

## Analysis of the Effect of Government Expenditure, Tax Revenue, and Road Infrastructure on Economic Growth in Lampung Province

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### ABSTRACT

Economic growth is essential for the prosperity of a country. Adequate infrastructure facilities, including roads, electricity, and water, are essential to encourage economic activity and ensure equitable development and community welfare. This study aims to determine the impact of government spending, tax revenue, and road infrastructure on economic growth in Lampung Province over 11 years using the Ordinary Least Squares (OLS) method and processed with E-Views 12 software. In this study, multiple regression will be used to examine the effect of the independent variable (Government Expenditure, Tax Revenue, and Road Infrastructure) partially on the dependent variable (Economic Growth). The findings revealed that Economic growth was significantly influenced favorably by transportation infrastructure., while Road Infrastructure showed a significant negative influence. This article highlights the importance of developing a strong transportation system to boost economic growth and improve well-being.

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## INTRODUCTION

One of the reasons is contributes significantly to economic growth is the government, especially in terms of choosing and implementing the general direction of the country's program either in government expenditure, income in tax revenue, or infrastructure development. Economic growth is an economic condition that fluctuates according to the situation, tends to be a better condition, and becomes the main goal in the economic system. "If a country cannot increase its economic growth, it will cause new economic and social problems such as high levels of poverty that occur" (Salim & Fadilla, 2021).

Currently, Indonesia has introduced regional autonomy by giving responsibility to local governments to manage their economies. This can be seen from the birth of Local Government Law (No. 22 of 1999), which was later updated with Law (No. 32 of 2004), giving regions broad authority to regulate their budgets with minimal central government interference. Local governments are expected to unify various public functions and regulate the allocation of the Regional Budget (APBD) maximally to increase economic growth and community welfare.

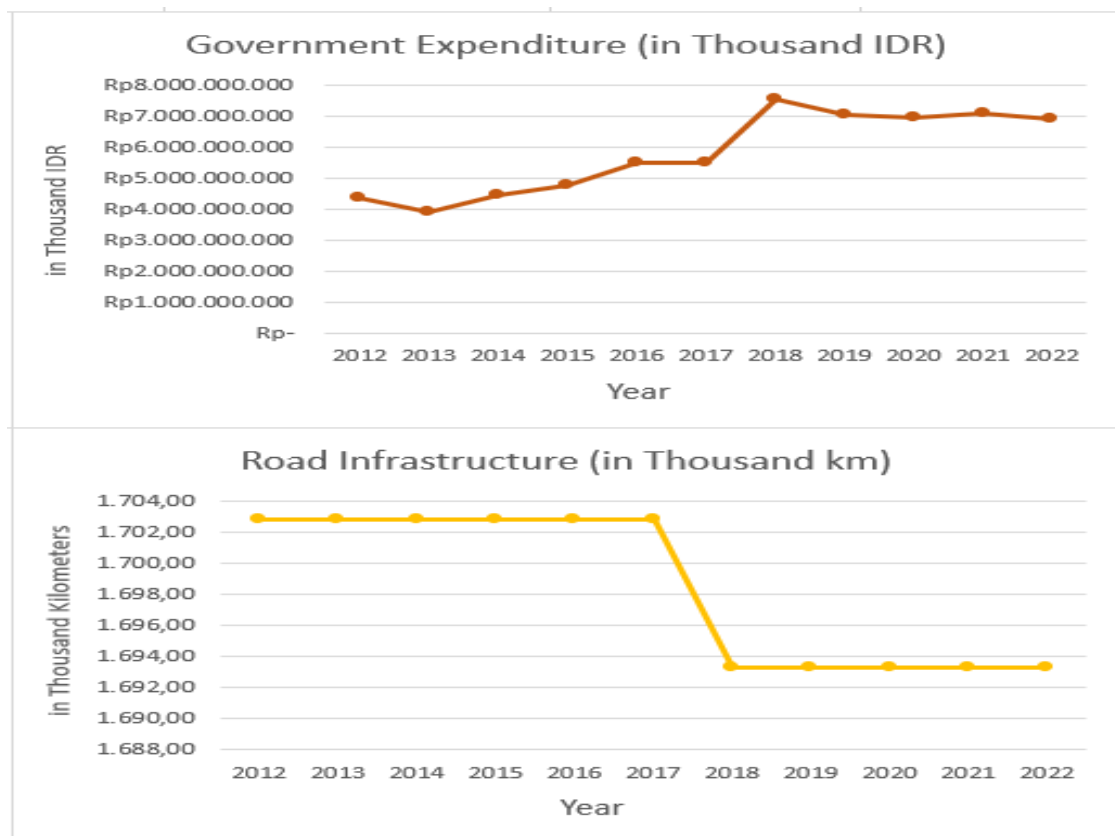


Figure 1. GRDP, Tax Revenue, Government Expenditure, Road Infrastructure  
 Source: Some sources processed by the author (2023)

Statistically from 2012 to 2022, economic growth in Lampung Province fluctuated. Of the highest GDP figures, it occurred in the last year, namely 2022, amounting to 257,534,189.65. Which experienced an increase of 0.043%, this was

driven by the positive performance of most Business Fields and an increase in the performance of Gross Fixed Capital Formation, amid moderating export performance. Likewise, tax revenue and fluctuating government spending tend to rise. However, road infrastructure stagnated and even decreased in 2017-2018 and stagnated again the following year. This is thought to be due to the many complex problems of road conditions in Lampung Province. Starting from the number of illegal parking and street vendors without permits, then road infrastructure that requires repair due to the tsunami natural disaster in 2018. "The study of development economic theory explains that to create and increase economic activities, adequate infrastructure facilities are needed. With the main infrastructure, namely roads, electricity, and water, the community can carry out economic activities that will have an impact on increasing economic growth, then also the creation of equitable economic development and certainly the welfare and prosperity of the community" (Hutajulu, 2021). Roads play an important role in stimulating and anticipating economic growth that occurs. Therefore every country makes a great investment in improving the quality and quantity of roads. "About 0.8% of the GDP of developing countries is spent on construction, track development, and road rehabilitation" (Mamahit et al., 2021). A good road system gives an advantage for a country to compete competitively in marketing its products, developing industries, distributing populations, and increasing income. "As pointed out by Owen, comparisons of income and road infrastructure are not meant to imply that a road by itself is capable of developing a country or region, but that it is a necessary element in the development process" (Queiroz & Gautam, 1992). Conversely, minimal and poor infrastructure conditions become obstacles to developing the economy. Limited road networks can inhibit the growth of an area so that economic activity can be disrupted which in turn can cause an increase in the price of an item.

## LITERATURE REVIEW

### **Economic Growth**

One of the factors driving the success of economic development is economic growth. According to (Mahzalena & Juliansyah, 2019), "economic growth is the process of expanding the productive capacity of the economy continuously or continuously from time to time to achieve an increased level of national income and production". "Another view defines economic growth as any action that increases people's output from commodities and services while improving people's welfare" (Hutajulu, 2021). Economic growth in practice refers to the physical development of the economy. Expansion of infrastructure and increased production of goods and services are three examples of actual economic growth that takes place in a nation. Economic growth indicates the extent to which economic activity, over time, provides greater income for society. "Gross Regional Domestic Product (GRDP) is one measure of the growth economy" (Wadana & Prijanto, 2021).

### **Government Expenditure**

“Government expenditure is a government action to regulate the course of the economy by determining the amount of government revenue and expenditure each year, which is reflected in the APBN document for the national and APBD for regions” (Mahzalena & Juliansyah, 2019). Government expenditure reflects government policy. “If the government has established a policy to purchase goods and services, government expenditure reflects the costs that must be incurred by the government to implement the policy” (Damaningrum, 2015). There are several scopes in defining government expenditure, such as the role of fiscal policy, micro-government expenditure, and macro-government expenditure.

H1 = It is suspected that the variable Government Expenditure affects Economic Growth

### **Tax Revenue**

Taxes according to Article 1 of Law (No.28 of 2007) concerning General provisions and tax procedures (Mononimbar et al., 2017) adalah: are: “Mandatory contributions to the state owed by private persons or entities that are coercive based on the Law, with no direct reciprocity and used for state purposes for the greatest prosperity of the people.”

Stewardship Theory explains that “The Government acts as a fiscus (steward) that has no desire to fulfill personal interests. But it prioritizes meeting the needs of the community which is also called (principal)” (Estro, 2020). In this case, the principal is a corporate taxpayer. On the other hand, the fiscus has targets that must be achieved together with corporate taxpayers, therefore the fiscus must provide maximum service to corporate taxpayers. Meanwhile, corporate taxpayers must show compliance in carrying out their tax obligations.

H2 = It is suspected that the variable of Tax Revenue affects Economic Growth

### **Road Infrastructure**

According to the Macmillan Dictionary of Modern Economics (Alie Asri, 2023), “Infrastructure is a structural element of the economy that facilitates the flow of goods between buyers and sellers”. Road infrastructure serves as a motor for economic growth in both urban and rural areas. The infrastructure sector can generate jobs for millions of employees in Indonesia through projects. Additionally, a key factor in the efficient movement of people, money, commodities, and information from one market zone to another is the state of the road infrastructure; this circumstance will enable lower prices for goods and services. So that they can be purchased by most Indonesians with lower incomes.

H3 = It is suspected that the variable of Road Infrastructure affects Economic Growth.

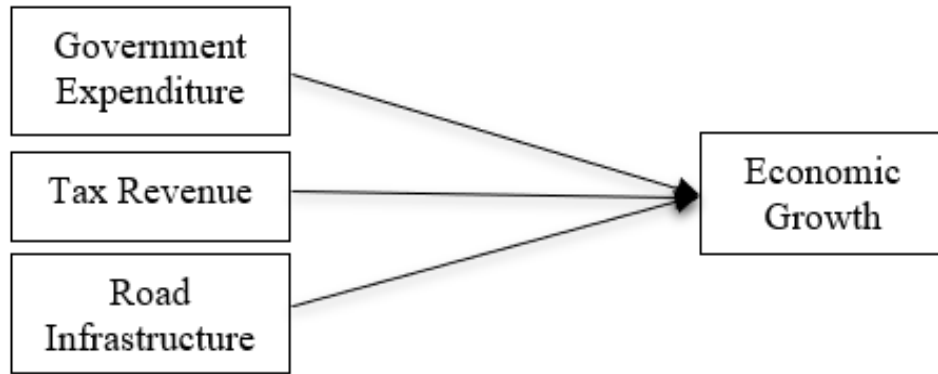


Figure 2. Hypothesis Flow

## METHODOLOGY

### Data Types and Sources

In this study, the data used were secondary. The samples to be used in this study are Government Expenditure, Tax Revenue, Road Infrastructure, and Economic Growth. This study used periodic time series data for 11 years, starting from 2012-2022. The secondary data was obtained from related agencies, namely the Central Statistics Agency (BPS) of Lampung Province.

### Data Analysis

The analysis method used to analyze government expenditure, tax revenue, and Road Infrastructure is the Ordinary Least Squares (OLS) method and is processed using E-views 12 software. By looking at multiple linear regression in this study to examine the effect between independent variables (Government Expenditure, Tax Revenue, Road Infrastructure) partially on the dependent variable (Economic Growth).

According to (Firdaus et al., 2021) the multiple linear regression equation can be expressed in the form of a formula as follows :

$$ECGRWTH = + GOVEREXP + TAXREV+ ROADINF + e$$

#### 1. *Economic Growth (Y)*

The dependent variable in this study is Economic Growth, which is a process of raising an economy's production capacity and is reflected in a rise in national revenue. The data used is Lampung Province's Economic Growth measured by Gross Regional Domestic Product (GRDP) in units of millions of rupiah (Rp) from the year 2012 until the year 2022.

#### 2. *Government Expenditure*

According to (Rai et al., 2019) "Government expenditure is a set of products produced that contain choices or decisions made by the government to provide public goods and services to the community". The data used in this study is the expenditure of the Lampung Provincial Government in units of billion rupiah (Rp) during the period 2012-2022.

### 3. Tax Revenue

Tax Revenue in this study uses Regional Tax from Lampung Province. Based on (Law No.28 of 2009) concerning regional taxes and regional levies, regional taxes hereinafter referred to as taxes are mandatory contributions to regions owed by individuals or entities that are coercive based on the law, with no direct compensation and used for regional purposes for the greatest prosperity of the people. The data used in this study is tax revenue contained in the regional tax of Lampung Province in units of billion rupiah (Rp) during the 2012-2022 period.

### 4. Road Infrastructure

Roads in Indonesia are the dominant land transportation infrastructure used by freight transportation and passenger transportation. "Roads have a strategic role in supporting economic, social, cultural, and defense and security activities, so they must be maintained properly through a good maintenance system" (Mamahit et al., 2021). In Presidential Regulation (No. 122 of 2016) road infrastructure includes public roads; Highways; bridges; and toll bridges. The study's information sources are the length of roads in Lampung Province in kilometers (km) during the period 2012-2022.

## RESULT

### Classical Assumption Test

#### 1. Normality Test

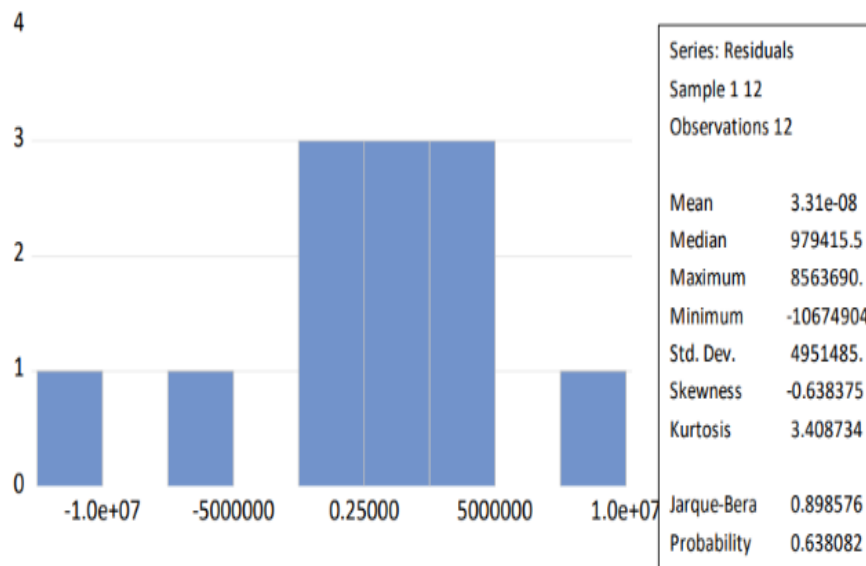


Figure 3. Normality Test

Source: Output E-Views

Based on the table above, it is explained that the estimated Jarque-Bera probability value is  $0.638082 > 0.05$ , which means that the regression model has been distributed normally.

2. *Multicollinearity Test*

Table 1. Multicollinearity Test

Variance-Inflation Factors  
 Date: 07/14/23 Time: 14:28  
 Sample: 1 12  
 Included observations: 12

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	5.68E+14	202.1941	NA
GOVEREXP	6.13E-06	72.20192	4.984206
TAXREV	5.40E-05	97.70209	5.126098
ROADINF	85788603	101.3211	1.741806

Source: Output E-Views

Based on the results in the table above, state that the VIF value of each independent variable is VIF GOVEREXP of 4.984206, the VIF value of TAXREV is 5.126098, and the VIF value of ROADINF is 1.741806. So it can be concluded that in the independent variable, there is no problem of multicollinearity.

3. *Heteroskedasticity Test*

Table 2. Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey  
 Null hypothesis: Homoskedasticity

F-statistic	1.542693	Prob. F(3,8)	0.2769
Obs*R-squared	4.397894	Prob. Chi-Square(3)	0.2216
Scaled explained SS	2.354079	Prob. Chi-Square(3)	0.5022

Source: Output E-Views

Based on the results in the table above, it is explained that the probability value of Chi-Square obtained is  $0.5022 > 0.05$ . So it can be interpreted that there is no heteroscedasticity problem.

4. *Autocorrelation Test*

Table 3. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:  
 Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.707419	Prob. F(2,6)	0.5298
Obs*R-squared	2.289741	Prob. Chi-Square(2)	0.3183

Source: Output E-Views

Based on the results in the table above, it is explained that the Chi-Square Probability value obtained is  $0.3183 > 0.05$ . So it can be interpreted that the regression model does not cause autocorrelation problems.

**Hypothesis Test**

1. *F Test*

Table 4. F Test

F-statistic	112.2043
Prob(F-statistic)	0.000001

Source: Output E-Views

Based on the table above, it shows that the calculated F value is 112.2043 with a significant value of 0.000001. Can be known the value of F-table ( $\alpha = 0.05$ ) with a degree of freedom (df1) of 3 (the number of independent variables / k) and a degree of freedom (df2) value of 12 (n-k), then the F-table can be obtained of 3.86. so that it can be known that the value of F-calculate  $112.2043 > 3.86$  with a significant value of  $0.000001 < 0.05$ . So it can be concluded that simultaneously the variables of Government Expenditure (X1), Tax Revenue (X2), and Road Infrastructure (X3) affect Economic Growth (Y) in Lampung Province.

2. *Coefficient of Determination Test (R<sup>2</sup>)*

Table 5. Coefficient of Determination Test

R-squared	0,976786
Adjusted R-squared	0,968080

Source: Output E-Views

Based on the results in the table, it is explained that the R-squared value is 0.976786, which means that the variables of government spending, tax revenue, and road infrastructure in explaining the variable of economic growth are 97.6%, then the remaining 2.4% is explained by other variables outside this study.

3. *t Test*

Table 6. t Test

Variable	t-Statistic	Prob.
C	4.643275	0.0017
GOVEREXP	3.182116	0.0130
TAXREV	4.746380	0.0015
ROADINF	-1.087499	0.3085

Source: Output E-Views

Based on the results in the table above, it explains that in making a decision, namely by comparing the t-table with the t-count. With the formula  $Dk = n - k = 12 - 4 = 8$  with a significant level of alpha 0.05. It can be obtained that the t-table value is 1.85955.

## DISCUSSION

### 1. The Effect of Government Expenditure on Economic Growth

Government expenditure has a positive and significant influence on Economic Growth in Lampung Province. This indicates that the allocation of government expenditures that have been carried out is quite good, which can affect economic growth in Lampung Province. In the reporting period, the increase in regional expenditure realization carried out by Lampung Province here was largely driven by budget absorption in Operating Expenditure items of IDR 5.15 trillion (96.25%) in the fourth quarter of 2021. Lampung Province APBD expenditure in aggregate recorded a surplus of 1.80 trillion until the first quarter of 2021 with details of expenditure realization of 3.08 trillion. "Government spending in providing public goods for the people will have a large multiplier effect on the economy" (Ladung, 2018).

### 2. The Effect of Tax Revenue on Economic Growth

Economic Growth is positively and significantly influenced by tax revenue in Lampung Province. The review indicates that the Lampung Government's regulating the regional budget, especially revenue in tax revenue, is quite good. "This tax revenue will have the potential to increase economic growth if it is used to fund productive projects or activities and has the potential to have a multiplier effect to create social welfare for all Indonesian people" (Habib Saragih, 2018). In research (Mdanat et al., 2018) it was revealed that high tax revenue will not always result in high economic growth. This happens because productive projects or activities are not funded with tax revenues. Tax reform requires an effective system of administration and cooperation between tax authorities, taxpayers, and the government as a whole. Sustainable contributions from various parties will encourage economic growth both immediately and later.

### 3. The Effect of Road Infrastructure on Economic Growth

Road infrastructure does not influence Economic Growth in Lampung Province. This is because there is no development of road infrastructure, the existence of road infrastructure also still faces many challenges, such as road congestion due to the high development of vehicles and the number of people who use private vehicles. Second, there are still roads used as illegal parking lots and many street vendors operating without permission from the government, disturbing motorists and causing congestion. Third, road infrastructure in Lampung still requires optimal repair, and unwanted natural disasters have an impact on road conditions, causing damage.

## **CONCLUSIONS AND RECOMMENDATIONS**

1. Government Expenditure (X1) is known to have a positive and significant influence on Economic Growth in Lampung Province, there is a strong relationship between these variables. If government spending is only used for employee spending or the like, then the allocation is not appropriate to support economic development even though it will have an impact on increasing economic growth. The government in Lampung Province should further optimize government spending in terms of development and summarize employee spending with the aim of development and economic growth that can develop rapidly.
2. Tax Revenue (X2) is known to have a positive and significant influence on Economic Growth in Lampung Province. The two variables are also very closely interrelated so that tax reforms are carried out to increase regional revenues from the tax sector. The government can further formulate policies that encourage public awareness in taxpayers by implementing programs such as taxpayer awareness counseling or setting up things delivered massively and comprehensively to all elements of society. The end goal is used for the prosperity of the people through economic growth and regional development.
3. Road Infrastructure (X3) is acknowledged to have no discernible impact on Economic Growth in Lampung Province. Road Infrastructure variables do not have a strong impact or real towards Economic Growth in Lampung Province. Although Road Infrastructure should be able to improve a country's economy, with better and longer roads, traffic flow will increase and the process of buying and selling or transactions will increase. However, this is not always the case, depending on the government in allocating the regional budget, especially for infrastructure development, one of which is road infrastructure.

## **ADVANCED RESEARCH**

This study still has limitations, so further research needs to be done related to the topic "Analysis of the Effect of Government Expenditure, Tax Revenue, and Road Infrastructure on Economic Growth". further research can use different economic growth objects to add insight for readers. to add insight for readers.

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