Analysis of the Effect of Economic Growth on Regional Inequality in Aceh Province in 2017

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Abstract
Making this journal aims to fulfill one of the tasks of the development economics course with lecturer Deris Desmawan, SE, M.Si. This study aims to examine the relationship between the effect of economic growth on regional inequality for the period 2017. This study uses secondary data, namely data sourced from BPS as well as previous studies that discuss the same topic. There are variable, namely economic growth and regional inequality. The results show the variable of economic growth on regional inequality has no significant full effect on regional inequality.
Keywords: Economic Growth and Regional Inequality

INTRODUCTION

The specification of the corresponding model is necessary to analyze the relationship between regional inequality and economic growth from a geographical perspective. Indeed, regional expansion of both inequality in the local economy and inequality in the surrounding region can have an impact. This recommended model takes into account the impact of dependence.

According to Anghelache et al. (2016), sustainable economic growth must take into account a number of important macroeconomic factors that track, compare, and evaluate economic performance, including GDP growth, unemployment, inflation, and the current account balance. It is possible to evaluate internal and external macroeconomic conditions by using four imbalance variables, to track economic changes, and to choose the way forward then comes the medium and long-term economic strategy.

The government's efforts to improve the welfare of the community at the social and economic level are known as economic development. Development planning is very important so that economic development can be realized and directed appropriately. According to Jhingan (in Sjafrizal, 2014), development planning is carried out to achieve a goal and the central government regulates and regulates its implementation. The National Development Planning System (SPPN) is a process used for the central government with the participation of the people to produce plans at a certain time.

Cross-country empirical research primarily provides evidence that inequality has a detrimental influence on growth (Alesina & Rodrik, 1994; Several other investigations also exist (Persson & Tabellini, 1994). favorable associations are indicated (Forbes, 2000; Li and Zou, 1998). Panizza (2002) found an adverse relationship between Growth and inequality, however, not strong for simple adjustments to the procedures for the data taken.

One of the key metrics for measuring the effectiveness of regional development is economic growth. Therefore, equity needs to be balanced with economic growth. According to Sjafrizal (in Pratiwi, 2021), the cause of inequality between regions is because each region has a different nature, which affects its ability to develop (people and writing). One of the significant

problems is this inequality, so handling it requires careful consideration. Economic growth itself is one of the achievements of economic development. The main objective in carrying out development is the result of meta-development. However, greater economic expansion has led to regional disparities in terms of development. The desire of a region to move forward can be harmed by this imbalance of development, which often becomes a major problem and, if not addressed.

There are 34 provinces in Indonesia, and Aceh is one of them. Aceh itself utilizes various technologies and has natural potential. This difference manifests itself as a variation in ecological conditions, natural resources and others resulting in variations in each region. Due to the concentrated economic activities in many parts of Aceh Province that have rich natural resources, this gap is an obstacle to equitable development. This type of wealth is supposed to contribute value to economic growth and can have far-reaching impacts. However, not all regions in Aceh Province have this equitable distribution of natural resources. Every region in Aceh Province can experience inequality as a result of this. Therefore, this study we hope to examine how much inequality is in each region in Aceh Province by looking at the disparity of economic growth in various regions in Aceh Province in each region.

Economic Growth

The increase in the value and volume of output of products or services over a period of time is referred to as economic growth. The level of well-being of the citizens of a nation is strongly correlated with economic progress. Comparing elements that may describe the economy of a country in its current and past state allows observing and measuring economic growth. GDP or GNP is a factor used to measure economic growth (GDP). The process of constant improvement in the economic situation of a country is known as economic growth. The economy of a country is said to be developing if the economic activity of its citizens directly results in an increase in the production of goods.

Faktor-faktor yang mempengaruhi pertumbuhan ekonomi

1. Natural Resources. The most influential factor in economic growth is human resources. HR itself is everything that comes from nature.
2. Human Resources. The second factor that is biased to influence economic growth is human resources, where this human resource can be seen from community productivity, education and health.
3. Capital Accumulation. The accumulation of capital is the next factor driving human growth. This process of capital accumulation seeks to increase the amount of physical capital that has been created by man, such as machinery, buildings, and equipment.
4. Science and Technology. Work patterns change as sophisticated machines take over tasks that previously required human hands, impacting productivity, quality, and quantity.

Regional Economic Growth Theory

Geographical Economics This theory is of great importance for regional economic analysis. The cause is clear given that growth is a key component of local economic development and has significant policy implications. 44 Economic growth at the local level refers to an increase in the total amount of income generated by local communities, or value added (value edit). the income of the county was first calculated using today's price. In order to be able to feel the increase from one period to the next. This basically sums up the abundance in the area (Tarigan, 2005).

Measurement of Development Inequality

According to Todaro (1987), if a country's national income and expenditure are not balanced and its capital or investment factors decrease, development can still take place. The Williamson Index is one of the metrics used to ensure that economic growth is fairly distributed among regions within a country or province. Williamson conducted research on the relationship between regional inequality and the level of economic development. He found that in the early stages of development, the gap between regions increased.

RESEARCH METHODS

The analysis method that we attached to this study uses secondary data derived from BPS sources published in the form of Microsoft Excel. Secondary data is where the data spontaneously spreads the data to the collector but by passing through other parties or data files. Based on what was used in this study, it is economic growth data and regional inequality data in Aceh province in 2017. The method we attach uses the method of documents or files taken from BPS and other source agencies.

Variable Oprationalization, The attached data research uses two variables, namely: Dependent variables, namely regional inequality in Aceh province and Independent variables, namely economic growth in Aceh province. The analysis method that we attached uses a descriptive method with a quantitative approach through Microsoft Excel and SPSS 25.0 as data processing tools. To analyze the problem we used a simple regression model in the form of a T test (partial) to find out the relationship of these variables. The regression formula used in this study is as follows:

$$Y = \beta_0 + \beta_1 X_1 + e$$

Y = Regional Inequality　　　X_1 = Economic Growth　　　β_1 = Regression Coefficient
β_0 = Constant　　　e = Disruptive Factors

RESULTS OF RESEARCH AND DISCUSSION
Economic Growth and Regional Inequality in Aceh Province

The increase in income in which the people are located is what becomes the economic growth of the region itself. And in general, one of the key metrics that can be used assesses a country's progress towards development. The following is data on Economic Growth and Regional Inequality according to Aceh in 2017 which we present in the form of graphs and tables.
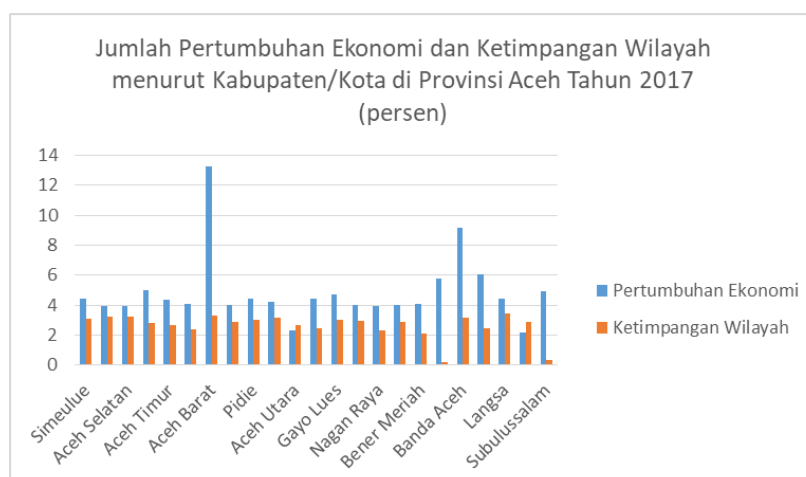

Figure1. Graph of Economic Growth and Regional Inequality in Aceh Province

Table 1. Economic Growth and Regional Inequality of Aceh Province

Kabupaten/Kota	Jumlah Pertumbuhan Ekonomi dan Ketimpangan Wilayah menurut Kabupaten/Kota di Provinsi Aceh Tahun 2017 (persen)	
	Pertumbuhan Ekonomi	Ketimpangan Wilayah
Simeulue	4,42	3,07
Aceh Singkil	3,92	3,21
Aceh Selatan	3,93	3,21
Aceh Tenggara	5,03	2,84
Aceh Timur	4,34	2,65
Aceh Tengah	4,05	2,38
Aceh Barat	13,23	3,33
Aceh Besar	4,01	2,91
Pidie	4,42	3,05
Bireuen	4,23	3,15
Aceh Utara	2,3	2,66
Aceh Barat Daya	4,46	2,46
Gayo Lues	4,7	3,01
Aceh Tamiang	4,0	2,95
Nagan Raya	3,95	2,31
Aceh Jaya	4,0	2,87
Bener Meriah	4,09	2,13
Pidie Jaya	5,8	0,22
Banda Aceh	9,17	3,14
Sabang	6,07	2,47
Langsa	4,43	3,42
Lhokseumawe	2,19	2,91
Subulussalam	4,93	0,33

Sumber: BPS Provinsi Aceh Tahun 2017

From the table attached above, it can be seen that there are 23 regency/city data in Aceh province. The BPS data shows that the amount of economic growth and regional inequality according to Aceh Province in 2017. Simeulue has a total economic growth of 4.42 percent and regional inequality of 3.07 percent. Aceh Singkil has a total economic growth of 3.92 percent and regional inequality of 3.21 percent. South Aceh has a total economic growth of 3.93 percent and regional inequality of 3.21 percent. Southeast Aceh has a total economic growth of 5.03 percent and regional inequality of 2.84 percent.

East Aceh has a total economic growth of 4.34 percent and regional inequality of 2.64 percent. Central Aceh has a total economic growth of 4.05 percent and regional inequality of 2.38 percent. West Aceh has an economic growth rate of 13.23 percent and regional inequality of 3.33 percent. Aceh Besar has a total economic growth of 4.01 percent and regional inequality of 2.91 percent. Pide has a total economic growth of 4.42 and regional inequality of 3.05 percent. Bireuen has a total economic growth of 4.23 percent and regional inequality of 3.15 percent.

North Aceh has a total economic growth of 2.3 percent and regional inequality of 2.66 percent. Southwest Aceh has economic growth of 4.46 percent and regional inequality of 2.46 percent. Gayo Lues has a total economic growth of 4.7 percent and regional inequality of 3.01 percent. Aceh Tamiang has a total economic growth of 4.0 percent and regional inequality of 2.95 percent. Nagan Raya has a total economic growth of 3.95 percent and regional inequality of 2.31 percent.

Aceh Jaya has a total economic growth of 4.0 percent and regional inequality of 2.87 percent. Bener Meriah has a total economic growth of 4.09 percent and regional inequality of 2.13 percent. Pidie Jaya has a total economic growth of 5.8 percent and regional inequality of 0.22 percent. Banda Aceh has a total economic growth of 9.17 percent and regional inequality of 3.14 percent. Sabang has a total economic growth of 6.07 percent and regional inequality of 2.47 percent. Langsa has total economic growth of 4.43 percent and regional inequality of 3.42 percent. Lhokseumawe has a total economic growth of 2.19 percent and regional inequality of 2.19 percent. Subulussalam has a total economic growth of 4.93 percent and regional inequality of 0.33 percent.

From the data on the amount of economic growth and regional inequality according to aceh province in 2017, it can be concluded that the one that experienced the most amount of economic growth was West Aceh as much as 13.23 percent and the one that experienced the least amount of economic growth in 2017, namely North Aceh as much as 2.3 percent. Furthermore, those who experienced the most number of regional inequalities according to Aceh Province in 2017 were Langsa as much as 3.42 percent and those who experienced regional inequality at least in 2017, namely Pidie Jaya as much as 0.22 percent.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Pertumbuhan Ekonomi[b]	.	Enter

a. Dependent Variable: Ketimpangan Wilayah

b. All requested variables entered.

Figure 2.
Sumber : Data Olahan SPSS 25.0

The research method we present uses data obtained from BPS in Aceh Province. In this study we used data within 1 year, namely in 2017. The variables used in this study used variables (Y) namely Regional Inequality and variables (X) namely Economic Growth. The method in the analysis that we attached to this study is to use the Simple Linear Regression Analysis method. The method has the purpose of knowing whether a bound variable has an influence on a free variable or vice versa.

Research Hypothesis
H_0 = There was no influence between Regional Inequality and Economic Growth in Aceh in 2017
H_1 = There is an influence between Regional Inequality and Economic Growth in Aceh in 2017

Statistical Hypothesis
T calculate > t table: H0 is rejected, there is an influence between Economic Growth and Regional Inequality in Aceh Province in 2017.

T calculate < t table : H1 rejected, no influence between Economic Growth and Regional Inequality in Aceh Province in 2017. Sig < 0.05: meaning significant Sig > 0.05: meaning insignificant.

T table is obtained using the excel formula, namely =tinv(α;n-k) meaning n i.e. a large amount of data then if k is the sum of a variable. T table = tinv(α;n-k) = tinv(0.05;23-2) = 2.079614

Regression Functions and Equations

Fungsi :

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	Upper Bound
1	(Constant)	.265	.019		14.032	.000	.225	.304
	Pertumbuhan Ekonomi	.004	.004	.254	1.202	.243	-.003	.012

a. Dependent Variable: Ketimpangan Wilayah

$Y = f(X_1)$ Regional Inequality $= f(Economic\ Growth)$
The equation of the regression function is simple:
$Y = \beta_0 + \beta_1 + e$
$Regional\ Inequality = \beta_0 + \beta_1\ PEconomic\ Growth + e$
Regional Inequality = 0,265 + 0,004 $Economic\ Growth$ + e

β_0 = 0,265 : This means that when the value of an independent variable (Economic Growth) is equal to zero (0) then the value of the dependent variable (Regional Inequality) is 0.265%.
β_1 = 0,004 : This means that when the value of an independent variable (Economic Growth) will affect an increase of 1% then the value of the dependent variable (Regional Inequality) will result in a decrease of 0.004%

T Test (Partial)

Based on the known output in the table above that T count (1.202) < t table (2.079614) : H1 rejected and sig (0.243) > 0.05 : insignificant, meaning that there is no influence between Economic Growth on Regional Inequality in Aceh Province in 2017. Because the regression is simple, it is only used through the T Test (Partial) only, not used through the F test (Simultaneous), because only multiple regression (X is more than 1) using the F test (Simultaneous). The results of the analysis that have been tested using this simple regression analysis method where the economic growth variable against the regional inequality variable can be proven by looking at the value or testing that has been tested using the T Test (partial).

CONCLUSION

The study in this study on how regional disparities in Aceh Province in 2017 were influenced by economic growth, in Aceh Province which is divided into 23 regencies/cities, the determinant of economic growth influences on the characteristics of regional inequality. According to the results of the study, the variable of regional inequality is negatively ignored by the variable of economic growth. A negative coefficient indicates that regional inequality is not affected by economic growth. Insignificant indicates that the pace of economic growth has no effect on regional inequality. The results of the t test, where t counts (ratios) > T table, show this.

There are several recommendations or facts that must be carried out by the government and the public based on information from the issues we are testing, including: The government must take steps that can encourage the elimination of inequality in a region to promote economic equality. Reducing stunting rates, alleviating poverty, creating jobs, reducing wealth inequality, and developing people-based businesses can all be included in the list of five policies. On the other hand, the government and local communities need to realize how to maximize natural resources by increasing community productivity in order to promote fair economic growth and prevent regional inequality. There will be no regional economic inequality if all this is implemented correctly over time.

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