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*RESEARCH ARTICLE*

# ANALYSIS OF THE IMPACT OF INVESTMENT AND LABOR ABSORPTION ON REGENCY/CITY ECONOMIC GROWTH IN WEST KALIMANTAN, INDONESIA

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**ABSTRACT**

The purpose of this study is to determine the impact of investment and labor absorption on economic growth in West Kalimantan. The quantitative descriptive approach method was used in this study. This study was conducted in West Kalimantan. The study period was from 2018 to 2022. The analytical methods used in this study were multiple regression analysis and model selection test. The results of this study show that investment has a negative and significant effect on economic growth while labor absorption has a positive effect on economic growth.

**KEYWORDS**

Investment, economic growth, Eviews 12, panel data, multiple regression

## 1. INTRODUCTION

Economic growth is the change in number and size that occurs for each individual (Wahyu Kurniawan, 2019). Economics is the science that discusses the needs of human life. Economic growth is the long-term increase in the capacity of a nation to produce a variety of goods and services for its citizens. This capacity depends on advances in production technology. In general, growth is measured by an increase in national income per capita (GNP, gross national product).10 Specifically, economic growth means an increase in output.

LM Test Table Economic growth is the process by which the economic conditions of a country continuously change for the better over some time. An economy is said to be experiencing change in its development if the level of economic activity is higher than that achieved in the previous period. The success or failure of a region's development can be seen in terms of the level of economic growth in that region. Therefore, each region always sets a high level of economic growth targets in its regional development plans and goals. High and sustainable economic growth is the main condition for continued economic development. An important indicator of a country's economic situation over a given period of time is the Gross Domestic Product (GDP) data; the value of GDP indicates a country's ability to manage and utilize its existing resources. Economic growth, in its simplest interpretation, is the increase in output or gross national income within a given period of time (e.g., one year). A country's economy is said to be experiencing growth if real returns on the use of factors of production in a given year are greater than in the previous year (Prasetyo, 2019).

One of the goals of development is to increase economic growth, and high economic growth ensures that the benefits accrue to the broader community (Julianita, 2020). An important indicator of the economic condition of a region or locality over a given period of time is provided by data on the gross domestic product (GRDP) of the region or locality. To achieve the desired goals, a country's development is directed toward three main things. The first is to increase the availability and distribution of basic needs for society, the second is to improve people's standard of living, and the third is to improve people's ability to access both economic and social activities in their lives (Todaro, 2004).

Economic growth is the process of continuously changing a country's economic situation for the better over a period of time (Ernita, 2013). Sustainable economic growth can increase the prosperity of a society because economic growth is a measure of a country's development success. Economic growth is a long-term economic issue for a country because it is the main measure of development success, and its results are enjoyed all the way down to the lowest levels of society.

Economic growth is used as an indicator when looking at the economic development of a region. As a developing country, Indonesia's achievement of economic growth is accompanied by an increase in the number of people below the poverty line. Overcoming poverty is not limited to a cause and effect relationship; poverty is a multidimensional problem as it also involves preferences, values, and politics (Purnama, 2016). The goal of development is to eradicate poverty and to test the effectiveness of established development policies and programs using poverty as an indicator. Local development is a process whereby governments and residents manage local resources and potential, work with the private sector to develop new jobs, and promote local economic growth. (Pratama and Utama, 2019).

Development can be interpreted as efforts made to increase the growth of national-level gross domestic product (GDP) or regional-level GRDP (Pantjar Simatupang and Saktyanu K, 2003 in Ravi, 2010). The success of local economic development undertaken by both the government and the private sector to improve the welfare of residents can be measured by the magnitude of GRDP growth (Soebagiyo, 2017).

Local economic development is the process by which local governments and communities manage existing resources through a pattern of partnerships to create new jobs and employment opportunities and stimulate economic growth (Menajang, 2019). The development that is undertaken must be able to explore all the potentials that exist in each region and treat them as real benefits. These potentials include natural resource potentials, human resource potentials, cultural potentials, and other potentials that must be optimally pursued and empowered. It is critical that all existing potentials be pursued in order to further develop the capacity and independence of each region.

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One variable that influences economic growth is labor force. An increase in labor force combined with an increase in output can stimulate economic growth in a region. Economic growth also cannot be separated from labor absorption as a supporting factor affecting economic growth (Matondang, 2018). Matondang, Adam Smith's classic theory, posits that factors of production are meaningless without proper management by human resources, the beginning of economic growth (Tahir, 2018).

The labor absorption that has occurred in the districts/cities of West Kalimantan over the past six years is as follows

**Table 1:** Data on labor absorption in West Kalimantan

| No | Kabupaten/Kota | Penyrepan Tenaga Kerja | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| 1 | Sambas | 247,108 | 256,560 | 256,560 | 282,246 | 278,708 | 282,918 |
| 2 | Bengkayang | 121,998 | 128,501 | 128,501 | 135,405 | 126,749 | 131,176 |
| 3 | Landak | 189,781 | 190,837 | 190,837 | 192,344 | 192,004 | 202,555 |
| 4 | Mempawah | 109,432 | 111,942 | 111,942 | 115,985 | 111,290 | 117,570 |
| 5 | Sanggau | 225,202 | 238,055 | 238,055 | 241,987 | 242,376 | 248,149 |
| 6 | Ketapang | 201,965 | 230,233 | 230,233 | 216,390 | 234,852 | 225,481 |
| 7 | Sintang | 201,419 | 203,638 | 203,638 | 222,933 | 234,184 | 225,629 |
| 8 | Kapuas Hulu | 139,612 | 138,881 | 138,881 | 140,753 | 140,523 | 156,483 |
| 9 | Sekadau | 114,750 | 105,926 | 105,926 | 112,529 | 105,744 | 112,073 |
| 10 | Melawi | 109,604 | 104,613 | 104,613 | 112,441 | 111,710 | 117,714 |
| 11 | Kayong Utara | 42,986 | 48,743 | 48,743 | 52,386 | 53,087 | 58,109 |
| 12 | Kubu Raya | 23,927 | 239,273 | 239,325 | 269,826 | 273,284 | 266,217 |
| 13 | Kota Pontianak | 269,945 | 261,653 | 261,653 | 265,330 | 277,910 | 303,616 |
| 14 | Kota Singkawang | 90,123 | 87,974 | 87,974 | 97,741 | 100,032 | 109,833 |

Table 1 shows an increasing trend in labor force absorption from 2017 to 2022 for areas such as Sambas, Bengkayang, and Kubu Raya, but a decrease of 8,292 workers from 2017 to 2018 for Pontianak City; Ketapang and Melawai, labor force absorption decreased from 2018 to 2022. And for Kayong, there was an increase, but not as large as increases in some other areas.

Apart from labor, investment is also considered an indicator of regional economic growth. Theoretically, high growth in investment will expand employment opportunities and affect per capita income, which is a measure of economic growth.

In West Kalimantan itself, economic growth rates have increased significantly each year, indicating that increased investment is positively related to economic growth in West Kalimantan.

## 2. THEORETICAL REVIEW

### 2.1 Investment

Investment is the first step in productive activity and is a factor that enhances economic growth. Thus, investment is essentially the first step in economic development activity. The dynamics of capital investment affect high and low economic growth and reflect high and low development. The question of investment often receives many answers from development theorists and practitioners. Opinions on the importance of investment in supporting the development of developing countries began after World War II, i.e., in the 1950s and 1960s, with the discovery of growth models by development experts such as Rostow and Harrod Domar.

According to Rostow, every effort to take off requires the mobility of domestic and foreign savings to create sufficient investment to accelerate economic growth. (Todaro, 2004: 65).

#### *2.1.1 Adam smith's investment theory*

According to Adam Smith, investments are made because capital owners expect profits, and expectations of future profits depend on the investment climate today and on real profits. Smith believed profits tended to decline with economic progress. When the rate of capital accumulation increases, competition between capital owners will increase. Wages will be increased and profits earned will decrease (Jhingan, 2018 ).

The Harrod-Domar theory states that achieving high economic growth requires capital formation (investment), with high investment the economy will be strong (steady growth). Investment will increase the productivity of goods and services (Sukirno, 2011). Investment has a positive and significant effect on economic growth. Research, investment can be a benchmark for the success and sustainability of development in the future because it can absorb labor, thereby opening up new job opportunities for the community which in turn will has an impact on increasing people's income (Pratama and Suyana's ,2019)

### 2.2 Labor

Labor is also a factor that influences the output of a region. A large workforce will be formed from a large population. However, it is feared that population growth will have a negative effect on economic growth. Rapid population growth is driving the problem of underdevelopment and making development prospects increasingly remote (Todaro, 2000). Furthermore, it is said that the population problem that arises is not because of the large number of family members, but because they are concentrated in urban areas only as a result of the rapid pace of migration from villages to cities.

### 2.3 The relationship between investment and economic growth

When companies and individuals invest in assets such as factories, machines, and new technologies, they increase their ability to produce goods and services. This in turn increases economic output.

Investments in research and development, new technologies, and new product discoveries drive innovation. This innovation can produce new industries, create jobs, and increase productivity.

Investments in infrastructure such as roads, bridges, ports, and public transportation systems increase the country's production capacity. This allows goods and services to be transported more efficiently, streamlines business and opens up access to a wider market.

### 2.4 Labor relations and economic growth

When a country's economy grows, this often creates more job opportunities. Companies developed, new industries emerged, and infrastructure projects were undertaken. All of this creates demand for new workers.

On the other hand, increasing labor absorption can also drive economic growth. When more people work, they have higher incomes to spend, which increases demand for goods and services. This then drives overall business and economic growth.

### 2.5 Empirical study

Investment has a positive and significant effect on economic growth in Indonesia (Sari, 2016). On the other hand, investment does not have a significant impact on economic growth in the province of Bali.The labor absorption has a significant influence on economic growth (Purba, 2020). Meanwhile, another research results showed that the labor absorption variable had no significant effect on economic growth (Menajang, 2020)

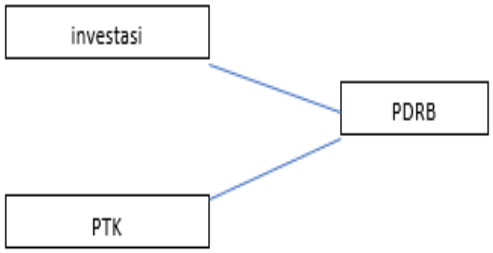


**Figure 1:** Conceptual framework

### 2.6 Research hypothesis

$H_1$ : Investment has a significant effect on economic growth in West Kalimantan

$H_2$: Labor absorption has a significant effect on economic growth in West Kalimantan

### 2.7 Research question

- Does investment affect economic growth in West Kalimantan?
- Does labor absorption affect economic growth in West Kalimantan?

### 2.8 Research purposes

- Examine and analyze the effect of investment on economic growth in West Kalimantan
- to examine and analyze the effect of labor absorption on economic growth in West Kalimantan.

## 3. METHOD

### 3.1 Research Plan or Design

Descriptive quantitative methods were used in this study. The data sources used were information collected by others and data processed by the researchers themselves. The data used were obtained from institutions such as BPS West Kalimantan. Types and Sources of Data.

Because of the way they were obtained, the data used were secondary, i.e., data published by competent associations and institutions. Data sources were obtained from various sources, namely the Central Bureau of Statistics (BPS). The data used are periodic (time series) and the cross-section covers the five years from 2018 to 2022.

### 3.2 Data analysis method

Eviews12 was used for data processing. The method used in this study is a descriptive analysis method with a quantitative approach using multiple regression analysis tools. The independent variables are government spending and the labor force. The dependent variable is GDP.

The analysis used in this study is a multiple regression model. Multiple regression analysis is a linear relationship between two or more independent variables (X1, X2 ..... Xn) and a linear relationship between the dependent variable (Y). This analysis is to determine the direction of the relationship between the independent and dependent variables, to determine whether each independent variable is positively or negatively related, and to predict from the value of the dependent variable if the value of the independent variable will experience an increase or decrease.

Since this study consists of three variables, multiple regression is used. The equation for this study examines the extent to which the independent variables, investment and labor absorption, affect the 2013-2022 GRDP for West Kalimantan, and the panel data regression model is formulated as follows:

$Yit = \alpha + \beta 1$ Investment it + ε it

Information:

α = Intercept

Y = Economic growth

β1 = Investment

β2 = Labor Absorption

ε it = Error

i = Regency/City Order

t = Series 2017-2022

## 4. RESULTS AND DISCUSSION

### 4.1 Descriptive analysis of data

This study examines the impact of investment and labor absorption on economic growth in West Kalimantan using panel data regression analysis methods.Selection of Panel Data Regression Models.

Regression models were selected to ensure correct data processing and analysis of the food variables. Three models can be used in panel data regression analysis: the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM). In selecting the best model among these three models, the Chow test, Hausman test, and Lagrange multiplier test should be used. The following are the results of the Chow test, Hausman test, and Lagrange multiplier test used in this study: Data Source: Eviews Processing Data 12, 2024.

**Table 2:** Chow test

| Uji model | Nilai Probalitas | Keputusan |
|---|---|---|
| Uji Chow Test | 0,0000 | Fixed Effect Model |

From the table of Chow tests, we see that the probability of the cross-section F is 0.0000 < α = 0.05. Therefore, the decision is made to reject H0 and accept H1, i.e., the model used is a fixed effects model.

**Table 3:** Hausman test

| | | |
|---|---|---|
| Hausman Test | 0.2058 | Fixed Effect Model |

The Hausman test results show that the probability value of Random Crossion is 0.2058 > rather than α = 0.05. The decision is to reject H1 and accept H0. This means that the best model to use is the Random Effects Model (REM) as a result of the three tests conducted.

**Table 4:** LM Test Table

| **Lagrange multiplier (LM) test for panel data** | | | |
|---|---|---|---|
| Date: 04/22/24 Time: 19:04 | | | |
| Sample: 2017 2022 | | | |
| Total panel observations: 84 | | | |
| Probability in () | | | |
| Null (no rand. effect) | Cross-section | Period | Both |
| Alternatives | One-sided | One-sided | |
| Honda | 12.00001 | -1.316683 | 7.554250 |
| | (0.0000) | (0.9060) | (0.0000) |
| SLM | 13.30314 | -1.134916 | -- |
| | (0.0000) | (0.8718) | -- |
| GHM | -- | -- | 144.0001 |
| | -- | -- | (0.0000) |

From the test results above, there is a robustness value smaller than 0.05. Thus, the best model to use is the Fixed Effects Model (FEM).

| **Table 5:** FEM model table | | | | |
|---|---|---|---|---|
| Dependent Variable: C | | | | |
| Method: Least Squares Panel | | | | |
| Date: 04/22/24 Time: 19:40 | | | | |
| Sample: 2017 2022 | | | | |
| Periods included: 6 | | | | |
| Cross-sections included: 14 | | | | |
| Total panel (balanced) observations: 84 | | | | |
| **Variables** | **Coefficient** | **Std. Error** | **t-Statistics** | **Prob.** |
| X1_INVESTMENT | -5.903367 | 8.10E-09 | -0.728378 | 0.4689 |
| X2_PTK | 4.133345 | 2.03E-07 | 20.34902 | 0.0000 |
| Y_PE | 3.563233 | 5.42E-09 | 6.576013 | 0.0000 |
| C | 45.7888 | | 98.74444 | 0.0000 |

| | | | |
|---|---|---|---|
| | Effects Specification | | |
| Cross-section fixed (dummy variables) | | | |
| R-squared | 0.928837 | Mean dependent var | 4734325. |
| Adjusted R-squared | 0.913139 | SD dependent var | 5603349. |
| SE of regression | 1651431. | Akaike info criterion | 31.64183 |
| Sum squared resid | 1.85E+14 | Schwarz criterion | 32.10484 |
| Log likelihood | -1312.957 | Hannan-Quinn Criter. | 31.82795 |
| F-statistic | 59.16989 | Durbin-Watson stat | 1.742912 |
| Prob(F-statistic) | 0.000000 | | |

| **Table 6:** Equation model | | |
|---|---|---|
| **Variable** | **Coefficient** | **Probality** |
| Constant | 45.7888 | 0.0000 |
| X1 Investment | -5.903367 | 0.0000 |
| PTK | 4.133345 | 0.0000 |
| Economic growth | 3.563233 | 0.0000 |

From this model, the regression equation can be prepared as follows: PE = C 45.7888 + -5.903367 investment + 4.133345 PTK

Statistic test

F test

This shows that the value is smaller than the significance level (0.000 < α 0.05), statistically H0 is rejected and H1 is accepted. This means that investment and simultaneous employment together have an effect on economic growth T test.

Based on the data processing that has been carried out

- The Effect of Investment on Economic Growth Based on the results of the t test, it can be seen that the investment probability obtained is 0.000, which is smaller than the alpha value of 0.05 with a t-statistic value of 0.5248, this shows which means that district/city investment wages partially have a significant negative effect on economic growth. .
- The effect of labor absorption on economic growth . Based on the results of the t test, it can be seen that the probability of labor absorption is 0.000, which is greater than the alpha value of 0.05, meaning that district/city labor absorption partially has a significant positive effect on economic growth.

### 4.2 Adjusted R-Squared

The adjusted R-squared value indicates how well the independent variable explains the variance of the dependent variable. The adjusted R-squared value for the FEM model is 0.0928837. The adjusted R-squared value indicates that 92.8% of the variance in the dependent variable is explained by the independent variables, and the remaining 7.2% is explained by other variables outside the model.

### 4.3 R-Squared (R2)

R2 describes how well the independent variables together can explain the dependent variable; we can see that the R2 value for the FEM model is 0.913139. This means that the independent variables, government spending and working population, are both influential and can explain 91.33% of GRDP. The remaining 8.67% is explained by variables outside the model (€), such as investment, inflation, and interest rates.

## 5. Conclusions

In West Kalimantan, investment has had a significant negative impact on economic growth, and increased domestic investment does not necessarily translate into a positive increase in GRDP. The government is strictly selective in granting investment licenses, prioritizing investments in capital such as machinery to improve production efficiency and product quality and quantity. This approach can reduce labor absorption by focusing on more automated and efficient production processes.

Labor absorption, which has a positive effect on economic growth, is crucial to a country's development. The conclusions that can be drawn from the positive relationship between labor absorption and economic growth are as follows

As more labor is absorbed, production in different economic sectors tends to increase. This is because more human resources are involved in the process of producing goods and services.

## Suggestion

Economic policies should focus on creating more jobs. Programs to encourage growth in labor-intensive sectors could be strengthened. For example, incentives for companies to develop sectors that require large numbers of labor, such as manufacturing, modern agriculture, tourism, and other services.

Investments in education and skills training help prepare the workforce for existing jobs and those expected to grow in the future. Training programs that meet the needs of the job market make workers more competitive and facilitate the absorption of workers into sectors that need them.

Even though investment has negative effects, this does not mean that we can ignore investment altogether. Policies can be put in place that encourage more productive and sustainable investment. For example, labor absorptive capacity can be increased by providing incentives for investment in technologies that improve production efficiency.

## ADVANCED RESEARCH

This study still has many shortcomings in both the method of analysis and the variables used. This study could be used as a reference for other studies by adding independent variables that may be very dominant in influencing economic growth. It would also be possible to add additional analytical methods to provide a comprehensive description of the variables to be studied next.

## CONFESSION

I would like to thank the course instructors and friends for helping me complete this article. Without the help and prayers of my friends, I would not have been able to complete this article.

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