ECONOMIC GROWTH, INCOME INEQUALITY, AND POVERTY IN WEST KALIMANTAN

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ABSTRACT

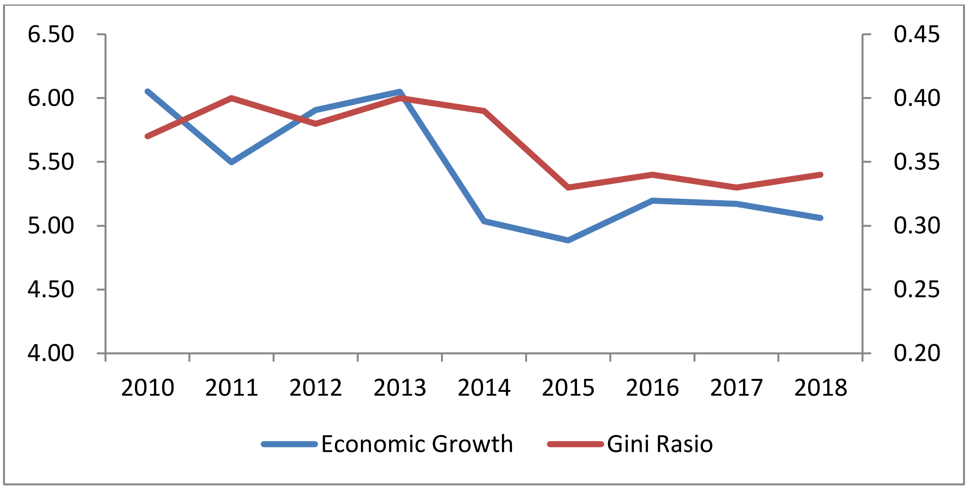
This study aimed to analyze the effect of income inequality and poverty on economic growth and the effect of income inequality and economic growth on poverty in West Kalimantan. This study was conducted by taking samples of all districts or cities in West Kalimantan from 2010 up to 2018, which were analyzed with a two-stage model of simultaneous equations. The endogenous variable in this study referred to economic growth and poverty. Whereas, the exogenous variable referred to income inequality, household consumption, the number of residents, the district minimum income, per capita income, investment, the growth of agriculture, and trade sectors. The result of this study was the income inequality, the population, household consumption, and the investment had a positive impact on economic growth. Also, economic growth and the district minimum income had a positive effect on poverty.

Key words: economic growth, income inequality, poverty, two-stage model of simultaneous equations.

INTRODUCTION

Ideally, the economic development that had already been carried out will give a high result of economic growth, as well as it will improve the population prosperity (Nafziger, 2006). However, based on reality, the benefits of economic growth doubtfully can be enjoyed directly by the whole population, so that, it will affect prosperity and income inequality. The phenomena of economic growth, income inequality, and poverty is a strategic issue, especially for policy-makers in West Kalimantan. It's due to several causes, such as first, economic growth in West Kalimantan recorded an average growth during the period time of 2010 up to 2018 was 5,43%, including one area which was able to achieve high growth. However, an adequate economic growth rate unfollowed by the improvement of the income distribution, and the pattern of income inequality stagnated during the period of 2015 up to 2018. These are the following economic growth and gini ratio in West Kalimantan during 2010 up to 2018:

Graphic 1. Economic Growth and Gini Ratio of West Kalimantan Province During 2011 up to 2018



Source: Central Bureau of Statistics (Badan Pusat Statistik, BPS) of West Kalimantan, the data is being processed.

Based on Graphic 1, the degree of inequality in West Kalimantan, as indicated by the gini ratio index, remained unchanged and stagnant during the last four years due to the effect of economic growth, which was neglected by the people at the lower level. This was contrary to the existing theory, which was stated that economic growth would affect income distribution. Kaldor (1955) noted that the higher economic growth rate followed by the uneven pattern of income distribution due to the rich people had higher savings than the poor one. Meanwhile, the lower economic growth followed by, the more equitable income distribution (Boediono, 1982).

Second, West Kalimantan, as a province with the highest poverty rates in Borneo Island, had already shown a reduction in the poverty rate from year-over-year. However, this was neglected by the decrease in the income gap. Trickle-down effect theory explained that the progress made by a group of people would trickle down so that it formed equitable economic growth distribution results. During this period, it was believed that to cut down poverty, it required high economic growth that one may expect to create a trickle-down effect that could improve the prosperity of the population. However, that was not only economic growth that was able to relieve poverty, but also it was neglected by more equitable income distribution.

Poverty is a problem that is a challenge for the success of the development that has been carried out. Local governments have tried to reduce poverty so that development results can be enjoyed by all people, but poverty at the district / city level is still quite high. This illustrates that the effects of economic paralysis have not been effective in poverty alleviation. Based on data from the Central Bureau of Statistics, the percentage of the poverty in West Kalimantan always experiences a decline and is below the national rate national rate of 7.77% below the national rate of 9.82% in 2018. However, the percentage of poverty in West Kalimantan is the highest in the region of Kalimantan Island

According to Berardi and Marzo (2017), the sector that more affected poverty was the growing sectors that took sides of potential areas for pro-poor. In line with the previous statement, Ames et al. (2001) noted that the economic growth which gave an impact on poverty influenced by the composition of sector growth. Economic growth, in which the population was concerned to provide an effect of poverty reduction, would make a more significant impact than other economic growth sectors.

LITERATURE REVIEW

The Concept of Economic Growth

Economic growth in terms of the macroeconomy is an attachment value of Gross Domestic Product (GDP), which means the improvement of national income. The concept of GDP was applied at the national level, meanwhile at the province and district levels applied the idea of Gross Regional Domestic Product (GRDP). GDP or GRDP can be measured through three approaches, which were production approach, the income approach, and payment approach (Tambunan 2003).

The economic growth was influenced by several factors, such as consumption, government spending, or net exports (Sukirno, 2000). Besides that, the investment establishment also had an essential role in economic growth. First, the investment affected the supply side because of its role as a factor that can make a profit. Second, the investment affected the supply side because it can enhance the production capacity of the economy by increasing the capital stock.

The Concept of Income Inequality

Income inequality is a condition in which an unequal society acknowledged income distribution. Income inequality distribution is a matter of income differentials between communities or developed region and disadvantages regions. The higher the income gap is, the greater the variation in the income distribution will cause the income disparity. It can't be avoided due to the perfect trickle-down effect from the output. The result of the national production was only retained by a handful of minorities with a specific purpose.

The Concept of Poverty

According to the Central Bureau of Statistics, the population who were unable to meet the minimum basic needs can be categorized as an impoverished society. In general, the concept of poverty itself can be associated with individual income and needs. If the income is not applied for fulfilling a minimum requirement in the form of basic needs, it won't allow an individual to live decently; thus, it can be considered as an impoverished society. Therefore, poverty can be measured by an individual or family income level (Arsyad, 1999).

Economic Growth and Income Inequality

The criteria for successful development can be seen from economic growth and income inequality between the society and the sectors. However, in reality, economic growth was not always followed by equalization adequately. Income inequality often appeared as a severe problem. Kuznets (1955) conducted a study about a relationship between economic growth and the income inequality. Based on the research, it was concluded that there was a significant relationship between economic growth and income inequality, which known as an inverted U-curve hypothesis.

Economic Growth and Poverty

Economic growth is an essential requirement to erase poverty, even though economic growth cannot stand-alone to cut down and dismiss poverty. The advantages of rapid economic growth will spread to all sectors of society. This point of view was based on the trickle-down theory, which was dominant in evolution theories in the 1950s up to 1960s. Economic rapid growth affected the development of economic capacity, and it will engage per capita income. The growth of per capita income will decrease poverty. In conclusion, the rapid economic growth will reduce poverty.

The Growth, Income Inequality and Poverty

Bourguignon (2014) explained the relationship of economic growth, income inequality, and poverty strike in the form of a triangle pattern. The poverty level was measured by the amount of absolute poverty, which was a particular society at a lower level of poverty rank based on the household survey data. Inequality or unequal income distribution referred to the comparative income gap among the society, which was measured by the gini ratio. The economic growth can be measured by the adjustment of the prosperous average level in terms of both income and outcome. According to him, poverty clearance was a function of economic growth, income distribution, and the replacement of income distribution. It means poverty clearance can be done by changing the income distribution (redistribution) and by increasing the income level.

RESEARCH METHODS

The statistical analysis in this study applied secondary data from the Central Bureau of Statistics and the Ministry of Manpower of the Republic of Indonesia from all districts or cities in West Kalimantan Province during 2010-2018. This study presents two outputs, for the first model, analyzes income and poverty inequality with economic growth, and the second model analyzes income inequality and economic growth towards poverty. Also, this study uses control variables in the form of population, household consumption, investment proxy for Gross Fixed Capital Formation, district minimum income, per capita income, growth in the agricultural and trade sectors.

Economic growth and poverty were applied as an endogenous variable; meanwhile, agriculture growth and trade sectors, gini ratio, poverty, population, per capita income, household consumption, investment proxy, and the district minimum income were treated as exogenous variables. Thus, the standard specifications of the structural equations system used in this study were:

$$Y_{it} = \alpha + \beta_1 GR_{it} + \beta_2 P_{it} + \beta_3 PND_{it} + \beta_4 KONS_{it} + \beta_5 INV_{it} + u_{it} \qquad (1.1)$$

$$P_{it} = \alpha + \beta_6 GR_{it} + \beta_7 Y_{it} + \beta_8 UMK_{it} + \beta_9 PPP_{it} + \beta_{10} AGR_{it} + + \beta_{11} TRAD_{it} + e_{it} \qquad (1.2)$$

In which: Y interpreted as economic growth; GR defined as income inequality, P described as poverty, PND represented population, KONS explained as household consumption, INV identified as an investment, UMK described as district minimum income, PPP represented per capita income, AGR defined as agriculture sector growth and TRAD defined as the growth of trade sector. The data were analyzed using the simultaneous method due to its endogen variable, which is interlinked to each other. The result of the identification test was an over-identified model, so the variables were analyzed using a two-stage least square method (2 SLS).

RESULT AND DISCUSSION

These are the following result of simultaneous modeling towards economic growth model (1.1) and poverty equation model (1.2) :

Table 1. Result of Simultaneous Model Estimation with Two Stage Least Square

Model	Variable	Parameter Estimation	t count	p value	R square
Economic Growth	Constants	-1.873	-2.15	0.034**	0.959
	Income Inequality (GR)	5.114	1.94	0.055*	
	Poverty (P)	-0.060	-1.26	0.209	
	Population (PND)	0.012	2.45	0.015**	
	Household Consumption (KONS)	0.526	5.04	0.000***	
	Investment (INV)	1.096	4.94	0.000***	
Poverty	Constants	43.373	4.05	0.000***	0.430
	Income Inequality (GR)	-24.343	-0.86	0.398	
	Economic Growth (Y)	2.221	8.35	0.000***	
	District Minimum Income (UMK)	-0.002	-1.12	0.262	
	Per capita Income (PPP)	-2.818	-4.13	0.000***	
	Agriculture sector growth (AGR)	-0.113	-0.23	0.811	
	Trade sector growth (TRAD)	0.292	0.74	0.458	

Source: Data Processing Result
Note.: *) significant at α 10%; **) significant at α 5%; ***) significant at α 1%;

Based on the table 1, in terms of the economic growth model, variable income inequality (GR) had a significant effect on economic growth at the level of 10%. Meanwhile population variable had a significant influence on economic growth at level 5%, and household consumption variables (KONS) had a significant effect on economic growth at level 1%; the investment variable (INV) has a significant impact on economic growth at level 1%. On the other hand, the poverty variable (P) had no significant effect on economic growth.

Based on the parameter estimation result, income inequality had a positive relationship with economic growth, which showed the higher the economic growth was, the higher the income inequality would be. These circumstances determined that the improvement of economic growth in a particular region was not followed by the increasing economic growth in other areas, which led to higher inequality in the development and income sectors. These were because, in the early stage, the economic agents tend to invest on the developed regions because of their complete infrastructures, their trained workers, and business opportunities which are available for them, so the developed areas, to be more advance, and this, will encourage the economic growth in this region. These results were in line with Kuznet's hypothesis, which stated that in the early stage of economic growth or when the project has just begun, the income distribution tend to uneven. However, in the next step, income distribution will get better in sync with the country's prosperity. The results of this study supported the previous research by Lin (2003), Sudarlan (2015), Fosu (2017) and Raza Cheema and H. Sial (2012) which stated that the improvement of economic growth in cooperation with the increase of income inequality.

Based on the result of parameter estimation, the population variables had a positive relationship with the economic growth, which showed that the higher the population was, the higher the economic growth would be. These were in line with Adam Smith's theory, which noted that man is a first-generation that determined national prosperity. Adam Smith also noticed that human was the source of economic growth. Adam Smith assumed that economic growth relied on the number of populations. These results were in line with the previous result by Ncube, Anyanwu, and Hausken (2014) which stated that the enhancement of population would engage the economic growth in MENA (Middle East and North Africa).

Another variable that significantly affected economic growth was household consumption. Parameter estimation of household consumption was positive, it might be, in other words, the higher the value of household consumption was, the higher the economic growth would be. This was due to the improvement in consumption growth. It means that there had been progressing in demand for goods and services. The enhancement demand for goods and services will push the economy to improve the production of goods and services. This results in line with Keynes' development theory, which stated that one of the economic growth sources was the household outcome, which was defined as household consumption (C). The results were also matched with the opinion from Adams (2004) which mentioned that household consumption had a significant relationship with economic growth. If the household consumption was high, so do the economic growth.

Based on the data analysis, investment had a positive relationship with economic growth in districts or cities in West Kalimantan. Investment defined as a production element that actively determined output level. It can be a starting point for successful and sustainable future, due to its ability to establish workers, and it can also generate new job opportunities for the society, which turned out to be able to affect the improvement in society's income.

Meanwhile, in terms of poverty, the model shows that economic growth variable (Y) had a significant effect on poverty at level 1%. Besides, the per capita income variable also had a significant impact on poverty at level 1%. In contrast, the income inequality (GR), district minimum income (UMK), agriculture growth sectors (AGR), and trade sector had no significant effect on poverty.

The economic growth variable had a significant effect on poverty. The parameter estimation was showed a positive mark, which means that the higher the economic growth was, the higher the poverty rate would be. This was because of the income distribution, which was unequally accepted, and in other words, the economic growth was not thoroughly enjoyed by all society. These were in line with the previous study conducted by Zhang and Wan(2006) which mentioned that the changes in poverty were due to two direct causes; first, income growth and the second is the resentment of the income distribution. The higher the economic growth was, the higher the poverty rate would be.

Parameter estimation of per capita income, which showed a negative mark, represented that the higher per capita income will reduce poverty. Per capita income was one of the prosperity standards of each region. The higher the income was, the higher the purchasing would be, and thus it will engage the prosperity (Sukirno, 2000). These results were equivalent with the opinion from Nakabashi (2018) which noted that the developing country in Brazil had smaller incomes, even though they had already controlled the investment in a physical asset, human asset stock, and the effective depreciation asset.

CONCLUSIONS

Based on the results and discussion on the previous parts, it can be concluded that:

1. Income inequality, population, household consumption, and investment had a positive impact on economic growth in West Kalimantan. The enhancement of income inequality affected economic growth. Besides, income inequality reduced the effectiveness of economic growth in cutting down poverty,

2. Economic growth and district minimum income had a positive impact on poverty. Thus, concluded that the economic growth was not inclusively achieved because not all society was able to access the real economic opportunities.

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