JRSSEM 2022, Vol. 02 No. 4, 533 – 543
E-ISSN: 2807 - 6311, P-ISSN: 2807 - 6494

DETERMINANTS OF POVERTY RATE IN EAST JAVA PROVINCE IN 2018-2020

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Submitted: 06 November 2022 *Revised*: 17 November 2022 *Accepted*: 26 November 2022

Abstract: This study aims to determine the magnitude of the determinant effect of the poverty rate in East Java in 2018-2020. This research is a study that uses secondary data obtained from the Central Statistics Agency (BPS) published results. The data used includes Gross Regional Domestic Product (GRDP), Open Unemployment Rate (TPT), population, and per capita income. The method of data collection carried out is the study of documents. The document study itself has various kinds of documents, one of which is a secondary document. Where in this document is taken from the results of other people's reports that have been published. And it will be processed using computer views 10 analysis. The analysis method used is regression analysis with the Panel Least Square (PLS) method which combines time series and cross-section data.

Keywords: poverty rate; GRDP; TPT; population; per capita income; PLS.

INTRODUCTION

In Indonesia, there are many people who are unaware of the poverty in their environment. The argument is that the people whose residences are in their rural areas are poor compared to those in cities. However, many people do not realize that even in the city there are still poor people. That's because the city people's point of view is always feeling that they have what they have, and not realizing that rural people who own agricultural land can become millionaires.

But it is different from the point of view of the poor. As one of the magnitudes of poverty is that it occurs a lot in urban areas. Because if in urban areas, many people do not have a place to live. For example, there are many who still live in the river. Most of them are people who do not have close family and are confused if they want to ask sispa for help. If it is in the countryside, there are so many families or relatives who always gather. Even the places where they live are always side by side. Even if they do business, they always ask for help from other families when they are short of capital.

Based on information sources from the Central Statistics Agency (BPS), we can find out the percentage of poverty that exists in all provinces of Indonesia. However, in the data presented in the BPS, the poverty percentage categories presented are only by province while in an effort to eradicate existing poverty, the government needs to know which areas have high, medium, or low poverty levels so that the government can set a priority scale to overcome poverty, because so far poverty alleviation carried out by the government has not been implemented optimally, because there are still many poor empowerment programs that have not been on target. Development policies and various poverty reduction programs developed often do not pay attention to the local characteristics and context of the poor. For example, high economic growth is not followed by the provision of jobs and therefore is unable to overcome the problem of poverty. The investment invested by both local and foreign countries, at this time, cannot be relied on to absorb labor. This is because there is a use of sophisticated machines so that it only slightly absorbs manpower. The investment made will be better if it is labor-intensive, so that it will increase job opportunities for the population. Limited job opportunities are one of the causes of a person becoming poor because the opportunity to earn income is getting smaller and smaller. Poverty has left millions of children unable to receive a quality education, difficulty financing health, lack of savings and no investment, lack of access to public services, lack of jobs, lack of social security and protection for families, strengthening the flow of urbanization, and worse, poverty has caused millions of people to meet limited food, clothing and shelter needs. Poverty, causes people to be willing to sacrifice anything for the safety of life, and receive wages that are not commensurate with the labor costs incurred.

The economic growth needed to reduce the number of poor people is high and quality economic growth, which is able to increase per capita income and reduce unemployment (M Kumalasari, 2011).

Many factors affect the poverty rate in East Java. One of them is the Gross Regional Domestic Product. If the GRDP decreases, it will affect the poverty rate, this is because the amount of final added value of goods and services will decrease. So the decrease in the number of goods and services affects the level of poverty.

The next factor is the open unemployment rate, the number of unemployment rates and the labor force shows the large number of people who must be included in the development process which means that the unemployment rate and the labor force are part of the population that is able to drive the economic process. This illustrates that the dynamics of the development process must be able to involve the entire labor force then a large number of the labor force it can be a burden for economic development (Muslim, 2014).

Some of the causes of unemployment in Indonesia are the level of urbanization, the level of industrialization, the proportion of the high school labor force and the provincial minimum wage. These factors also influence the percentage of data related to the unemployment rate to be slightly volatile. Based on the movement of the percentage data, a prediction is needed to find out the percentage of the unemployment rate in the future using the concept of forecasting.

Unemployment is rising as the economy shrinks. The coronavirus crisis has affected many sectors in Romania, some companies are reducing or even stopping their activities. Making estimates of the unemployment rate has a fundamental and important impact on future social policy strategies. In fact, many people have lost their jobs due to covid-19. So that many people build their own businesses and can be successful in the present day.

The third factor is that a large population if followed by adequate quality is a reliable development capital, but if the quality is low, it will actually become a burden on development. Meanwhile, the increasing number of people affects many things, namely the increase in basic needs such as clothing, food, and housing. In addition, an oversized population will drain the government's already very limited treasury to provide a variety of health, economic, and social services for the new generation. The soaring burden of financing the government budget will obviously reduce the possibility and ability of the government to improve the living standards of generations and encourage the transfer of poverty to future generations who come from lower-middle-income families (M Kumalasari, 2011).

The number of people here can be interpreted as the densely populated area in a certain area and already overpopulated. Which resulted in the area becoming many of its inhabitants and their residences increasingly cramped. So that if it happens in an outside country, every family is not allowed to have descendants again. So it is restricted to pregnant programs so that the human population in the region does not soar and the country remains stable. If the population is stable

then the economy is also more stable.

Per capita income also affects the poverty rate in East Java. One of the ways to determine the prosperity of society is per capita income. Per capita income is derived from income in a given year divided by the number of inhabitants of a State in that year. If people have high incomes or salaries, people can support their lives and save for their future costs. If people's income decreases, it is difficult for that community to make ends meet (EW Azizah, 2018).

Per capita income can be interpreted as a benchmark for understanding the human economy. Where if the per capita income or community income decreases, it will cause bad things to the economy, namely the difficulty of finances of an area or region. So they lack to support from their families and cannot meet basic needs such as clothing, food, and shelter. So people must be able to process and manage their income in order to get benefits in old age and even arguably for the future.

MATERIALS AND METHODS

A. Data and Data Sources

1. Data

The data used is secondary data which includes the results of publications from the Central Statistics Agency (BPS) in the 2018-2020 period, which includes statistics on poverty rates, Gross Regional Domestic Product (GRDP), open unemployment rates, population, and per capita income.

2. Data Sources

The source of the data obtained is only through the Central Statistics Agency (BPS) the results of publications on poverty rates, Gross Regional Domestic Product (GRDP), open unemployment rates, population, and per capita income.

B. Data Collection Methods

The method of data collection carried out is the study of documents. The document study itself has various kinds of documents, one of which is a secondary document. Where this document is taken from the results of other people's reports that have been published. And it will be processed using computer views 10 analysis.

C. Operational Definition

- The poverty rate is data used to find out how large the percentage of the population is still below the poverty line in East Java province (in percent).
- GRDP is data used to find out how much real GRDP value there is in East Java province (in units of million rupiah).
- The open unemployment rate is data used to measure how many unemployed people are unemployed in East Java province (in percentage terms).
- Per capita income is data used to measure how much per capita income is according to the prevailing price in East Java province (in units of million rupiah).
- The number of inhabitants is data used to find out how many people

there are in each district in East Java province (in units of soul).

D. Models and Analysis Tools

In this study using the Regression Analysis Tool Panel Least Square (PLS), which was formulated as follows:

$$TK_{it} = \beta_0 + \beta_1 \log GRDP_{it} + \beta_2 TPT_{it} + \beta_3 \log PG_{it} + \beta_4 \log PP_{it} + \varepsilon_{it}$$

where:
TK= Poverty Rate (%)
GRDP = Gross Regional Domestic Product constant price 2018-2020 (million rupiah)
TPT= Open Unemployment Rate (%)
PG= Total Population (soul)
PP= Per capita income price valid for 2018-2020 (million rupiah)
ε= Error term (error factor)
β_0= Constant
$\beta_1 - \beta_4$= Independent variable regression coefficient
i= Cross Section Data (district/city)
t= time series data for 2018-2020

This study aims to determine the determinants of poverty levels in east Java province. Where to find out the Effect of Gross Regional Domestic Product (GRDP), Open Unemployment Rate (TPT), population, and per capita income in 2018-2020 using the eviews 10 programs. The data analysis used is Panel Least Square (PLS) which is a combination of data between cross-section and time series data covering the period in 2018-2020 and between spaces described from several districts in East Java province. In using this panel data, there are many advantages obtained in order to maximize the results of the data obtained. One of them is being able to know more information and be more efficient. In the panel data, there are several tests, namely the chow test and the thirst test. Where in this test there are three approaches, namely the common effect model, fixed effect model, and random effect model. Of these three approaches, it will be used to find out which test is good in the panel data.

This study used a chow test to find out which model is good to use in the panel data. Which is the chow test to prove whether a common effect or fixed effect model is good is used. If common effects are selected then it does not have to proceed to the hausman test. But on the contrary, if the selected model is fixed in effect, it must conduct a hausman test. Where in the hausman test is carried out to find out whether a fixed effect model or a good random effect method is used.

RESULTS AND DISCUSSION

From the results of data processing carried out using the eviews 10 program with the Panel Least Square (PLS) regression analysis model, this research requires a chow test, which is as follows:

Table 1. Uji Chow

Redundant Fixed Effects Tests
Equation: REGRESSION
Test cross-section fixed effects

Effects Test	Statistic	D.F.	Prob.
Cross-section F	103.268824	(37,72)	0.0000
Cross-section Chi-square	454.889125	37	0.0000

Based on the table above, it can be obtained which model is good to use. As for the probability value of F = 0.0000 < 0.01, the probability of chi-square = 0.0000 < 0.01, H0 = CEM, HA =FEM. So the conclusion is that H0 is rejected, so the selected model is Fixed Effect Model (FEM). Thus, the fixed effect model is more suitable for use so this study is truly substantial. As explained above, if the chow test of the selected model is a fixed effect, the test is continued, namely the Hausman test as follows:

Table 2. Uji Hausman

Correlated Random Effects - Hausman Test
Equation: REGRESSION
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	19.441492	4	0.0006

Based on the table above, it can be obtained which model is good to use. As for the probability value = 0.0006 < 0.01, H0 = REM, HA = FEM Then the conclusion is that H0 is rejected, so the selected model is Fixed Effect Model (FEM). Thus, the fixed effect model is more suitable for use so this study is truly substantial. Because both of the selected models are fixed effect models, the fixed effect model analysis is carried out as follows:

Table 3. Fixed Effect Model Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.767629	4.756087	1.843455	0.0694
LOG(PDRB)	-1.211040	0.286938	-4.220564	0.0001
TPT	1.439540	0.624160	2.306363	0.0240
LOG(PG)	0.349996	0.295571	1.184133	0.2403
LOG(PP)	-0.021472	0.025685	-0.835982	0.4059

Based on the table above, the results of the panel data regression equation are obtained as follows:

$$TK_{it} = 8.767629 - 1.211040 \log PDRB_{it} + 1.439540 TPT_{it} + 0.349996 \log PG_{it} - 0.021472 \log PP_{it} + \varepsilon_{it}$$

The interpretation of the result of the Panel Least Square (PLS) regression equation is that the value of the constant (C) = 8.767629 which means that the probability value (0.0694) is greater than the alpha value of 0.05, so it is not significant. Then for the value of the gross regional domestic product coefficient (GRDP) = -1.211040 which means that the variable GRDP probability value (0.0001) is smaller than the alpha value of 0.05, it is significant to the poverty level. Then the value of the open unemployment rate coefficient = 1.439540 which means that the TPT variable probability value (0.0240) is less than the alpha value of 0.05, which is significant to the poverty rate. Then for the value of the coefficient of the population (PG) = 0.349996 which means that the variable number of inhabitants (PG) the probability value (0.2403) is greater than the alpha value of 0.05, it is not significant to the poverty level. Then for the value of the coefficient of per capita income (PP) = -0.021472 which means that the variable per capita income (PP) probability value (0.4059) is greater than the alpha value of 0.05, it is not significant to the poverty level.

Effect of Gross Regional Domestic Product (GRDP) on Poverty Rate

Based on table 3, it is known that the upper Probability value is 0.0001 and the coefficient is -1.211040 which shows that the GRDP variable has a negative and significant effect on the poverty rate in East Java province because the Probability value is smaller than alpha 0.05. So it can be concluded that gross regional domestic product or GRDP affects the poverty rate in East Java province.

It can be known that this gross regional domestic product affects the poverty rate because in the gross regional domestic product there is an explanation that if the GRDP decreases, it will affect the poverty rate, which means that the amount of final added value of goods and services will decrease as well. So the decrease in the number of goods and services affects the level of poverty.

Based on the value of GRDP in East Java province, it can be evaluated that GRDP is able to reduce the poverty rate because if the GRDP value increases every period, it will have a good impact on all groups including the poor in East Java province so as to reduce the poverty rate in East Java province.

Effect of Open Unemployment Rate (TPT) on Poverty Rate

Based on table 3, it is known that the upper Probability value is 0.0240 and the coefficient is 1.439540 which shows that the TPT variable has a positive and significant effect on the poverty rate in east Java province because the Probability value is smaller than alpha 0.05. So it can be concluded that the Open Unemployment Rate (TPT) affects the poverty rate in East Java province.

The effect of the open unemployment rate on the poverty rate can be caused by several factors. One of the factors is the absence of social security for the unemployed such as insurance. If there is an insurance guarantee then they will feel protected in their lives.

It is different from unemployment if the unemployed do not have guarantees and insurance or social security. So that unemployed person they will be willing to do any job in order to live a decent life. So an unemployed person is able to work for just a few hours a week to fulfill his life.

The poverty rate will also move with the unemployment rate. This is because the unemployment rate increases automatically so the poverty rate will increase. But unemployment will not always be unemployed, for example in a household there is only one who works and the other is not working (unemployed) but they have more income to support their lives.

Effect of Population (PG) on Poverty Rate

Based on table 3, it is known that the upper Probability value is 0.2403 and the coefficient is 0.349996 which shows that the population variable (PG) has a positive and insignificant effect on the poverty rate in East Java province because the Probability value is greater than alpha 0.05. So it can be concluded that the number of inhabitants (PG) does not affect the poverty rate in East Java province.

This study shows that the population does not affect the large level of poverty in East Java. Due to the success of the family planning (KB) program, it began to appear or develop. So that the distribution of the population is more dominated by the age of productive age or adolescents who can form a pyramid of good results. Similarly, teenagers are able to develop creative ideas to overcome poverty level or reduce the poverty level in East Java province.

At this time the age of productive age is considered ideal by most observers of the social economy. Because this productive age it is very dominating many provide jobs in order to encourage economic development in the province of East Java. It is considered that at a productive age they can develop their ideas and be able to analyze and try new things.

The Effect of Per capita Income (PP) on the Poverty Rate

Based on table 3, it is known that the Probability value is 0.4059 and the coefficient is -0.021472 which shows that the per capita income (PP) variable has a negative and insignificant effect on the poverty rate in East Java province because the Probability value is greater than alpha 0.05. So it can be concluded that per capita income (PP) does not affect the poverty rate in East Java province.

Based on the results of this study, per capita income is not significant or does not affect the poverty rate in the province of East Java. Per capita income here is to measure a person who does a job because if the greater the level of per capita income of the community, the greater the ability of the community to do a job.

Per capita income is a key to determining a society's prosperity. Where this per capita income is derived from the opinion of tons in a given year divided by the number of inhabitants of a country in

that year. So that person who have more income, the community is able to support their lives and is able to finance their future. Vice versa, if people's income is small or decreases, it will be difficult for people to provide for their lives.

This per capita income can also be seen from the amount of gross regional domestic product or GRDP in East Java province which is divided by the total population in East Java province. Per capita income is used to measure indicators of the level of progress or the level of well-being of the population of a region.

CONCLUSIONS

Based on the analysis that has been carried out, the following conclusions can be drawn:

1. The Least Square Panel (PLS) regression analysis model of poverty levels can result in a fixed effect model approach. The results showed that variations in poverty rates could be explained by an independent variable of 8.767629. Partially, independent variables also have a significant effect on dependent variables.
2. Gross Regional Domestic Product (GRDP) negatively and significantly affects (α = 5%) on the poverty rate.
3. The Open Unemployment Rate (TPT) has a positive and significant effect (α = 5%) on the poverty rate.
4. The Number of Inhabitants (PG) has a positive and insignificant effect (α = 5%) on the poverty rate.
5. Per Capita Income (PP) negatively and insignificantly (α = 5%) on the poverty rate.

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