The Influence of Government Expenditure and Investment on Income Gaps through Regency/City Economic Growth in West Sumatra Province

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Abstract

This research aims to test and also analyze the influence of government spending and investment on income gaps through economic growth in districts/cities in West Sumatra Province. The type of data used in this research is quantitative data, while the data source used in this research is secondary data. This research uses a path analysis model (Path Analysis), namely using panel data of 190 data consisting of 10 years as Time Series data starting from 2011 to 2020 and combined with 19 Regencies/Cities as Cross Section data. The data analysis method used in this research is the multiple linear regression analysis method (Multiple Regression Analysis) and path analysis (Path Analysis). The results of research based on the path analysis method show that the government expenditure variable has a negative and significant effect on economic growth, the investment variable has a negative and insignificant effect on economic growth, the government expenditure variable has a negative and significant effect on the income gap, the investment variable has a negative and significant effect on the income gap income, the economic growth variable has a positive and significant effect on income inequality.

Keywords: Government Expenditure, Investment, Economic Growth, Income Gap.

A. INTRODUCTION

Judging from the development process in Indonesia, there have been several significant changes, starting from the old order government, the new order, the reform order to post-reformation. At each stage, careful planning is needed so that the development direction can be successful. Planning is a process for determining what you want to achieve in the future and determining the stages needed to achieve it (Buana, 2018). Basically, development is carried out with the aim of creating good economic growth and social welfare.

The government performance referred to here is not only focused on the central government, but also on the provincial government, be it Regency/City. The government of West Sumatra Province must of course strive to distribute development, facilities and infrastructure that can help optimize the role of the community in improving welfare in West Sumatra Province. Development has the aim of increasing per capita income in order to accelerate economic growth in a region.

Development is carried out not only to accelerate economic growth but also to ensure equality. Unequal development that occurs in a particular area will cause...
disparities or disparities in income distribution in that area. This can occur due to several factors, such as geographical differences, differences in the quality of human resources, unequal distribution of investment, allocation of government spending that has not been carried out effectively and regional development strategies that are still lacking. The widening gap between regions is greatly influenced by geographical differences, such as the inequality that occurs in urban and rural areas (Primandani, 2018).

There are still gaps between provinces on the island of Sumatra. In this picture, for each region there are no very serious disparities or high disparities. This means that the areas on the island of Sumatra are almost close to equality. The average inequality figure for each region is $0.3 \leq G \geq 0.5$, which means that the inequality that occurs is moderate inequality. The area with low inequality on the island of Sumatra is the Bangka Belitung Islands, this area is able to reach a figure of 0.2 compared to other areas in Sumatra. Meanwhile, for other regions it can be said that they are still at relatively the same figure, namely above the inequality figure of 0.3, which is considered moderate inequality. Development is a process of making improvements or progress by making efforts towards changes for the better in the future. The changes in question include all existing systems in a region or country, such as political, economic, infrastructure, defense, education and technology, institutional and cultural systems. The economic development of a region is essentially a series of activities carried out subconsciously and continuously in order to create better conditions simultaneously and continuously.

Economic growth is an economic problem faced by a country in the long term. Economic growth will later measure the achievements of a country’s economic development from one period to the next. Economic growth is closely related to the process of increasing the production of goods and services in society’s economic activities. Economic growth indicators not only measure the level of output growth in an economy, but actually also provide an indication of the extent to which economic activities occurring in a certain period have generated income for society. Economic growth in a country is also influenced by several factors, for example how much investment or investment is made by investors in a particular country or region. Harrod-Domar (Tumbel, 2018) states that the conditions that must be met so that an economy can achieve strong growth or steady growth in the long term are the need for investment, and to create this investment it is necessary to increase savings.

In other research also carried out by I Gusti Ayu Putri Wahyuní (2014) in the Regency/City of Bali Province in the period 2000-2012, the novelty of the research lies in the location and time of the research, in addition to the formulation of the problem and hypothesis described by previous research is also a fundamental difference between the research currently being carried out and previous research. Meanwhile, in other research conducted by Ni Putu Intan Primandani (2020) in Regencies/Cities in Bali Province in the period 2000-2012, what is different and updated with the research currently being conducted lies in the
variables used. In previous research, income inequality was used as an intervening variable and Community Welfare as Y2. Meanwhile, the research being conducted uses Economic Growth as an intervening variable and Income Gap as Y2.

This study only used two variables, the fundamental reason why this study only included two variables was because it was inspired by Cobb Douglas’ theory. The Cobb Douglas production function is a function and equation that only involves two or more independent and dependent variables. Labor, raw materials and machines are used as independent variables (input from the production process), while the dependent variable is the output from the production process in the form of goods. This research aims to analyze the influence of government spending on the economic growth of districts/cities in West Sumatra Province.

B. METHOD

In analyzing the magnitude of the influence of independent variables on dependent variables, this research uses structural equations, namely path analysis (Path Analysis), which is an extension of multiple linear regression analysis to estimate the causal relationship between variables (causal model) which is processed using the SPSS 29 program. In path analysis, there is a variable that plays a dual role, namely as an independent variable in a relationship, but in other relationships it also plays a role as a dependent variable (Suyana Utama, 2007). By using path analysis, direct and indirect influences between variables can be calculated.

This analysis is used to see the effect of government spending and investment on income gaps through economic growth in the districts/cities of West Sumatra province. In this research, there are two endogenous variables used, namely Economic Growth (Y1) and Income Gap (Y2). This technique is used to determine the direct influence of the independent variable on the dependent variable and the indirect influence through intervening variables which is assisted by processing using SPSS 29.

![Figure 1. Path II diagram structure model](image)

C. RESULTS AND DISCUSSION

1. Normality Test

In the normality test, a test will be carried out which functions to see whether in the regression model, the confounding or residual variables have a normal distribution. The normality test will show whether the data is normally distributed or
In this study, testing normality was Kolmogorov Smirnov (KS) using the SPSS version 29 application. This test is a Goodness of Fit, namely the level of suitability of the data distribution. The way to see the normality of residuals is by using the KS Test as a basis for decision making, namely, if the significance value (Sig.) is greater than 0.05 then the research data is normally distributed, and if the significance value (Sig.) is smaller than 0.05 then the research data not normally distributed. The calculation results from the Normality test on the unstandardized residual values in the 2 model structures will produce 2 residuals as follows:

**Table 1. Results Test Normality Variable Growth Economy**

<table>
<thead>
<tr>
<th>Variable</th>
<th>One-Sample Kolmogorov-Smirnov Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized Residual</td>
</tr>
<tr>
<td>N</td>
<td>190</td>
</tr>
<tr>
<td>Normal Parameters&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>Mean .0000000</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td>Absolute .078</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>Asymp. Sig. (2-tailed)&lt;sup&gt;c&lt;/sup&gt; .078</td>
</tr>
<tr>
<td>Monte Carlo Sig. (2-tailed)&lt;sup&gt;d&lt;/sup&gt;</td>
<td>Sig. .018</td>
</tr>
</tbody>
</table>

<sup>a</sup> Test distribution is Normal.
<sup>b</sup> Calculated from data.

Based on the SPSS output table, the total number of observation data is 190. Asymp.Sig value data (2-tailed) of 0.067 is greater than the figure of 0.05. So, it can be concluded that based on the KS test above, the data is normally distributed, or it could be said that the data normality assumption has been fulfilled.

**Table 2. Results Test Normality Variable Gaps Income**

<table>
<thead>
<tr>
<th>Variable</th>
<th>One-Sample Kolmogorov-Smirnov Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized Residual</td>
</tr>
<tr>
<td>N</td>
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Monte Carlo Sig. (2-tailed) parameter (2-tailed) of .018 is greater than the parameter of .05. So, it can be concluded that based on the KS test above, the data is normally distributed, or it could be said that the data normality assumption has been fulfilled.
2. Multicollinearity Test Results

The multicollinearity test aims to test whether in the regression model a correlation is found between the independent variables. A good model occurs when there is a correlation between the independent variables (Ghozali in Baihaqi, 2010:68). This test is carried out by looking at the tolerance value and variance inflation factor (VIF). If the tolerance value is > 0.10 or VIF < 10, it can be concluded that multicollinearity does not occur. Below are presented the results of the multicollinearity test.

Table 3. Multicollinearity Test of Economic Growth Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1,904</td>
<td>.054</td>
<td>34.974</td>
</tr>
<tr>
<td>LN_X1</td>
<td>-.027</td>
<td>.009</td>
<td>-.226</td>
</tr>
<tr>
<td>LN_X2</td>
<td>-.006</td>
<td>.004</td>
<td>-.117</td>
</tr>
</tbody>
</table>

a. Dependent Variables: LN_Y1

From the results of the multicollinearity test above, it can be seen that the tolerance and VIF values show that the government expenditure and investment variables in this study do not experience multicollinearity. This is because the tolerance value far exceeds 0.1 and the VIF of this variable is less than 5.

Table 4. Multicollinearity Test of Income Inequality Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-1.376</td>
<td>.152</td>
<td>-9.055</td>
</tr>
<tr>
<td>LN_X1</td>
<td>-.030</td>
<td>.009</td>
<td>-.254</td>
</tr>
<tr>
<td>LN_X2</td>
<td>-.008</td>
<td>.004</td>
<td>-.150</td>
</tr>
<tr>
<td>LN_Y1</td>
<td>.219</td>
<td>.075</td>
<td>.219</td>
</tr>
</tbody>
</table>

From the results of the multicollinearity test above, it can be seen that the tolerance and VIF values show that the variables of government spending, investment
and economic growth in this study do not experience multicollinearity. This is because the tolerance value far exceeds 0.1 and the VIF of this variable is less than 5.

3. Autocorrelation Test Results

The autocorrelation test is carried out with the aim of showing that there is a correlation between the variables themselves, at different times and individuals. If this problem occurs then the equation is not good/fit to be used as a prediction. Autocorrelation testing can be determined by looking at the Durbin Watson (DW) value. If DW is below -2 (DW < -2), then autocorrelation occurs in the study. If DW is between -2 and +2 (-2 < DW < +2), then there is no autocorrelation. The following will present the results of the autocorrelation test.

**Table 5. Results Test Autocorrelation Variable Growth Economy**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.243</td>
<td>.059</td>
<td>.047 .10856</td>
<td>1,042</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LN_X2, LN_X1
b. Dependent Variable: LN_Y1

The results of the autocorrelation test can be seen in table 4.7 above, where the Durbin-Watson value shows that the figure is 1,042 where -2 < 1,042 +2. So, it can be concluded that the equation is free from autocorrelation interference.

**Table 6. Results Test Autocorrelation Variable Gaps Income**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.395</td>
<td>.156</td>
<td>.140 .10305</td>
<td>1,558</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LN_Y1, LN_X2, LN_X1
b. Dependent Variable: LN_Y2

The results of the autocorrelation test can be seen in table 4.8 above, where the Durbin-Watson value shows that the figure is 1,558 where -2 < 1,558 +2. So, it can be concluded that the equation is free from autocorrelation interference.

4. The Effect of Government Expenditures on Economic Growth

Based on the meaning of the standardized coefficient beta value of -0.226, it can be explained that every 1 percent increase in government spending will reduce economic growth by -0.226 percent, and the value of government spending has a negative and significant effect on economic growth. The state of government spending or regional spending in West Sumatra Province is based on reports from the West Sumatra Province Regional Financial Agency, namely that in its management, there are two policy directions used, namely indirect spending policies and direct spending policies. Indirect expenditure policy regulates employee expenditure, subsidy expenditure, grant expenditure, profit sharing expenditure, financial
assistance expenditure and unexpected expenditure. Meanwhile, direct spending contains more direction towards Economic Recovery. If we look at 2020, the main problems with regional spending in the 2020 APDB include the need for a larger budget to prevent and handle the impact of the Covid-19 pandemic, which includes handling health impacts, handling economic impacts and providing social safety nets. Meanwhile, at the same time, regional income sources experienced a significant decline to fund these expenditure needs, therefore, in overcoming this problem, the government reallocated and refocused the budget from the activity program (Direct SKPD Shopping) to Indirect Shopping, namely for spending. Unexpected in handling non-natural disaster emergencies (Covid-19).

5. The Effect of Investment on Economic Growth

Based on the meaning of the standardized coefficient beta value of -0.117, it can be explained that every 1% increase in investment will reduce economic growth by -0.117%, and the investment value has a negative and insignificant effect on economic growth. In West Sumatra Province, investment licensing problems often occur. It is no secret that the investment licensing system in the West Sumatra region can be said to be quite difficult. Apart from difficult permits, protected forest areas and customary land are also several obstacles to investment in West Sumatra Province.

The results of this research are in line with research conducted by Heilda Erjergit (2021), regarding the influence of investment and government spending on economic growth in Sorong Regency. The results of this research show that investment does not have a significant influence on economic growth. This is because investment does not directly have an impact on economic growth in Sorong Regency due to the low quality and productivity of human resources, especially for existing workers who are not native to Sorong Regency. Furthermore, in other research, namely research conducted by Siti Saudah (2022), regarding the influence of investment on economic growth in South Kalimantan Province. This research also provides research results that have a negative and insignificant effect on investment on economic growth in South Kalimantan Province. This is because investment in South Kalimantan Province is still dominated by the primary sector, namely mining and plantations. However, research conducted by Stelma Diane Anita Tumbel (2018) had contradictory results. In this research, investment has a positive and significant influence on growth in South Minahasa Regency.

6. The Effect of Government Expenditures on Income Gaps

Based on the meaning of the standardized coefficient beta value of -0.254, it can be explained that every 1% increase in government spending will reduce the income gap by -0.226%, and the value of government spending has a negative and significant effect on the income gap. Government spending can be an injection into the economy through programs or activities to encourage the productivity of available resources.
For example, let's say that government spending drives the productivity of business units in an area because more output produced by large industries and small industries or MSMEs will be absorbed, so that in the future people's income will increase and can help reduce distribution inequality, income of a particular area.

7. The Effect of Investment on Income Gaps

Based on the meaning of the standardized coefficient beta value of -0.150, it can be explained that every 1% increase in investment will reduce the income gap by 0.150%, and the investment value has a negative and significant effect on the income gap. High investment in an area can reduce the income gap in districts/cities in West Sumatra Province. This can be interpreted according to the view of Sukirno (2000), investment activities carried out by the community continuously will increase economic activity and employment opportunities, increase national income and the level of prosperity of society by reducing the income gap. The role that originates from three functions in an investment activity is as follows: 1) investment is a component of aggregate expenditure, so that an increase in investment will increase aggregate demand, 2) an increase in capital goods as a result of investment will increase production capacity, 3) investment is always followed by technological developments. According to Neo Classical Theory, direct investment has a contribution, especially in developing countries, to increasing the level of social welfare by reducing income disparities or equalizing income.

8. The Effect of Economic Growth on Income Inequality

Based on the meaning of the standardized coefficient beta value of 0.219, it can be explained that every 1% increase in economic growth will increase the income gap by 0.219%, and the value of government spending has a positive and significant effect on the income gap. This means, the higher the economic growth, the higher the income inequality. The results of this research are in accordance with the Kuznets Theory in Sukirno (1995), which states that the process of economic development of a country in the early stages is generally accompanied by a fairly large decline in income distribution, and then only turns towards better equality at a further stage of development. Economic growth is one of the conditions for achieving economic development. However, what needs to be paid attention to is not just statistical figures that describe the rate of economic growth.


The indirect effect of government spending on the income gap is -0.049, while the direct effect of government spending on the income gap is -0.254. This means that the direct influence is greater than the indirect influence. This research shows that there is no direct influence of government spending on income inequality through economic growth. Based on the results of the calculations that have been carried out,
it is found that economic growth is not an intervening variable for government spending on income gaps in districts/cities in West Sumatra Province.

This research is in line with research conducted by Novelya Mamuane (2021), which states that development budget allocation as an instrument for reducing economic inequality seems to need more attention. The strategy for allocating the budget must be able to encourage and accelerate national economic growth as well as act as an intervention tool to reduce disparities/inequality in a region. From this it can be concluded that in this study the indirect variable of government expenditure on income inequality through economic growth cannot partially mediate the influence of government expenditure on income inequality.

10. The Effect of Investment on Income Inequality through Economic Growth

The indirect effect of investment on the income gap is -0.025, while the direct effect of government spending on the income gap is -0.150. This means that the direct influence is greater than the indirect influence. This research shows that there is no direct contribution of investment to income inequality through economic growth. Based on the results of the calculations that have been carried out, it is found that economic growth is not an intervening variable for investment in income gaps in districts/cities in West Sumatra Province.

The results of this research are in line with research conducted by Ni Putu Intan Primandani (2020), which stated that investment will certainly create jobs which will ultimately lead to improving community welfare by equalizing or eliminating income inequality. In this case, the regional government of Bali Province must prepare its human resources according to needs and also improve the quality of its human resources. From this, it can be concluded that in this study the investment variable indirectly on income inequality through economic growth cannot partially mediate the effect of investment on income inequality.

D. CONCLUSION

Based on the results of the data analysis described in the previous chapter, it can be concluded that government spending has a negative and significant effect on economic growth in the districts/cities of West Sumatra Province during 2011-2020. This proves that increasing government spending will actually reduce the level of economic growth, this is because government spending shows fluctuating conditions. Government spending has a negative and significant effect on the income gap in the Districts/Cities of West Sumatra Province during 2011-2020. This proves that increasing government spending will actually reduce the level of inequality or create greater equality of income between regions. Investment has a negative and significant effect on economic growth in the Regencies/Cities of West Sumatra Province during 2011-2020. This proves that if there is an increase in investment it will actually reduce the level of economic growth. Investment has a negative and significant effect on the income gap in the Districts/Cities of West Sumatra Province during 2011-2020.
proves that if there is an increase in investment, it will reduce the level of inequality or create more equal distribution of income between regions in the region. Economic growth has a positive and significant effect on the income gap in the Regencies/Cities of West Sumatra Province during 2011-2020. This proves that the greater the economic growth in a region, the greater the inequality that will occur.

REFERENCES