



ANALYSIS OF ECONOMIC GROWTH, OPEN UNEMPLOYMENT RATE AND POVERTY RATE USING TECHNOLOGY

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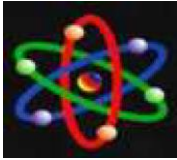
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Abstract

This study examines the effect of economic growth and the open unemployment rate on the poverty rate in Merangin District, Jambi Province. The type of data used in this study is secondary data, the poverty rate from 2010-2018, economic growth from 2011-2018, and the open unemployment rate from 2011-2018. The data were obtained from the Central Bureau of Statistics of Merangin Regency, data analysis techniques used parametric statistical analysis methods and hypothesis testing using SPSS. The purpose of this study was to determine the effect of economic growth and the open unemployment rate on the poverty rate in Merangin District. Multiple linear regression data analysis was carried out through parametric statistical assumption testing and hypothesis testing, to see whether there are similarities that can predict the dependent variable, parametric assumption tests include (1) normality test, (2) multicollinearity test, (3) heteroscedasticity test, and (4) autocorrelation test. While the hypothesis testers are (1) Determinant Coefficient Test (R Square), and (2) T test. The results of this study indicate that economic growth has no significant effect on the poverty rate, while the open unemployment rate has a positive effect on the poverty rate in Merangin District, Jambi Province. The value of the determinant coefficient is 0.224 which means that the independent variable affects 22% of the dependent variable on the poverty level in Merangin Regency, Jambi Province.

Keywords: Firm Performance, Family Ownership, Founders on Board, Political Connections, Indonesia



INTRODUCTION

Economic growth indicates performance in the economic sector so that there is an increase in goods and services produced by the community accompanied by an increase in people's welfare which is usually indicated by the growth rate of gross regional domestic product. A sign indicating that the economy of a region has developed with good results is seen from the increase in economic growth itself [1][2][3][4].

The worst thing will happen if economic growth cannot increase properly, one of which is unemployment. Economic growth must be balanced with employment, because the existence of employment will provide opportunities for people to develop their interests and earn income for their survival. The population always increases every year, if such rights cannot be balanced it will result in increasing unemployment [5][6].

The following data obtained from the Central Bureau of Statistics for Merangin Regency can be seen in the table below [7] :

Year	Percentage Economic growth
2011	7.25
2012	6.37
2013	6.45
2014	7.13
2015	5.40
2016	6.22
2017	5.40
2018	5.17

Table 1. Percentage of Economic Growth

Based on economic development in Merangin Regency

based on these data, 7.25% in 2011, 6.37% in 2012, 2013 was 6.45%, 2014 was 7.13%, 2015 was 5.40%, 2016 was 6.22%, 5.40% in 2017, and 5.17% in 2018.

With a percentage of 7.25% in 2011 and a percentage of 5.17% in 2018, it can be said that Merangin Regency has not had a stable economic growth.

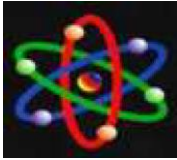
The total gross added value generated by all economic sectors in a region aims to see the measure of economic growth in a region that is often used. Increased economic growth can indicate that more and more workers will be absorbed by employment [8]. Thus the more labor absorbed will result in a reduced unemployment rate and decreased poverty. If the number of unemployed is high, it means that many people do not have the income to meet their needs, so that they have to reduce their needs. Poverty is usually described as a person's low income to meet basic needs. A person's inability to meet his needs because he does not have sufficient income will result in him being on the poverty line [9].

Poverty is said to be something that cannot be fulfilled by its basic needs, which is a population whose average spending per month is below the poverty line (Central Bureau of Statistics) [10].

RESEARCH METHODS

There are several assumptions that must be fulfilled so that the regression equation can be





valid when used to predict, the parametric assumption test contains the following data:

a. Normality test

Namely the test regarding the normality of the data, which is most widely used in parametric statistical testing, one of which is the normality test which aims to determine whether the power that has been analyzed is normally distributed. The point is that the line tapers up in SPSS processing, where the center value is at the median average.

One of the methods used is the histogram chart analysis method *and the Normal Probability Plot P-P Plot Regression Standardizer Residual*. The data is normally distributed, which can be seen in the point spread.

b. Multicollinearity Test

This test states that the independent variable and the dependent variable must be free from multicollinearity. Symptoms can be shown with a significant relationship between the independent variables. If there are symptoms of multicollinearity, the way to eliminate it is by removing one of the independent variables from the regression

model, so that the best model can be selected.

c. Heteroscedasticity Test

In this test, where the residuals are not the same from one observation to another, the absence of a certain pattern is an assumption that must be fulfilled from one observation to the next. To see the spread point of the residual standard, the test is the right test.

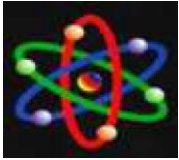
d. Autocorrelation Test

This test is a test where the dependent variable should not be correlated with itself, meaning that it is not related to the value of the variable itself.

Durbin Watson (DW) produces calculated DW values and DW tables which aim to detect whether there are signs of autocorrelation or not.

Hypothesis testing is a temporary guess or temporary answer on the basis of a theory regarding the independent variable and the dependent variable. The hypothesis is the null H_0 hypothesis and the alternative hypothesis H_a . Testing the hypothesis in this study uses the R test and t test, aiming to test the significance of the effect of the free variable (economic growth and open unemployment rate) on the bound level (poverty level).





a. Determinant Coefficient Test (R Square)

To measure how far the dependent and independent variables are, use the R test.

b. t test

To find out whether the independent variable has an influence on the dependent variable.

H_0 : There is no significant influence between economic growth and the unemployment rate on the poverty rate in Merangin District.

H_a : There is a significant influence between economic growth and the unemployment rate on the poverty rate in Merangin District.

To perform the t test there are several types, namely:

a. By comparing the values

t_{hitung} with t_{tabel}

- If $t_{hitung} \geq t_{tabel}$, then it is H_0 rejected and H_a accepted.
- If $t_{hitung} < t_{tabel}$, then H_0 accepted and H_a rejected.

b. By comparing the probability significance figures

- If the probability number is significant ≥ 0.05 , then it is H_0 accepted and H_a rejected.

- If the probability number is significant < 0.05 , then it is H_0 rejected and H_a accepted.

RESULTS

Year	Percentage of Poor Population
2010	8.07
2011	7.68
2012	8.09
2014	9.37
2015	9.80
2016	9.95
2017	9.43
2018	8.88

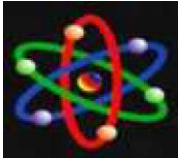
Source: Central Statistics Agency for Merangin Regency

Table 2. Percentage of Poor Population

The researcher met with the Merangin Regency Central Statistics Agency (BPS), then asked for the data he obtained regarding the percentage of poor people each year, stating the number of poor people in Merangin Regency from 2010 to 2018 which reached a percentage (9.95%), in 2011 the percentage of poor people became (32%) which in the previous year 2010 reached (8.07%) and in 2011 it became (7.68%), but in the following year namely 2012 the percentage of poor people increased to (8.09%), then in 2014 to In 2016 the percentage of poor people increased to (9.95%), and in the last year, namely 2018, it decreased to (8.88%).

Poverty has an impact on unemployment, if it increases, economic growth will slow down. The problem of poverty has something to do with the large





number of people who are unemployed, so that the percentage of poor people is always there every year. Unemployment is also included in the labor force and is willing to get a job but the results have not been obtained. In some parts, what people say is very poor can be seen in someone who is not yet working.

From the data obtained through the Central Bureau of Statistics (BPS) for Merangin Regency, we obtained the following Regency/City employment :

Year	Percentage of Unemployment Rate
2010	7.38
2011	4.55
2012	2.80
2013	6.02
2014	2.55
2015	5.38
2017	4.10
2018	3.64

Table 3. Percentage of Open Unemployment Rate (%) TPT

Efforts to follow up on the problems of unemployment and poverty are very important. In theory, people will earn income by working and their needs will be fulfilled if they can earn income [11].

Analysis of the data that the researcher has analyzed using computer *software* in the form of SPSS by carrying out several tests which of course the researchers have obtained the results so that some conclusions can be drawn and can answer the research objectives that the researchers have made.

To perform data analysis using several parametric assumption

tests, to see whether the data is normally distributed or not. To measure the extent of the regression model, several tests were carried out to produce a good model if the models were multicollinearity, autocorrelation, heteroscedasticity and normality, where the analysis results of each test used computer software in the form of the SPSS application.

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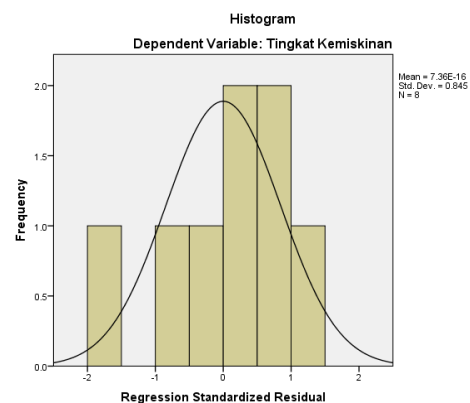


Figure 1. Normality Test



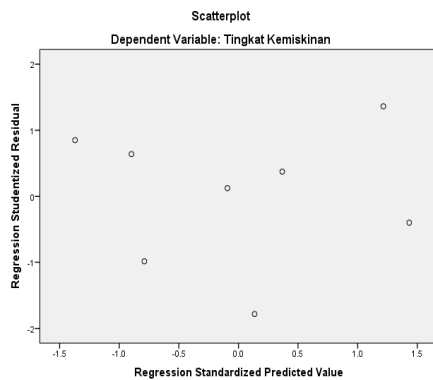
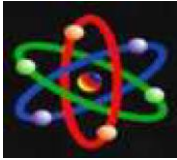


Figure 2. Multicollinearity Test

Based on the SPSS 20 output above, because the data follows the direction of the histogram line, the data is normally distributed. From the output graph, it can be seen that the shape of the poverty rate graph follows the shape of the normal distribution with a histogram that is almost the same as the shape of the normal distribution. Apart from using the histogram, the researcher also conducted a normality test using the PP Plots chart to see whether the data was normally distributed or not.

The VIF value aims to determine the existence of each predictor. Based on the data processed using SPSS, it can be concluded that the model is not affected by multicollinear problems because the VIF value is 1.

Multicollinearity test on independent variables, namely:

a. Economic growth (X1)

The VIF value (*vaiance inflation factor*) of the economic growth variable is 1,196 based on the output results above, meaning that

the conclusion is that this variable has no correlation with other variables.

b. Unemployment Rate (X2)

The VIF value (*vaiance inflation factor*) of the unemployment rate variable of 1,196 based on the output results above, the conclusion is that this variable does not experience multicollinearity with other variables.

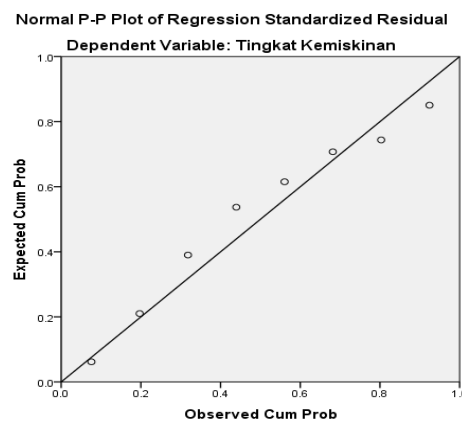
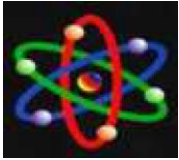


Figure 3. Heteroscedasticity Test

Based on the output of SPSS 20 obtained, it can be seen that the results of the distribution of residuals are irregular, the dots form a certain pattern which means no.

The Durbin-Watson value at the output is called the calculated DW, then this number will be compared with the acceptance and rejection criteria which will be made with a value d_L and d_U determined based on the number of independent variables in the regression model (k) and the number of samples (n), the value d_L and d_U seen in the DW table with a significant level (*error*) of 0.05, the number of independent





variables is 2 and the number of samples is 24.

The DW table shows that the value is d_L 1.188 and the value is d_u 1.541, the dw count is 1.342 which is smaller than 1.546, meaning that there is no autocorrelation so it can be concluded that there is a regression model where autocorrelation does not occur.

In the economic growth variable, the t_{count} value is 0.146 which is smaller than the t_{table} of 1.720 with a significant value of 0.304 greater than 0.05, the beta coefficient is -0.742 which means that if economic growth increases by one, the poverty rate decreases by 0.742. this means that the hypothesis in this study is not proven, then H_0 is accepted and H_a is rejected, which means that there is no positive effect on the poverty level

The coefficient of economic growth is 0.742 and the open unemployment rate is 0.193. The results of the analysis of each variable in this study are as follows:

Based on the results of the analysis concluded that there is no positive influence between economic growth on the poverty rate, based on the results of processing data using SPSS 20 the beta coefficient is -0.742 and t_{count} is -1.146 with a significant level of 0.304 which means that economic growth does not affect the poverty rate in the Regency Winking.

From the analysis of data on the open unemployment rate does not have a significant effect on the poverty rate, it can be seen in the

previous hypothesis test. Through the results of t_{count} of 0.619 which is smaller than t_{table} 1.720 with a significant level of 0.563 greater than 0.05, the conclusion is that what affects the poverty rate is the open unemployment rate, where poverty will increase if employment opportunities are limited.

CONCLUSION

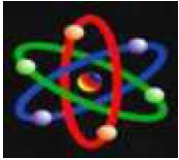
From data processing and hypothesis testing that has been done by researchers and the discussion that has been explained, there are several conclusions, namely:

1. From the results of the assumption and hypothesis test it is stated that economic growth (X1) has a negative effect on the poverty rate in Merangin Regency.
2. From the results of data processing it states that the open unemployment rate (X2) has a positive influence on the poverty rate in Merangin Regency.

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