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The Effect of Foreign Investment And Domestic Investment on The Gross Regional Domestic Product in Indonesia (Survey of 34 Provinces for 2019-2022)

Muhammad Ali*, Ingrid Larasati Agustina, Tria Apriliana, Syafrizal Ikram, Suryana, Dudi Abdul Hadi
Faculty of Economics and Business, Widyatama University
*Correspondence: muhammad.ali@widyatama.ac.id

Abstract. The purpose of this study was to determine the effect of foreign investment and domestic investment on gross regional domestic product in Indonesia. The research subjects are 34 provinces in Indonesia for the period 2019 – 2022. This research was conducted in Indonesia. This type of research is quantitative research. The data used in this study are secondary data obtained from the Indonesian Central Bureau of Statistics. The research method used in this study is the explanatory method. Data analysis techniques in this study are descriptive analysis and panel data regression analysis. The results of this study simultaneously indicate that there is an influence of foreign investment and domestic investment on gross regional domestic product. Partially, there is no effect of foreign investment on gross regional domestic product, while domestic investment has an effect on gross regional domestic product.

Keywords : domestic investment; foreign investment; gross regional domestic product

INTRODUCTION

Gross Domestic Product (GDP) and Gross Regional Domestic Product (GRDP) are indicators of economic growth. GDP and GRDP are theoretically the same. The concept and method of calculation are the same. The only difference between GDP and GRDP is the area covered. Simply put, GDP is a term that is used at the country level. GRDP is used at the regional level, such as provinces, districts/cities, and sub-districts (Studiekonomi.com, 2021). According to the Central Bureau of Statistics, Indonesia's economic growth will reach a cumulative (c-to-c) figure of 5.31% in 2022. The term c-to-c refers to GDP based on cumulative constant prices up to a quarter compared to the same cumulative period the previous year. This performance cannot be separated from the calculation of the GDP of each region. What is the contribution and growth of each region? In terms of contribution, Java Island is the region that contributes the most to the Indonesian economy at 56.48% (c-to-c).

The growth rate in 2022 is only 5.31%. The second largest contributor came from Sumatra which reached 22.04%. On the other hand, the growth rate is 4.69%. In terms of growth, Maluku and Papua are the islands with the fastest growth, with a growth rate of 8.65% in 2022. However, in terms of contribution to Indonesia, Maluku and Papua only contribute 2.50%. BPS said that Indonesia's economy is considered supportive in 2022, but is overshadowed by global geopolitical pressure from increased community activity during Covid-19. GRDP is the total value added of goods and services produced by various production units in an area and is usually calculated in one year. GRDP can also be used to determine the capacity, movement, and economic structure of a region's economic resources (databoks.katadata.co.id, 2023).



Source: processed data

Figure 1
GRDP Growth and Contribution in Indonesia in 2022

National Income or GDP is very closely related to investment. Investment in the form of increased capital expenditure has a positive impact on the business production process which

is more active and also on increasing household consumption. Until the first semester of 2020, the Investment Coordinating Board found that investment realization reached IDR 402.6 trillion, covering 49.3% of the 2020 realization target. This is good news considering the unfavorable situation caused by the pandemic. Seeing these figures, the board is optimistic that Indonesia can achieve its 2020 investment realization target.

So what are the details of the role of investment in economic recovery? First, this investment is positively correlated with the country's infrastructure development. While GDP growth will boost the government's development efforts, the government will also work actively to build infrastructure to support and attract investors. Second, this investment will also strengthen the business environment. The more investments and investments are made, the more new businesses are created. Such as micro, small, and medium enterprises (MSME), medical devices and housing, these are some of the business fields that are developing during this pandemic. Third, many start-ups will create more jobs, clearly supporting increased consumer purchasing power and household consumption.

The Indonesian government has made many efforts to encourage economic growth, especially the role of investment in Indonesia's economic recovery. One of the most popular is the opening of the Manado-Bitung Toll Road. This will further enrich the prospects for investment and tourism in the North Sulawesi region. Since then, the government has also provided various guidelines to encourage investment in Indonesia. By restructuring labor-intensive investments and building partnerships with economic players, including MSMEs, it is hoped that Indonesia can optimize the role of investment in its economic recovery. It can be said that the focus of the Indonesian government itself is not only on recovering the Indonesian economy, but also on ensuring that the Indonesian economy continues to grow in the coming years through a strong investment base (mediaanalisisindonesia.co.id).

Literatur Review

Gross Regional Domestic Product

A country's economic growth is closely related to the welfare of its citizens, which is also an indicator of the country's economic health. Economic growth can be defined as the development of economic activities resulting in increased goods and services produced by society. The problem of economic growth can be seen as a macroeconomic problem in the long term. Increasing the ability of a country to produce goods and services from one period to anothe (Sukirno, 2008). National income is the result obtained by each member of the community or family household who is directly employed or consumed at a certain time or year. The Financial Services Authority defines national income as the value of all goods and services received by a country as income from the production of goods and services over a certain period of time (usually one year).

Gross Domestic Product (GDP) data is an important indicator to measure the countr*ie*s economic situation in a certain period of time. Gross Domestic Product (GDP) is basically the sum of value added created by all business units in a country or the sum of final goods and services produced by all business units. GDP at current prices is the value of goods and services added to annual prices while GDP at constant prices is the value added of those goods and services in one year. GDP can be used to monitor changes in current prices and the structure of the economy. Constant prices are used to determine economic growth each year. The GDP of a region is the sum of the added value of all economic sectors in the region. Gross value added is production (output) minus intermediate consumption. Gross value added includes depreciation of income (wages and salaries interest rent and profits) and net indirect taxes. So if we calculate the gross value added for each sector and add them up the result is regional GDP at market prices (Tarigan, 2005).

The Gross Regional Domestic Product (GRDP) is a key indicator of the countrys economic conditions over a certain period of time in terms of current and constant prices. GRDP is basically the sum of value generated by all entities in a country or the sum of goods and services produced by all entities in a sector (BPS, 2023). The monetary price of GRDP is the incremental price of goods and services calculated on the basis of current prices while the constant price of GRDP is the incremental price of goods and services calculated on the basis of current prices. value function. Gross domestic product at current prices is used to determine the mobility of economic resources and economic structure in a region. A constant GRDP on the other hand tends to determine

year-to-year real economic growth or economic growth independent of factor prices. GRDP can also be used to determine price changes by calculating the GRDP deflator (implied index change). The implied price index is the ratio of regional GDP in currency prices to GDP in constant prices. Three accounting methods are used to calculate GDP: the production method the accrual method and the income method.

Foreign Investment

Foreign investment is an investment activity carried out in the territory of the Republic of Indonesia by foreign investors or fully supported by foreign capital or domestic investment (Sihombing, 2009). Foreign investment in article 1 includes foreign direct investment carried out in Indonesia in accordance with the provisions of this Law and the investor shall bear the investment loss directly. The following is the definition of foreign investment in article 2.

1. Foreign payment instruments that are not included in Indonesia's foreign exchange reserves are used by Indonesian companies with the permission of the government.
2. Business equipment brought into Indonesian territory from outside, including inventions and new materials belonging to foreigners, unless the equipment is financed from Indonesia's foreign exchange reserves.

Part of the proceeds from this law is to finance Indonesian companies (Fahmi, 2013). From the several definitions of foreign investment above, foreign investment is an investment activity conducted by a company located in the territory of the Republic of Indonesia all of which can be carried out directly by foreign investors residing in the territory of the Republic of Indonesia in Indonesia. The law was given to make investments in Indonesian management company.

Domestic Investment

Domestic Investment is an investment activity in the territory of the Republic of Indonesia that is used for business and is carried out by domestic investors with domestic capital. Domestic investors are Indonesian citizens, Indonesian business entities, the Republic of Indonesia or areas investing in the territory of the Republic of Indonesia. Provisions for investment are regulated in Law no. In 2005, 25 per investment. Domestic investments can be made by Indonesian citizens who invest in national institutions or the central government within the territory of the Republic of Indonesia. Enterprises are open for investment activities or changes in business models by Presidential Decree N. except for closed and declared open activities or transactions with requirements and restrictions on the participation of state capital in the economic branch of the company. Activities including closed listings and open advertisements of investment affiliates (Pasaribu & Kowanda, 2013)

National Income or Gross Domestic Product (including Gross Regional Domestic Product) is very closely related to investment. Investment in the form of increased capital expenditure has a positive impact on the business production process which is more active and also on increasing household consumption. The purpose of this study was to determine the effect of foreign investment and domestic investment on gross regional domestic product in Indonesia. The research subjects were 34 provinces in Indonesia for the 2019 – 2022 period.

METHOD

The research method used is explanatory research. The objects in this study are foreign investment, domestic investment, and gross regional domestic product. Foreign investment (X1) as the independent variable, domestic investment (X2) as the independent variable and gross regional domestic product (Y) as the dependent variable. The unit of analysis for this research is the 34 Indonesian provinces that received investments in Indonesia during the 2019-2022 period which were published on the website BPS. The population in this study are provinces in Indonesia up to June 2022. While the 4 new provinces (South Papua, Central Papua, Highlands Papua and Southwest Papua) which began at the end of June 2022 were not included in the population in the study This. Sampling for this study used the census method which included all population groups for data processing.

The data collected in this research is secondary data. Secondary data is data that comes from a second source and is usually ready for use. This secondary data comes from the Central Bureau of Statistics and is fully available. The type of data uses cross sectional data and time series data from 2019 to 2022. For Foreign Investment and Domestic Investment data from 2019-2021, while the Gross Regional Domestic Product (GRDP) data from 2020 –

2022. The time series data is separated by 1 year with the assumption that there is a time lag in the impact of the investments on GRDP. This is because the investments are permanent accounts, while GRDP is a nominal account. The final balance of investmens are the balance at the end of December, while the GRDP balance is the balance for 1 year. Data analysis techniques are needed to obtain research results that are in accordance with the research objectives. The data collected will be processed and analyzed. Data analysis techniques in this study are descriptive analysis and panel data regression analysis. To assess the validity of the data, it is necessary to test the classical assumptions before conducting panel data regression analysis. Hypothesis testing in this study was carried out in two stages, namely partial testing (t-test) and simultaneous testing (F-test).

RESULT

Gross Regional Domestic Product (GRDP) is used as the dependent variable in this study. while the independent variables are Foreign Investment (FI) and Domestic Invesment (DI). Table 1 presents a statistical summary which includes mean, median, maximum value, minimum value, and standard deviation from data on FI, DI, and GRDP. The average value of FDI data is US$862.43 Million. The median value of the FI data is US$302.35 Million . The maximum value of the FI data is US$5,881 million. The minimum value of FI data is US$5.90 million, with a standard deviation of US$1,178.59 million. The average value of DI data is IDR 12,226.45 billion. The average value of DI data is IDR 5,557.25 billion. The maximum value of DI data is IDR 62,094.80 billion. The minimum value of DI data is IDR 252.90 billion, with a standard deviation of IDR 15,141.28 billion.The average value of the GRDP data is IDR 508,447.7 billion. The median value of the GRDP data is IDR 217,208.9 billion. The maximum value of GRDP data is IDR 3,186,470 billion. The minimum value of the GRDP data is IDR 41,729.89 billion, with a standard deviation of IDR 716,661.5 billion.

Table 1
Desciptive Statistics

	FI	DI	GRDP
Mean	862.4333	12226.45	508447.7
Median	302.3500	5557.250	217208.9
Maximum	5881.000	62094.80	3186470.
Minimum	5.900000	252.9000	41729.89
Std. Dev.	1178.594	15141.28	716661.5
Observations	102	102	102

Source: processed data

Table 2
The Result of Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	53.248273	(33,66)	0.0000
Cross-section Chi-square	338.506370	33	0.0000

Source: processed data

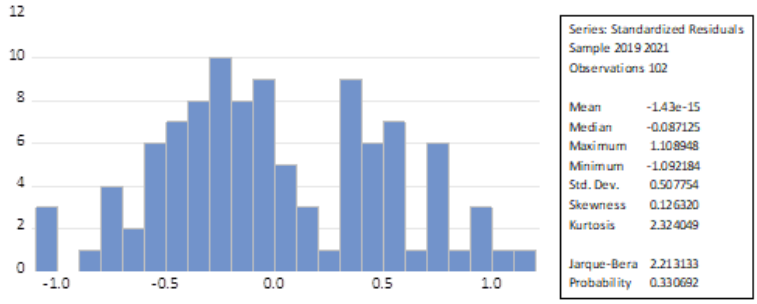
Table 2 shows that the probability (p-value) Cross section F of 0.0000. Given the probability (p-value) Cross-section F < 0.05, H_0 is rejected, and therefore the model used is a fixed effect. The decision obtained is to use the fixed effect, then proceed with the Hausman test. A random cross-sectional probability value (p-value) of 0.0000 is given according to Table 3. Based on these data we can conclude that the fixed effects model is superior to the random effects model.

Table 3
The Result of Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	92.878620	2	0.0000

Source: processed data

Figure 2 the Jarque-Bera Normality test statistic is 2.13133 based on the results of the normality test, with a probability value of 0.330692. This means that the empirical model used is α = 5% is 0.330692 > 0.05. The following is a diagram of the data normality test results.



Source: processed data

Figure 2
The Result of Normality Test

Table 4
The Result of Uji Breusch-Pagan-Godfrey Test

F-statistic	2.402618	Prob. F(2,99)	0.0957
Obs*R-squared	4.721670	Prob. Chi-Square(2)	0.0943
Scaled explained SS	3.819637	Prob. Chi-Square(2)	0.1481

Source: processed data

The Obs*R-squared probability is 0.0943 and this value is greater than 0.05 or 0.0943 > 0.05 which indicates that the sample problem does not have odd type. The final Durbin Watson value was 1,603 between -2 and +2 (-2 < 1,603 < +2) according to Table 5. These results indicate that the regression model does not have autocorrelation, thus the model meets the requirements for regression testing. Table 6 shows that all variables have a VIF value of less than 12. Therefore it can be concluded that the model does not have a multicollinearity problem.

Table 5
Durbin-Watson Statistical Testing

Durbin-Watson stat	**Conclusion**
1.602986	there is no autocorrelation

Source: processed data

Tabel 6
Result of Multicolinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.119240	46.24129	NA
X1	0.001495	20.55206	1.615344
X2	0.002457	73.44655	1.615344

Source: processed data

Table 7
Estimation Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.79358	0.346828	34.00412	0.0000
X1?	0.006797	0.030202	0.225065	0.8226
X2?	0.070922	0.031618	2.243082	0.0283

Source: processed data

Based on Table 7 the constant value of this coefficient can be seen as follows in the panel data regression equation.

GRDP = 11.79358 + 0.006797 X1 + 0.070922 X2 + 0,011

This equation can be interpreted as follows:

1. α is 11.79358 which means that if FI and DI are zero, then the GRDP will be worth 11.79358 units.
2. The variable regression coefficient of FI is 0.006797. This means if the increase in FI changes by 1 unit (if other variables are constant) GRDP will increase by 0.006797 units.
3. The regression coefficient for the DI variable is 0070922. In other words when the change in DI increases by 1 unit (if other variables are constant) GRDP increases by 0070922 units.

According to Table 7 the following conclusions can be drawn: The p-value of the FI variable is 0.8226. Due to the value of probability (p-value) > 0.05 (5% significance level) or 0.4842 > 0.05, then H_0 is accepted and it is concluded that FI has no significant effect on GRDP. The p-value of the DI variable is 0.0283. Because the probability value < 0.05 (5% significance level) or 0.0283 < 0.05, H_0 is accepted so it's concluded that DI has a significant effect on GRDP.

Table 8
Simultaneous Test results

Root MSE	0.096132	R-squared	0.992672
Mean dependent var	12.44824	Adjusted R-squared	0.988785
S.D. dependent var	1.128513	S.E. of regression	0.119508
Akaike info criterion	-1.140298	Sum squared resid	0.942627
Schwarz criterion	-0.213837	Log likelihood	94.15522
Hannan-Quinn criter.	-0.765143	F-statistic	255.4326
Durbin-Watson stat	1.602986	Prob(F-statistic)	0.000000

Source: processed data

Probability value of 0.000001 < 0.05; then H_0 is rejected which means Foreign Investment (FI) and Domestic Investment (DI) simultaneously have a significant influence on the Gross Regional Domestic Product (GRDP). Determination Cofficient (Adjusted R-squared) is 0.988785 or 98.9%. This shows that Foreign Investment (FI) and Domestic Investment (DI) are able to explain the Gross Regional Domestic Product (GRDP) with an effect of 98.9%, while the remaining 1.1% is explained by other variables outside the study.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that simultaneously, it shows that there is influence of foreign investment and domestic investment on gross regional domestic product. Partially, there is no effect of foreign investment on gross regional domestic product, while domestic investment has an effect on gross regional domestic product.

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