

Analysis of the Effect of Economic Growth on Development Inequality between Districts/Cities in North Sumatra Province in 2012-2016

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ABSTRACT

The purpose of this study was to determine the effect of economic growth on development inequality between districts/cities in North Sumatra Province. This study uses secondary data from the Central Statistics Agency (BPS) 2012-2016. The analysis method used was regression. Regression analysis using panel data. Development inequality is calculated using the williamson index. The effect of economic growth on regional development inequality was analyzed using linear regression random effect models. The results of the study concluded that economic growth did not significantly effect development inequality in North Sumatra Province.

Keywords: Economic Growth, Development Inequality, Williamson Index, Panel Data

INTRODUCTION

The regional development process is directed at increasing economic growth and optimal distribution (Arsyad, 1999). The indicator that can be used to see the success of a region is the increase in economic growth. Therefore, the government always sets a target for the growth rate in planning and its goal is to overcome the imbalances that occur between districts and cities. Economic growth is the process of increasing the production capacity of an economy which is manifested in the form of an increase in national income (Boediono, 1992).

A country is said to experience economic growth if there is an increase in

the real gross national product (GNP) in that country. Their economic growth is an indication of the success of economic development. Economic development is generally defined as a process that causes the per capita income of a society to increase in the long run (Sukirno, 1985). The welfare of the people's economy can be measured by the growth rate of gross domestic product (GDP).

The level of welfare of the Indonesian people shows an increasing trend in line with improving indicators for poverty, unemployment, health, human development indexes, and so on (Dernbug, 1988). However, this welfare seems uneven. Infrastructure development, for example, has focused a lot on the outermost, periphery and rural areas. In fact, the village budget continues to be increased from year to year. In 2015, the village fund budget was prepared for Rp20.5 trillion, then in 2016 it jumped drastically to Rp47 trillion, and this year it has been increased again to Rp60 trillion. However, not all infrastructure support or programs implemented have reached the periphery. As a result, price imbalances still occur between Java and other regions such as Papua, Maluku, East Nusa Tenggara.

According to Sjafrizal (2008), a high enough concentration of economic activity will encourage inequality in development between regions. The opposite is also true, when the economic concentration of an area is low, it will encourage unemployment and

a low level of community income (Domar, 1947). Previous research by Bonet on the relationship between fiscal decentralization and regional income disparities in Colombia during the 1990s used panel data that included agglomeration variables into the model. The results of the study concluded that during the analysis period, the fiscal decentralization process increased regional income disparities. Then Bonet emphasized two variables, namely the level of economic openness and the trend of economic agglomeration which had a negative effect on regional income balance.

Research conducted by Akai and Sakata (2005) and Lessman (2006) looks for factors that affect the level of regional inequality, including economic growth, agglomeration, and the number of people working. Infrastructure development to spur economic growth and reduce development disparities between regions, has not had a positive impact on economic growth.

Meanwhile, North Sumatra's GRDP based on current prices in the first quarter of 2014 reached Rp108.66 trillion and based on a constant price of Rp37.01 trillion. When viewed from the composition of the use component, North Sumatra's economic growth is still influenced predominantly by the household consumption expenditure component of 6.73%, followed by gross fixed capital formation which grows 4.72%, government consumption 4.41%, consumption of non-profit institutions 3.57%, and net exports of goods and services 0.97%.

Indonesia, including North Sumatra, has tremendous potential. The tourism business will be the belle of the future. Not only the surrounding community, tourism development must also involve business actors and all related parties, including support for regulatory regulations from local governments, communities and business actors. Entrepreneurs also prioritize not only profit, but also benefits. Resources and natural beauty must provide welfare for all groups, especially people in tourism areas (Tambunan, 2014). This is done for

equitable regional development in North Sumatra because the tourism sector is one of the largest contributors to development in North Sumatra.

The purpose of this study was to determine economic growth, the level of inequality, and the effect of economic growth on development inequality between districts/cities in North Sumatra Province.

RESEARCH METHODS

Based on the problem formulation and research objectives that have been mentioned, this research is included in the form of descriptive analysis and regression. This research consists of one independent variable, namely economic growth and one dependent variable, namely development inequality.

This research was conducted in North Sumatra Province and was conducted from December 2017 to March 2018.

All of the data required in this study are secondary data obtained from BPS North Sumatra Province for the period 2012-2016. The data used is panel data which is a combination of time series data and cross sectional data. The time series in this case is between 2012-2016 while the cross sectional is 33 districts/cities in North Sumatra Province.

The data analysis technique used in this research was descriptive analysis to analyze changes in the regional economic structure relative to the economic structure of higher administrative areas as a comparison or reference, namely using the regional inequality index calculation based on the williamson index and simple regression analysis (Gujarati, 2003).

The effect of economic growth on regional development inequality was analyzed using linear regression random effect models.

RESULTS AND DISCUSSION

In 2012 the williamson index value in North Sumatra Province was 0.4185. It is the imbalance of economic development that occurs in North Sumatra Province in the

Williamson index criteria, namely 0.4185 >0.35, that the inequality of economic development that occurs in North Sumatra Province is high. The moderate economic development gap between districts/cities is Medan City with a value of 0.2987, then the lowest economic development inequality is Pematangsiantar with a williamson index value of 0.0003.

In 2013 the williamson index value in North Sumatra Province was 0.4137. It is the imbalance of economic development that occurs in North Sumatra Province in the williamson index criteria, namely 0.4137 >0.35, that the inequality of economic development that occurs in North Sumatra Province is high. Inequality of economic development in Medan City in 2013 was moderate with a williamson index value of 0.2952 and the lowest inequality of economic development was in Pematangsiantar City with a Williamson index value of 0.0003.

In 2014 the williamson index value in North Sumatra Province was 0.4172. It is the imbalance of economic development that occurs in North Sumatra Province in the williamson index criteria, namely 0.4172 > 0.35, that the inequality of economic development that occurs in North Sumatra Province is high. The imbalance in economic development between districts/cities that is currently in Medan is 0.3032. Pematangsiantar City with a williamson index value of 0.0022 has the lowest inequality of economic development between districts/cities.

In 2015, the williamson index value in North Sumatra Province was 0.4201. It is the imbalance of economic development that occurs in North Sumatra Province in the williamson index criteria, namely 0.4201 > 0.35, that the inequality of economic development that occurs in North Sumatra Province is high. Inequality in economic development between districts/cities in Medan City in 2015 was moderate with a williamson index value of 0.3094. Pematangsiantar City with a williamson index value of 0.0028 remains the city with

the lowest inequality of economic development between districts/cities.

In 2016 the williamson Index value in North Sumatra Province was 0.4143. It is the imbalance of economic development that occurs in North Sumatra Province in the williamson index criteria, namely 0.4143 > 0.35, that the inequality of economic development that occurs in North Sumatra Province is high. Inequality in the economic development of Medan City in 2016 is moderate with a williamson index value of 0.3050. The lowest inequality of economic development is in Pematangsiantar City with the williamson index value of 0.0017.

Panel Data Regression Model Selection Results

To get the best in this study, the chow test and hausman test were carried out.

Chow Test

The chow test that compares the common effect model with the fixed effect. The results of the analysis are shown in Table 1.

Table 1. Results of Chow Test

Redundant Fixed Effects Tests			
Equation: FE			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	2139.882018	(32,131)	0.0000
Cross-section Chi-square	1033.057707	32	0.0000

Source: Results of Data Processing

From Table 1 it is known that the significance value $F = 0.0000 < 0.05$ means that H_0 is rejected. Thus, a better model is the fixed effect model.

Hausman Test

Testing with the hausman test which compares the fixed effect model with the random effect. The results of the analysis are shown in Table 2.

Table 2. Results of Hausman Test

Correlated Random Effects - Hausman Test			
Equation: RE			
Test cross-section and period random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.010762	1	0.9174
Period random	0.665413	1	0.4147
Cross-section and period random	0.613547	1	0.4335

Source: Results of Data Processing

From Table 2 it is known that the significance value of chi squares = 0.9174 > 0.05 means that H_0 is rejected. Thus, a better model is the random effect model.

From the two tests, it shows that the random effect model is the best, so the test with multiple langrangge is not carried out. Thus this research model is a random effect.

Regression Analysis Results

The results of simple regression analysis with the random effect model are shown in Table 3.

Table 3. Results of Regression Analysis

Dependent Variable: KETIMPANGAN				
Method: Panel EGLS (Cross-section random effects)				
Date: 04/22/18 Time: 14:38				
Sample: 2012 2016				
Periods included: 5				
Cross-sections included: 33				
Total panel (balanced) observations: 165				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.050496	0.009225	5.473709	0.0000
PERT_EKONOMI	0.000201	0.000202	0.994744	0.3213

Source: Results of Data Processing

The results of this analysis mean that if economic growth is 0, then the value of development inequality is 0.050496. For every 1 additional value of economic growth, the value of inequality increases by 0.000201.

The results of the analysis show a significance of 0.3213 > 0.05, so it can be concluded that H_0 is accepted and H_a is rejected, that is, there is no significant effect of economic growth on development inequality.

The rejection of this research hypothesis can be caused by the uneven economic growth between districts/cities in North Sumatra Province.

Based on the value of $R^2 = 0.006047$, which means that economic growth only has an effect of 0.6047% on the development inequality between districts/cities in North Sumatra Province. As much as 99.3953% of development inequality is influenced by other factors.

CONCLUSION AND SUGGESTION

The results of the study concluded that economic growth did not significantly effect development inequality in North Sumatra Province.

Suggestions in the results of this study are:

1. Each regional government should further increase regional economic growth by optimizing the management of the potential of their respective regions.
2. North Sumatra Provincial Government to further encourage district/city governments to increase economic growth in their respective regions.

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How to cite this article: Akbar T, Tarmizi HB, Hasibuan AA et.al. Analysis of the effect of economic growth on development inequality between districts/cities in North Sumatra Province in 2012-2016. International Journal of Research and Review. 2020; 7(8): 401-405.
