


## **The Effect of Domestic Investment and Foreign Investment and Labor on The Gross Regional Domestic Product of Regencies in East Kalimantan**

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### **Abstract**

The purpose of this study is to determine the influence of domestic investment, foreign investment and labor on gross regional domestic product. The data used is secondary data in the form of data on the realization of domestic investment, the realization of foreign investment, and the number of labor forces working in 10 districts/cities of East Kalimantan in the period 2017-2023. The analysis model used was a regression of panel data processed using Eviews-12. The results of the study show that domestic investment, foreign investment, and labor have a positive and significant influence on the gross regional domestic product of districts/cities in East Kalimantan.

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## INTRODUCTION

Each region wants to achieve high and sustainable economic growth where the economic conditions of the region change continuously towards a better state. High economic growth can increase people's living standards, expand jobs, and increase people's income. The economic growth of an area can be considered to increase if economic activities in the area are running well. To see economic growth in a region, it can be seen from the amount of Gross Regional Domestic Product (GDP) from each region which is expected to grow continuously every year. (Sukirno, 2020; p. 170)

East Kalimantan Province is one of the regions that has the largest GDP in Indonesia, this can be seen from East Kalimantan Province to be ranked 7th largest in 2023, which is IDR 537.63 trillion. This large Gross Regional Domestic Product is dominated by the mining, plantation, and services sectors. However, if you look at all regencies/cities in East Kalimantan, the GDP growth of each region is uneven. The highest Gross Regional Domestic Product (GDP) in 2023 is dominated by Regencies/Cities which are the largest mining producers, namely Kutai Kartanegara with a value of Rp.135.41 trillion, East Kutai with a value of Rp.104.66 trillion and Balikpapan with a value of Rp.97.06 trillion. This is inversely proportional to the GDP of Mahakam Ulu Regency which is only Rp.1.85 trillion and North Penajam Paser which is Rp.9.65 trillion. This must be the attention of the central government, especially to take policies that help encourage the growth of the GDP value of districts/cities whose values are still far behind in order to reduce inequality between regions.

According to Neo-Classical theory, there are several ways to increase economic growth in a region, including by increasing investment, whether from within or outside the country, labor absorption and technological advancement. An investment is an attempt to obtain funds to double current capital goods to create new products in the future. Harrod-Domar's theory states that investment is the key to economic growth, this is based on its nature that can increase income and increase production capacity. (Jhingan, 2018; p. 183) (Jhingan, 2018; p. 229)

As investment increases the factors of production, including labor, greater production capacity will result in greater labor demand, so that the economy as a whole can absorb as much labor as possible. The more labor is absorbed, the greater the national production output which will increase economic growth.

Looking at previous research conducted by where this study analyzes the Influence of Foreign and Domestic Investment and Government Expenditure on Gross Regional Domestic Product. The results of his research show that the number of Foreign Investment, Domestic Investment, and Government Expenditure in Regencies/Cities of South Kalimantan province in 2011-2015 has a positive and significant effect on the Gross Regional Domestic Product in South Kalimantan. Another study was conducted that analyzed the influence of Labor, Domestic Investment, and Foreign Investment on Economic Growth in East Kalimantan in 2009-2017. The study shows that Labor and Foreign Investment have a positive and significant effect on economic growth, while Domestic Investment has a positive but insignificant effect on Economic Growth in East Kalimantan. (Khairunnisa et al., 2017) (Rachmad, 2019)

### **Gross Regional Domestic Product**

An important benefit of GDP data is to determine the level of economic growth achieved by the country from year to year. National income in its calculation is based on two systems, namely the prevailing price and the fixed price. Harrod and Domar maintain the opinion of earlier economists who emphasized the role of capital formation in creating an increase in economic activity. Gross regional domestic product is the sum of the value of the net output of the economy from economic activities in a region. (Sandono Sukirno, 2020).

## **Investment**

Investing is a strategic effort to generate and grow wealth over time. In economic theory, investment is defined as spending on the purchase of capital goods and production equipment to replace or increase capital goods that will be used in the future to produce goods and services in the economy. Harrod-Domar defended the views of classical economists and Keynes, emphasizing the role of capital growth in creating economic growth. (Sadono Sukirno, 2009)

## **Workforce**

Labor force can be defined as the population of working age (aged 15-64 years) or the total population in a country who can produce goods and services if there is a demand for their labor, and if they are willing to participate in such activities. (Mulyadi, 2008)

## **Relationships Between Variables**

### **The Influence of Domestic Investment on Gross Regional Domestic Product**

Capital formation is absolutely necessary in an effort to accelerate the growth of gross regional domestic product, because it is needed to finance development so that national production can be increased and for the expansion of work. Neo-classical economic theory also explains that the main factors that determine the growth of a country are capital and labor. This encourages countries to make policies regarding the ease of investors to invest their capital, especially capital from within the country.

### **The Influence of Foreign Investment on Gross Regional Domestic Product**

One of the characteristics of developing countries is the small availability of capital, efforts to mobilize domestic savings through taxation and public loans are almost not enough to increase the rate of capital formation, in fact these steps will cause a decline in consumption standards and make the people suffer more. Foreign investment can help reduce capital shortages experienced by developing countries Along with money, and physical capital, foreign capital also brings technological knowledge and trains local workers with new skills so that local workers are more skilled (Jhingan, 2018) so that in this case it increases the output of gross regional domestic products.

### **Influence of Labor on Gross Regional Domestic Product**

Population growth over time can be both a driver and an inhibitor of economic growth, in this case gross regional domestic product. The growing population will increase the number of workers so that the region can increase production. The increase in population in an area will result in market expansion which results in an increase in production output and an increase in public consumption. Because of this role, population development or in this case labor can encourage an increase in national product and the level of economic activity so as to encourage the growth of gross regional domestic product in a region.

## **METHOD**

The type of data used in this study is secondary data. Secondary data is in the form of panel data in the form of cross section data from ten districts/cities in East Kalimantan and time series data for the period from 2017 to 2023. The secondary data was obtained from the publications of related agencies, namely the Central Statistics Agency (BPS) and the One-Stop Investment and Integrated Services Office (DPMPTSP). The analysis tool used in this study is the application of E-views 12 with the panel data regression analysis method.

The model chosen in this study is the Fixed Effect model so that in this study the following equations are produced:

$$Y = \beta_0 + \beta_1PMDN1it + \beta_2PMA2it + \beta_3TK3it + \alpha_i + \mu_{it}$$

Information:

Y : Gross Regional Domestic Product

b : parameter

PMDN : domestic investment

PMA : Foreign Investment

Kindergarten : Labor

i : cross section 10 Regencies/Cities in East Kalimantan

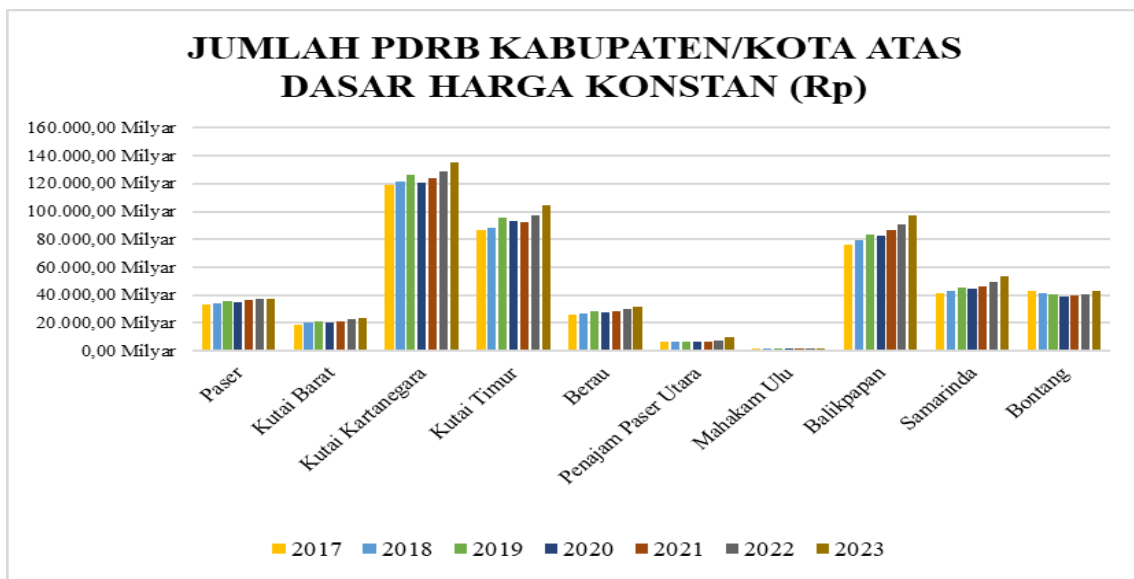
t : Time Series 2017-2023

a : unobserved factor, showing the value of the difference between cross sections

$\mu$  : distrubance error

## RESULTS AND DISCUSSION

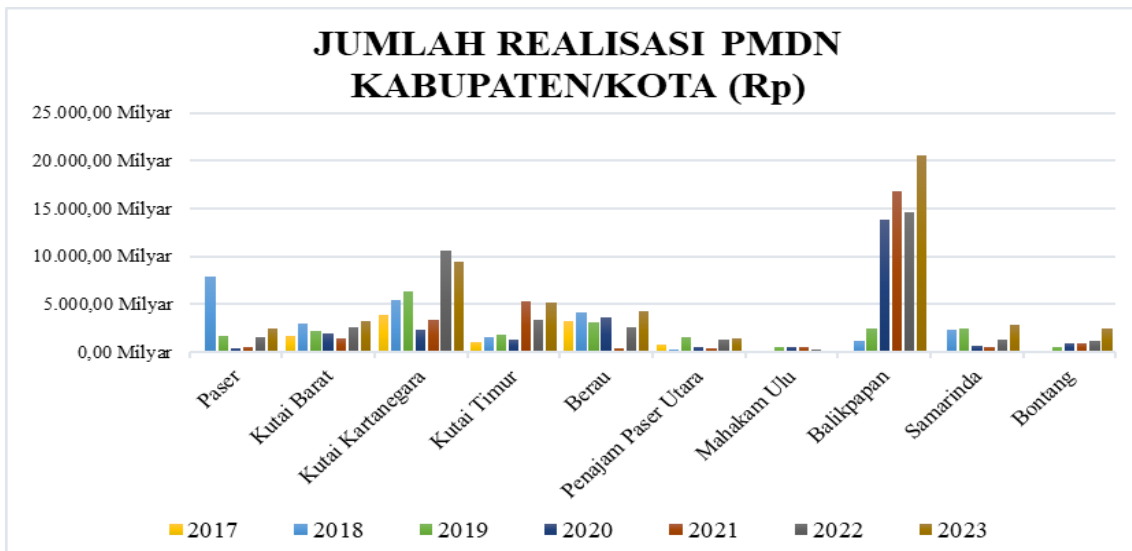
The Gross Regional Domestic Product (GDP) in East Kalimantan Province in 2017 to 2023 continues to grow every year, in 2017 the value of East Kalimantan's GDP was Rp.452,741.91 billion and in 2023 it will be Rp.537,630.01 billion. To see the comparison between districts/cities, we can look at the following graph: (Central Bureau of Statistics, 2024b)



**Figure 1. Graphics Total Gross Regional Domestic Product at Constant Prices in Regencies/Cities of East Kalimantan Province in 2017 to 2023**

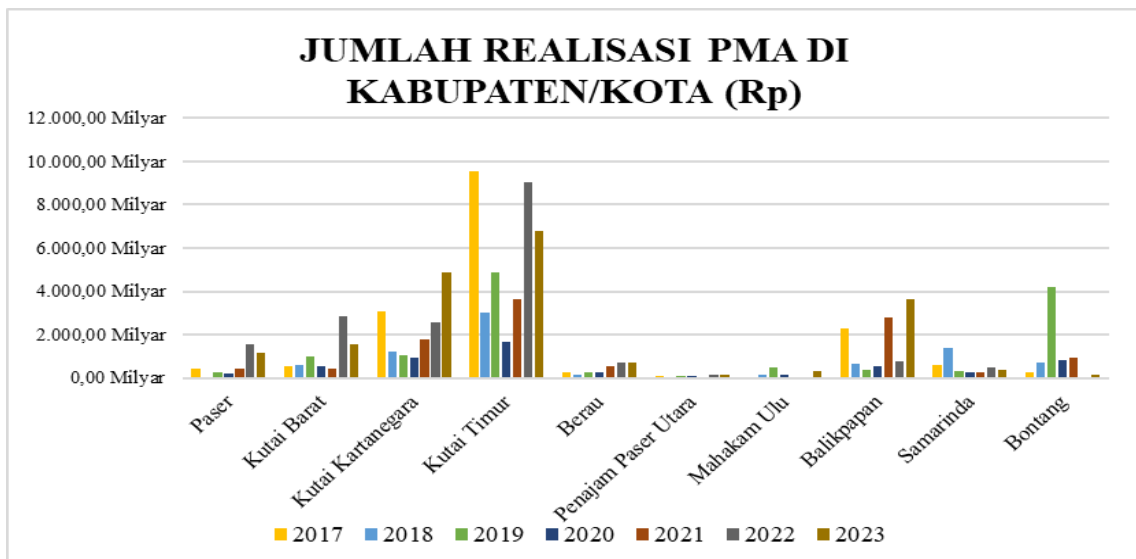
From the graph 1, it can be seen that the GDP of districts/cities in East Kalimantan has experienced fluctuating growth with the highest GDP value in Kutai Kartanegara district which in 2017 amounted to Rp.118,943.86 billion and continues to increase to Rp.135,406.05 billion in 2023, while the lowest GDP is in Mahakam Ulu district with a GDP value in 2017 of Rp.1,589, 56 billion and in 2023 it will be Rp.1,852.96 billion.

One of the important factors to increase economic growth or in this study, namely GDP is investment, whether from within or outside the country, an increasing investment is expected to increase the value of GDP in each district/city. The value of domestic investment in districts/cities in East Kalimantan can be seen in the graph below:



**Figure 2. Graphics Number of Domestic Investment Realizations in Regencies/Cities of East Kalimantan Province in 2017 to 2023**

In graph 2, it can be seen that the value of domestic investment or in this case the value of the realization of Domestic Investment (PMDN) in each district/city in East Kalimantan has experienced fluctuating growth. From the graph, it can be seen that in 2023 the highest PMDN value is in the city of Balikpapan with a realization value of Rp.20,501.29 billion and the lowest is in Mahakam Ulu district which only has a realization value of Rp.189.19 million.

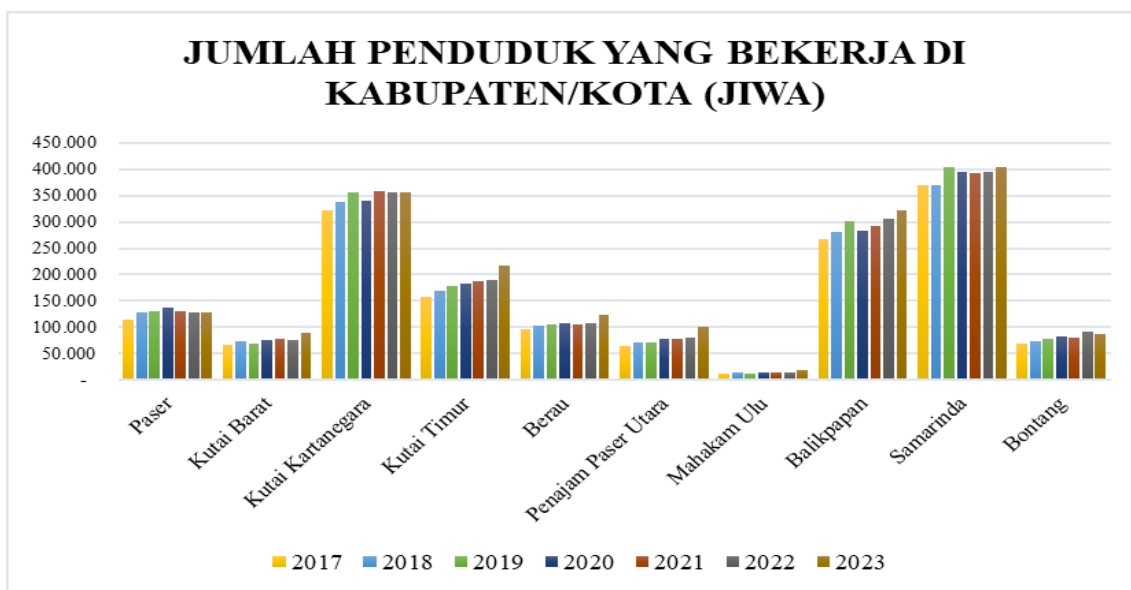


**Figure 3. Graphics Number of Foreign Investment Realizations in Regencies/Cities of East Kalimantan Province in 2017 to 2023**

In addition to increasing domestic investment, the government also needs to open and increase opportunities for foreign investors to invest their capital in each district/city, in this study, the value of Foreign Investment (PMA) realization.

In graph 3, it can be seen that the value of FDI in each district/city in East Kalimantan has experienced fluctuating growth. The highest FDI realization value in 2023 is in East Kutai district with a FDI realization value of Rp.6,781.89 billion and the lowest is in the city of Bontang with a FDI realization value of Rp.151.69 million.

In addition to increasing capital investment, one way to increase economic growth in an area is by increasing labor absorption, the more people who work will also increase people's purchasing power who will produce output or GDP in the region. The growth of the workforce from each district/city in East Kalimantan can be seen in the following table:



**Figure 4. Graphics Number of Population Aged 15 years and above Working by Regency/City in East Kalimantan in 2014 to 2023**

In figure 4, it can be seen that the number of workers working from each district/city in East Kalimantan from 2017 to 2023 tends to continue to increase every year. The area with the most workers in 2023 is the city of Samarinda with a workforce of 403,138 people and the lowest is in Mahakam Ulu district which only has a workforce of 19,177 people.

**Simultaneous Test (F-Test)**

Based on the results of the analysis using the Eviews 12 software, an F-Statistic value of 2245.996 and a probability value of F of 0.0000 were obtained, which can be concluded that all independent variables or variables of domestic investment, foreign investment, and labor together affect the related variables or in this study is the gross regional domestic product in districts/cities in East Kalimantan.

**Partial Test (t-test)**

The t-test aims to show how much influence the independent variables of domestic investment, foreign investment, and labor have on the dependent variables of gross regional domestic product. The table can be found by looking at the significance rate of 5 percent and the degree of freedom  $df=(5 \text{ percent}/2 ; n-k-1)$  then  $df = (0.05/2 ; 70 - 4 - 1) = 1.997$  So the value of the table is 1.997. The following is a table of partial test results or t-test.

**Table 1. Test Results t**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.18E+10	3.92E+09	3.017837	0.0038
PMDN	0.366963	0.094095	3.899915	0.0003
PMA	0.503820	0.201216	2.503881	0.0152
Kindergarten	206526.5	23666.41	8.726567	0.0000

**Domestic Investment to Regency/City GDP in East Kalimantan**

The value of the coefficient of PMDN is positive at 0.366963. For a calculated value of 3.899915 or greater than the table of 1.99656 and a probability value of 0.0003 or less

than 0.05, this shows that the H1 hypothesis is accepted or that Domestic Investment has a positive and significant effect on the Gross Regional Domestic Product is proven.

### **Foreign Investment to Regency/City GDP in East Kalimantan**

The value of the coefficient of PMA is positive 0.503820. For the tcal value of 2.503881 is greater than the ttable of 1.99656 and the probability value is 0.0152 less than 0.05, which indicates that the H2 hypothesis is accepted or Foreign Investment has a positive and significant effect on the Gross Regional Domestic Product is proven.

### **Labor Against Regency/City GDP in East Kalimantan**

The value of the coefficient of Labor is positive 206526.5. For the tcal value of 8.726587 is greater than the ttable of 1.99656, the probability value is 0.00 which means it is less than 0.05. This shows that the H3 hypothesis is accepted or that Labor has a positive and significant effect on the Gross Regional Domestic Product.

## **R2 (Coefficient of Determination) Test Results**

After conducting the analysis, the R-squared value was obtained of 0.997890 which means that the dependent variable, namely GDP which is influenced by the independent variables of domestic investment, foreign investment, and labor by 99.78 percent and the remaining 0.22 percent is influenced by variables outside the research variable.

### **Research Results**

This study aims to determine the influence of Domestic Investment, Foreign Investment, and Labor on Gross Regional Domestic Product in 10 East Kalimantan Regencies/Cities from 2017 to 2023. Based on the results of data processing using the fixed effects method, the following equations were obtained:

$$\text{GDP} = 11833752073700.8 + 0.3669 \text{ PMDN} + 0.5038 \text{ PMA} + 206526.48 \text{ TK}$$

Information:

- From the results of the regression equation of the panel data, a coefficient of constant value of the number of 11,833,752,073,700.8 has been obtained, which means that if Domestic Investment, Foreign Investment and Labor have a value of 0, then the value of the Gross Regional Domestic Product is Rp.11,833,752,073,700.8. Next, it will be explained about the value of the coefficient for each independent variable:
- The value of the regression coefficient in the Domestic Investment variable (X1) is 0.3669 and has a positive value. This value can be concluded that Domestic Investment has a positive effect on GDP. It can be interpreted that if there is an increase in Domestic Investment by 1 percent, it will increase GDP by 0.3669 percent in 10 districts/cities in East Kalimantan.
- The value of the regression coefficient in the Foreign Investment variable (X2) is 0.5038 and has a positive value. This value can be concluded that Foreign Investment has a positive effect on GDP. It can be interpreted that if there is an increase in foreign investment by 1 percent, it will increase GDP by 0.5038 percent in 10 districts/cities in East Kalimantan.
- The value of the regression coefficient in the Labor variable (X3) is 206,526.48 and has a positive value. This value can be concluded that labor has a positive effect on GDP. It can be interpreted that if there is an increase in labor by 1 percent, it will increase GDP by Rp.206,526.48 in 10 districts/cities in East Kalimantan.

## CONCLUSION

Based on the results and discussion of the analysis that has been carried out in the previous chapter, the conclusions that can be drawn in this study are as follows:

- Domestic investment has a positive and significant effect on the Gross Regional Domestic Product. This shows that if domestic investment increases, or in other words if the realization value is in accordance with the domestic investment plan, it will increase the Gross Regional Domestic Product in East Kalimantan Regencies/Cities.
- Foreign investment has a positive and significant effect on the Gross Regional Domestic Product. This shows that if the realization value is in accordance with the domestic investment plan, it will increase the Gross Regional Domestic Product in East Kalimantan Regencies/Cities.
- Labor has a positive and significant effect on the Gross Regional Domestic Product. This shows that if there is an increase in labor, it will increase the Gross Regional Domestic Product in East Kalimantan Regencies/Cities.

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