

# Effect of Regional Expenditures, Population and PDRB (ADHB) Against the Original Revenue of Jambi Province

*by* Sudirman Susilawati

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# Effect of Regional Expenditures, Population and PDRB (ADHB) Against the Original Revenue of Jambi Province

Sudirman and Susilawati

## Abstract

This study aims to determine how much influence the number of populations, government expenditure and GRDP affect regional income in Jambi Province. This study uses a quantitative descriptive method with a form of correlational research that explains the relationship of independent variables with dependent variables. The analytical tool in this study uses multiple regression with proof of hypotheses by statistical tests t. Based on the results of SPSS calculations, the authors get the results of research in the form of government expenditure variables, PDRB and the number of residents together - they have a partially positive influence on regional income in Jambi Province due to F count (11.69973) > F table (3.41) then  $H_0$  is rejected or equal to zero. This means that all regression coefficients or all government expenditure variables, GDP and population together - have an effect on regional income in Jambi Province. From the results of the analysis in this study can be concluded, together the Regional Expenditure Variables, Population and GRDP affect Regional Original Revenue. Individually, the Regional Expenditure Variables, Population and GRDP can influence Regional Original Income, which has the greatest influence on Regional Original Revenue in Jambi Province.

**Keywords:** Regional Original Revenue, Regional Expenditure, Population, Gross Regional Domestic Income (PDRB).

## 1. Introduction

National development has the main goal to prosper society evenly in every region. If seen from a narrower scope, then regional development is carried out so that economic activity in the region can develop. This development objective will be carried out maximally by implementing one of the government's policies in the form of regional autonomy which has been effectively implemented since 2001. Regional autonomy contains the rights, authority and obligations of the regions to regulate and manage their own households based on applicable laws and regulations. With regional autonomy, each region can be biased freely maximizing local revenue (PAD) through the potential that each region has (Nabila, 2017). According to Law Number 32 Year 2004 concerning

Corresponding Author:  
Sudirman  
Sudirmans3@yahoo.com

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<sup>2</sup> Regional Government Article 1 paragraph 5 “Regional autonomy is the right, authority and obligation of autonomous regions to regulate and manage their own government affairs and interests of the local community in accordance with the laws and regulations. One measure to see regional readiness in implementing <sup>11</sup> regional autonomy is to measure how much the financial capacity of a region to carry out regional autonomy or regional government itself. One of these financial resources comes from local revenue (PAD). If the area has a low dependency towards the center, it can be said that the area is in good financial condition. In these conditions, the implementation of the provision of public services can be realized optimally so as to increase economic growth. Regional autonomy will have an influence on increasing local revenue. Regions with positive economic growth are likely to have an increase in PAD, so this can have a positive influence on the regional expenditure revenue budget, Beruttu (2017).

<sup>4</sup> Population is an important indicator in a country. Classical economists pioneered by Adam Smith even consider that population is a potential input that can be used as a production factor to increase the production of a company’s household. The more inhabitants, the more labor can be used. Because the population continues to grow, a lot has to be planned to overcome the increasing number of people.

PDRB is a factor of PAD by increasing PDRB will increase government revenues from regional taxes. Thus there will be an increase in government revenues that will encourage an increase in government services to the community which in turn will increase community productivity. Thus it will increase economic growth. Economic growth per community, it will encourage the ability of people to pay taxes and other levies (Ema, 2013). Soleh and Rochmansjah (2010) explain that the source of regional income in the context of autonomy and decentralization is currently still being mined by assistance and donations from the central government in the form of General Allocation Funds, Special Allocation Funds and Revenue Sharing Funds, while the proportion of PAD is still relatively small. Santosa and Rahayu (2005) say, the role of government in development is as a catalyst and facilitator of course requires a variety of supporting facilities and facilities, including the budget in order to implement sustainable development. Some of the expenditure is used for development administration and some for development activities in various types of important infrastructure. Shopping-shopping will increase aggregate expenditure and increase the level of economic activity. With the increase in economic activity, the flow of government revenues through PAD has also increased.

Economic growth according to Adam Smith is divided into 5 sequential stages, namely starting from the hunting stage, breeding stage, planting stage, trading stage and the last

is the industrial stage. According to this theory, society will move from traditional society to modern capitalist society. In the process, economic growth will be increasingly driven by the existence of a system of division of labor between economic actors (Kuncoro, 1997: 38-41).

<sup>2</sup> Regional Original Income is the backbone of regional financing, therefore the ability to carry out the economy is measured by the amount of contribution made by Regional Original Revenue to the Regional Budget, the greater contribution that Regional Original Revenue can make to the Regional Development Income Budget means that the local government relies less on central government assistance.

## 2. Research Methods

The data analysis method used in the study uses descriptive methods, namely the method or procedure of problem solving that is examined by describing the state of the object of research based on the facts discussed. And the quantitative method <sup>13</sup> is to collect existing data, arrange systematically, and then present the results of research to others (Gujarati, 2003).

To find out and analyze factors that influence the original income of the province of Jambi. Using multiple linear regression methods with SPSS analysis tools are as follows:

$$Y = b_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e_i \quad (1)$$

So it is simplified to be:

$$\text{Locally-generated revenue} = \beta_0 + \beta_1 \text{PDRB} + \beta_2 \text{PP} + \beta_3 \text{JLHPDD} + e \quad (2)$$

Where:

Regional original income = (Dependent)

$\beta_0$  = Constants

$\beta_1$ -3 = Coefficient

PDRB = PDRB

PP = Government Expenditures JLHPDD = Population Number

### 2.1. Classic assumption test

In conducting multiple regression analysis using the SPSS method, the model testing of classical assumptions must be done. The classic assumption test includes the following:

### 2.1.1. Multicollinearity Test

Multicollinearity is a linear relationship between independent variables. In the assumption of classical linear regression, between independent variables is not permitted to collaborate with each other. The presence of multicollinearity will cause a large variance in the regression coefficient which has an impact on the width of the confidence interval on the independent variables used. There are several indicators that can be used to detect the presence or absence of multicollinearity in a regression equation (Gujarati, 2003), among others.  $R^2$  values generated by a model estimate are very high, but many independent variables that do not significantly affect the independent variables

### 2.1.2. Heteroscedasticity Test

Heteroscedasticity is a condition where the variation of interference ( $\mu_i$ ) for each independent variable is not constant from one observation to another. Heteroscedasticity can be known by doing the Test Park. The Park Test uses the natural logarithm of the residual as the dependent variable. Where the test criteria are to look at the probability value of the t-Test. If it is significant ( $<0.05$ ), then the regression model is exposed to heteroscedasticity.

### 2.1.3. Autocorrelation Test

Autocorrelation is a condition in which a disturbance error from a certain period ( $\mu_t$ ) correlates with a confounding error from the previous period ( $\mu_{t-1}$ ). In this condition the intruder errors are not free but each other is interconnected. Detecting the presence or absence of autocorrelation can use the Multiplier Langrange Test (LM Test). In this test if the probability value of  $\text{obs} * R^2$  is not significant ( $<0.05$ ), it can be concluded that there is autocracy.

### 2.1.4. Coefficient of Determination

The goodness of the model that has been used can be seen from the coefficient of determination ( $R^2_{\text{Adjusted}}$ ), namely by showing the magnitude of the independent variable on the dependent variable in the model. Adjusted  $R^2$  value ranges from  $0 < R^2 < 1$ . The greater the  $R^2$  Adjusted value, the stronger the two variables or the model

is said to be good. While the adjusted R<sup>2</sup> value that is close to 0 means there is no relationship between the independent variable and the dependent variable.

Used to indicate whether the overall independent variables affect the dependent variable. The formulation of the hypothesis is as follows (Gujarati, 2003):

- H<sub>0</sub>:  $\beta_0, \beta_1, \beta_2, \beta_3 = 0$ , All independent variables do not significantly influence the dependent variable.
- H<sub>1</sub>:  $\beta_0, \beta_1, \beta_2, \beta_3 \neq 0$ , All independent variables significantly influence the independent variables. The formula used in this F Test is as follows:

$$F = \frac{R^2(K-2)}{(1-R^2)(N-K+1)} \quad (3)$$

Where:

R<sup>2</sup> = The coefficient of determination

N = Number of observations

K = Number of variables

While the testing criteria are as follows:

1. If F count > F table, then H<sub>0</sub> is rejected and H<sub>1</sub> is accepted.
2. If F count < F table, then H<sub>0</sub> is accepted and H<sub>1</sub> is rejected.

The t-test is used to show whether the independent effect is partially significant on the dependent. The formulation of the hypothesis is as follows (Gujarati, 2003):

- H<sub>0</sub>:  $\beta_i = 0$ , the independent variable partially does not have a negative and significant effect on the dependent variable.
- H<sub>1</sub>:  $\beta_i < 0$ , independent variables partially have a negative and significant effect on the dependent variable.

In testing the hypothesis with the t-test the following formula is used:

$$t = \frac{\beta_i}{se(\beta_i)}, \quad (4)$$

Where:

$\beta_i$  = Regression coefficient

Se ( $\beta_i$ ) = Standard regression coefficient error

while the testing criteria are as follows:

- If t count > t statistics, then H<sub>0</sub> is rejected and H<sub>1</sub> is accepted.
- If t counts < t statistics, then H<sub>0</sub> is accepted and H<sub>1</sub> is rejected.

### 3. Results

The calculation results of the tolerance value of the expenditure variable (X1) 0.980 pdrb (X2) 0.985 and the population (X3) 0.994 is greater than 0.1. Meanwhile the calculation of the Variance Inflation Factor (VIF) value on expenditure variables (X1) 0.980 pdrb (X2) 0.985 and population (X3) 0.994 is smaller than 10. So it can be concluded that there is no risk.

the DW value is 1,259, then this value will be compared with a significant table value of 5%, the number of samples  $N = 11$  and the number of independent variables 3 ( $K3 = 2.80$ ), then the value of  $du$  is 1.6882. The value of  $Dw$  is 2,300 greater than the upper limit ( $du$ ) of 1,6882 and less than  $(4-du)$   $4-1,6882 = 2,411$ . this shows  $d < d1$  so that it can be concluded that there is no auto correlation.

From the results of the analysis, the logatrima model multiple linear regression equation is obtained as follows:

$$\log PAD = 1.5232 - 0.146 \log PP - 0.024 PDRB - 0.017 \log PDD$$

Simultaneous influence Based on the results of the regression known or obtained F-count value of 0.127 and with a 95% confidence level ( $\alpha = 5\%$ )  $df = (10)$  obtained Ftable of 4.12. Thus the value of Fcount is smaller than the value of Ftable (0.127 < 4.12). This means that  $H_a$  is rejected and  $H_o$  is accepted, this can be interpreted that the independent variable (government expenditure, GDP and population) together (simultaneous) does not affect the dependent variable (regional original income) in the province during 2007-2017.

Partial influence obtained determination value of 0.52. It shows that 52 percent of regional income in Jambi province is able to explain the development of government expenditure, population and GDP, while the remaining 48 percent by other variables are not explained in the model.

On the other hand the table above was obtained by the correlation coefficient of 0.227. This means that there is an effect of government expenditure, GDP, and the number of residents on regional income in Jambi province is positive, amounting to 0.227.

After processing the data through multiple linear regression analysis tools for each regression coefficient can be obtained the following results:

In the multiple linear regression equation the results obtained are obtained by costing, which is 1,435. It is that if the government expenditure, GRDP and the number of population do not change or remain constant, then the regional income in Jambi province during the period 2007-2017 has an average increase of 1.435.



### 3.1. Variable Government Expenditures (X1)

The value for the coefficient for government expenditure is -0.146, this shows a negative influence between the variables of government expenditure with regional income variables in the province of Jambi. That is, if government expenditures are equal to 0, regional original income is -0.146 percent assuming other variables are constant.

### 3.2. PDRB variable (X2)

The value for the GDP coefficient is -0.024, this indicates a negative influence between the GDP variable and the dependent variable, namely local revenue. Where if the GRDP is 0 percent, the original regional income in Jambi province is -0.024 percent, assuming that other variables are constant, there is a negative effect on local revenue.

### 3.3. Variable Number of Population (X3)

The value for the coefficient The total population is 0.017. This shows <sup>16</sup> that there is a positive influence between the variables of the population and the regional income variable. In the meantime, if there is an increase in population of 1 percent, the regional income in Jambi province <sup>1</sup> will increase by 0.017 percent assuming other variables are constant.

## 4. Conclusion

Based on the estimation results using multiple linear regression, it can be seen that. The partial test using t-test statistics on government expenditure variables has an influence on regional income in Jambi Province, because the value of t arithmetic is 4.836343 > t table 1.76131 means that at the 0.05 percent significance level the government expenditure variable has a significant influence on Jambi Province's original income, and the GDP variable has an influence on the regional income in Jambi Province, because the <sup>6</sup> value of t count is 4.261024 > t table 1.76131 then <sup>6</sup> ho is rejected and ha is accepted, meaning that at the 0.05 percent significance level the GRDP variable has a significant influence on the provincial revenue Jambi. While the simultaneous test, namely with a statistical test that the variable government expenditure, PDRB and the number of residents together - have an influence on the regional income in Jambi Province because <sup>6</sup> of F count (11.69973) > F table (3.41) then <sup>6</sup> ho is rejected or different



with zero. This means that all regression coefficients or all government expenditure variables, GDP and population together - have an effect on regional income in Jambi Province

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