Analysis of Economic Growth and Regional Inequalities in Bangka Belitung Islands Province Over the 2010-2020 Period

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ABSTRACT

This study aims to identify the typology of economic growth in regencies/municipalities in Bangka Belitung Island Province, analyze the level of inequality between regions and the factors that influence it. The analytical tools used are Klassen typology, Williamson index, and linear regression analysis. The results indicate that economic growth in regencies/municipalities in Bangka Belitung Islands Province has different levels of diversity, with the classification of one area in the prosperous category, three prosperous areas declining, two depressed areas, and one underdeveloped area. The Williamson index shows that Bangka Belitung Islands Province has regional inequalities with a moderate category and tends to decrease. The Human Development Index has a positive significant effect on the regional inequalities, while government spending and investment have no significant effect.

Keywords: Economic growth, inequality, regional development.

1. INTRODUCTION

Economic development is an important issue in the economy of a country which is on the agenda every year. According to Meier (1960) in Mugihardjo (2007) [1], economic development is a process that causes real national income per capita to increase over a long period of time. There are several main problems in the development economy, including: problems of economic growth, poverty, income inequality, capital formation, the level of domestic savings, structural transformation and foreign aid [2]. However, what often gets attention, especially development in developing countries is the problem of poverty, income distribution and employment, so it can be said that the success of a country's economic development happen if it has been able to solve the three main problems [3].

Growth and equity are two poles of a development strategy that often ignore each other (trade-off). This means development that focuses on aspects of economic growth tends to "sacrifice" the aspect of equity, and vice versa. In general, the policy choice fell on the policy of accelerating high economic growth with the hope that equitable distribution of development results would eventually be achieved through the trickle-down effect [4].

According to Syafrizal [5], inequality in development between regions is caused by differences in the content of natural resources and differences in demographic conditions found in each region. As a result of these differences, the ability of a region to encourage the development process is also different. The occurrence of this inter-regional disparity has implications for the level of inter-regional community welfare.

Bangka Belitung Islands Province is one of the regions in Indonesia with abundant natural resources, especially in ores with the main commodity being tin, and plantation crops, namely palm oil, pepper, and rubber. However, the Province of Bangka Belitung Islands' natural wealth is able to improve the welfare of its community, or vice versa, as happened in East Kalimantan Province that experienced growth without development [6].

Based on the description above, the objectives of this research in outline are as follows:

1. Classifying regencies/municipalities in the Province of Bangka Belitung Islands based on the classification typology.

2. Analyzing the level of inequality in economic development between regions that occurred in the Province of Bangka Belitung Islands.

3. Analyzing the factors that influence the level of inequality in economic development in the Province of Bangka Belitung Islands.

2. THEORETICAL FRAMEWORK

2.2. Regional Economic Growth and Development

Regional development is a function of natural resources, labor, investment, entrepreneurship, transportation, communication, industrial composition, technology, area, export market, international economic situation, local government capacity, central government spending, and development assistance [7]. Biswajit and Mariusz (2010) explain that in order to maintain growth and reduce inequality, it is necessary to increase the use of labor and develop policies to improve transportation infrastructure, increase cost competitiveness, and increase human capital accumulation [8].

2.1. Interregional Inequality

Kutscherauer, et al (2010) defines regional inequality as a divergence or inequality of characters, phenomena or the process of allocation of a certain area (territorial structure) and has an impact on at least two territorial structure entities [9]. According to Arsyad (2010: 323) the imbalance in the level of development between various regions within a country is called regional dualism. In developing countries, regional dualism occurs mainly as a result of unequal investment between industrial (urban) and agricultural (rural) areas [10]. According to the neoclassical school, growth inequality between regions occurs because of different technological advances between regions, different growth of capital stock between regions and different growth of labor force between regions [11]. Meanwhile, Rodrıguez and Ezcurra (2010) identified fiscal decentralization policy variables, government spending policies in the economic, education and social protection sectors as variables that affect regional inequality [12].

The hypotheses in this study are 1) it is suspected that the level of development inequality in the Province of Bangka Belitung Islands is increasing based on the Williamson index, 2) it is suspected that the human development index, government spending, and investment have a negative effect on development inequality.
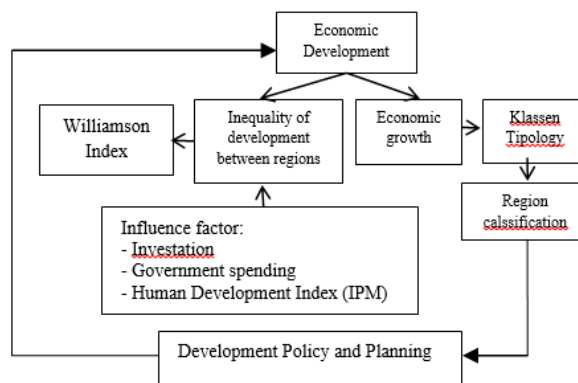

Figure 1 Framework Research.

3. RESEARCH METHODS

To measure the level of inequality between regencies/cities in the Province of Bangka Belitung Islands, the Williamson Index is used, of which the calculation used the following formula:

$$Vw = \sqrt{\frac{\sum (Yi - Y)^2 \, fi/n}{Y}} \qquad (1)$$

Where:

Vw = Williamson Index

Yi = GRDP per capita at regency/municipality level (Rupiah)

Y = GRDP per capita at province level (Rupiah)

fi = Total population at regency/municipality level (persons)

n = provincial population (person)

There are three criteria in the calculation of this Williamson Index, namely if the Index showed:

a) result between 0.0 to 0.2, then the inequality is low;

b) result between 0.21 to 0.35, then the inequality is moderate;

c) result > 0.35 means the inequality is high.

Klassen Typology is used to classify regions in the Province of Bangka Belitung Islands, which groups regions based on economic growth (r) and per capita income (y).

To analyze the factors that influence the level of inequality in economic development in the Province of Bangka Belitung Islands, linear regression was used to analyse time series data from the 2010-2020 period.

Table 1. Area type based on Klaassen typology

GDP per capita (y) / Growth economic (r)	(yi < y)	(yi > y)
(ri > r)	Tipe II: Lagging areas in the process of development	Type I: prospereus area
(ri<r)	Tipe IV: Underdeveloped areas	Tipe III: affluent areas that are in decline (potential to be left behind)

Source: Arsyad (2010: 394)

y = Regency/Municipality average GRDP per capita

yi = GRDP per capita Regency/Municipality (i)

r = Regency/Municipality average economic growth

ri = Regency/Municipality economic growth (i)

4. RESEARCH RESULTS AND DISCUSSION

The results of the study indicated that the GRDP per capita of regencies/municipalities in the Province of Bangka Belitung Islands for the period 2010–2020 tended to increase. Based on Graph 1.1, it is known that there were 3 regions with GRDP per capita above the Province of Bangka Belitung Islands' GRDP per capita, namely East Belitung Regency, West Bangka Regency and Pangkalpinang City where Belitung Regency was an area with the highest average GRDP per capita, amounting to Rp. 44,779,919,246,752.00 Meanwhile, there were 4 regions that have per capita GRDP below the provincial GRDP per capita, namely Bangka, Central Bangka, South Bangka, and Belitung Regencies where South Bangka Regency had the lowest average GRDP per capita, which was Rp. 27,301,357,609,276.20.
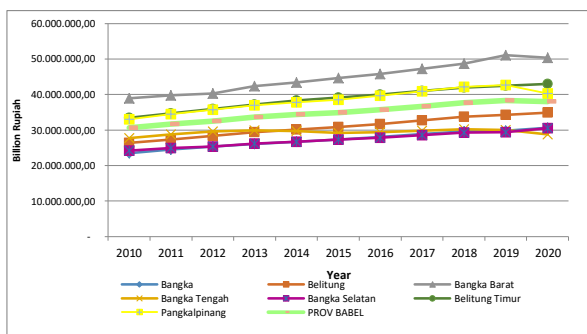

Figure 2 Development of GRDP per Capita Regency/Municipality in the Province of Bangka Belitung Islands

In contrast to the value of GRDP per capita which tends to increase, the economic growth of the Regency/Municipality in the Province of Bangka Belitung Islands for the period 2010-2020 tended to decrease. Significant declines occurred in 2020 in all regions. This happened as a result of the COVID-19 pandemic that weakened all lines of the regional economy. Based on Graph 3, it is known that Central Bangka Regency had the lowest average economic growth of 0.805 and was the only area that is below the province's economic growth. Meanwhile, Belitung Regency was the area with the highest average economic growth.
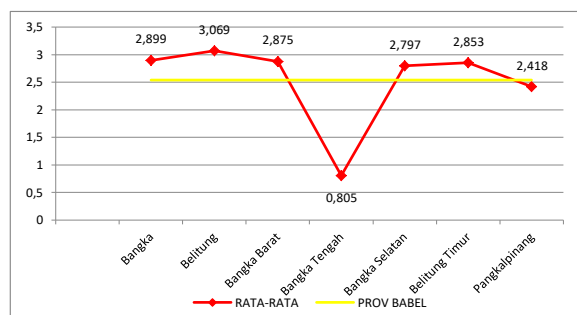

Figure 3 Average Regency/Municipality Economic Growth in the Province of Bangka Belitung Islands 2010-2020.

Based on the data above, the regional economic development in the Province of Bangka Belitung Islands during the 2010-2020 period could be identified. Based on the results of Klassen's typology analysis, there were 4 regional classifications in the Province of Bangka Belitung Islands, namely:

1) Prosperous areas, namely West Bangka and East Belitung Regencies, which had higher levels of economic growth and per capita income than average for all regencies/municipalities.

2) Depressed areas or lagging areas in the development process, namely Pangkalpinang City which had a higher per capita income, but had a lower economic growth rate than average for all regencies/municipalities.

3) Developing regions (potential to be left behind) were Bangka, South Bangka, and Belitung Regencies that had higher economic growth but lower per capita incomes than the average for all regencies/municipalities.

4) Underdeveloped areas, namely Central Bangka Regency that had lower economic growth and per capita income compared to the average for all regencies/municipalities.
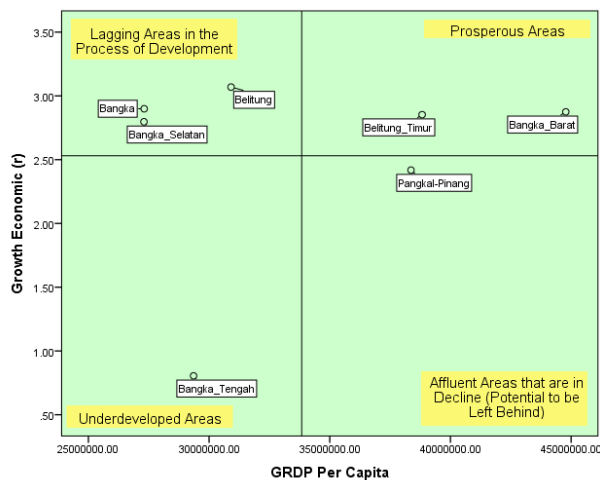
Figure 4 Classification of Regions based on Klassen's Typology

These 4 types of regional classifications in the Province of Bangka Belitung Islands, indicate that there was an imbalance in development between regions. During the period 2010-2021, the level of inequality between regions in the Province of Bangka Belitung Islands as measured by the Williamson Index showed a declining index value. In 2010, the level of inequality in the Province of Bangka Belitung Islands was 0.315 and then continued to decline until 2018 to 0.201. In 2019 it increased slightly to 0.213, but again decreased to 0.199 in 2020.
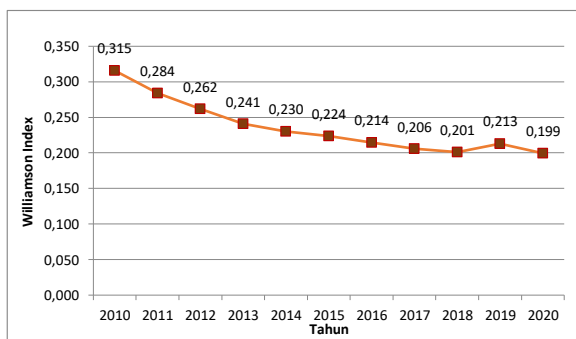

Figure 5 Williamson Index of Bangka Belitung Islands Province 2010-2020

The disparity in economic development between regencies/municipality in Bangka Belitung Province was due to the different characteristics of these areas. Based on the results of linear regression analysis of the data series for 2010-2020, it was found that together the Human Development Index variable, Government Expenditure variable, and foreign investment variable had a significant effect on development inequality between regions in the Province of Bangka Belitung Islands, But partially to regional disparities. The regression equation model that explains the relationship between these variables is as follows.

$$IW = 1.404 - 0.27IPM(***) + 0.01GovExp(ns) + 0.047Invest(***)$$

$R2 = 0.986$

F statistic$= 84.327(***)$

The Human Development Index has a significant negative effect on the level of development inequality between regions, which means that the higher the HDI, the lower the level of development inequality between regions. According to Syafrizal, the disparity in development between regions is caused by differences in demographic conditions in each region [13]. A high level of human development greatly determines the ability of the population to absorb and manage sources of economic growth, both in relation to technology and to institutions as an important means of achieving economic growth [14].

The variable of foreign investment or investment has a significant effect on the level of development inequality between regions, as explained by classical economic theory in Armstrong, that inequality in growth between regions occurs because of different technological advances between regions, growth in capital stock, which differs between regions and the growth of the labor force which differs between regions [15]. The results of the analysis showed a positive relationship between the variables of foreign investment and the level of inequality between regions. This is in line with Myrdal (1957) in Jhingan (2010), that investment tends to increase regional inequality. Rising demand in developed regions will stimulate investment which in turn will increase income and lead to a second round of investment and so on. Better investment scope in development centers can create capital scarcity in underdeveloped areas [16].

5. CONCLUSION

The level of inequality between regions in the Province of Bangka Belitung Islands as measured by the Williamson Index during the research period tended to decrease. Regional classification based on Klassen typology divided areas in the Province of Bangka Belitung Islands into 4 classifications: 1) prosperous areas, namely West Bangka and East Belitung Regencies; 2) depressed areas, namely Pangkalpinang City; 3) developing areas, namely Bangka and South Bangka Regencies; and 4) underdeveloped areas, namely Central Bangka Regency. The level of human development as measured by the HDI had a significant negative effect on the level of inequality between regions, and the Foreign Investment variable had a significant positive effect on the level of inequality between regions. Meanwhile, the level of government spending had no significant effect on the level of inequality between regions in the Province of Bangka Belitung Islands.

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