

## Conference Paper

# The Impact of HDI, Minimum Wages, Investment and GRDP on Poverty in East Java in 2019

Vika Annisa Qurrata and Nadiah Ramadhani

Department of Economic Development, Faculty of Economic, Universitas Negeri Malang

**ORCID:**

Vika Annisa Qurrata: <http://orcid.org/0000-0003-4214-5956>

**Abstract**

Poverty is a serious problem in East Java. Many policies are carried out to reduce poverty such as intensified economic growth, improvement in the quality of human resources, increasing UMK annually and promoting investment. This research examined the influence of the Human Development Index (HDI), Small Medium Enterprises (SMEs), investment, and GRDP on poverty in East Java in 2019. Cross-sectional data of 38 regency cities in East Java were analyzed using linear regression. The results showed that HDI had a significant effect on poverty in East Java.

**Keywords:** poverty, HDI, investment, minimum wage, GRDP

Corresponding Author:

Vika Annisa Qurrata  
[vika.annisa.fe@um.ac.id](mailto:vika.annisa.fe@um.ac.id)

Published: 14 July 2021

Publishing services provided by  
Knowledge E

© Vika Annisa Qurrata and Nadiah Ramadhani. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the IRCEB Conference Committee.

## 1. Introduction

Economic development in Indonesia is carried out with the aim of increasing the welfare of the community. One of the things that can be overcome with economic development is poverty. Poverty is a condition in which the community or family is unable to fulfill their primary needs (M. Alhudori, 2017). Poverty alleviation efforts continue to be carried out both on a national and local scale (Ernawati, 2012). Poverty alleviation is not only a problem from the central government, but also a regional problem throughout Indonesia, including the province of East Java.

The number of poor people in East Java in 2019 have decreased from the previous year. In 2018, the number of poor people in East Java was 4332.59 thousand people or 10.98% of the total population in East Java. Meanwhile, in 2019, the number of poor people in East Java was 4112.25 thousand people or 10.37% of the total population. Even though it has decreased from the previous year, the poverty rate for 10% of the total population is still quite high, there are still more than 4 million people living below the poverty line.

**OPEN ACCESS**

To create economic development as well as a poverty alleviation, there are many things to be intensified, such as increased economic growth, increased and stabilized people's purchasing power through an increase in minimum wages, opening up jobs by bringing in investment both domestic and foreign, and improving the quality of human resources through education, health etc.

Based on the above background, the purpose of this study is to determine: 1). How and to what extent the HDI variable affects poverty in East Java, 2). How and how many does the SME variable affect poverty in East Java, 3). How and how much do the GRDP variables affect poverty in the East, 4). How and to what extent does the SME variable affect poverty in East Java.

## 2. Literature Review

Sharp, et.al (in Kuncoro, 1997: 131) identified the causes of poverty from an economic perspective:

1. Unequal patterns of resource ownership that result in inequality. The poor have more limited resources and are of lower quality.
2. A different quality of human resources. The low quality of human resources will result in low productivity, which results in low wages. The low quality of human resources is due to low education, unfortunate fate, discrimination, or heredity.
3. Differences in access in capital.

These three causes of poverty are found in the vicious circle of poverty theory by Nurkse (in Kuncoro, 1997) where underdevelopment, market imperfections, and lack of capital lead to low productivity. Their low productivity results in the low-income they receive. Low-income will have an impact on saving and investment. Low investment results in underdevelopment, and so on.

The Asian Development Bank (2008) states that dynamic economic growth has ability to reduce poverty. Investment, economic growth, unemployment and poverty are interrelated. Without high economic growth, it will be difficult for the government to create new jobs, causing an increase in unemployment (Mekahsari, 2012). In reducing poverty, investment is needed as a source of economic development, modernization, income growth, employment, and poverty reduction. This shows that investment is an important component in national income and economic growth (Adnan, 2010).

Current conditions show that a good human development index and high absorption of labor into existing jobs can have an impact on reducing poverty (BPS Jawa Timur, 2017). The World Bank (2004) states that one of the causes of poverty is a lack of income and assets to meet basic needs of such as food, clothing, housing, and an acceptable level of health and education. The minimum wage is imposed by the local government to trigger people's interest in working besides there are also important factors that play a very important role in increasing the provincial minimum wage, namely because of the needs of the community are increasing, the government has taken a policy of increasing wages / salaries (Sutikno et al,2019).

Based on Dita Sekar Ayu's research in 2018, the GRDP variable had a significant effect on poverty in East Java in 2010 – 2015. In the research conducted by Nilam Indah Susilowati, Dwi Susilowati, Syamsul Hadi in 2017, the GRDP variable also had a significant effect on poverty in Java. Timur in 2015 – 2016, but the object of this research is 29 villages in East Java Province. Meanwhile, in this study the GRDP did not show a partially significant effect on poverty in East Java.

Based on research by Daftian Tri Prasetyawan, Anifatul Hanim, Lilis Yuliati in 2017, investment has a partially significant effect on poverty in 2010 – 2014. However, in 2019, based on this research, it does not have a partial significant effect on poverty.

### 3. Method

This study uses two variables, the dependent variable and the independent variable.

#### 3.1. The dependent variable

The dependent variable in this study is the number of poor people in East Java Province according to districts and cities in 2019.

#### 3.2. The Independent variable

The independent variables in this study are the HDI Value of the province of East Java 2019, the minimum wage for districts and cities throughout East Java in 2019, the GRDP of the city of East Java in 2019, and the total investment (Foreign investment and Domestic investment) of urban districts in East Java 2019.

The data used is secondary data cross section, as many as 38 regencies in East Java. These data are:

1. The number of poor people in East Java according to the districts of East Java in 2019 from the Central Statistics Agency (BPS) in East Java in 2020
2. HDI values based on city districts in East Java in 2019 from the Central Statistics Agency (BPS) in the Official Gazette of the East Java Human Development Index 2019 statistics
3. Minimum Wage for City District of East Java Province in 2019 based on the governor's decision
4. GRDP value of East Java city district based on 2019 constant prices from the Central Statistics Agency (BPS) in East Java in 2020
5. Domestic investment and foreign investment data for city districts in East Java in 2019 accessed via [nswi.bkpm.go.id](http://nswi.bkpm.go.id)

The data analysis method used in this research is linear regression analysis with the Ordinary Least

Square (OLS) method and uses cross-section data in districts / cities in East Java in 2019. The models used are:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

information: Y = poverty, X1 = HDI, X2 = minimum wage for city, X3 = GRDP, X4 = investment

Classical assumption tests are normality test, heteroscedasticity test, and multicollinearity test with the help of the STATA application program. The normality test uses the Shapiro-Wilk test, this test is used because of the small sample size, namely 38 regencies. Observations were made by looking at the Prob> Z value on the Shapiro-Wilk test for normal data. If the value is more than 0.05, the residual is normally distributed.

Heteroscedasticity test used the Breusch-Pagan method. If the value shown is > 0.05 then there is no symptom of heteroscedasticity, or we can call it homoscedasticity. The multicollinearity test was carried out by looking at the Variance Inflating Factor (VIF). If the tolerance value is > 1 and VIF < 10, there are no symptoms of multicollinearity.

Significance test is carried out with the help of the STATA application program

#### 1. Coefficient of determination (R<sup>2</sup>)

The coefficient of determination (R<sup>2</sup>) is a number that provides the proportion or percentage of total variation in the dependent variable (Y) which is explained by the dependent variable (X) (Gujarati, 2003)

2. Simultaneous significance test (F test)

Used to determine whether all independent variables have a simultaneous effect on the dependent variable.

3. Parameter significance test (t test)

Conducted to show how much influence one independent variable individually has to explain the variation in the dependent variable (Ghozali, 2005).

## 4. Results and Discussion

### 4.1. Regression Test

The following are the results of the regression test using the STATA program:

TABLE 1: results of the regression test

Source	SS	df	MS	Number of obs	38
				F(4, 33)	13.67
Model	1.0206e+11	4	2.5516e+10	Prob > F	0.0000
Residual	6.1615e+10	33	1.8671e+09	R-squared	0.6236
Total	1.6368e+11	37	4.4237e+09	Adj R-squared	0.5779
				Root MSE	43210

Y	Coef.	Std. Err.	T	P> t	[95% Conf. Interval]	
x1	-10387.23	1685.01	-6.16	0.000	-13815.41	-6959.051
x2	14.29276	17.02576	0.84	0.407	-20.34641	48.93192
x3	.2651107	.1645943	1.61	0.117	-.069759	.5999803
x4	4.63826	4.648069	1.00	0.326	-4.818308	14.09483
_cons	801737.3	110215.6	7.27	0.000	577501.9	1025973

Based on the results of the regression test above, it can be seen that there is one independent variable that has a significant effect on the dependent variable, namely the HDI variable which partially influences poverty in East Java province in 2019. Meanwhile, the SME, GRDP, and Investment variables have no effect. partially significant to poverty.

The t test results show that HDI has a significant effect on poverty with a coefficient value of -10,387.18 which means that an increase in HDI by 1% will reduce poverty in East Java by 10,387 people. Based on the F test, it can be seen that the HDI, Minimum Wage for cities, GRDP, and investment simultaneously influence poverty in East Java. The result of the determination test or R2 shows the number 0.6232 which can be interpreted by

the ability of HDI, Minimum wage for city, GRDP, and investment in explaining poverty in East Java is 62.3% and the rest is explained by other variables outside the model.

### 4.2. Multicollinearity Test

TABLE 2: results of the multicollinearity test

Variable	VIF	1/VIF
x4	3.31	0.301983
x2	2.81	0.355473
x3	2.56	0.390769
x1	1.49	0.672093
Mean VIF	2.54	

Based on the results of the multicollinearity test by looking at the Variance Inflating Factor (VIF), it can be seen that the VIF value is <10 which means there is no relationship between variables in the linkage model.

### 4.3. Heteroscedasticity Test

TABLE 3: results of the heteroscedasticity test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of y

chi2(1)	3.33
Prob>chi2	0.0679

Heteroscedasticity test using the Breusch-Pagan method shows that Prob> chi2 = 0.0679 or> 0.05, which means the variance of the error term or residual is constant.

### 4.4. Normality Test

TABLE 4: Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
Res	38	0.98061	0.737	-0.640	0.73903

The results of the normality test using the Shapiro-Wilk test method indicate that the data is normally distributed. Based on the results described above, it can be seen that HDI is a very important factor in indicators of economic development in poverty

alleviation efforts, even HDI can have a partially significant effect on poverty in East Java. HDI also had a partially significant effect on poverty in East Java in 2012 – 2016, until 2019 based on the results of this study, the increase in HDI still plays an important role in alleviating poverty problems in East Java (Rentie, 2017). This is in accordance with the theory of Endogenous growth pioneered by Robert E. Lucas and Paul Romer who emphasize the importance of human resources for economic growth and development. The District or City Minimum Wage does not have a partial significant effect on poverty in East Java. The minimum wage variable has an effect on poverty in 2010 - 2015, but no longer has a partially significant effect in 2019 (Ayu, 2018).

## 5. Conclusion

Based on the research that has been done, it can be seen that the HDI variable has a negative effect on poverty in East Java in 2019, an increase in HDI by 1% can reduce the number of poverty by > 10 thousand people. Meanwhile, the variables of minimum wage for city districts, GRDP, and investment do not have a partial significant effect on poverty in East Java. However, the 4 variables have a partially significant effect on poverty in East Java in 2019. The ability of these 4 variables to explain poverty in East Java in 2019 is 62.3% and the rest is explained by other variables outside of this research model.

## References

- [1] Wiguna, V. I. and Sakti, R. K. (2012). Analisis Pengaruh PDRB, Pendidikan, dan Pengangguran Terhadap Kemiskinan di Provinsi Jawa Tengah Tahun 2005-2010. *Jurnal Ilmiah Mahasiswa FEB*, vol. 1, issue 2.
- [2] Ayu, D. S. (2018). Analisis Pengaruh Produk Domestik Regional Bruto, Tingkat Pengangguran Terbuka, IPM. *Jumlah Penduduk dan Upah Minimum Terhadap Kemiskinan Di Provinsi Jawa Timur (Tahun 2010-2015)*.
- [3] Ratih, G. A. P. A., Utama, M. S. and Yasa, I. N. M. (2017). Pengaruh Investasi, Pengeluaran Pemerintah, Tenaga Kerja Terhadap Produk Domestik Regional Bruto Dan Tingkat Kemiskinan Pada Wilayah Sarbagita Di Provinsi Bali. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, vol. 6, pp. 29-54.
- [4] Alhudhori, M. (2017). Pengaruh IPM, PDRB Dan Jumlah Pengangguran Terhadap Penduduk Miskin Di Provinsi Jambi. *Ekonomis: Journal of Economics and Business*, vol. 1, issue 1, pp. 113-124.

- [5] Paramita, A. I. D. and Purbadharmaja, I. P. (2015). Pengaruh Investasi dan Pengangguran terhadap Pertumbuhan Ekonomi Serta Kemiskinan di Provinsi Bali. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, vol. 4, issue 10, p. 44574.
- [6] Paramita, A. I. D. and Purbadharmaja, I. P. (2015). Pengaruh Investasi dan Pengangguran terhadap Pertumbuhan Ekonomi serta Kemiskinan di Provinsi Bali. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, vol. 4, issue 10, p. 44574.
- [7] Romi, S. and Umiyati, E. (2018). Pengaruh Pertumbuhan Ekonomi Dan Upah Minimum Terhadap Kemiskinan Di Kota Jambi. *E-Jurnal Perspektif Ekonomi Dan Pembangunan Daerah*, vol. 7, issue 1, pp. 1-7.
- [8] Susilowati, N. I., Susilowati, D. and Hadi, S. (2017). Pengaruh Alokasi Dana Desa, Dana Desa, Belanja Modal, dan Produk Domestik Regional Bruto Terhadap Kemiskinan Kabupaten/Kota Di Jawa Timur. *Jurnal Ilmu Ekonomi JIE*, vol. 1, issue 4, pp. 514-526.
- [9] Sutikno, R. Y., Rotinsulu, D. C. and Tumangkeng, S. Y. (2019). Pengaruh Upah Minimum dan Investasi terhadap Kemiskinan di Provinsi Sulawesi Utara. *EFISIENSI*, vol. 19 issue 1. pp.1-11
- [10] Prasetyawan, D. T., Hanim, A. and Yuliati, L. (2017). Analisis Pengaruh Investasi dan Tenaga Kerja Terhadap Pertumbuhan Ekonomi Serta Hubungannya Terhadap Kemiskinan di Provinsi Jawa Timur. *Jurnal Ekuilibrium*, vol. 1, issue 1, pp. 45-50.
- [11] Fauziah, W. E. N., Suratman, B. and Hakim, L.(2019) Education, Unemployment, Minimum Wage and Health Impact On Poverty.10(1).PP 69-7
- [12] Subanidja, S. and Suharto, E. (2014). The Dominant Factors in the Causes of Poverty Level in Indonesia.