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IMPLEMENTATION OF ECONOMIC GROWTH AND DISPARITY OF INTER-DISTRICT DEVELOPMENT IN BANJARNEGARA

Wibowo Hendri*, Supardi Suprapti, Antriyandarti Ernoiz

Postgraduate of Agribusiness, Universitas Sebelas Maret, Surakarta

*E-mail: hendri.bowouns@gmail.com

ABSTRACT

Economic development is expected to be enjoyed by all communities, sustainable economic growth and determination of the direction of development in the future. This study aims to determine the level of development disparity between districts in Banjarnegara Regency and the factors that influence disparity in the area. This study uses two approaches; descriptive and quantitative. The data used in this study is secondary data in the form of time series data sourced from the Central Statistics Agency (BPS) of Banjarnegara Regency. the data includes data related to Gross Regional Domestic Product (GRDP), population; Micro, Small and Medium Enterprises (MSMEs); Foreign Investment, Domestic Investment, and service sector from 20 districts in Banjarnegara Regency in 2010-2014. The analysis technique used for descriptive analysis is the Williamson disparity index, while, to determine the effect of the independent variable on the dependent variable, the analysis was carried out using panel data regression analysis method with the Fixed Effect model approach. From the results of the Williamson Index, development carried out in 2010-2014 shows that Purworejo Klampok district has a value of 0.319 higher than Wanadadi district with a value of 0.16. This fact indicates that, from 2010 to 2014, development disparity between districts still occurred in Banjarnegara. Furthermore, population variables and service sector variables have a positive and significant effect on regional development disparity in Banjarnegara Regency.

KEY WORDS

GRDP, Banjarnegara, development disparity, panel data.

Development is a process of transformation that is carried out systematically and sustainably. An important part of national development is economic development to improve people's welfare in local areas. Economic development can be interpreted as a process that causes per-capita income of a community's population to increase. The increase in per-capita income is a reflection of improvements in the economic welfare of the community. According Sukirno (2006), the high economic growth can describe a process of the improvement of public welfare by strengthening the capacity of production output, an increase in the amount of consumption, and increased revenue.

Increasing disparity is a natural thing for developing countries. This happens because economic growth requires capital whose formation requires public savings. The growth of wealthy groups allows capital accumulation to occur faster. However, the relevance of the hypothesis has diminished with the emergence of "new growth theories" that promote the role of human capital in growth. If innovation (the effect of human capital) is a major contributor to economic growth, the accumulation of human capital is central to the growth process.

Nurkse (in Kuncoro, 2006) illustrates that in the theory of poverty, backwardness, market imperfection, and lack of capital can result in low human productivity. Low human productivity will result in low income received. The low income received will result in low savings and low investment. Investment can be in the form of investment in human resources, namely the size of education, as well as capital investment with consumption measures. Based on the theory of poverty circle, it can be seen that there are several factors that cause poverty including the level of income, level of education, and the amount of public consumption.

Banjarnegara Regency as one of the regencies located in Central Java Province has natural resources with diverse and potential variants to be developed. However, Banjarnegara Regency is still classified as an area with a relatively small economic rate. In this era of regional autonomy, it is expected that Banjarnegara Regency will experience accelerated development. GRDP data and economic growth in Banjarnegara over the past five years shows a better direction. Since 2010, economic development has increased year by year. The development of economic growth of Banjarnegara can be seen in Figure 1 as follows:

Figure 1 – Economic Growth of Banjarnegara Regency from 2010 to 2014
(Source: BPS Banjarnegara, 2010-2014)

Economic development is a process whereby the state government and all components of society manage existing resources and then form a partnership pattern between local government and the private sector to form new jobs and stimulate the development of economic activities in the region. Economic development basically aims to improve people's welfare.

Development disparity, often, becomes a serious problem. If it cannot be handled carefully it will lead to more complex crises such as problems related to population, economic, social, political, environmental and also problems in the macro context which can harm the development process in a certain area.

The interaction between economic growth and income disparity between regions attracted most of the attention in recent years. Growth and disparity in the early stages of development, according to more recent research, is a mechanism in which disparity increase due to the influence of economic growth or income disparity affects growth (either positively or negatively).

Development disparity has been going on in various forms, aspects and dimensions. Based on the background of these problems, the problem of this research focuses on: (1) determining the level of development disparity between districts in Banjarnegara Regency, (2) analyzing what factors influence development disparity between districts in Banjarnegara.

THEORETICAL REVIEW

Economic growth. In general, economic growth is defined as an increase in the ability of an economic system to produce goods and services. Economic growth is one of the most important indicators in analyzing economic development that occurs in a country. It shows how far the economic activity will generate additional income for a community in a given period because basically economic activity is a process of using factors of production to produce output. Therefore, this process, in turn, will produce a stream of remuneration for the production factors that are owned by the community. With the existence of economic growth, it is expected that the income of the community as the owner of the factors of production will also increase. Economic growth can come from growth on the aggregate demand side and the aggregate supply side. As illustrated in Figure 1, the point of intersection between the

aggregate demand curve and the aggregate supply curve is the economic equilibrium point that produces a certain amount of aggregate output (GDP) with a certain general price level. The aggregate output generated, then, will form national income. Developing economic growth theories include:

1. Classical Growth Theory;
2. Harrod-Domar's Growth Theory;
3. Solow – Swan Economic Growth Theory.

Regional economic development is a process whereby local governments and communities manage the existing resources and form a partnership pattern between local government and the private sector to create new jobs and stimulate the development of economic activities (economic growth) in the region.

Regional development aims to improve the welfare of the community, expand employment opportunities and equalize the results of development to all levels of society. The success or failure of national development is inseparable from the success of local governments in carrying out regional development. Thus, regional development contributes greatly to the success of national development.

The construction will create economic growth and prosperity of society fair and equitable if it is produced by many people. As described in Todaro (2000), development requires high levels of GNI and sustainable growth. If the increase in economic growth is only done by a handful of rich people, then the increase in yield is likely to only benefit them. as a result, progress in overcoming poverty will move slowly and disparity will worsen.

This theory argues that the economic growth of a region is very much determined by the existence of a strong synergy between the economic activities of rural areas and urban activities. Development synergy between rural and urban areas will be realized if there are linkages and can usually be developed input linkages (backward linkages) and output linkages (forward linkages) between related activities.

Gross Regional Domestic Product (GRDP) is one of the important indicators for knowing the economic conditions in an area within a certain period, both at current prices and on the basis of constant prices. GRDP is basically the amount of added value of final goods and services produced by all economic units in an area.

Kuncoro, 2004 stated that the traditional development approach is more defined as development which focuses more on increasing the GRDP of a province, district, or city. While economic growth can be seen from the growth of GRDP figures. Currently, GRDP is only calculated based on two approaches; from the sectoral / business field and from the use of economic products. Furthermore, the GRDP is also calculated based on the current price and constant price. Total GRDP shows the total amount of added value generated by the population in a certain period.

METHODS OF RESEARCH

This study uses secondary data in the form of panel data which is a combination of time series and inter-individual data (cross section). the data used is GRDP, number of graduates, UMKM, PMA, PMDN, service sector of Banjarnegara Regency. all of them are the results of a survey by the Central Statistics Agency (BPS). The years observed were from 2010 to 2014. In measuring disparity between regions, we used a tool called the Williamson index and panel data analysis.

Williamson Index. Development disparities between regions that occur can be analyzed by using a regional in equality index called the Williamson disparity index. The Williamson index shows the index of income variation between regions within a country. The Williamson Variation formula (Sjafrizal, 1997) is as follows;

$$Wi = \frac{\sqrt{\sum(yi - \bar{y})^2 \sum fi / n}}{\bar{y}} \quad (1)$$

Where: W_i = Williamson Variations; y_i = Per capita income in district "i"; y = Regency per-capita income; f_i = Population of district "i"; n = Regency population.

Hypothesis Testing Criteria:

- If W_i is smaller or near zero, it indicates that disparity is smaller / more evenly distributed;
- If W_i is far from zero, it means that disparity spreads widely.

Panel Data Regression. In the panel data, the same cross section data is observed according to time (Gujarati, 2004). The data panel is a combination of time series data and cross section data. Therefore, panel data is data that has time and space dimensions. Some advantages of using panel data include:

Heterogeneity, more informative, varied, greater and more efficient degree of freedom, avoidance of multicollinearity problems, superior in studying dynamic changes, ability to detect and measure effects that cannot be observed in pure cross section data or pure time series, ability to study behavioral models, and bias minimization. While the general form of the panel data regression model can be formulated with the following equation:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e_{it} \quad (2)$$

Where: $i = 1, 2, 3, \dots, N$ (cross section dimensions); $t = 1, 2, 3, \dots, T$ (time series dimension); Y_{it} = dependent variable (Williamson Index disparity); β = constants of the independent variable at time t and unit i ; $\beta_1 X_{1it}$ = GDP variable; $\beta_2 X_{2it}$ = population variable; $\beta_3 X_{3it}$ = MSME variable; $\beta_4 X_{4it}$ = Foreign Investment variable; $\beta_5 X_{5it}$ = Domestic Investment variables; $\beta_6 X_{6it}$ = service sector variables; e_{it} = error.

Panel Data Regression Model Selection. Determination of the most appropriate model among Common Effect, Fixed Effect and Random Effect models consists of several stages, namely:

- Chow test is done to determine whether the common effect model is better than the fixed effect method.
- The significance test of random effects is done to determine whether the model with a random effect approach is better than the common effect model.
- Hausman test is done to determine whether the fixed effect model is better than the random effect model.

RESULTS AND DISCUSSION

Analysis of Development Disparity (Williamson Index). The difference in GRDP per-capita between districts in Banjarnegara provides an overview of the conditions and progress of development in Banjarnegara Regency.

Based on the test results in table 1, the Williamson Index shows that the highest disparity value is found in Purworejo Klampok sub-district with a value of 0.319 while the smallest value is in Wanadadi sub-district with a value of 0.16. The low value of the disparity index of the Gross Regional Domestic Product (GRDP) between districts in Banjarnegara shows that the distribution of GRDP, in each district, in Banjarnegara tends to be evenly distributed.

The low value of the Williamson index does not mean that the people in Banjarnegara Regency have a high level of welfare. For example; Pagedongan, Punggulan, Wanayasa, and Pandanarum which have disparity values of 0.130, 0.134, 0.032 and 0.090, respectively, have a low disparity value but when viewed from the klassen typology analysis, they are categorized as underdeveloped regions. It means that the equity in those districts is in terms of poverty, not welfare. The Williamson index only explains the distribution of GRDP without explaining how much the distribution compared to the average GRDP of other regions.

Analysis of Factors Affecting Development Disparity. In this analysis there are six independent variables tested using Stata software because it is suspected that these variables are able to explain variations in the index magnitude of economic development

disparity in Banjarnegara Regency. Furthermore, in this discussion, panel data estimation techniques and panel data regression models are carried out using three methods; Pooled Least Square (PLS) methods, Fixed Effect Model (FEM) and Random Effect Model (REM). Of the three available panel data methods, the panel data method that is most suitable for use in this study will be determined. Therefore, we did several tests (F Restricted test, Lagrange Multiplier test, and Hausmann test). These tests are carried out to determine the best model.

Table 1 – Williamson index between districts in Banjarnegara Regency (2010-2014)

No	Districts	Disparity Value
1	Susukan	0,093
2	Purwareja Klampok	0,319
3	Mandiraja	0,040
4	Purwanegara	0,064
5	Bawang	0,074
6	Banjarnegara	0,299
7	Pagedongan	0,130
8	Sigaluh	0,029
9	Madukara	0,064
10	Banjarmangu	0,026
11	Wanadadi	0,016
12	Rakit	0,080
13	Punggeln	0,134
14	Karangobar	0,021
15	Pageetan	0,095
16	Pejawaran	0,142
17	Batur	0,174
18	Wanayasa	0,032
19	Kalibening	0,078
20	Pandanarum	0,090

Source: Banjarnegara Central Bureau of Statistics 2010-2014 (analysis result).

Based on estimation techniques, panel data regression models can be estimated using three estimation methods, namely Pooled Least Square (PLS), Fixed Effect Model (FEM), and Random Effect Model (REM). To choose the best estimation model in panel data regression, there are three tests conducted in this study. First, the Restricted F test is used to choose between PLS or FEM models. Second, if the test rejects the FEM model, the Breusch – Pagan Lagrange Multiplier test (LM Test) must be done to choose between the PLS or REM models. Third, the Hausman test is carried out if the first or second test rejects the PLS model.

The results of the Restricted F test estimation are used by looking at the lowest probability value of F on the FEM output as shown in Table 2. The table shows that the Prob> F value is 0.0000 or less than α (5%). Therefore, a decision can be made that H0 (PLS) is rejected and the best temporary estimation model is the FEM model.

Based on the test results, FEM was chosen as the best model used to estimate the influence of the independent variables (Gross Regional Domestic Product, population, MSMEs, Foreign Capital Safeguards, Domestic Investment, and Services sector) on Williamson's index in Banjarnegara Regency in the period between 2010 and 2014. The results of the selection of the FEM estimation model can be seen in Table 2:

Based on the regression model test on the variables of economic development disparity in districts in Banjarnegara Regency, the results showed that the population variables and service sector variables had a significance level of 0.01. Furthermore, Domestic Investment variables have a significance level of 0.10. Meanwhile, GRDP, MSMEs, and Foreign Investments variables have no significance to the Williamson index of development disparity (Y).

Furthermore, based on the calculated F value of 708.39 with a significance of 0.0000 $< \alpha = 0.01$, it was concluded that GDP, population, MSMEs, FDI, domestic investment and services simultaneously had a significant effect on economic growth in Banjarnegara Regency. With the R-squared value of 0.9935, it means that the magnitude of GRDP (X1),

population (X2), MSMEs (X3), FDI (X4), Domestic Investment (X5), and service sectors (X6) are able to influence economic growth.

Table 2 – Results of Data Panel Estimates

Variable	Coef	Std. Error	t	P> t
PDRB	4.50e-09 ^{ns}	4.97e-09	0,90	0,369
Penduduk	2.75e-06 ^{***}	4.45e-08	61,54	0,000
UMKM	-2.88e-07 ^{ns}	1.89e-07	-1,52	0,132
PMA	-5.14e-16 ^{ns}	1.25e-14	-0,05	0,964
PMDN	-2.29e-16 [*]	1.25e-16	-1,83	0,072
Sektor Jasa	-5.11e-08 ^{***}	1.31e-08	-3,90	0,000
Cons	.090678	.0019089	47,50	0,000
R ²	0,9829			
F-stat	0,0000			
Number	100			
observation	20			

Source: Stata output results.

Notes:

*) : Significant influence at 90% confidence level;

**) : Significant influence on 95% confidence level;

***): Significant influence on 99% confidence level;

ns): Not significant.

Based on table 2, the model of development disparity that is formed is as follows:

$$Y_{it} = 0,900678 - 4,50 \times 10^9 (PDRB) + 2,741 \times 10^6 (penduduk) - 2,88 \times 10^7 (UMKM) - 5,14 \times 10^{16} (FI) - 2,29 \times 10^{16} (GRDP) - 5,11 \times 10^8 (Service)$$

Gross Regional Domestic Product (GRDP) shows how well the economy in Banjarnegara Regency. Based on the estimation of panel data, GRDP variable (X1) shows that the coefficient of positive GRDP variable of 4.50 does not significantly influence the development disparity in Banjarnegara Regency in the period of 2010-2014. The results of the t test (0.369) in Banjarnegara District explain that per-capita GRDP has no relationship with the level of regional development disparity in Banjarnegara Regency in the period of 2010-2014.

Then, from the results of the regression test, it is known that the variable coefficient of population (X2) is 0,000 with a probability of 0,000 and a significance level of 99%. This shows that the population factor has a positive influence of 2.74 and has a significant influence on development disparity. This also means that an increase in the population of 1% can increase development disparity. Supported by previous research, conducted by Devi (2010) with the title "Analysis of the Influence of Income Distribution Disparity on West Java Economic Growth", similar result showed that the population growth rate has a negative but significant effect.

Another factor from the panel data estimation, the MSMEs (X3) variable, shows that this variable has no significant effect on development disparity in Banjarnegara District in the period 2010-2014. With the results of t test (0.132) in Banjarnegara Regency, it can be explained that the MSMEs factor has no relationship with the level of regional development disparity in Banjarnegara Regency in the period of 2010-2014.

Based on the estimation of the variable panel data of Foreign Investment (X4), it can be indicated that Foreign Investment does not have a significant effect on the development disparity in Banjarnegara Regency in the period of 2010-2014. With the results of t test (0.964) in Banjarnegara Regency, it can be explained that Foreign Investment does not have relationship with the level of regional development disparity in Banjarnegara Regency in the period of 2010-2014.

From the estimation results, it is known that the variable of domestic investment has a significant influence on the development disparity in Banjarnegara Regency with a probability of 0.000. Therefore, it can be said that domestic investment variables affect the development inequality.

Investment will directly or indirectly affect economic growth. With the increase in investment, economic growth will also increase. Further more, the conditions would result in the disparity of income.

From the regression test results, it is known that the service sector variable coefficient (X6) is valued at 0,000 with a probability of 0,000 and a significance level of 99%. It is seen that the coefficient is negative, which is equal to -5.11, meaning that the increase in the service sector by 1% can reduce the development inequality of Banjarnegara Regency by 5.11%. Mishra's research results in 2011 concerning the service sector show all the needs for goods and services obtained by consumers during a visit in less than one year. This sector includes business and personal travel, personal travel includes trips for vacation purposes, visiting relatives, Hajj & Umrah, as well as education and health services. This fact shows the importance of openness for each country as it can provide benefits, such as benefits in educational sector and better service.

CONCLUSION AND RECOMMENDATIONS

Per-capita GRDP disparity between districts in Banjarnegara Regency during the period of 2010-2014 is included in the criteria of high disparity. In the calculation of the Williamson index, the greatest inequality is found in Purworejo Klampok sub-district (0.319) while the smallest value is in Wanadadi sub-district (0.16). this happened due to differences in inter-district natural resources and per-capita Gross Regional Domestic Product (GRDP) between districts in Banjarnegara Regency. This is a sign that the development disparity between districts is still large.

Whereas, from the results of the regression test, population variables (x2) and service sector (x6) have a significant and positively related effect on the index of regional development in Banjarnegara Regency. Based on the results of the study, it is suggested to the government to improve the investment climate which is more conducive by providing licensing facilities and simplifying regional regulations in Banjarnegara Regency. The provision of development assistance to the local districts should be adjusted to the situation and conditions in each district, so that the disadvantaged districts will be able to catch up with the developed districts.

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