

The Role of Investment and Workforce in South Kalimantan's GDP Growth

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Abstract

One of the benchmarks for a region's economic development is economic growth. To quantify the amount of progress monetary development has made in a locale, it tends to be seen from the expansion in GRDP (Gross Regional Domestic Product) around there. Therefore, this research aims to analyze how a production factor can influence GRDP. The production factors in question are Investment and Labor. The sort of examination utilized in this exploration is spellbinding quantitative. The information utilized in this examination is auxiliary information as time series information got from the Central Bureau of Statistics (CBS). Using the eviews I2 program, multiple linear regression analysis was used as the method of analysis. This study's conclusion is that GRDP is influenced by investment and labor, but not significantly, either simultaneously or partially.

Keywords – *Investment, Workforce, Gross Regional Domestic Product*

INTRODUCTION

One of the ways a country can improve the welfare of its people is by developing its economy. All developing countries are trying to incorporate economic growth into society, including Indonesia. With the expectation of solid monetary developments can help a reasonable turn of events and work on individual government assistance. (Kusumadewi et al., 2022) Typically, the increase is characterized as the capacity of the public economy to create and support any Gross National Income (GNI) or Gross Domestic Product (GDP) each year (Todaro, 2004).

The method or indicator for estimating the financial development of a region is based on the goods and services produced by the residents of the area, which is often referred to as the GDP. (Wulandari & Mubarak, 2021)

From one era to the next, the capacity of each region to produce goods and services will also grow. The quantity and quality of the production factors will always increase. (Wajdi et al., 2023) leading to an increase in this capability. The amount of capital goods will increase as a result of the investment. Additionally, population growth and job skills that increase job reliability lead to an increase in the workforce. (Mubarak et al., 2023)

In macroeconomic theory, on the expenditure side, total regional income is a combination of various factors, (Hidayatullah et al., 2024) including investment. Investment itself is influenced by foreign and domestic investment. Investment for the regions consists of state and private investment. (Rasyid et al., 2023) Private investment can arise from within or outside the country. Public goods are produced through investments made by the government. How much state investment can be determined by the contrast between the all-out state budget and traditional spending (Rustiono, 2008).

In national development, the workforce, both as a useful workforce and a customer, plays an important role in determining the pace of economic growth both regionally and sectorally. (Yusuf et al., 2023) Imbalances in the distribution of population in regions and cities lead to disproportionate use of labor regionally and sectorally. (Hamid et al., 2023) As a result, public and local financial development is hampered. Work is an important part of the production cycle, in addition to other methods for production such as raw materials, soil, water, etc., as people move or work on large amounts of these resources to produce essential products, which will thus affect the country's GDP (Susanto, 2012).

Tabel 1. South Kalimantan Investment and Workforce Data for 2018-2022.

Variabel	2018	2019	2020	2021	2022
X1 (Investment)	170	534	1.620	1.588	1.733
X2 (Workforce)	2039048.00	2045831.0	2083319.0	2109427.0	2092225.00
Y (GRDP)	41046.28	42823.56	44100.79	47998.87	60079.32

As can be found in the table above, in addition to the expansion in investment and labor each year, there will be changes that imply an expansion in how much GDP there is. (Yuliani et al., 2023) In general, every region in South Kalimantan will generally experience an increase in investment and the number of workers in a consistent period. This can be a viable capital for improvements in the economy. (Yuliani et al., 2023) This is driven by the accessibility of capital, business and labor to adequate human resources. Therefore, the researcher is interested in reviewing this study to measure how persuasive investment and labor are towards GDP, especially in the South Kalimantan Region. (Syauqi & Rahmah, 2021)

RESEARCH METHODS

The type uses a quantitative descriptive method. The research approach uses a quantitative approach. The data contained in this study was obtained from the official website of the Central Statistics Agency (www.bps.go.id) in the period 2018-2022. The subject of this study is South Kalimantan Province. Regarding the object of research, namely labor and investment. The information used in this study is additional information. The information contained in this study is as follows:

1. Information on Investment in 2021-2018 obtained from Annual data.
2. Information on the 2018-2022 workforce obtained from Annual data.
3. Information about the GDP of South Kalimantan Province from 2018-2022.

RESULTS

Investment

The economic health of a country is reflected in the activeness of its capital market. As an investment center, the capital market has a dual role, both in terms of finance and in

encouraging overall economic growth (Syauqi & Rahmah, 2021). Investment price movements are influenced by market mechanisms. When the price rises, investors gain capital. To estimate potential future profits, investors can analyze the historical performance of the investment instrument (Purnomo & Zahra Maulida, 2023).

Investment is spending funds in the hope of getting more money or profits. Basically, spending some money today in the hope of making a profit in the future is a form of investment. A form of capital known as investment has the potential to improve the economy.

This is due to the fact that the increase in the value of managed investments will encourage economic smoothness in Kalimantan. The value of investment entering an area should open new open doors, whether in the open door for business or financial development. This is because the higher the value of the investment managed, the more economic turnaround on the island of Kalimantan. The existence of investment value that enters an area is expected to open up new opportunities, both in job opportunities or the expansion of the economic sector.

Workforce

An employee is an individual who has fulfilled the conditions specified in the country's employment laws. Labor force is the number of people of working age (15-64 years old) or residents in a country who can create services and products if there is interest in the job and if they have the desire to take part in the action.

Gross Regional Domestic Product (GDP)

Definition of GDP

GDP is generally how much added value is created by all specialized units in a given region, or in other words the final value of output and services delivered by each economic participant.

Distribution of GDP and Its Functions

GDP based on current costs represents the added value of goods and services determined using the costs that apply every year. The structure and shifts of the economy can be examined by comparing the current price GDP. Meanwhile, GDP based on fixed costs shows the added value of goods and services is determined by utilizing fixed costs in a

certain year. GDP based on fixed costs is used to determine economic growth from year to year.

GDP on the basis of applicable prices describes the added value of barang and services calculated using the prevailing price every year. GDP on the basis of prevailing prices can be used to see shifts and economic structures. Meanwhile, GDP on the basis of constant prices shows the added value of goods and services calculated using the prevailing price in a given year. GDP on the basis of constant prices is used to determine economic growth from several periods.

Variable Correlation

Investment in Gross Regional Domestic Product (GDP)

The Harrod-Domar theory presents an economic growth model that focuses on the role of savings and industry which are very important for regional economic growth (Arsyad, 1997, Prasetio, 2017). The endogenous growth model says that the higher a country's total output, the higher the return on invested capital (Deddy, 2008, Prasetio, 2017).

Harrod-Domar researched the conditions necessary for long-term economic growth and development. In principle, investment is essential for monetary growth. Through revenue generation and expansion of production capacity, investment has a significant impact on aggregate demand and aggregate supply (Patiwi, 2019)

Labor to Gross Regional Domestic Product (GDP)

According to Todaro (2000), population development and workforce development are generally considered as one of the positive factors that increase economic growth. A larger workforce means more creation, while more prominent population growth implies a larger local market.

The current number of workers is a picture of the available business conditions. The greater the employment that can be accessed, it will lead to an expansion of absolute creation in a space. The availability of food that can be provided, is reflected by the number of people employed (Kuncoro, 2004).

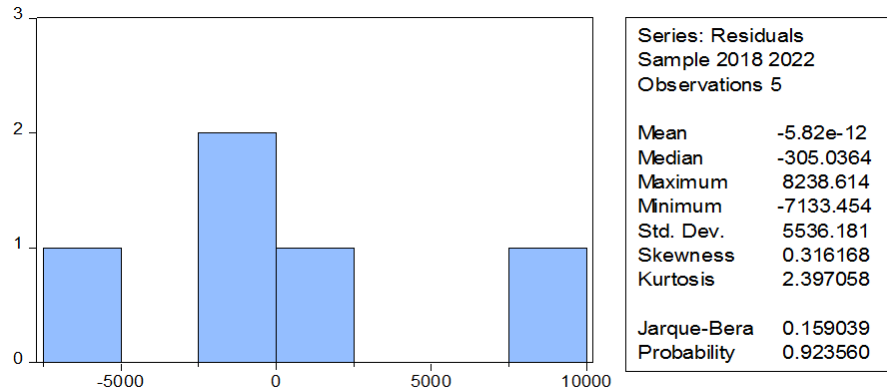
Reporting Research Results

The examination was carried out by looking at optional information (time series data) obtained from the website of the Central Statistics Agency (www.bps.go.id) as information introduced in the annual structure which was then dissected using Multiple linear regression method analysis through the Eviews 12 program.

Prerequisite Test (Classic Assumption Test)

Normality Test

Gambar 1. Results of the Normality Test with Histogram



Sumber: Eviews 12, Data diolah, 2023

The Jarque-Bera Probability Value is 0.923560 which implies more than α ($0.92 > 0.05$). Therefore, the residual data of this study has a normal distribution.

Linearity Test

Tabel 2. Linearity Test Results

Dependent Variable: PDRB
 Method: Least Squares
 Date: 12/01/23 Time: 14:43
 Sample: 2018 2022
 Included observations: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	135116.8	738793.2	0.182889	0.8717
INVESTASI	9097.856	15291.61	0.594958	0.6122
TKERJA	-0.047338	0.363990	-0.130054	0.9084
R-squared	0.474150	Mean dependent var		47209.76
Adjusted R-squared	-0.051699	S.D. dependent var		7634.481
S.E. of regression	7829.343	Akaike info criterion		21.05285
Sum squared resid	1.23E+08	Schwarz criterion		20.81852
Log likelihood	-49.63214	Hannan-Quinn criter.		20.42392
F-statistic	0.901684	Durbin-Watson stat		1.439453
Prob(F-statistic)	0.525850			

Sumber: Eviews 12, Data diolah, 2023

The F-Statistic Probability value is 0.525850 which means more than α ($0.525850 > 0.05$). So it can be concluded that the model used obtains linear results.

Multicollinearity Test

Tabel 3. Multicollinearity Test Results

Variance Inflation Factors			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	5.46E+11	44521.02	NA
INVESTASI	2.34E+08	32.28532	7.973718
TKERJA	0.132489	46492.03	7.973718

Sumber: Eviews 12, Data diolah, 2023

The centered VIF value was obtained for the Investment variable = $7.97 < 10$ and for the workforce variable = $7.97 < 10$. The Focused VIF value of all these autonomous factors, all of which are less than ($<$) 10, means that they are free from multicollinearity.

Heteroscedasticity Test

Tabel 4. Heteroscedasticity Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	5.828061	Prob. F(2,2)	0.1465
Obs*R-squared	4.267728	Prob. Chi-Square(2)	0.1184
Scaled explained SS	0.476981	Prob. Chi-Square(2)	0.7878

Sumber: Eviews 12, Data diolah, 2023

Prob Value Obtained. The Breuch-Pagan-Godfrey Chi-Square is 0.1184 which means more than alpha ($0.1184 > 0.05$). So it tends to reason that he is exempt from the problem of heteroscedasticity.

Autocorrelation Test

Tabel 5. Autocorrelation Test Results

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.000145	Prob. F(1,1)	0.9923
Obs*R-squared	0.000724	Prob. Chi-Square(1)	0.9785

Sumber: Eviews 12, Data diolah, 2023

Obtained by the Prob. The Chi-Square Breusch-Godfrey LM Test is 0.9785 which means more α / alpha ($0.9785 > 0.05$). Jaldi can be considered that there is no autocorrelation mass, so the climactic assumption is fulfilled.

Simultaneous Test (Test F)**Tabel 6.** Simultaneous Test Results

Variable	Coefficient
C	135116.8
INVESTASI	9097.856
TKERJA	-0.047338
R-squared	0.474150
Adjusted R-squared	-0.051699
S.E. of regression	7829.343
Sum squared resid	1.23E+08
Log likelihood	-49.63214
F-statistic	0.901684
Prob(F-statistic)	0.525850

Sumber: Eviews 12, Data diolah, 2023

Based on the table above, it is possible to calculate the $\text{Prob}(F\text{-Statistic}) = 0.525850 < 0.05$ then H_0 is accepted and H_a is rejected, which is not significant. This shows that the variable of Investment in Labor simultaneously has no significant effect on the GDP in Kallimantan Province.

Partial Test (t-Test)

The following are the results of using the Eviews 12 program for partial hypothesis testing:

- a) Investment (X_1)

Tabel 7. Hasil Uji Parsial Investasi

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	135116.8	738793.2	0.182889	0.8717
INVESTASI	9097.856	15291.61	0.594958	0.6122
TKERJA	-0.047338	0.363990	-0.130054	0.9084

Sumber: Eviews 12, Data diolah, 2023

Based on the results of partial tests in Table 8. above, the investment probability value of $0.6122 > 0.05$ is obtained, then H_0 is accepted and H_a is rejected which means it has no significant effect. So it can be concluded that partial investment has an effect but is not significant to the Gross Regional Domestic Product (GDP). That means, if investment increases, then GDP will also increase. And vice versa, if investment decreases, GDP will also decrease. However, this investment is not significant in influencing GDP.

b) Workforce (X_2)**Tabel 8.** Workforce Partial Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	135116.8	738793.2	0.182889	0.8717
INVESTASI	9097.856	15291.61	0.594958	0.6122
TKERJA	-0.047338	0.363990	-0.130054	0.9084

Sumber: Eviews 12, Data diolah, 2023

Based on the results of partial tests in Table 9. above, the Labor Probability value of 0.9084 < 0.05 is obtained, then H_0 is accepted and H_a is rejected which means that it has no significant effect.

So it can be concluded that workforce has a partial and insignificant effect on GDP. That means, if the workforce increases, then the GDP will also increase. However, workforce is not significant in influencing GDP.

Investment Variables (X_1)

Based on the results of the analysis test that has been completed as shown in Table 8. The results of hypothesis testing showed that investment had an effect but not significant on GDP, which obtained a probability value of 0.6122 > 0.05 . The results of this study are in line with the theory mentioned earlier that the higher the investment, the higher the GDP in a certain area, the higher the GDP. An increased GDP will result in the economic growth of a region will increase and prosper. The results of this analysis are supported by Yuniar Sri Hartati's research entitled Analysis of the Influence of Investment Level, Labor and Gross Regional Domestic Product (GDP) on Dalerah Original Income (Pad) in Jayapura City, the results of this research show that the variability of investment has an insignificant effect on GDP.

Workforce Variables (X_2)

Based on the results of the analysis test that has been facilitated as shown in Table 8. The results of hypothesis testing showed that Labor did not have a significant effect on GDP, where a probability value of 0.9084 > 0.05 was obtained. This result is in line with the theory that if the workforce increases, the GDP in a region will increase. Because the large amount of GDP in an area will have an impact on economic growth in that area. The results of this analysis are supported by the research of Galuh Nugraha, et al. entitled The

Influence of Electricity, Capital and Labor on GDP in the Province of Bangka Belitung Islands, the results of this study show that investment variables have an effect but are not significant on GDP.

DISCUSSIONS

In many ways, it is the most important section in an article (Feldman, 2004:4). Because it is the last thing a reader sees, it can have a major impact on the reader's perceptions of the article and the research conducted (Summers 2001:411).

Different authors take different approaches when writing the discussion section. According to Feldman (2004:5), Perry et al. 2003: 658), and Summers 2001: 411412), the discussion section should:

- Restate the study's main purpose
- Reaffirm the importance of the study by restating its main contributions
- Summarize the results in relation to each stated research objective or hypothesis without introducing new material
- Relate the findings to the literature and the results reported by other researchers
- Provide possible explanations for unexpected or non-significant findings
- Discuss the managerial implications of the study
- Highlight the main limitations of the study that could influence its internal and external validity
- Discuss insightful (i.e., non-obvious) directions or opportunities for future research on the topic

The discussion section should not merely restate the findings reported in the result section or report additional findings that have not been discussed earlier in the article. The focus should instead be on highlighting the broader implications of the study's findings and relating these back to previous research. Make sure that the conclusions you reach follow logically from and are substantiated by the evidence presented in your study (Varadarajan 1996: 5).

CONCLUSION

Considering the examination of information that has been carried out in the previous section, regarding the influence of investment and labor on GDP in South Kalimantan Province. Therefore, the following conclusions are obtained.

1. Investment and labor simultaneously have an influence but not significantly on the GDP in South Kalimantan Province. This is because the investment has a Prob(F-Statistic) value = $0.6122 > 0.05$.
2. Partially, Investment has an effect but not significant on the GDP in South Kalimantan Province, because it has a Prob(F-Statistic) value = $0.6122 > 0.05$. Therefore, H_0 was accepted and H_a was rejected. Meanwhile, labor also has an effect but not significantly on the GDP in South Kalimantan Province, because it has a Prob(F-Statistic) value = $0.9084 < 0.05$, then H_0 is accepted and H_a is rejected.

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