



**Journal**  
**THE EFFECT OF GROSS REGIONAL DOMESTIC PRODUCT,  
PROVINCIAL MINIMUM WAGE, AND EDUCATION ON POVERTY  
IN DAERAH ISTIMEWA YOGYAKARTA**

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**Abstract:**

This study aims to determine the effect of gross regional domestic product, provincial minimum wage, and education on poverty in Daerah Istimewa Yogyakarta. The research method used in this study is in the form of panel data from 2015 to 2021 in Regencies/Cities in Daerah Istimewa Yogyakarta with a descriptive quantitative model. Data is presented annually obtained from BPS Daerah Istimewa Yogyakarta. Based on the results of the partial analysis, poverty is strongly influenced by the variables of gross regional domestic product and education, which is seen from the probability value which is smaller than (0.05). While the provincial minimum wage variable does not have a significant effect on poverty, which is seen from the probability value greater than (0.05). Simultaneously all research variables have a significant effect on poverty and have an influence shown by the Adjusted R-squared value is 71.44%, while the remaining 28.56% is influenced by other factors outside the model.

**Keywords:** *Poverty, Gross Regional Domestic Product, Provincial Minimum Wage, Education*

**Background**

Poverty is a fundamental problem and the focus of all governments anywhere in the world, even developed countries are still finding it difficult to alleviate poverty. The Indonesian government is no exception, which is still classified as a developing country. In some developing countries, poverty is an important issue in the economy. The phenomenon of poverty has been going on for a very long time, various programs have been attempted both from the central and regional governments to reduce poverty levels. In fact, poverty has become one of the important agendas of the SDGs (Sustainable Development Goals), which replaced the MDGs (Millennium Development Goals) at the end of 2015. The problem of poverty is not only a national problem, but also extends to various regions throughout Indonesia. One of the regions in Indonesia where poverty is still quite high is the Special Region of Yogyakarta (DIY).



The province of Yogyakarta Special Region consists of 1 city and 4 regencies, namely Yogyakarta City, Sleman Regency, Bantul Regency, Kulonprogo Regency, and Gunungkidul Regency. Most of the districts/cities in Yogyakarta Special Region have a high number of poor people, with only a few districts having a low number of poor people. The difference in the number of poor people in each district/city can serve as a reference for how big the problem is and what the government needs to do to alleviate poverty.

**Table 1. Poverty Rate in Regency/City Daerah Istimewa Yogyakarta**  
(In Percent)

No.	Tahun	Presentasi Penduduk Miskin Kab/Kota DIY (Persen)				
		Kulonprogo	Bantul	Gunungkidul	Sleman	Yogyakarta
1	2015	21.4	16.33	21.73	9.46	8.75
2	2016	20.3	14.55	19.34	8.21	7.7
3	2017	20.03	14.07	18.65	8.13	7.64
4	2018	18.38	13.43	17.12	7.65	6.98
5	2019	17.39	12.92	16.61	7.41	6.84
6	2020	18.01	13.5	17.07	8.12	7.27
7	2021	18.38	14.04	17.69	8.64	7.64

Source: BPS (2021)

It can be seen in Table 1.1 above, the striking differences in poverty rates between districts/municipalities in the Province of Yogyakarta are related to the unequal distribution of growth outcomes between regions. In addition, it can be caused by the fact that the minimum standard of living between one region and another is different, because it depends on customs, transportation facilities, geographical location, and differences in the level of welfare between regions such as differences in the quality of infrastructure, especially education, health, and markets, both in terms of availability and ease of access. One indicator of the success of development implementation that can be used as a macro benchmark is economic growth. However, although it has been used as an indicator of development, economic growth is still general and does not reflect the ability of individual communities. Regional development is expected to have a positive impact on economic growth. According to Suryono (2010), regional economic growth can be reflected in changes in Gross Regional Domestic Product (GRDP) in a region. In Syahrullah's study (2014), it is explained that GRDP affects poverty. Kuswantoro & Dewi (2016) argued that the government must be active in increasing GRDP to alleviate poverty by creating jobs.

Another factor that causes the high poverty rate in Yogyakarta Special Region Province is the minimum wage. In 2021, the Provincial Minimum Wage (UMP) of Yogyakarta Special Region was the lowest wage in Indonesia at IDR 1,765,000. Some people consider that this wage is in line with the "cheap" cost of living in Yogyakarta Special Region. However, the Provincial Minimum Wage (UMP) of Yogyakarta Special Region is still far from the UMP of other regions. Wages that are too low are not enough to fulfill the needs of daily life, making it difficult for



people to get out of poverty. Muharomi (2022) in his study found that the minimum wage has an influence in reducing the poverty rate. If the minimum wage increases, poverty decreases and vice versa if the minimum wage decreases, poverty increases. Therefore, the number of wages is very important so that people can get out of poverty.

Like the Provincial Minimum Wage, education can also influence the increase and decrease in poverty. The relationship between poverty and education is very large because education provides the ability to develop through mastery of knowledge and skills (Suryawati, 2005). Education in this study is seen from the average length of schooling. The average years of schooling indicator is used to see the quality of the population based on the formal education completed. The higher a person's level of education, the knowledge and skills will also increase so that it will encourage an increase in a person's productivity (Muharomi, 2022). Research conducted by Kurnia Dwi (2017) found that education has a negative and significant effect on poverty. Islami & Anis (2019) explain that the higher the level of education, the lower poverty will be. Because with a high level of education it will produce high productivity.

## **RESEARCH STRUCTURE**

### **Poverty**

Poverty is a complex problem that is influenced by various interrelated factors, including: income level, education, access to goods and services, location, geography, gender, and environmental conditions (Renggapratiwi, 2009). According to Kuncoro (2006), poverty is the inability of individuals or groups to meet minimum living standards. The minimum standard of living is limited or even unable to obtain a decent place to live, clean water, adequate nutrition, as well as adequate education and access to health.

Poverty is one of the things used to measure the welfare of the community, the lower the poverty rate, the more prosperous the community is. Furthermore, the World Bank (2010) defines poverty as a lack of welfare and consisting of many dimensions. It includes low income and the inability to obtain basic goods and services necessary to survive with dignity. Poverty also includes low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice and adequate capacity, and opportunities for a better life. The limited assets owned by the community are the initial cause of the problem of poverty, making it difficult for people to fulfill their needs.

### **Gross Regional Domestic Bruto**

According to the Central Bureau of Statistics, Gross Regional Domestic Product (GRDP) is the sum of added value generated by all business units in a particular region or is the sum of the value of final (net) goods and services produced by all economic units. This causes the amount of GRDP value in each region to vary. GRDP is one of the important indicators to determine the economic conditions in a region in a certain period. According to Todaro (2002), GRDP is the total value of all final outputs produced by an economy at the regional level (both those carried out by residents and residents from other regions who reside in the area).



### Provincial Minimum Wage

According to BPS (2021) the minimum wage is the lowest wage with fixed benefits but excluding overtime paid to employees based on the type of position or type of work in all districts / cities in one province. The determination of the Minimum Wage is based on the Decent Living Needs (KHL) with due regard to productivity and economic growth. The Decent Living Needs component is used as the basis for determining the Minimum Wage, which is calculated based on the living needs of workers in meeting basic needs which include the need for food 2100 kcal per day, housing, clothing, education and so on.

### Education

Based on the Law of the Republic of Indonesia Number 20 of 2003 concerning the Education System, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation, and state. According to Prof. H. Mahmud Yunus and Martinus Jan Langeveldt, education is an effort that is deliberately chosen to influence and help children with the aim of improving knowledge, body, and morals so that it can slowly lead children to their highest goals and ideals.

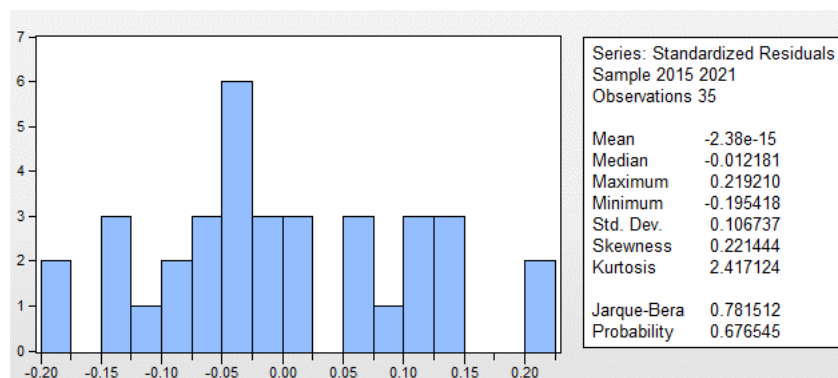
### METHOD

This study uses quantitative methods. Quantitative method is a research method that can be interpreted as a research method based on the philosophy of positivism to examine several populations or samples, analyze quantitative data for the purpose of testing predetermined hypotheses (Sugiyono, 2016). The data used in this study used panel data in the form of time series during the 2015-2021 period and a cross section of 5 districts/cities in Daerah Istimewa Yogyakarta.

### RESULT

#### Classic assumption test

#### Normality test



**Figure 1. Normality Test Results**

Source: Output Eviews 9



Based on the results of the normality test, the Jarque-Bera probability value was calculated at  $0.676545 > 0.05$ , which means the data is normally distributed.

### Multicollinearity Test

**Table 2. Multicollinearity Test Results**

	X1	X3	X2	Y
X1	1.000000	0.776361	0.395031	-0.933122
X3	0.776361	1.000000	0.406397	-0.900818
X2	0.395031	0.406397	1.000000	-0.434579
Y	-0.933122	-0.900818	-0.434579	1.000000

Source: Output Eviews 9

Based on the calculations in Table 2, there is no high correlation value between the independent variables, which does not exceed 0.90, so it is concluded that in this study there is no multicollinearity between the independent variables.

### Heteroscedasticity Test

**Table 3. Heteroscedasticity Test Results**

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.764585	Prob. F(3,31)	0.5226
Obs*R-squared	2.411307	Prob. Chi-Square(3)	0.4915
Scaled explained SS	1.441228	Prob. Chi-Square(3)	0.6959

Source: Output Eviews 9

Based on the test results, the probability value of the independent variable  $> 0.05$  means that there is no heteroscedasticity symptom.

### Hypothesis testing

#### Panel Data Regression Analysis

The Panel Data Regression Equation used by the researcher aims to estimate the dependent variable if the independent variable is increased or decreased. The following are the results of the Random Effect Model (REM) panel data regression conducted by researchers.

**Table 4. REM Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.45003	1.331751	9.348616	0.0000
LOG(X3)	-0.768413	0.362803	-2.117990	0.0423
LOG(X2)	0.052467	0.085712	0.612132	0.5449
LOG(X1)	-0.538211	0.130878	-4.112316	0.0003

Source: Output Eviews 9



Based on the results of data processing, the following results are obtained:  $Y = 12.45003 - 0.538211 \text{ Log}(X1) + 0.052467 \text{ Log}(X2) - 0.768413 \text{ Log}(X3)$ . Based on the regression equation, it can be concluded as follows: If Gross Regional Domestic Product, Provincial Minimum Wage, and Education are constant at 0 then Y (Poverty) is 12.45003. If X1 (Gross Regional Domestic Product) increases by 1% then Y (Poverty) will increase by - 0.538211. If X2 (Provincial Minimum Wage) increases by 1% then Y (Poverty) will increase by 0.052467. And if X3 (Education) increases by 1% then Y (Poverty) will increase by - 0.768413.

### t test

Based on the results of the t-statistic test at Table 4, it shows that GRDP and education have a negative effect on poverty in the Special Region of Yogyakarta with a significance value of 0.05. Meanwhile, the UMP variable has no significant effect on Poverty in the Special Region of Yogyakarta because the probability is far above 0.05, which is 0.5449.

### F test

**Table 5. F Test Results**

R-squared	0.739690	Mean dependent var	0.404904
Adjusted R-squared	0.714499	S.D. dependent var	0.099728
S.E. of regression	0.053287	Sum squared resid	0.088024
F-statistic	29.36294	Durbin-Watson stat	1.163696
Prob(F-statistic)	0.000000		

Source: Output Eviews 9

Based on the test in the table, it can be seen based on the F-count probability value of 0.000000. Calculated with a confidence level of 95%, alpha of 0.05. The probability value is smaller than 0.05, so the three independent variables simultaneously affect the dependent variable.

### Coefficient of Determination

From the table above at Table 5, the Adjusted R-squared value is 0.714499. The Adjusted R-squared value is the adjustment of R squared by the number of independent variables. In this study, the Adjusted R square result is 0.714499, meaning that the dependent variable, namely poverty, shows that it can be explained by the independent variables, namely GRDP, UMP, and Education by 71.44%, while the remaining 28.56% is influenced by other factors outside the model.

## DISCUSSION

### Gross Regional Domestic Product on Poverty in the Special Region of Yogyakarta

Based on the results of the regression analysis that has been carried out using the Random Effect Model displayed in Table 4, GRDP has a negative effect on poverty with a t-test result of -4.112316 and has a probability value of 0.0003 smaller than the significant level of 0.05, which means that the hypothesis can be accepted, namely that there is a negative and significant influence between gross regional domestic product on poverty in the Special Region of Yogyakarta.



These results are in accordance with the theory and previous research which is the theoretical basis for this study. According to Kuznet in Tulus Tambunan (2001), growth and poverty have a very strong correlation, because in the early stages of the development process poverty tends to increase and when approaching the final stage of development, the number of poor people gradually decreases. Furthermore, according to Hermanto S. and Dwi W. (2008), it is important to accelerate economic growth to reduce the number of poor people. This is because rapid economic growth will reduce poverty, which is one indicator of the success of regional development.

### **Provincial Minimum Wage on Poverty in the Special Region of Yogyakarta**

Based on the results of the regression analysis that has been carried out using the Random Effect Model shown in Table 4, the Provincial Minimum Wage has a positive effect on poverty with a t-test result of 0.612132 and has a probability value of 0.5449 greater than the significant level of 0.05, which means that the hypothesis is rejected, namely that there is a positive and insignificant influence between UMP on poverty in the Special Region of Yogyakarta.

The minimum wage has always increased every year, but this has no influence on the number of poor people in the Special Region of Yogyakarta. This result is different from research conducted by (Fajriansyah & Chandriyati, 2022) which explains that the provincial minimum wage has a negative and significant effect on poverty where the more the provincial minimum wage increases, the lower the poverty rate will be. Thus, the results of the research conducted are not in accordance with the hypothesis that has been proposed in this study. One of the reasons that the provincial minimum wage variable has no effect on poverty is the high cost of living for the community, especially in the period after the COVID-19 pandemic in 2020, which makes the determination of the minimum wage based on the Decent Living Needs still not enough, resulting in an increase in the number of poor people.

### **Education on Poverty in the Special Region of Yogyakarta**

Based on the results of the regression analysis that has been carried out using the Random Effect Model displayed in Table 4, education has a negative effect on poverty with a t-test result of -2.117990 and has a probability value of 0.0423 smaller than the significant level of 0.05, which means that the hypothesis can be accepted, namely that there is a negative and significant effect between education and poverty in the Special Region of Yogyakarta.

This is supported by the theory used in this study, that a high level of education is expected to reduce poverty. With the high level of education passed by individuals, these individuals can be educated and trained so that they can work and support themselves and not become poor individuals.

### **CONCLUSION**

Based on the results of research that has been conducted by researchers on the effect of the influence of gross regional domestic product, provincial minimum wage, and education on poverty in the Special Region of Yogyakarta in 2015-2021. Producing several conclusions



based on the results of tests conducted using the t test can be concluded that partially:

1. Gross regional domestic product has a negative and significant effect on poverty in the Special Region of Yogyakarta.
2. Provincial minimum wage has a positive and insignificant effect on poverty in the Special Region of Yogyakarta.
3. Education has a negative and significant effect on poverty in the Special Region of Yogyakarta.
4. Simultaneously, gross regional domestic product, provincial minimum wage, and education have a negative and significant effect on poverty in the Special Region of Yogyakarta.

From these results, it can be said that poverty is strongly influenced by the variables of gross regional domestic product and education. While the provincial minimum wage variable does not have a significant effect on poverty.

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