	0.1103
Obs*R-squared	5.828174	Prob. Chi-Square(3)	0.1203
Scaled explained SS	3.632567	Prob. Chi-Square(3)	0.3040

Source: Eviews 10.0

Heteroscedasticity is used to see whether the interference variable is not constant or changing. A good regression model is one that does not occur Heteroscedasticity. Table 2 above shows that the value of Obs \* R Squared is 5.828174 with Prob. Chi-Square (3) of 0.1203 is more than  $\alpha = 0.05$ . It can be concluded that this model does not contain Heteroscedasticity.

#### 4.1.3. Autocorrelation Test

**Table 3. Autocorrelation test result**

<b>Breusch-Godfrey Serial Correlation LM Test:</b>			
<b>F-statistic</b>	1.044963	Prob. F	0.4142
<b>Obs*R-squared</b>	2.402243	Prob. Chi-Square(2)	0.1212

**Source: *Eviews 10.0***

Autocorrelation is a condition where there has been a correlation between the residuals of this period and the previous period's errors. Based on table 3, it is known that the value of Obs \* R-squared is 2.402243 and the probability value is 0.1212, which is more significant than  $\alpha = 5\%$  (0.05), so it can be concluded that the data in this study do not have autocorrelation problems.

#### 4.1.4. Multicollinearity Test

**Table 4. Multicollinearity Test Result**

<b>Variable</b>	<b>Coefficient Variance</b>	<b>Uncentered VIF</b>	<b>Centered VIF</b>
<b>C</b>	31.86463	50655.86	NA
<b>HDI</b>	0.003938	30818.17	9.314666
<b>Ln SPP</b>	1.86E-07	33.81855	1.301036
<b>TPT</b>	0.046107	2404.766	9.014878

**Source: *Eviews 10.0***

The multicollinearity test is used to detect the presence or absence of relationships between some or all of the independent variables in the regression model. A good model is a model that does not have multicollinearity problems. Based on the results of the table 4, it can be seen the centered VIF of all variables is less than 10, so it can be stated that there is no multicollinearity problem in this model.

**4.1.5. Regression Results**

Having conducted above classical assumption tests, the following equation model is analyzed:  $Y_t = \beta_0 + \beta_1. X_1 + \beta_2. X_2 + \beta_3.X_3 + e_t$ ..... (1)

Based on the results of *evIEWS 10.0*, the regression is:

$$PVT_t = 52.11381+ (-0.592331*HDI_t) +(-0.002803*Ln SPP_t) + 0.145711*TPT_t + e_t$$

**Table 5. Multiple Linier Regression Result**

Variable	Coefficeince	t-Statistic	Prob.
C	52.11381	9.232055	0.0027
HDI	-0.592331	-9.438947	0.0025
Ln SPP	-0.002803	-6.490596	0.0074
TPT	0.145711	0.678597	0.5461
<b>Dependent Variable: PVT</b>			
<b>R-squared</b>		0.996754	
<b>Adjusted R-squared</b>		0.993508	
<b>F-statistic</b>		307.0706	
<b>Prob (F-statistic)</b>		0.000314	

**Source: EvIEWS 10.0**

The HDI data shows that poverty alleviation programs have a significant negative relationship, while the unemployment variable has a significant positive relationship with poverty. The 99% of ( $R^2$ ) means that variations of independent variables can explain the variation of dependent variable for 99 percent, and the remaining 1% is explained by variables outside the model.

In addition, based on the table 5, then the multiple regression equation can be interpreted as the following:

- i.  $\beta_0 = 52.11381$ , meaning that if the HDI variable, the social protection program, and unemployment are assumed to be *ceteris paribus* (the independent variable is considered constant or zero), then the poverty is 52.11381. It implies that the role independent variables are very important in determining the poverty rate in Indonesia
- ii.  $\beta_1 = -0.592331$  means that for every 1 point decrease in HDI, the poverty rate will increase by 0.592331% and vice versa by the assumption that other variables are considered constant.

- iii.  $\beta_2 = -0.002803$  means that for every 1% reduction in the social protection program, the poverty rate will increase by 0.002803% and vice versa, by the assumption that other variables are considered constant.
- iv.  $\beta_3 = 0.145711$ , it means that for every 1% increase in the unemployment rate, the poverty rate will increase by 0.145711% and vice versa, by the assumption that other variables are considered constant.

## 4.2 Statistic Test

### 4.2.1. T-Test

The T-test is used to test the significance of independent variables' influence on the dependent variable individually / partially. To find out the effect of each variable on the dependent variable can be explained below:

#### a. Constant

The coefficient value in the regression calculation is 52.11381. It means that if the HDI, social protection, and unemployment programs are assumed to be *ceteris paribus* (the independent variable is considered constant or zero), then the value of poverty rate is 52.11381

#### b. Human Development Index (HDI)

Based on the data analysis, the probability value of the HDI is 0.0025 with a negative coefficient value. Because the HDI probability value  $< 0.05$  ( $0.0025 < 0.05$ ),  $H_0$  is rejected and  $H_1$  is accepted so that the HDI variable has a significant and negative effect on poverty rate.

#### c. Social Protection Program

The results of data analysis can be obtained from the probability value of the social protection program by 0.0074 with a negative coefficient value. Because the probability value of the poverty alleviation program  $< 0.05$  ( $0.0074 < 0.05$ ),  $H_0$  is rejected, and  $H_1$  is accepted so that the poverty alleviation program variable has a significant and negative effect on poverty rate.

#### d. Unemployment (TPT)

Based on the regression results, the probability value of the variable unemployment (TPT) of 0.5461 with a positive coefficient value can be obtained. Because the unemployment probability value  $> 0.05$  ( $0.5461 > 0.05$ ),  $H_0$  is accepted, and  $H_1$  is rejected so that the unemployment has an insignificant and positive effect on the poverty rate.

#### 4.2.2. F-Test

The f-test is used to test the significance of the independent variable's effect on the overall dependent variable. From the results of the regression analysis, the significant probability value of the f-statistic is 0.000314 because the probability of f-statistical significance is  $<0.05$  ( $0.000314 < 0.05$ ),  $H_0$  is rejected, and  $H_1$  is accepted, meaning that HDI, SPP, and TPT simultaneously or jointly affect poverty rate.

#### 4.2.3. Coefficient of Determination ( $R^2$ )

From the tests that have been carried out, it produces a coefficient of determination  $R^2$  (Adjusted  $R^2$ ) of 0.993508 so that it can be said that the results of the tests carried out give good results (goodness of fit). The coefficient of determination is positive. It shows that 99% of the poverty rate can be explained by the variation of HDI, SPP, and TPT, while the remaining 1% is explained by variables outside the model.

### 4.3. Discussion and Interpretation Regression Result

#### 4.3.1. The influence of HDI on the poverty rate in Indonesia

Based on the regression analysis results, the HDI coefficient is -0.592331 with the probability of a significant variable  $<0.05$ , which is 0.0025 ( $0.0025 < 0.05$ ). These results indicate that the human development index has a negative and significant effect on Indonesia's poverty rate (in line with the initial hypothesis). The negative coefficient level indicates the contrast relationship between HDI and poverty, meaning that it will reduce poverty when the human development index increases. When Indonesian HDI increases by one percent, Indonesia's poverty rate will decrease by 0.592331% or vice versa. With a note that all variables *ceteris paribus* or constant.

The results of this study are also linear as the research conducted by Ningrum, (2017), Budhijana, (2017), Palupi Lindiasari Samputra, (2019) Zuhdiyaty and Kaluge, (2018), and Mukhtar and Saptono, (2019). The human development index puts the highest position in reducing the level of unemployment in Indonesia. It is certainly reasonable, with predetermined HDI indicators, namely health and life expectancy, knowledge and fulfillment of life standards provide a high impetus to reduce poverty. This research also supports the endogenous growth theory (new growth theory). Economic growth can be derived from internal forces (endogenous). Namely, human resource factors,

investment, innovation, and knowledge are essential contributors to economic growth. Profitable economic growth will undoubtedly impact reducing poverty, which is reflected in the improvement of a more decent quality of life (Leonita and Sari, 2019; Sasana and Kusuma, 2018).

The human development index (HDI) is an essential indicator in measuring success in building people's quality of life. From the government side, various programs and infrastructure development to support the community's quality of life continue to be carried out. Efforts to allocate budget to education, health, and supporting access to community living standards have increased from year to year (OECD, 2019). Basic needs, such as access to clean water, hospitals, and subsidized housing, impact the community to provide reasons why HDI is very influential on poverty levels in Indonesia.

#### **4.3.2. The influence of the social protection program on the poverty rate in Indonesia**

The results show that the social protection programs had a negative and significant effect ( $<0.05$ ) on poverty rate in Indonesia (in line with the initial hypothesis). The regression results show that the coefficient of this variable is  $-0.002803$  with a probability of  $0.0074$ . A negative coefficient value indicates a contrasting relationship between social protection program towards the poverty variable. It means that one percent increase in the social protection programs will reduce poverty rate by  $0.002803\%$  by assuming all variables are constant.

This research is supported by Misdawita and Sari, (2013), Mustaqimah and Hartoyo (2017), and Bandiyono (2018) that state expenditure on education, economy, and social protection can reduce poverty. Government expenditures including social assistance such as education assistance, subsidies, funding programs, and funds provide long-term effects; the type of budget in the form of direct cash assistance and food aid has a temporary impact. Specifically Suharto, (2015), Arham and Payu (2020); Suryahadi and Al Izzati (2018) mention that program for education, poor people (Program Keluarga Harapan), and village fund make a significant contribution to poverty alleviation.

These programs can decrease poverty because these programs are designed based on the concept of three things handled by social protection programs, namely: firstly poverty level, defined as the average monthly per capita expenditure is below the poverty line. This targeted government program is in the form of a conditional cash transfer program

or Program Keluarga Harapan (PKH), direct cash assistance, and village fund targeting local or rural communities to reduce poverty (Sunu & Utama, 2019). This program can ease the burden of public expenditure so that it is free from the poverty line threshold. Tohari et al. (2019) also mention that people who get programs for poor people can increase 30% of their capital expenditure. Secondly, food security defined as poverty line categories with a minimum food expenditure of 2100 kilocalories per capita per day. This category is handled by forming a non-cash food assistance program and other cash assistance. The government's cash transfer policy has been proven to help the targeted beneficiaries, even overcome another problem, such as the reduction of child labor (Hidayatina and Garces-Ozanne, 2019; Yusuf, 2018). Thirdly, the non-food defined as poverty line categories are taken from the minimum needs for housing, clothing, education, and health. The smart Indonesia program (PIP), bidikmisi, and national health insurance are implemented to overcome this category. The government also provides financial assistance and subsidies in various sectors that affect improving living standards through active income (Lowder et al., 2017; Miranti, 2017; Nursini, 2020). The benefit of programs provides impactful protection for poor people and informal workers. The government also requires attention to run more effectively in program and management administrative capacity (McCarthy and Sumarto, 2018; Ramesh, 2014). Overall, the budget for social protection programs are impactful in mitigating and improving the quality of life, particularly in fulfilling basic and economic needs.

#### **4.3.3. The influence of Unemployment (TPT) on the poverty rate in Indonesia**

The study results obtained the unemployment coefficient of 0.14511 with a probability of 0.5461, greater than the value of  $\alpha = 0.05$  ( $0.5461 > 0.05$ ). It means that the unemployment variable is not significant or has no impact on Indonesia's poverty levels during the 2013-2019 period (different from the initial hypothesis).

This research is different from the study by Prasetyoningrum, (2018), which results in unemployment having a positive and significant impact on Indonesia's poverty. But this analysis is linier with research conducted by Yaumul (2018), Samputra, (2019), and Zuhdiyaty and

Kaluge, (2018) which state unemployment does not have a significant impact on the poverty rate in the 2011-2015 period. It indicates that the unemployed people in Indonesia are not classified as poor. Those who are unemployed are still supported by the family who have sufficient income (Ketut & Endrayani, 2016).

The other reason is that the majority of Indonesian society's work is in agriculture, forestry, and fisheries sectors, where this field of society cannot work all the time. Work in this field depends on the season and natural conditions so that under certain conditions, the community is unemployed and falls into the category of seasonal fusion. From the education perspective, unemployment in Indonesia is dominated at the level of vocational high schools and diplomas. This fact is strengthened by the Central Bureau of Statistics (BPS) where out of 122,4 million labor force, 7.6 million are still in the process of finding work. Unemployment, in this case, does not affect the level of poverty. However, the government still needs to overcome it because it can have multiple effects in the long run, especially on social problems. It is supported by Murjani, (2019) that in the long-run unemployment significantly will influence poverty.

## 5. CONCLUSION

### 5.1 Conclusion

Based on the results of data analysis and discussion that has been stated, the conclusions that can be drawn from this study are as follows:

1. Simultaneously, the human development index, social protection programs, and the level of unemployment have a significant effect on poverty with an F-statistical probability value of 0.000314 (F Test). The adjusted  $R^2$  value is relatively high at 0.993508, which means 99% of the independent variables can explain the variation on dependent variable.
2. Human development index (HDI) has a negative and significant impact on poverty levels in Indonesia. These two variables have the opposite relationship. The increase in HDI with the criteria of 3 main factors, namely health, knowledge, and access to living standards, will reduce Indonesia's poverty levels.
3. Budget allocation for social protection programs has a negative and significant impact on poverty levels in Indonesia. Increasing the

government budget for subsidies and improving people's quality of life can reduce poverty in Indonesia.

4. Unemployment rates positively correlate with poverty but not significant. It is because of people need time to find the suitable job. But, in the long run, the unemployment would positively affect poverty in Indonesia through income effect.

## 5.2 Suggestion

Based on the researchers' conclusions, the following suggestions are:

1. The human development index is proven able to push poverty rates. So, the government must continue to pursue policies to improve human resource quality.
2. Social protection programs must be carried out by increasing the synergy, effectiveness and targeting the right groups. The government needs to improve its programs and strengthen its policy and administrative capacity to succeed extending this social safety nets program.
3. The unemployment rate must be maintained at a low level because it has a long-run impact and may devastate the economy. Hence, the government needs to put innovative effort and policy through link and match policy in the labor markets.

## 5.3. Limitation of Research

1. The study assumes the unemployment variable as opened employment, not cyclical, or structural unemployment
2. The linier regression cannot capture the relationship among variables in the long run and dynamic interaction among variables. Other quantitative methods are interesting to be used, for example Vector Auto Regression (VAR).
3. The study needs to put the observed data into business cycles context. The separated data into normal and abnormal condition can result another interesting finding for determining factors affecting poverty.

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