



Regional Inequality Analysis In Papua

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Abstract: Economic development and growth are always interpreted as an increase in per capita income because per capita income is a plan for improving people's welfare. Development and growth will always be able to go hand in hand because, with every development, there will always be economic growth generated. In contrast, development that is not controlled or not handled properly will cause problems as well as affect economic growth. It will have an impact on poverty, high unemployment, low income, and high crime rates. This is still a problem that exists in each province to be able to increase income in Indonesia. The current development concept is regional-based development that aims to overcome the problem of regional inequality. For the Papua province, the regional inequality looks quite large between developed and underdeveloped regencies/cities because there are still inadequate infrastructure facilities and resource capacity. Low human resources. This study aims to analyze regional inequality based on regional typology using the Klassen typology, and the variables that affect inequality are Regional Original Income (PAD), General Allocation Funds (DAU), Special Allocation Funds (DAK), Economic Growth, Human Development Index (IPM), Poverty Level, using the index and the Gini ratio. The variable that has an influence is that the PAD variable has a positive and significant influence on regional inequality in quadrants 1 and 4, while the poverty level variable is also proven to have a positive and significant effect on regional inequality in quadrants 2 and 3.

Keywords: Gini index, Klassen typology, Panel, Regional inequality, Theil index.

1 Introduction

Indonesia is a developing country that administratively consists of 34 provinces. Meanwhile, Indonesia is a country with a fairly large economic development. This is supported by optimizing the utilization of the wealth of resources owned by each region. The wealth of resources owned by each region is different. This difference can lead to differences in development. [15]. The resource wealth in question is Natural Resources (SDA), Human Resources (HR), and social and artificial resources.

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Several methods are used to analyze the inequality of a region's income tools. Namely, the Gini index or the Gini coefficient is an indicator used to measure or show income inequality. The Gini index value ranges from 0 to 1. If the Gini index is 0, it will be said that there is perfect income distribution or everyone has the same income in an area. In contrast, if the value is 1, it can be said that income inequality is perfect in that area. Moreover, if the value obtained from the calculation of the Gini Index reaches 0.4, it can be said that regional inequality is severe.

Meanwhile, on the islands of Maluku and Papua, the highest income inequality was achieved by Papua Province, with a Gini Index value of 0.412. The regional income growth rate for the islands of Maluku and Papua ranks first among the islands in Indonesia. Papua Province is classified as a province with a relatively high economic growth rate compared to the previous year. However, the inequality rate is still high, and there is no change from the previous year. Therefore, the case of inequality in Papua Province becomes interesting to examine.

In 2018, Papua Province had a fairly high Gini ratio of 0.398, almost reaching 0.4. From this data, Papua has the fourth highest inequality value in Indonesia and the first on the islands of Maluku and Papua, while seen from the previous year, inequality in Papua has yet to develop quite well, which is still the same at 0.398.

In addition to using the Gini Index in measuring income inequality in each region, the Theil Entropy Index can also be used, according to Kuncoro (2001). Theil's entropy concept of distribution is an application of the concept of transformation theory in measuring economic inequality and industrial concentration [17]. If Theil Entropy Index.

The larger the index value, the greater the inequality. If the index is smaller, then the income distribution is more even. This is in line with the Gini Index.

Based on the data, the value of the Theil Entropy Index in Papua Province decreased by 0.61 to 2,270. In the following year, income inequality, as measured by the Theil entropy index, always increased until 2018 by 2,551. This shows that income inequality in Papua Province always increases every year.

In this case, the steps taken by the government are to realize a more balanced development through decentralization of government and accompanied by direct cooperation between the central and regional governments (Vickerman, 2015).² Real steps in implementing decentralization in Papua and West Papua provinces, starting with Law No. 21/2001 on Papua's Special Autonomy. This law was later amended by Perpu Number

1 of 2008. Furthermore, Presidential Instruction Number 5 of 2007 concerning the Acceleration of Development of the Provinces of Papua and West Papua. As one of the steps for implementing the Presidential Instruction, the Unit for the Acceleration of Development for Papua and West Papua (UP4B) was formed. Special Autonomy for Papua/West Papua mandates the provincial government of Papua/West Papua to fulfill the main basic rights needs, namely in education, health, infrastructure, and economic empowerment.

One source of regional revenue that seems to play a very important role in increasing development is part of the balance, namely the General Allocation Fund, which can be seen from the data in various provinces that the DAU has a fairly large percentage contribution in the formation of the amount of regional revenue.

The General Allocation Fund (DAU) is part of the balancing fund, contributing to regional revenues. DAU is a fund given by the central government to regional governments that aims to provide financial equity between regions to meet the region's needs. The role of DAU lies in the ability to create equity based on consideration of the fiscal potential and needs of each region (Law No. 2004). The problem with the general allocation of funds lies in the different perspectives between the centers. The general allocation fund center is used as an instrument for horizontal imbalance for equity or filling the fiscal gap.

Unfortunately, the different contributions between regions, on the one hand, impact regional inequality between regions that are already more advanced than other regions. ?"

1.1 Research Question:

Based on the background described above, the problems that will be studied and discussed in this research are:

1. Is there a significant influence of Regional Original Revenue on inequality in Papua based on regional grouping?
2. Is there a significant effect of the General Allocation Fund on inequality in Papua based on regional groupings?
3. Is there a significant effect of the Special Allocation Fund on inequality in Papua based on regional grouping?
4. Is there any influence of economic growth on the inequality of income distribution in Papua based on regional grouping?
5. Is there any influence of HDI on the inequality of income distribution in Papua based on regional grouping?
6. Is there any influence of poverty level on income distribution inequality in Papua based on regional grouping?

1.2 Research Objectives

This study aims to provide an overview of the relationship between implementing Regional Autonomy and regional economic disparities. At the end of the article, policy suggestions are also offered to create a more equitable economy. The objectives of this research are:

1. To identify the effect of original regional revenue on regional disparities in Papua based on regional groupings
2. To identify the effect of general allocation funds on regional inequality in Papua based on regional grouping
3. To analyze the effect of special allocation funds on regional inequality in Papua based on regional grouping
4. To analyze the effect of economic growth on the regional inequality of the island of Papua based on regional groupings
5. To analyze the influence of HDI on regional inequality in Papua based on regional grouping
6. To analyze the effect of poverty level on regional inequality in Papua based on regional grouping

2 Literature Review

2.1 Economic Gap Between Regions

Economic disparities between regions are common in a country's economic development activities. In this case, development policies to increase economic growth exacerbate regional economic disparities [4].

Economic disparities between regions are often a serious problem because some regions can achieve fast economic growth while others experience slow growth. The factors that cause development inequality between regions are (1) Differences in the content of natural resources, (2) Differences in geographical conditions, (3) Lack of smooth mobility of goods and services, (4) Concentration of regional economic activities, (5) Allocation of development funds between regions This problem can trigger population migration from underdeveloped regions to developed regions which will have an impact on the emergence of socio-economic problems in developed regions.

2.2 Interregional Economic Growth Theory

The theory of regional economic growth is an important part of regional and urban economic analysis, which explains why an area can grow fast, and some grow slowly. On the other hand, growth theory can also explain the relationship between economic growth and inequality between regions and why it happens [5]. This theory developed based on an

analysis of economic growth according to the classical view. Economists who became pioneers in developing this theory were Robert Solow and Trevor Swan [6]. According to this theory, economic growth depends on the increase in the supply of production factors (population, labor, and capital accumulation) and technological progress. According to neo-classical theory, the factors of production that are considered to be very influential on output growth are the amount of labor and capital (capital). Capital can be in the form of finance or capital goods. The addition of the amount of labor and capital with other production factors, for example, the level of productivity of each of these production factors or, as a whole, will continue to increase the output produced. The percentage of output growth can be greater (increasing return to scale), the same (constant return to scale), or smaller (decreasing return to scale) than the percentage growth of the two factors of production [7].

2.3 State Finance Theory

In general, state finances are defined as all matters relating to state revenues and expenditures. [8] States that State finance is a study of the effects of the State Revenue and Expenditure Budget (APBN) on the economy, especially its effects on the achievement of the objectives of economic activity, price stability, equitable distribution of income, and increased efficiency. And the creation of job opportunities. The types of balancing funds are as follows:

2.4 General Allocation Fund (DAU)

General Allocation Funds are block grants given to all districts/cities to fill the gap between their fiscal capacity and needs. These are distributed using a formula based on certain principles that indicate that poor and underdeveloped regions should receive more than rich regions. In other words, the important purpose of the DAU allocation is to equalize the ability to provide public services between local governments.

2.5 Special Allocation Fund (DAK)

According to Law no. 33 of 2004, Special Allocation Funds are funds sourced from APBN revenues that are allocated to certain regions to finance special activities, which are regional affairs and in accordance with national priorities. DAK is intended for special regions that are selected for special purposes. Therefore, the central government's allocations are the center's authority for special national purposes.

2.6 Previous Study

Erni Safitri [9], in a study on the analysis of disparity between regencies/cities in Jambi Province with the level of inequality between regencies/cities that is 0.18 lower than the inequality rate in Indonesia, it can be seen that the balancing fund variable affects regional inequality, where the greater the balancing fund from one district/city will affect reducing regional inequalities that occur. Terms of the Human Development Index also affect regional inequality in Jambi province, with the increase in HDI having a positive impact on the quality of its human resources, thereby increasing welfare and reducing inequality.

Ayu Arista [10] looked at the regional inequality factor that occurred in the province of Banten regarding economic growth. The HDI showed that increasing economic growth had a positive and significant impact on development inequality between districts/cities in Banten Province with a 90% confidence level. This indicates that when economic growth increases, development inequality between regions will increase.

Sonny Harry B Harmadi and Uka Wikarya¹¹ In "Regional Inequality in Indonesia: Pre and Post Regional Autonomy Analysis," the Theil Index and the Williamson Index with the variable used the income per capita (period 1995-2005) to measure the level of welfare between regions, regional fiscal capacity per capita (1995-2005), to measure the level of welfare between regions is the regional fiscal capacity per capita (1995-2005 period) is a variable used to measure the level of inequality in the financing of public facilities, and the average length of schooling (period 1995-2008) as a variable used to determine the performance of public services in the field of education, then compare these variables in the period before and after the implementation of regional autonomy. The analysis results show that the inequality of GRDP per capita between regions has increased from 1995-2005, so the implementation of regional autonomy is less successful in increasing the income distribution between regions.

Hypothesis

H1: Regional Original Revenue has a positive effect on Inequality between Regions

H2: General Allocation Fund has a negative effect on Inequality between Regions

H3: Special Allocation Fund has a negative effect on Inequality between Regions

H4: HDI has a negative effect on Inequality between Regions

H5: Poverty Level has a positive effect on Inequality between Regions

H6: Growth of the Economy has a positive effect on Inequality between Regions

3 Methods

This study aims to analyze the influence of regional revenue factors on inter-regional inequality in Papua during the period 2012 – 2018 using a quantitative approach. The variables used are local revenue (PAD), general allocation funds (DAU), special allocation funds (DAK), economic growth, HDI, and poverty.

The method used is a descriptive-analytic approach. That is, this research was formed based on data sourced from secondary data, journals, articles, literature studies, and the results of previous research related to the problem. Meanwhile, to perform quantitative analysis, the panel data method approach was used using Eviews 9.0 software.

Research Design

$$CW_{it} = \alpha_0 + \alpha_1 PAD_{it} + \alpha_2 DAK_{it} + \alpha_3 DAU_{it} + \alpha_4 growth_{it} + \alpha_5 IPM_{it} + \alpha_6 POV_{it} + e_{it} \quad (1)$$

CW: Regional disparity

PAD: Regional Original Revenue

DAK: General Allocation Fund

DAU: Special Allocation Fund

Growth: Growth

IPM: HDI

POV: Poverty level

α_0 : Constant

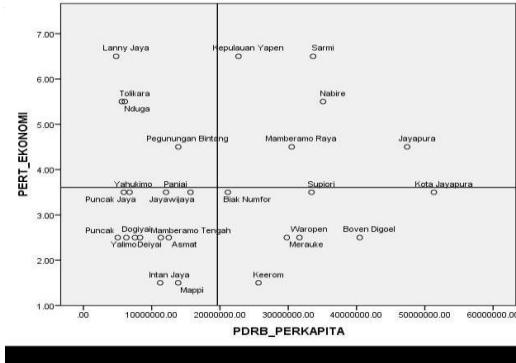
α_1 s/d α_{10} : Koefisien Variabel Independen

e : *Residual/er*

Entropy Index Theil

The Theil Entropy Index is an information theory that measures economic disparities and industrial concentration in a region. Entropy Index Theil's Entropy Index can be calculated by the following calculations [16];

$$I(y) = \sum(y_j /$$



I(y): Entropy Index Theil

- Yj: GDP Per capita
- Y: Average GDP Per capita
- Xj: Total population of the district
- X: Total Population

The larger Theil Entropy Index indicates that the inequality in an area/region is getting bigger or the inequality in the area is not evenly distributed. Likewise, the Entropy Theil index is getting smaller. In that case, it indicates that the inequality in an area/region is getting smaller/lower, or the inequality in the area is getting more evenly distributed.

Klassen Typology

Klassen Typology to determine the characteristics of the pattern and structure of regional economic growth can use Klassen Typology.[11]; [12] Explained that by using this analytical tool, four growth characteristics of each region can be obtained, namely developed and fast-growing regions (rapid growth regions), retarded regions, and growing regions. And relatively backward regions, namely (a) low growth, high income, (b) high growth, high income, (c) high growth, low income, (a) low growth, low income. Matrix presentation of the Klassen Typology analysis tool by Sjafrizal (1997)

4 Results

4.1 Tipologi Klassen

The Klassen Typology analysis tool describes the pattern and structure of economic growth in each region. Klassen's typology divides regions based on two main indicators, namely economic growth on the vertical axis and average per capita income on the horizontal axis.

Based on these criteria, the observed area can be divided into four regional quadrants, including:

Quadrant 1. Fast-developing and fast-growing regions are areas that have higher levels of economic growth and income levels than the district/city average. From the results of data processing districts/cities of the province of Papua. Regions that are in quadrant I are regions that have faster economic growth and poverty reduction (pro-growth, pro-poor).

Quadrant 2. Developing regions are areas that have high growth rates but lower per capita income levels than the district/city average. Alternatively, have below-average economic growth and above-average poverty reduction (low growth, pro-poor). The areas in this quadrant are Lanny Jaya, Tolikara, Nduga, and Bintang Mountains. The problem that must be faced is how to maintain the effectiveness and efficiency of poverty reduction policies and programs while at the same time encouraging the acceleration of economic development by prioritizing sectors or economic activities that have the potential to develop, such as agriculture, plantations, marine fisheries, and trade.

Quadrant 3. Developed but depressed regions, i.e., areas with higher per capita income but lower growth and poverty reduction rates than the district/city average (low growth, less pro-poor). For quadrant 3 Forward but depressed, there are 12 districts/cities, namely Puncak Jaya, Yahukino, Jaya Wijaya, Paniai, Puncak, Yalimo, Dogiyai, Deiyai, Mamberamo Tengah, Asmat, Intan Jaya, Mappi. It is hard to encourage the acceleration of economic development by increasing the productivity of sectors or economic activities that can absorb more labor than people with low incomes. Local governments must also improve the effectiveness and efficiency of various poverty reduction policies and programs.

Quadrant 4. Relatively underdeveloped regions are regions that have growth rates and per capita incomes that are lower than the district/city average, or in other words. These regions have above-average growth rates but also have below-average poverty reductions. Average. (high-growth, less-pro poor). The challenges that will be faced include encouraging sector development and economic activities accompanied by relatively high labor absorption, such as the agricultural and plantation sectors and MSMEs. In addition, the government will also face challenges in improving coordination in optimizing poverty reduction policies and programs. The results show seven districts/cities in this quadrant: Biak, Waropen, Boven Digoel, Merauke, Keerom, Supiori, and Jayapura City.

4.2 Result Analysis

Quadrant 1

From the research results, there is only one variable that affects and is significant to regional inequality, namely the PAD variable of 0.0022 with a P-value of $0.03 < 0.05$ significance level. This is in accordance with research conducted by [13]. The ability of a region to generate income varies greatly, depending on the conditions of each region concerned, whether it has a wealth of resources or not or an area with a high or low intensity of economic activity.

While the DAU and DAK variables do not significantly affect regional inequality, one of the factors that cause DAU not to have an effect is that the use of funds is intended to meet personnel expenditures, not for potential sector development, while DAK.

When inequality research uses the Gini index, not a single variable is found that significantly affects regional inequality.

Quadrant 2

In quadrant two regions with high growth characteristics but low per capita income, the variable that affects regional inequality is the level of poverty, which has a positive and significant effect on regional inequality. This is in accordance with Ode Nur's research (2020)¹⁴The poverty level has a significant influence on increasing inequality in the region. East Java Province, where the higher poverty rate will increase the regional inequality in the area. While the DAU variable, although significant, is not in accordance with the existing hypothesis based on previous research, this variable cannot be stated to affect regional inequality. While the results of processing using the Gini index, there is only one significant variable, namely the poverty level, but unfortunately, it is not appropriate with the hypothesis made.

Quadrant 3

For quadrant 3 with the criteria of developed but depressed regions, the variable that influences regional inequality is the level of poverty, which has a positive and significant influence on regional inequality, meaning that the higher the percentage of the poverty rate, the higher regional inequality, this is in accordance with Ode Nur's research. Meanwhile, for the growth variable, in terms of significance, the variable is significant but not by the existing hypothesis. The test results using the Gini index have one significant variable, namely PAD, that cannot be selected because it is also not by the existing hypothesis.

Quadrant 4

The results of processing in quadrant 4 with the characteristics of relatively lagging regions, the selected variable is PAD, which has a positive and significant influence, meaning that the higher the PAD, the higher the resulting regional inequality. In quadrant 4, the existence of varying PAD between regencies and cities will impact the higher regional inequality that occurs. This is because several regions have relatively small PADs compared to other regions. Meanwhile, when the study uses the Gini index, no variables affect regional inequality.

5 Conclusion

This research was conducted to know the Effect of PAD, DAU, DAK, economic growth, poverty rate, and HDI on regional inequality in the period 2012–2018 in Papua province using panel data analysis.

The conclusions obtained from the test results in the study are that two variables influence regional inequality. That is, the PAD variable has a positive and significant influence on regional inequality in quadrants 1 and 3. This is the following research was conducted by [13]. The ability of a region to generate income varies greatly, depending on the conditions of each region, whether it has resource wealth or not, or areas with a high or low intensity of economic activity. The poverty level variable positively and significantly influences quadrants 2 and 3. According to Ode Nur's research (2020), the poverty level significantly influences increasing inequality in East Java Province. Meanwhile, the DAU, DAK, growth, and HDI variables do not significantly affect regional inequality [14].

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