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Analysis of The Influence of Economic Growth, Foreign Investment, And International Trade on Income Inequality in Indonesia in The Period of January 2005 To December 2013

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ABSTRACT

The purpose of this study is to find out how the response was given by the Gini coefficient variable to the movement of the variables of economic growth, foreign capital flows, and international trade and to find out which variables make the largest contribution to the amount of investment credit, the authors choose the Vector Auto Regression (VAR) analysis tool) or Vector Error Correction Model (VECM). IRF results show that when there is a movement in the economic growth of 1 standard deviation, the Gini coefficient responds negatively. This shows that when there is an increase in economic growth, the Gini coefficient will decrease. According to the Trickle-Down Effect theory, The increase in economic growth enjoyed by some of the rich will ultimately affect the economic activities of the poor and this growth will be enjoyed by the poor. The IRF results show that when there is a movement in the number of foreign capital inflows into Indonesia by 1 standard deviation, the Gini coefficient trend will respond positively. The increase in MNCs due to increased FDI causes an unequal distribution of income. This is because MNCs employ only skilled labor so that only some highly skilled workers get additional income and the income distribution becomes unequal. The impact of international trade can harm income inequality due to a large number of import activities carried out by Indonesia, thereby reducing the competitiveness of domestic producers. This reduces the income of local producers and causes an unequal distribution of income.

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1. INTRODUCTION

Economic development is a process consisting of a long chain of supply and demand changes that cause an increase in the Gross Domestic Product of a country in the long run [1]. However, history provides several examples where economic growth was not accompanied by the same progress in human development. Instead, growth is achieved at the cost of large inequality, higher unemployment, weakening democracy, and loss of cultural identity [2].

Income inequality, as measured by the Gini Index, reached 0.413 in 2013 which represents a fairly large number of inequality. Based on these two trends, it can be concluded that increasing economic growth is not always accompanied by an increase in the welfare of the population in a country. This can be seen from the increase in the Gini coefficient from 2005 by 0.363 to 0.413, where the Gini coefficient exceeds 0.4, including fairly high-income inequality [3].

Several aspects are considered to be an effort to increase the rate of economic growth, namely the amount of incoming investment. One of the things that are currently in the spotlight is investment originating from abroad, which is called Foreign Investment. FDI is a reflection of economic globalization which is the key to current economic development. Meanwhile, international trade which reflects economic globalization, namely the number of exports and imports, increased from 2005 to 2013 by USD 182 billion to USD 429 billion, although in 2009 it decreased by USD 245 billion due to the global crisis.

This is followed by Indonesia's growth rate which is experiencing an increasing trend. The government then set a free-floating exchange rate in 1970, which was followed by the liberalization of the financial sector in the 1980s. Since then, Indonesia has become an attractive destination for foreign investment. With more and more attracting incoming investment, it has a positive impact on Indonesia, which needs capital to build its economy.

The success of development in a country is not only measured by high economic growth but is measured by several other economic variables and indicators because high economic growth does not necessarily reflect the high per capita income received by the community and a fair and equitable distribution of income among the people. With a group of people who are very prosperous in a country, while that country also has more than half of its people who are not prosperous, then the country experiences income inequality. Increased income inequality is a result of capital inflows and is only accessed by certain people. The fact that income inequality in Indonesia is increasing will cause problems that must be solved.

High inequality brings negative impacts such as economic inefficiency, weakens social stability and solidarity, strengthens the political power of the rich, and creates injustice. This condition is a development challenge that must be faced considering that this inequality problem can make it difficult for us to carry out national economic development based on equity. Although inequality cannot be eliminated, it can be reduced to a level that is acceptable to a particular social system so that harmony within the system is maintained in its growth process. To reduce income inequality in Indonesia, we must know the actual response of the globalization variables and economic growth variables that are suspected to be the cause of income inequality.

2. LITERATURE REVIEW

The study of income inequality in the field of development has been widely contributed by scientists, as already stated in the introduction. These studies describe several economic aspects that affect income inequality. The most famous study is the Kuznets hypothesis which has prompted a lot of research into the relationship between economic growth and inequality, then expanded to other aspects of the economy, namely FDI and international trade [4].

2.1 *Income Inequality Theory*

The concept of inequality refers to a comparison based on certain characteristics that can be measured using an index as an indicator. In the economic context, inequality is related to differences in income, consumption, or related to social welfare. Of all inequality measures, the Gini index is the most frequently used indicator of inequality. One of the highlights of the Gini index is its very direct approach to measures of inequality, taking into account the differences between each income group, which is by far the most popular measure of economic inequality.

2.2 *The Concept of Economic Growth and Development*

Economic growth and development have different definitions, namely, economic growth is the process of increasing output per capita continuously in the long term. Economic growth is one indicator of the success of a development. Thus, the higher the economic growth, the higher the welfare of the community, although there are other indicators, namely the distribution of income. Meanwhile, economic development is an effort to increase per capita income by processing potential economic power into a real economy through investment, the use of technology, increasing knowledge, increasing skills, and increasing organizational and management capabilities for public welfare [5].

2.3 *Harrod-Domar Growth Model*

To spur economic growth, new investment is needed which is a net addition to the reserves or capital stock. If k (capital-output ratio) and s (savings ratio) is a percentage of national output that is always saved and the amount of new investment is determined by the total savings (S), then we can construct a model of economic growth:

- Savings (S) is part of national income (Y):
  $S = sY$
- Net investment (I) is the change in capital stock (K):
  $I = K$
- K has a direct relationship with Y:
  $K/Y = k$ or $K/\Delta Y = k$ or $K = k\Delta Y$
- S=I then
  $sY = k\Delta Y$ or $Y/Y = s/k$ (left side is the rate of change/growth in GDP). The growth rate of GDP is determined by the positive ratio of savings and negative capital-output ratio.

2.4 *Solow's Neoclassical Growth Model*

The Solow model adds the labor factor and introduces the independent variable, namely technology, into the economic growth equation. Technological progress becomes the residual factor explaining long-term growth and the growth rate according to Solow's exogenously determined assumptions. In a more formal form, Solow uses the following aggregate function;

$$Y=K^a(AL)^{(1-a)}$$

Where Y is a gross domestic product, K is capital stock, L is labor and A is labor productivity whose growth rate is determined exogenously [3].

2.5 *Kuznets. Hypothesis*

According to Kuznets, economic growth in poor countries initially tends to lead to high levels of poverty and unequal distribution of income. However, if these poor countries are more advanced, the problem of poverty and inequality in income distribution will decrease [6].

2.6 *Trickle-Down Effect Theory*

Inequality initially increases due to northern growth as a result of the concentration of factors of production, but in the long run, this growth will spread to other areas due to the occurrence of agglomeration diseconomies in the northern region due to pollution, high labour, expensive land costs, and congestion.[7]. This will encourage the spread of industry to other regions and increase the economic growth of other residents.

2.7 *Neo-Marxist Theory and Piketty*

Economic growth will always cause the gap to widen between the rich and the poor. This is because economic growth benefits the capital owner group (rich) with the accumulation of capital and technological advances that tend to increase the concentration of resources and capital control by capital owners. Meanwhile, workers (non-capital owners) remain in poverty [8].

Piketty found a general theory of capital and inequality. Inequality arises when wealth grows faster than national income or can be expressed as r>g, where r is the rate of return on capital and g is the growth of income and output. There is a high inequality due to the dominance of private wealth in national income and concentration in only a few rich families because class relations with a rigid structure still apply. This system even continues to dominate even though industrialization slowly contributes to rising wages for workers [8].

2.8 *Investment Theory*

Investment can be interpreted as expenditure or expenditure of investors or companies to buy capital goods and production equipment to increase the ability to produce goods and services available in the economy [5].

2.9 *International Trade Theory*

New Trade Theory(NTT), pioneered by Krugman in the late 1970s, changed the way economists think about international trade flows. This theory argues that in developing countries, the level of prosperity differences between regions tends to be high (divergence) in the early stages. Meanwhile, over time, the development will cause differences in the level of prosperity between regions that tend to decline (convergence). This is because in developing countries capital and trade traffic is still not smooth so the adjustment process towards a balanced level of growth cannot yet occur.

3. METHODS

The data used in this study is secondary data. The secondary data used is time series data from January 2005 to December 2013.

Based on the research objective, is to find out how the Gini coefficient variable responds to the movement of the variables of economic growth, foreign capital flows, and international trade and to find out which variables make the largest contribution to the amount of investment credit, the authors choose the Vector Auto Regression (VAR) analysis tool) or Vector Error Correction Model (VECM). The choice of this tool is because the VAR analysis tool can explain the effect of variable movement through the Impulse Response Function (IRF) tool, then it is also able to explain the contribution of the variance of the variable through the Variance Decomposition (VD) tool.

4. RESULTS AND DISCUSSION

The researcher analyzes the effect of economic growth, foreign investment, and international trade on income inequality in Indonesia in the period January 2005 to December 2013 using quarterly data. The main purpose of this study is to determine the effect of economic growth, foreign investment, and international trade on inequality in Indonesia and to determine the contribution of these variables to the variation of the Gini coefficient (income inequality), therefore this study uses an Impulse Response Function analysis tool. and Variance Decompositions.

Based on all the discussions that have been carried out in the previous chapter, using the variables of income inequality (Gini), economic growth (GDP), foreign investment (FDI), and international trade (TO), the conclusions of this study are as follows:

1. Through the analysis of the Impulse Response Function (IRF) graph, it can be seen that changes in the variables of economic growth, foreign investment, and international trade have an influence that will be responded to positively and negatively by the Gini coefficient, namely:
   a. IRF results show that when there is a movement in the economic growth of 1 standard deviation, the Gini coefficient responds negatively. This shows that when there is an increase in economic growth, the Gini coefficient will decrease. According to the Trickle-Down Effect theory, the increase in economic growth enjoyed by some of the rich will ultimately affect the economic activities of the poor and this growth will be enjoyed by the poor.
   b. The IRF results show that when there is a movement in the number of foreign capital inflows into Indonesia by 1 standard deviation, the Gini coefficient trend will respond positively. The increase in MNCs due to increased FDI causes an unequal distribution of income. This is because MNCs employ only skilled labor so that only some highly skilled workers get additional income and the income distribution becomes unequal.
   c. IRF results show that when there is a movement in the number of exports and imports (international trade) of 1 standard deviation, the Gini coefficient trend will respond positively. The impact of international trade can harm income inequality due to a large number of import activities carried out by Indonesia, thereby reducing the competitiveness of domestic producers. This reduces the income of local producers and causes an unequal distribution of income.
2. Based on the analysis of variance decomposition of the Gini coefficient, it can be concluded that economic growth has a major contribution to explaining the Gini coefficient compared to foreign investment and international trade variables. The next order of contribution is the variable of foreign investment, while international trade contributes the least. This shows that in the long term, income inequality will be more influenced by economic growth in Indonesia.

5. CONCLUSION

The results of the study that show the impact of increasing FDI makes income inequality increase, this shows that the incoming foreign capital only enriches a group of people with the opportunity to take advantage of capital and get a bigger return.

Individuals who do not have access or opportunity to the existence of these PMAs should try to improve their abilities or skills to take advantage of all access related to this PMA. In addition, the government needs to provide education and training for low-skilled workers so that all people have the same opportunity to benefit from PMA.

In terms of international trade, the government can reduce imports by imposing import duties, limiting import quotas, and implementing import substitution policies to reduce dependence on foreign countries by encouraging domestic producers to produce their goods imported from abroad. By producing these imported goods themselves, domestic production increases and expands economic activity and provides employment opportunities for people who do not have jobs. The increase in exports must also be carried out by improving the quality of export products and facilitating access to export activities. Increased export activities can improve the distribution of income through the results of production activities.

In addition, the effect of increasing economic growth on income inequality which results in reducing income inequality can provide input that the government can implement pro-growth policies that have been implemented by the current government and balance them with pro-poor, pro-jobs.

This study has limitations, namely the lack of attention to variables originating from individuals such as education and the Human Development Index (HDI) which are the causes of endogenous inequality among individuals. Future research is expected to conduct an in-depth analysis by modeling each of the three variables (economic growth, FDI, and international trade) that are suspected to be the cause of inequality. In-depth analysis can include variables such as HDI and relative wages that can affect the results of subsequent studies.

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