

## The Influence Of Gross Regional Domestic Product (Gdp) And Interest Rates On Investment In West Java Province

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**Abstract:** Economic growth is significant for every country, where economic growth indicates the success of a country's development. One of Indonesia's efforts to encourage economic growth is by growing the investment sector. Investment is a component that influences the level of aggregate expenditure and is one of the important and main factors in economic development which many economic experts have recognized, according to him there is no development without investment. This research intends to analyze the influence of Gross Regional Domestic Product (GRDP) and interest rates on investment in West Java Province. The data used in this research is secondary data obtained from the Central Statistics Agency (BPS) during 2015-2022 in a time series format. The research method uses a quantitative approach. The data analysis technique was carried out using multiple linear regression in SPSS. The research results show that Gross Regional Domestic Product (GRDP) has a positive and significant influence on investment in West Java Province. Meanwhile, interest rates do not affect investment in West Java Province.

**Keywords:** Gross Regional Domestic Product, Interest Rates, Investment.

**JEL :** E2, E4, E2.

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### 1. INTRODUCTION

Economic growth is a long-term problem faced by every country, of course, every country hopes for very fast economic growth. Every country has the same goal, namely how each country must accelerate its economic growth. Economic growth is a process in which output per capita increases continuously over time. Economic growth is the reason why a country's economy is healthy or not, and economic growth is an absolute prerequisite for a country's success. If a country fails to encourage economic growth, it will give rise to new problems, both economic and social, one of which is extreme poverty (Simanungkalit, 2020).

Economic growth is very significant for every country in the world. One of the developing countries that is currently focusing on development and economic growth is Indonesia. Having good economic growth can be an indicator of a country's success in the development wheel. Economic development certainly requires investment support which is one of the main sources of economic growth. Capital investment activities produce investments that will continue to increase the capital stock. Increasing capital can increase productivity as well as increase production capacity and quality, which will ultimately encourage economic growth and increase labor absorption (Ali et al., 2020).

One of Indonesia's efforts to encourage economic growth is by growing the investment sector (Alvaro, 2021). Many economists admit that investment is a factor that influences the level of total expenditure and is one of the most important and important factors in economic development, but they say that there is no development without investment. The main objective of investment activities carried out by investors or companies is to obtain profits in the future. Everything that is done to increase the ability to create and add benefits to life is an investment. Therefore, investment is not only physical, but also non-physical, with the main focus on improving the quality of human resources (HR). (Abdul Rajab, 2021).

The economic development of a region can be seen from the development of long-term economic growth which is expressed in the growth of Gross Regional Domestic Product (GRDP). Increasing GRDP will increase government revenues to finance its development programs. Then it will improve the local government services provided to the community, which is expected to increase the productivity of its operations. It is hoped that the speed of economic development can be part of the success of regional autonomy, thereby contributing to regional development and assisting in future decision-making (Nandita et al., 2019).

West Java is one of the provinces in Indonesia whose economic growth rate is currently around 5.45%. The rise and fall of GRDP clearly describe the conditions of the area concerned. This causes GRDP to be used as a reference for investors to understand the conditions of the desired location. The amount of GRDP can also measure the success of a region's economic development,- so a region is required to increase the amount of GRDP from year to year. The following is data on West Java Province's GRDP development from 2015-2022.

Table 1. West Java GRDP

Years	GRDP (milyar)
2015	1.524.974,83
2016	1.653.238,42
2017	1.788.117,36
2018	1.960.627,65
2019	2.123.153,71
2020	2.082.107,26
2021	2.204.660,23
2022	2.422.782,32

Source: BPS West Java Province 2023

Apart from that, the first largest investment in the province of Indonesia is occupied by West Java, followed by the province of DKI Jakarta. The two have not too much difference. This indicates that investors are interested in investing their money in West Java province. Several factors that are reasons for investors to invest in Indonesia, such as supporting infrastructure, adequate human resources (HR), and ease of processing permits. In this way, it is possible that from year to year the investment target in West Java province will continue to increase.

GRDP has a very important role in investment. This is because the higher the income of a region will increase people's income and the higher people's income will increase demand for goods and services. High demand can also increase company profits and will encourage more investment. In other words, if GRDP increases then investment will also increase. Apart from GRDP, interest rates also influence investment growth. When interest rates fall, investment will increase. In other words, there is a negative correlation between investment and interest rates. This is to Keynes' theory which states that the higher the interest rate, the lower the amount of investment and vice versa (Sadono, 2010).

Low interest rates lead to lower borrowing costs because low interest rates stimulate investment and economic activity, thereby causing higher stock prices (Jessica et al., 2021). Based on data obtained from the Central Statistics Agency (2023), shows that interest rates continue to decrease and increase every year. It can be seen that in 2015 the interest rate was 7.52%, it decreased in 2016 to 6%, and then in 2017, there was a significant decrease in the interest rate to 4.56%. In 2018 the interest rate was 5.10%, experiencing an increase in 2019, namely 5.63%. In 2020 there was another decline of 4.25%. A significant decrease occurred in 2021 amounting to 3.52% and in 2022 there was an increase of 4.00%.

## 2. LITERATURE REVIEW

### 2.1 Interest Rate

According to classical theory, the interest rate is the price of borrowed funds (invested funds), so the interest rate is the price that occurs in the market and investments. According to Keynes' theory, interest rates are a monetary phenomenon. This means that the interest rate is determined by the demand for money and the supply of money (determined by the money market) (Apriliansa & Soebagiyo, 2023). The interest rate represents the value of the loan, and the interest rate represents the proportion of the basic money supply per unit of time, and the price parameters for the resources used by the debtor and must be paid to the creditor. If interest rates rise uncontrollably, the business world will have difficulty paying interest and debt costs. This is because higher interest rates will increase the company's burden, which ultimately impacts their profits (Ahmad & Badri, 2022).

According to Bank Indonesia, the BI rate is a policy interest rate that reflects the monetary policy stance determined by Bank Indonesia and announced to the public (Khotijah et al., 2020).

Investment interest rates serve as a guide for decision-making. Interest rates are divided into two types, namely savings interest rates and loan interest rates. Savings interest is interest that customers receive as a reward or incentive for saving some of their money with the bank. Loan interest is interest paid to customers who have taken out loans as interest or higher rewards given to borrowers (Ernayani et al., 2023).

## 2.2 Gross Regional Domestic Product (GRDP)

According to Sukirno, economic growth is an increase in output per capita in the long term. The focus is on three aspects, namely process, output per capita, and the long term. Economic growth is a process, not just a temporary state. So that regional sectoral development can take place by regional potential and priorities, regional and sectoral development must be mutually coordinated. Gross Regional Domestic Product is the sum of added manufacturing value produced by various sectors or business lines operating in a region or region (Lube et al., 2021).

GRDP is the amount of surplus value produced by all business entities in a certain area,- or is the total amount of final (net) goods and services produced by all economic units. Market price-based GRDP shows the added value of goods and services calculated based on market prices each year, while constant price-based GRDP shows the added value of goods and services based on market prices in a particular year. GRDP is the total value production of goods and services produced in a certain region or area within a certain period, usually within a one-year (Lucky Riana Putri, 2020).

## 2.3 Investment

Investment is expenditure aimed at increasing or maintaining the stock of capital goods. The capital goods inventory consists of factories, machines, offices, and other durable products used in the production process. Capital goods also include living space and inventory. In economic theory, investment is defined or interpreted as "expenditures on the purchase of capital goods and production equipment which are intended to replace, especially supplement, capital goods in the economy for use in producing goods and services in the future". Investment is the second factor that influences the level of total expenditure,- and is one of the most important factors in economic development, which is recognized by many economists, but without investment, there will be no development (Subito et al., 2022).

Table 2. West Java PMDN Investment

Years	Investment (milyar)
2015	26.272,9
2016	30.360,2
2017	38.390,6
2018	42.278,2
2019	49.284,2
2020	51.400,5
2021	59.948,5
2022	80.808,3

Source: Investment Coordinating Board (BKPM) 2023

## 3. METODHS

This study uses a quantitative approach. The data used in this research is secondary data in the form of time series data from 2015 to 2022. The data sources come from the Central Statistics Agency (BPS), the Investment Coordinating Board (BKPM), scientific journals, and other literature related to this topic. Apart from that, the author also conducted literature studies to obtain theories that support the research. Literature study references were obtained through previous research journals. Measurement to determine the extent to which variables  $X_1$  (GRDP) and variable  $X_2$  (Interest Rate) influence variable  $Y$  (investment). GRDP plays an important role in investment,- because high community income will affect the demand for goods and services. High demand will increase company income and thus encourage more investment. Likewise, interest rates will impact investment. If interest rates fall or are low, investment in the community will increase.

**4. RESULT AND DISCUSSION**  
**4.1 CLASSIC ASSUMPTION TEST**  
**4.1.1 Normality Test**

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test			GRDP	Interest Rate	Investment
N			8	8	8
Normal Parameters <sup>a,b</sup>	Mean		1969957,7225	5,0725	47342,9250
	Std. Deviation		299441,33014	1,29072	17473,32159
Most Extreme Differences	Absolute		,146	,154	,158
	Positive		,105	,154	,158
	Negative		-,146	-,115	-,114
Test Statistic			,146	,154	,158
Asymp. Sig. (2-tailed) <sup>c</sup>			,200 <sup>d</sup>	,200 <sup>d</sup>	,200 <sup>d</sup>
Monte Carlo Sig. (2-tailed) <sup>e</sup>	Sig. 99% Confidence Interval	Lower Bound	,885	,829	,802
		Upper Bound	,877	,819	,792
			,893	,839	,813

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Based on the results of the normality test that has been carried out in the table above, it can be seen that the GRDP and interest rate variables have a significance value of 0.200 or more than 0.05. So it can be concluded that the distribution of variable data in this study is normally distributed.

**4.1.2 Multicollinearity Test**

Table 4. Multicollinearity Test

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-63789,679	34313,992		-1,859	,122		
	PDRB	,056	,011	,965	4,918	,004	,370	2,700
	Suku Bunga	30,222	2657,450	,002	,011	,991	,370	2,700

a. Dependent Variable: Investment

Based on the table above, it is known that the tolerance value for the GRDP and interest rate variables is  $0.370 > 0.10$ , while for VIF it is  $2.700 < 10.00$ , meaning that the data does not experience multicollinearity.

### 4.1.3 Autocorrelation Test

Table 5. Autocorrelation Test

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,964 <sup>a</sup>	,929	,900	5522,81283	,949

a. Predictors: (Constant), Interest Rate, GRDP

b. Dependent Variable: Investment

Based on the table above, the DW (Durbin Watson) value resulting from the GRDP regression model and interest rates on investment is 0.949. The DW value is between -2 and +2 ( $-2 \leq 0.949 \leq 2$ ), so it can be concluded that there is no autocorrelation.

## 4.2 MULTIPLE LINEAR REGRESSION TEST

### 4.2.1 t-test

Table 6. t test

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-63789,679	34313,992		-1,859	,122
	PDRB	,056	,011	,965	4,918	,004
	Suku Bunga	30,222	2657,450	,002	,011	,991

a. Dependent Variable: Investment

Based on the t-test above, the significance value for the GRDP variable is 0.004, which means there is an influence on investment because the value is less than 0.05. This means that as the nominal gross domestic product of a region increases, so will the investment value. Conversely, when the nominal gross domestic product of a region decreases, so will the investment value, because the gross domestic product of a region indicates economic growth, and good economic growth can be measured by increasing business investment. Gross Regional Domestic Product as a supporter of economic growth includes regional income measured according to the Gross Product approach in a particular year. In this case, if economic growth is characterized by high regional gross domestic product development, this guarantees the development of positive investment interest. On the other hand, weak or slow economic growth hurts investment activity, thereby affecting investment performance (Rizkiyani et al., 2022).

Meanwhile, for the interest rate variable, there is no significant influence on investment because the significance value is 0.991, which is more than 0.05. This shows that the interest rate variable is not significant because it is greater than 0.05 so this interest rate variable does not influence investment. This means that the lower the interest rate, the lower the investment. It should be that if the interest rate decreases, investment will increase. This result is not by the theory that states that the higher the interest rate, the higher the public's interest in saving. This means that at high interest rates, people will be encouraged to reduce their spending for consumption to increase their savings. This research is in line with research (Messakh et al., 2019) stated that interest rate fluctuations had a negative and significant impact on Indonesia's domestic investment (IDN). Investment considerations are not only related to capital interest rates and future profits, but can also be influenced by non-economic variables such as legal, political, and cultural support. Since most investors in Indonesia invest their capital to carry out profitable

business activities, their interests are not completely influenced by interest rates when deciding to invest in the country. The non-economic factors that influence domestic investment activities include instability in political and security conditions and inefficient bureaucracy,- because according to investors, the presence of uncertainty factors will strengthen the risk of influencing economic conditions in the future so that it can be detrimental to investment. Investors will experience difficulty in estimating expenses or costs incurred to invest, this occurs because there are many burdens or expenses that must be paid by the company outside of existing official levies (Yusmanti & Amar, 2020).

#### 4.2.2 F test

Table 7. F tests

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1984711464,952	2	992355732,476	32,535	,001 <sup>b</sup>
	Residual	152507307,683	5	30501461,537		
	Total	2137218772,635	7			

a. Dependent Variable: Investment

b. Predictors: (Constant), Interest Rate, GRDP

Based on the results of the table above, it can be seen that the calculated F value is 32.535 and F table 4.74, so calculated  $f > f$  table ( $32.535 > 4.74$ ) with a confidence level = 0.05%. The significance value is 0.001 or smaller than 0.05, meaning that the coefficients of the three variables are significant or in other words, the GRDP and interest rate variables have a positive and significant effect on investment.

#### 4.2.3 Coefficient of Determination Test

Table 8. Coefficient of Determination Test

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,964 <sup>a</sup>	,929	,900	5522,81283	,949

a. Predictors: (Constant), Interest Rate, GRDP

b. Dependent Variable: Investment

Based on the table above, the R Square is 0.929. This shows that the magnitude of the influence of the GRDP and interest rate variables on the investment variable is 93%. In comparison, the remaining 7% is influenced by other variables not examined in this study.

## 5. CONCLUSIONS AND SUGGESTIONS

### CONCLUSIONS

Based on the results of the research that has been carried out, the following conclusions can be drawn:

1. The GRDP variable (X1) positively and significantly influences investment (Y) in West Java Province in the 2015-2022 period.
2. The interest rate variable (X2) does not influence investment (Y) in West Java Province in the 2015-2022 period.

### SUGGESTIONS

GRDP has a big influence on investment in West Java Province. For this reason, the government



is required to continue to increase the rate of GRDP growth in West Java Province, for example by increasing regional promotion and improving the quality of human resources which will later form competent characters in their respective fields so that they can optimize the management of natural resources in the Java Province region. West itself. Interest rates do not influence investment in West Java Province, however, interest rate stability must still be considered for the sake of economic sustainability in West Java Province itself.

For future researchers, it is hoped that they will be able to carry out maximum and more in-depth research on the same object. Apart from that, future researchers can use other, more diverse variables, such as inflation, political atmosphere, and so on. That way, the research carried out will be even better than previous research.

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