
Proceeding Medan International Conference Economics and Business

Volume 1, Year 2023

“Entrepreneurship on Global Economics Development in the Era of Society 5.0”

Analysis of the Effect of Labor, Unemployment, Poverty on GRDP in Central Java Province**Firman Dhea Saputra^{1*}, Maulidyah Indira Hasmarini¹**¹Universitas Muhammadiyah Surakarta

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Email: firmandheasaputra@gmail.com**ABSTRACT**

This research was conducted to determine how influential Employment, Poverty and Unemployment are on Gross Regional Domestic Product in Central Java Province. The analysis tool used is panel data regression. From the results of the tests carried out, the value of the coefficient of determination R^2 for the *Fixed Effect Model* model was obtained by 0.9942. The results showed that the three dependent variables, namely Employment, Poverty and Unemployment, had a significant effect on Gross Regional Domestic Product (GRDP).

Keywords: GRDP, Labor and Poverty.

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INTRODUCTION

Gross Domestic Product or GRDP is one of the important indicators to determine an economic condition in a region in a certain period. GRDP is the net value of goods and services generated from various economic activities in an area within a certain period of time. GRDP is fundamental in an economy (Bechtel and Bechtel 2020), GRDP can describe an area how its economic activities take place by managing existing resources both natural and human resources and production factors, therefore the amount of GRDP of an area can vary due to the limited resources of each region. In the economy of each sector is interdependent on each other both in energy, raw materials to the final result. Gross Domestic Product by price is an increase in the price of goods and services in the economy in a certain period of the year. According to (Hasibuan et al. 2022) Gross Regional Domestic Product is a factor in the condition to determine the economy in an area within a certain period of time while according to BPS Gross Regional Domestic Product is gross added value arising from all economic sectors in an area.

The economic development of a province can be seen from several economic indicators, one of which is through the unemployment rate. Unemployment is a macroeconomic problem that affects individuals severely (Mosikari 2013). By looking at the condition of the unemployment rate, it can be seen whether the economy is developing or slowing down and even experiencing setbacks in an area in a certain period. Even with the unemployment rate, it can also be seen inequality or inequality in the distribution of income received by the people of the area in a certain period. Unemployment can occur due to changes in the labor force that are not balanced by large employment and small employment opportunities, this is due to the low rate of job creation growth for the work-ready labor force.

(Maisaroh and Risyanto 2018) the result is that labor has a significant effect on GRDP. In national development, the role of labor is needed and its important position as an actor of development goals because this determines the economy as a productive and consumptive force. Basically the most important labor factor is in terms of quality not quantity. If the quality of labor is good, it will make an increase in production. In addition, each local government should compensate by creating jobs and absorbing as much labor as possible. If a person does not have a job or income, it will lead to a poverty line because he cannot afford a job or income to meet daily needs where one's basis for food, clothing and shelter is not met (Manzoor et al. 2019). (Igbari 2016) poverty and inequality are global phenomena because this is inseparable from the policies of the government as a service provider for its people and poverty occurs because a person does not have a job or income, therefore the whole world will not be separated from the problem of poverty because this fundamental problem is very serious for a country. If poverty still arises in a country that has received a flow of aid, it does not mean that aid is ineffective but it may be that aid has indirectly reduced the poverty level itself (Al-Khaldi 2008).

METHOD

This study used four variables, consisting of one dependent and three independent variables. Central Java's Gross Regional Domestic Product (GRDP) as a dependent variable, furthermore, the independent variables in this study include Unemployment (PNG), Poverty (KMK), Manpower (TK) from each regency/city area in Central Java Province in the 2017-2021 period. With the operative definition of variables, it will be easier to understand and

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clarify the function of using the variables to be analyzed in this study. The operational definition is as follows.

Gross Regional Domestic Product is one of the important indicators to determine the economic condition of a region in a certain period, both based on prevailing prices and based on constant price data (BPS) taken from the BPS of Central Java Province for the 2017-2021 period.

Unemployment includes people who are not working but are looking for a job, or preparing for a business, or feel that it is impossible to get a job, or have been accepted to work but have not worked (BPS Central Java) data taken from the BPS of Central Java Province for the 2017-2021 time period.

Poverty is the inability from the economic side to meet basic food and non-food needs as measured in terms of expenditure. The name of the variable in this study is KMK where data is taken from BPS Central Java Province in the 2017-2021 time period consisting of regencies/cities.

The labor force is a working-age population (15 years and older) who is employed, or has a job but is temporarily unemployed and unemployed (BPS). Data taken from BPS Central Java for the 2017-2021 period.

Data processing using data regression panels using Eviews 10 software with regression or estimation models as follows:

$$PDRB_{it} = \beta_0 + \beta_1 \log TK_{it} + \beta_2 KMK_{it} + \beta_3 PNG_{it} + \varepsilon_{it}$$

Where:

GRDP : Gross Regional Domestic Product

TK : Labor

KMK : Poverty

PNG: Unemployment

β_0 : Constant

$\beta_1 \beta_2 \beta_3$: Regression coefficient

t : Year

i : Cross section of the District

ε : Error Term

Log : Logarithm

RESULT AND DISCUSSION

Panel Data Estimation Results

This study estimates the direction and magnitude of the influence of Labor (million), Poverty (percent), Unemployment (percent). (provincial minimum wage (rupiah), and Domestic Investment (PMDN - million rupiah) against the Gross Regional Domestic Product of Java province in 2017-2021. with panel data regression. The regression results of the Common Effects Model (CEM), Fixed Effects Model (FEM), and *Random Effects Model* (REM) are shown in Table 1.

Table 1. Panel Data Regression Results

Variable	CEM		FEM		BRAKE	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
<i>C</i>	5,857	0.0000	11,479	0.0000	8,767	0.0000
<i>LOG(TK)</i>	0,882	0.0000	0,440	0.0013	0,649	0.0000

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Variable	CEM		FEM		BRAKE	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
<i>KMK</i>	-0,0692	0.0000	-0.035	0.0000	-0.035	0.0000
<i>.PNG</i>	5,614	0.0002	1,135	0.0060	-0,944	0.0155
R^2	0.644		0.9942		0.433	
<i>Adj. R²</i>	0,637		0.9926		0.423	
<i>F-stat.</i>	103,171		636,429		43,587	
<i>Prob. (F-stat)</i>	0,000		0.000		0.0000	

Model Selection Test:

(1) Chow

Cross-section $F(5, 14) = 243,874$; Prob. $F = 0.000$

(2) Hausman

Cross section random $\chi^2(3) = 10.768$; Prob. $\chi^2 = 0.0130$

Description: The dependent variable is *GRDP* (Gross Regional Domestic Product)

Chow Test Results

The Chow test is used to compare common effect models with fixed effects.

Hypothesis:

H_0 : Common Effect Model (CEM)

H_A : Fixed Effect Model (FEM)

H_0 accepted if the p-value or probability of $F > \alpha$. rejected if the p-value or probability of $F < \alpha$. H_0

Based on the results of the chow test in table 1, it can be seen that the p-value or probability of F is $0.000 < 0.01$. So H_0 is rejected, meaning that the estimation model follows the Fixed Effect Model.

Hausman Test Results

The Hausman test was used to compare fixed-effect models with randomized effects.

H_0 : Random Effect Model (REM)

H_A : Fixed Effect Model (FEM)

The thirist test criterion is that if the p-value or probability of empirical signification $\chi^2 > \alpha$, then it is accepted. If the p-value or probability of empirical signification is $< \alpha$ then it is rejected. $H_0 H_0$

Based on the results of the hausman test in table 1, it can be seen that the probability value of χ^2 is $0.013 < 0.10$, thus rejecting the notion of an estimation model using the H_0 Fixed Effect Model.

Regression Results of Selected Models

Based on the Chou and Hausman Test tests, the selected result is a Random Effect Model or REM. The results of regression using the *Fixed Effect Model* can be seen in the table below:

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Table 2. Fixed Effect Model (FEM)

PDRB it = 11.479 + 0.440 logTK it – 0.035KMK it + 1.135PNG it
(0,0000)* (0,0013)** (0,000)** (0,0060)
$R^2 = 0.9942$; $F = 636,429$; Prob. $F = 0.0000$

Source: Table 1

Description: *Significant at $\alpha = 0.01$; ** significant at $\alpha = 0.05$; significant at $\alpha = 0.10$. The number in parentheses is the probability of the statistical value t.

Model Goodness Test

Simultaneous Independent Variable Influence Significance Test (*F* Test).

The *F* test is performed to determine the influence of independent variables on the dependents simultaneously or together. The H_0 *F* test is Labor, Poverty and Unemployment together have no effect on the Gross Regional Domestic Product in Central Java province in 2017-2021. H_A of the *F* test is Labor, Poverty, Unemployment together affecting the Gross Regional Domestic Product in Central Java province in 2017-2021. H_0 is rejected if the statistical probability value of $F < \alpha$.

Based on table 2, it can be seen that the probability value of *F*-statistics is $0.000 < 0.01$; which means that H_0 is rejected, so the conclusion is that Employment, Poverty, Unemployment together affect the Gross Regional Domestic Product in Central Java in 2017-2021.

Interpretation of Coefficients of Determination and Constants

The coefficient of determination of R^2 from the regression results of the Fixed Effect Model shows a figure of 0.994, which means 99.4% of the Gross Regional Domestic Product of Central Java Province in 2017-2021. can be explained by the variables Labor, Poverty, Unemployment. While the remaining 0.6% can be explained by other variables outside the model.

Partial Independent Variable Influence Significant Test (*t*-test)

The results of the *t* test show that Labor, Poverty, Unemployment have no effect on the Gross Regional Domestic Product in 2017-2021. In more detail, the *t*-test can be seen through the table below:

Table 3. *t* Test Results

Variables	Coefficient	Prob.t	Criterion	Conclusion
logTK	β_1	0.0013	< 0.01	Significant at $\alpha 0.01$
KMK	β_2	0.0000	< 0.01	Significant at $\alpha 0.01$
.PNG	β_3	0.0060	< 0.01	Significant at $\alpha 0.01$

Source: Table 2

Interpretation of the Influence of Independent Variables

Based on the *t* test, it is known that Labor, Poverty has a significant effect on the GRDP of Central Java in 2017-2021. did not have a significant effect on GRDP in Central Java Province in 2017-2021.

The Labor Variable has a positive regression coefficient value of 0.440. The pattern of the relationship between Labor and Gross Regional Domestic Product is linear-logarithmic which means that if labor increases by 1% then GRDP will decrease by 0.0044%. Conversely, if the labor force decreases by 1%, GRDP will increase by 0.0044%.

The Poverty Variable has a negative regression coefficient value of -0.035. The pattern of the relationship between poverty and GRDP in Central Java Province is linear-linear with

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a unit of GRDP data of one million rupiah, meaning that if poverty increases by 1%, then GRDP will also decrease by -0.035 million Rupiah. On the other hand, if poverty decreases by 1%, then GRDP will also increase by 0.035 million Rupiah.

The Unemployment Variable has a positive regression coefficient value of 1.135. The pattern of the relationship between unemployment and GRDP is linear-linear with percent GRDP data units, meaning that if unemployment increases by 1%, then GRDP also decreases by 1,135 million Rupiah. On the other hand, if poverty decreases by 1%, then GRDP will increase by 1,135 million Rupiah.

DISCUSSION**The Effect of Manpower on GRDP**

From the results of the *t* test, it shows that Employment has a significant effect on GRDP in Central Java in 2017-2021, this is supported by the opinion (Hasibuan et al. 2022) which says that this happens because the available jobs are able to absorb labor optimally even though it does not fully absorb the entire workforce. An increase in the number of workers will increase the number of productive workers while with population growth will increase the size of the domestic market. The positive relationship between Manpower and GRDP shows that every increase in Manpower in Central Java is always followed by an increase in GDP because the goods and services produced also increase.

Labor is one of the factors that is an important factor in GRDP, which can determine economic growth with the total ups and downs of GRDP and the per capita income of an area itself (Work, Wages, and Planting n.d.) more labor means that the higher the level of productivity in all sectors in the Central Java region, this will contribute quite well to economic growth in Central Java. this is in line with research conducted by (Susanti, Komariyah, and Muslihatinningsih 2015), saying that more labor means higher productivity. With the existence of a workforce that can be an opportunity and need that is used with the right labor policy instruments so that the desired level of productivity will be created (Tilli 2019). This is in line with the theory where mankiw suggests that the more labor used, the more output will be produced which means that if the labor force increases then this can be explained because any increase in labor will determine the growth of output.

The Effect of Poverty on GRDP

The results of the *t* test show that poverty affects the GRDP in Central Java in 2017-2021. This is because, when poverty rises, it will reduce the level of GRDP in Central Java. It is seen from an individual point of view that this poverty is very influential on GRDP because if people are no longer productive and have no income, it will indirectly reduce their consumption expenditures, so important is it to accelerate economic growth to reduce the rate of poverty in an area (Permana and Arianti 2012). Because with a rapid increase in economic growth, it can reduce the poverty rate which is one of the indicators of the success of regional development because basically growth and poverty have a very strong correlation. (Rahmadi and Parmadi 2019) states that a development carried out by a region or country aims at how to improve the welfare of the community. GRDP is an indicator to see the level of development and economic structure in a region starting from a decrease in the minimum wage for labor will improve the economic conditions of the community, with increasing economic conditions will result in a decrease in inequality that occurs in the regions.

(Which 2017) said that the national poverty alleviation policy promotes the economic development of poor districts in the new period and increases the level of GDP.

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in poverty alleviation itself can be done using existing resources with effective management balanced with effective policies as well so that later it will be able to alleviate poverty in an area as a whole and effectively by improving the development of industrial structures (Chen 2020) . (Manzoor et al. 2019) state that the key to reducing poverty is trade promotion. Because with trading that experiences an increased volume will strengthen a demand for labor.

The Effect of Unemployment on GRDP

From the results of the t test, it can be concluded that unemployment has a significant effect on GRDP in Central Java in 2017-2021. This means that if unemployment in Central Java increases, it will reduce the GRDP rate and decrease the unemployment rate will increase GRDP in the sense that this happens because unemployment that occurs in Central Java there are no activities to produce goods and services this will result in a negative impact on the community due to low income since unemployment itself can generate various economic problems just as one has to reduce one's daily consumption expenditures due to the absence of income and this will reduce the level of prosperity they achieve (Cholili 2014) From an individual point of view it can be reviewed that unemployment will pose various problems in the economic and social for those who suffer from it. With the existence of a *state of income* can cause the unemployed to reduce their consumption expenditure when needs cannot be met, the impact will be on the category of poor people and will result in a swell in the number of poor people.

The importance of monetary policy in creating jobs (de Lima and Marques 2019), if a region does not open as many jobs as possible, it will cause problems that will occur due to unemployment in the form of increasing crime rates, weak economic growth and difficulty in equalizing income for the population. Declining welfare due to unemployment will certainly increase the chances of them being trapped in poverty because they have no income. Due to the lack of utilization of human resources, especially in terms of increasing creativity, entrepreneurship and vocational in a person, it will only always depend on opening jobs that open jobs much better because of oneself can provide jobs to someone who is unemployed and adapt the job to the abilities he has (Mubanga et al. 2019)

The relatively high unemployment rate is considered a signal to the government that the domestic economy is at the bottom level (Zhou 2021). This can mean that the government must pay more attention to the domestic economy and continue to seek capital and investors from both the private sector and the government itself for how to create a job in order to reduce the unemployment rate in the regions and the domestic economy is rising. The issue of productivity has always been one of the debatable issues in the economic world (Graffi, Alessandro Parravicini 2019) especially on labor productivity that can show the level of output for each hour worked. With growth above 10 percent and inflation maintained, it will cause a significant increase in employment and be able to reduce unemployment (Gumata and Ndou 2020).

IMPLICATIONS

From the results of the research above, it is known that Labor, Poverty and Unemployment have a significant effect on the Gross Regional Domestic Product in Central Java which consists of districts or cities, and it is known that if the labor force increases, then GRDP will decrease, and unemployment and poverty if it rises, GRDP will also fall.

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CONCLUSION

From the results of the discussion above, the author can conclude several conclusions regarding the effect of Employment, Poverty, Unemployment on Gross Regional Domestic Product in Central Java Province that labor and unemployment have a positive effect on gross regional domestic product while poverty negatively affects the gross regional domestic product of Central Java which consists of 35 districts and cities with these results showing that the equitable distribution of economic growth uneven in the Central Java region, so this equity can result in inequality such as poverty, unemployment in some areas in Central Java. With this result, the government must immediately make a careful plan on how to alleviate the problem of unemployment poverty and employment. To solve employment, the government must find investors in order to create new jobs and strive for the absorption of a large number of workers, therefore unemployment and poverty will be well alleviated because labor, poverty and unemployment correlate with each other so that with this the GRDP in Central Java can increase if this problem can be done properly.

ACKNOWLEDGEMENT

Thank God for his blessings, because for his blessing and rahmt, I was able to complete this scientific paper. The writing of this scientific paper is carried out in order to meet one of the requirements to get a bachelor's degree in Economics at the Faculty of Economics and Business, Muhammadiyah University of Surakarta. I as the author of this work realized that without help and guidance, it was quite difficult for me to complete this scientific work. I would like to thank Prof. Dr. ANTON AGUS SETYAWAN. M.Si. as the dean of the Faculty of Economics and Business, University of Muhammadiyah Surakarta who has given and taught everything during my forging studies and life there are many things that I exemplified while studying at the University of Muhammadiyah Surakarta and Ir. Maulidyah Indira Hasmarini, MP as my supervisor. I would also like to thank both my Parents and Family for providing support, encouragement and prayers to me that are never forgotten at any time.

I as a writer realize that in the preparation of this scientific work there are very many shortcomings, which I hope his constructive criticism and suggestions will be able to perfect this scientific paper. Finally, I thank you and hopefully the paper I made can be useful for those in need.

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