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# The Influence Of The Regional Income and Expenditure Budget (APBD), Gross Regional Domestic Product (GRDP), and The Human Development Index (HDI) On Foreign Investment In 5 Provinces Of The Northern Sumatera Region

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**Abstract**

This study has three independent variables used, namely the regional income and expenditure budget (APBD), gross regional domestic product (GRDP), and the human development index (HDI). This study uses a type of Quantitative research with the Regression Panel Data method with a research time period of 2017 to 2021. The data used was obtained from the official website of the Ministry of Finance for Regional Budget data, the data used was obtained from the official website of the Central Statistics Agency (BPS) for Gross Regional Domestic Product data, the Human Development Index, and for data obtained from the official website of the Central Statistics Agency (BPS) for Foreign Direct Investment (FDI). The results showed a simultaneous effect on Foreign Direct Investment in the 5 provinces of the northern Sumatra region. APBD GRDP variables, and HDI used can explain Foreign Direct Investment by 0.560338 or 56.03%. While the remaining 44.97% is explained by other factors.

**Keywords**: Regional Revenue and Expenditure Budget; Gross Regional Domestic Product; Human Development Index; Foreign Investment.

## 1. Introduction

It is expected that this will not only increase economic growth but will also achieve equitable and sustainable welfare improvement, which is the essence of economic development. Investment has a crucial role as a driver of a country's economy and the need for investment growth in Indonesia is crucial to overcome the high unemployment rate in almost all regions. With the growth of investment in Indonesia, new jobs will be created that can increase people's income and consumption is a key factor in supporting economic growth. [1]

Table 1. Foreign Direct Investment Realization by Province (Million US$)

| Province | 2017 | 2018 |
|---|---|---|
| Aceh | 89 | 91 |
| North Sumatra | 564 | 491 |
| West Sumatra | 146 | 137 |
| Riau | 285 | 252 |

Source: E-views processed

Explaining that Riau Islands Province is the largest contributor to investment compared to other provinces, it can be seen that every year there is an increase and decrease that fluctuates the largest investment is in 2020, namely 2143 which in the previous year amounted to 1279. Compared to other provinces, Riau Islands is the candidate province closest to Jakarta. Foreign Investment (PMA) is an investment activity to conduct business in the territory of the Republic of Indonesia carried out by foreign investors, both those who use foreign capital completely or in partnership with domestic investors.


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Table 2. Gross Domestic Product/Gross Regional Domestic Product at Constant Prices (billion rupiah) (Rp)

| Province | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Aceh | 121.240,98 | 126.824,37 | 132.069,62 | 131.581 | 135.274 |
| North Sumatra | 487.531,23 | 512.762,63 | 539.513,85 | 533.746,4 | 547.651,8 |
| West Sumatra | 155.984,36 | 163.996,19 | 172.205,57 | 169.426,6 | 174.999,9 |
| Riau | 470.983,51 | 482.064,63 | 495.607,05 | 489.995,8 | 506.471,9 |
| Kepuluan Riau | 166.081,68 | 173.498,75 | 181.877,67 | 174.959,2 | 180.952,4 |

Source: E-views processed

Explains that North Sumatra Province is the recipient of the largest gross regional domestic product in the period 2017 to 2021, the largest compared to other provinces, it can be seen that every year there is an increase and decrease that fluctuates the largest GRDP is in 2021, namely 547,651.82 Billion Rupiah which in the previous year amounted to 533,746.36 Billion Rupiah. Compared to other provinces, North Sumatra is the most advanced candidate province. Overall, the provinces in the northern part of Sumatra experienced an increase from 2017-2021. The budget politics of a region is reflected in the regional budget as a policy product. The APBD reflects the formulation of development directions and priorities that can be seen at the level of programs and activities in a particular year. The determination of these priorities must ensure the operation of government and improve the welfare of the community. Therefore, local governments must set budgets that will have great benefits for the community. [2]

Table 3. Regional Budget (APBD)

| Province | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Aceh | 44.390,34 | 41.352,12 | 45.089,83 | 46.634,8 | 43.454,1 |
| North Sumatra | 53.971,59 | 55.840,46 | 61.306,67 | 60.650,6 | 57.216,2 |
| West Sumatra | 25.687,60 | 26.306,82 | 28.594,41 | 28.830 | 27.388,3 |
| Riau | 30.344,10 | 30.574,44 | 32.595,34 | 33.985,3 | 29.804 |
| Kepuluan Riau | 11.242,14 | 11.495,04 | 13.189,47 | 13.703,9 | 12.730 |

Source: E-views processed

It can be seen that in the 2017-2021 range, the 5 provinces in the northern Sumatra region experienced various developments in the Regional Revenue and Expenditure Budget. In 2017 North Sumatra had an amount of 53,971.59 billion Rupiah, which increased in 2018 and 2019, but in 2020 and 2021 the Regional Budget of North Sumatra decreased to 57216.24 billion Rupiah. Apart from the APBD, there is a human development index which is a factor that affects investment. The existence of incoming foreign investment can create positive benefits, both direct and indirect. The direct advantage is the absorption of labor which can improve the welfare of the population of each country concerned. [3] It is expected that the increase in welfare in various dimensions can be represented through the human development index (HDI). The human development index is composed of three variables, including life expectancy which represents the level of health in a country. Years of schooling and estimated years of schooling to represent the education variable.

Table 4. Human development index (HDI)

| Province | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Aceh | 70,60 | 71,19 | 71,90 | 71,99 | 72,18 |
| North Sumatra | 70,57 | 71,19 | 71,74 | 71,77 | 72,00 |
| West Sumatra | 71,24 | 71,73 | 72,39 | 72,38 | 72,65 |
| Riau | 71,79 | 72,44 | 73,00 | 72,71 | 72,94 |
| Kepuluan Riau | 74,45 | 74,84 | 75,48 | 75,59 | 75,79 |

Source: E-views processed

In the range of 2017 -2021 in 5 regions in North Sumatra Province experienced diverse developments in the Human Development Index.

## 2. Literature Review

### *2.1 Regional Revenue and Expenditure Budget*

The Regional Revenue and Expenditure Budget (APBD) is a government work plan expressed quantitatively, usually in monetary units that reflects sources of regional revenue and expenditure to finance regional activities and projects within one fiscal year. In essence, the regional budget (APBD) is one of the tools to improve public services and community welfare in accordance with the objectives of broad, real and responsible regional autonomy. Thus the APBD must truly reflect the needs of

the community by taking into account the potential for regional diversity [4].

*2.2 Gross Regional Domestic Product*

Gross Regional Domestic Product (GRDP) is the sum of added value generated for all business areas and services in a region, applying the total value of final goods and services produced by all economic units. GRDP itself can be interpreted as the amount of added value generated by all business units or is the total value of goods and services by all economic units in a region [5].

*2.3 Gross Regional Domestic Product*

An important indicator to be able to determine the economic condition of a region in a certain period of time is to use Gross Regional Domestic Product (GRDP) data, which can be used at current prices or at constant prices. According to Sukirno (2000), economic growth is an increase in output per capita in the long term, the emphasis is on three aspects, namely the process, output per capita, and the long term. Economic growth is a process, not just a snapshot of the economy. Regional development and sectoral development must be carried out in line so that sectoral development in the regions can run in accordance with the potential and priorities of the region [6].

*2.4 Foreign Investment*

Foreign Investment is a form of investment by way of building, totally buying or acquiring a company. Investment in Indonesia is stipulated through Law No.25 of 2007 concerning Foreign Investment (PMA). Foreign Investment in this Law is the activity of investing capital to conduct business in the territory of the Republic of Indonesia carried out by foreign investors, either fully using foreign capital or in collaboration with domestic investors [7].

## 3. Research Method

This study uses a quantitative approach because the data used is data in the form of numbers published by the Central Statistics Agency (BPS), and the Ministry of Finance, which will be processed using an analytical tool in the form of the Eviews 12 program to get answers to the hypotheses proposed. This research is descriptive in nature, namely for research methods that describe or describe certain phenomena, situations, or events systematically, [8] factually, and accurately. In accordance with this definition, this research was conducted to determine the effect of the Regional Budget, gross regional domestic product, and human development index on foreign investment.

In this research, the analysis used is a panel data analysis. PaneI data is an analysis that combines cross section with time series data. The reason for using multiple linear regression in this research is to determine the effect between independent variables on dependent variables.This study uses one variable dependent variable and three independent variables. The dependent variable in this study is Foreign Direct Investment (FDI), while the independent variables in this study are Regional Income and Expenditure Budget (APBD), Gross Regional Domestic Product (GRDP) and Human Development Index (HDI). The general equation in multiple linear regression analysis is as follows [9].

$$\mathbf{Y=\beta 0.X1\ \beta 1.X2\ \beta 2.X3\ \beta 3.\ Et}$$

In order to be estimated, the regression equation is transformed to multiple logarithms.

$$\mathbf{LogYt= \beta 0 + Log\ \beta 1X1t + Log\ \beta 2X2t + Log\ \beta 3X3t + et}$$

Description:

β0 = Constant
t = Time Series
Y = Foreign Investment
X1 = APBD
α = Constant
X2 = GRDP
X3 = HDI
β = Regression Coefficient
e = Error βn = Elasticity parameter

## 4. Results and Discussion

The Chow test is used to choose whether to use the PIS or FEM model. The following are the results of the Chow Test:

Table 5. Result of Chow Test

| Effect Test | Statistic | d.f | Prob. |
|---|---|---|---|
| Cross Section F | 3.405982 | (4, 17) | 0.0321 |
| Cross Section Chi Square | 14.7142017 | 4 | 0.0053 |

Source: E-views processed

Based on the table above, it can be seen that the Cross-section F probability value is 0.0321 and the value is smaller than the significance level α = 5% (0.0321 <0.05), then the pooled leasr square model is not accepted so, the best model used is the Fixed Effect Model.

Hausman Test is a test used to determine which modeI is the best to choose between Fixed Effect ModeI or Random Effect Model.

Table 6. Result of Hausman Test

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f | Prob. |
|---|---|---|---|
| Cross-section random | 6.858190 | 3 | 0.0766 |

Source: E-views processed

Based on the table above, it can be seen that the Cross-section random probability value is 0.0766 and the value is greater than the significance level α = 5% (0.0766> 0.05) Fixed Effect Model Rejected. Thus, a good model to use is the Random Effect Model.

The LM test is used to determine whether the model used is the Common Effect Model or the random effect model chosen to estimate.

Table 7. Result of LM Test

| | Cross-section | Test Hypothesis is Time | Both |
|---|---|---|---|
| Breusch-Pagan | 0.000316 | 4.938760 | 4.939076 |
| | (0.9858) | (0.0263) | (0.0263) |
| Honda | -0.017771 | 2.222332 | 1.558 860 |
| | (0.5071) | (0.0131) | (0.0595) |
| King-Wu | -0.017771 | 2.222332 | 1.558 860 |
| | (0.5071) | (0.0131) | (0.0595) |
| Standardized Honda | 1.915938 | 2.655608 | 0.082412 |
| | (0.0277) | (0.0040) | (0.4672) |
| Standardized King-Wu | 1.915938 | 2.655608 | 0.082412 |
| | (0.0277) | (0.0040) | (0.4672) |
| Gourieroux, et al. | - | - | 4.938760 |
| | | | (0..0343) |

Source: E-views processed

Based on the table above, it can be seen that the probabiIity value of Cross- section random is 0.9858 and the value is smaller than the significance level α = 5% (0.9858 <0.05) Fixed Effect ModeI is rejected,. Thus, a good modeI is used, namely the Common Effect Model (CEM). Based on the results of the Chow Test, Hausman Test, and Lm Test, the best model in this study is the CEM.

The MuItikoIinearity test is conducted to determine whether there is a correlation between the independent variables.

Table 8. Result of MuItikoIinearity Test

| Variable | X1 | X2 | X3 |
|---|---|---|---|
| X1 | 1.000000 | 0.505400 | -0.772007 |
| X2 | 0.505400 | 1.000000 | -0.251461 |
| X3 | -0.772007 | -0.251461 | 1.000000 |

Source: E-views processed

The correlation coefficient between X1 and X2 is 0.505400 < 0.85, X1 and X3 is -0.772007 < 0.85, and X2 and X3 is -0.251461 < 0.85, so it can be concluded that it is free of multicollinearity or passes the multicollinearity test.

The heteroscedasticity test is intended to test whether in the regression model there is an inequality of variance and residuals from one observation to another. If the variance and residuals of one observation to another are constant, it is called homoscedasticity and if it is different it is called heteroscedasticity.[10]

Table 9. Result of Heteroscedasticity Test

| Variable | Coefficient | Std Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -5468.928 | 3532.968 | -1.547970 | 0.1366 |
| X1 | 0.006039 | 0.005039 | 1.198470 | 0.2441 |
| X2 | -0000102 | 0.000297 | 0.344987 | 0.7335 |
| X3 | 0.760912 | 0.471022 | 1.615449 | 0.1211 |

Source: E-views processed

From the results of the table above, the probability value between variables> from 0.05. So it is free from heteroscedasticity test.

The t-statistic test serves to determine the effect of independent variables in parsiaI or individually on independent variables. The t-statistic test is carried out by comparing the probabiIity value of the t-statistic of each variable against the significance level α = 5%, then if the probabiIity value < α, then H0 is rejected.

Table 10. Result of T Test

| Variable | Coefficient | Std Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -27064.07 | 5625.956 | -4.810572 | 0.0001 |
| X1 | 0.016704 | 0.008023 | 2.081843 | 0.0498 |
| X2 | 0.000575 | 0.000473 | 1.217709 | 0.2368 |
| X3 | 3.700519 | 0.750063 | 4.933612 | 0.0001 |

Source: E-views processed

The F-statistic test aims to determine whether all independent variables have a joint or comprehensive influence on their related variables.

Table 11. Result of F Test

| | |
|---|---|
| F-statistic | 11.19578 |
| Prob(F-statistic) | 0.000134 |

Source: E-views processed

The F-count value is 11.19578> 3.072467, and the significant value is 0.000134 <0.05, so the APBD GRDP variable, and HDI have an effect on Foreign Investment.

The Determination Coefficient test aims to measure how much the ability of the independent variabeI is in explaining the dependent variable.

Table 12. Result of Determination Coefficient Test

| | |
|---|---|
| Adjusted R-squared | 0.560338 |

Source: E-views processed

The effect of the independent variable on the dependent variable partially is as follows:

1. The T test on variable X1 obtained a t-count value of 2.081843> 2.068658, and a probability value of 0.0498 <0.05, so the APBD variable has a significant effect on Foreign Investment in the 5 Provinces of the Northern Sumatra region.[7]
2. T-test on variable X2 obtained a t-count value of 1.217709 < 2.068658, and a probability value of 0.2368 > 0.05, so GRDP has no significant effect on Foreign Direct Investment in 5 Provinces in the Northern Sumatra regio [11].

3. T-test on variable X3 obtained a t-count value of 4.933612 > 2.068658, and a probability value of 0.0001 < 0.05, then the Human Development Index has a significant effect on Foreign Direct Investment in the 5 Provinces of the Northern Sumatra region [12].

## 5. Conclusions

Regional Revenue and Expenditure Budget has a significant effect on Foreign Direct Investment in 5 Provinces in the Northern Sumatra region. Gross Regional Domestic Product has no significant effect on Foreign Direct Investment in 5 provinces in the Northern Sumatra region. Human Development Index has a significant effect on Foreign Direct Investment in 5 provinces in the Northern Sumatra region. Based on the results and discussion that has been discussed previously, the researcher draws the conclusion, the Regional Revenue and Expenditure Budget has a significant effect on Foreign Investment in the 5 Provinces of the Northern Sumatra region. Gross Regional Domestic Income has no significant effect on Foreign Direct Investment in 5 Provinces in the Northern Sumatra region.[10] Human Development Index has a significant effect on Foreign Direct Investment in 5 provinces of North Sumatra region. GDRP APBD, and HDI simultaneously affect Foreign Investment in 5 provinces of northern Sumatra. GDRP APBD variables, and HDI used can explain Foreign Investment by 0.560338 or 56.03%. While the remaining 44.97% is explained by other factors not examined in this study.

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