

# THE EFFECT OF ECONOMIC OPENNESS ON INCOME INEQUALITY AT THE PROVINCE LEVEL IN INDONESIA

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## ABSTRACT

This study aims to determine the effect of economic openness which is divided into export openness, import openness, and foreign investment openness on income inequality at the provincial level in Indonesia. The estimation method used is the fixed effect method. The data used is panel data from 29 provinces in Indonesia. Based on the results of the analysis, it was found that only export openness had a significant effect on reducing income inequality at the provincial level in Indonesia, while import openness and foreign investment openness had no significant effect.

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## 1. INTRODUCTION

The current development of the world economy shows a tendency to apply a liberalist economic system, where almost all countries in the world practice liberalist economic teachings. The teachings of liberalist economics are collectively contained in the Washington Consensus which is a package of liberalist economists blended by the United States Treasury and the International Monetary Fund (IMF) which was originally intended to overcome the monetary crisis in Latin America in 1989.[1]. Indonesia itself in the 80's to the mid 90's tended to use a mixed economic system as used in Germany and Japan, where the State united and directed the newly growing liberalist economy through protection and subsidies. However, from the mid-90s Indonesia increasingly gave a role to the market and reduced government interference through deregulation and debureaucratization. Economic openness in terms of trade in Indonesia was manifested in the joining of Indonesia with international trade organizations, including the Asia-Pacific Economic Cooperation (APEC) in 1989, and the World Trade Organization (WTO) in 1994. These cooperations have made Indonesia's economic openness in terms of trade increased quite high[2], [3].

Increased financial openness occurred in all islands in Indonesia. Only the provinces of Riau, West Sumatra, Jambi, Bangka Belitung, Lampung and DKI Jakarta experienced a decline in foreign capital openness, with a very low rate of decline. A fairly high decline only occurred in the provinces of Lampung and DKI Jakarta. Looking at the development of economic openness by province, it can be seen that the development of trade openness only occurs in certain provinces. Meanwhile, the increase in financial openness is evenly distributed in almost all provinces in Indonesia[4]. It is hoped that the economic openness in terms of trade and finance that the Indonesian government strives for will be able to create prosperity for all Indonesian people, such as the general welfare concept promoted by Adam Smith. However, the hope of achieving prosperity by seeking economic openness is threatened with extinction given the condition of income inequality in Indonesia which does not show a downward trend but tends to increase.[5], [6]. The increase in Indonesia's income inequality is actually caused by an increase in income inequality in almost all provinces in Indonesia. Indonesia has experienced a fairly high development in economic openness both from the trade and financial side, but income inequality has not decreased and even tends to increase from year to year.[7], [8]. Moreover, Indonesia will soon enter the AEC era which will certainly increase the economic openness of all provinces in Indonesia.

## 2. METHOD

### 2.1 Research design

Research design is a plan on procedures for collecting, managing, and analyzing data in a systematic and directed manner so that research can be carried out effectively and efficiently in accordance with its

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objectives. This study uses a quantitative approach that functions to describe data in the form of numbers or percentages and econometric analysis in the form of panel data regression[9].

## 2.2 Panel Data Model

In the modeling stage, the researcher refers to the research of Jaumotte, et al. which examines the effect of trade openness, financial openness and technology on Income Inequality.

## 2.3 Data Types and Sources

This study uses secondary data from 29 provinces in Indonesia in the period 2007-2013. The 2007-2013 timeframe was chosen due to the limited Gini index data. The data used in this study are secondary data published by the Central Statistics Agency (BPS), Bank Indonesia (BI), the Investment Coordinating Board (BKPM), and Development Performance Data and Information published by Bappenas in collaboration with BPS. Meanwhile, 36 exchange rates used to convert GRDP into US\$ are derived from the middle transaction rate taken from the Bank Indonesia Exchange Rate Calculator.

## 2.4 Data analysis technique

The data analysis used in this study is panel data regression estimation to measure the effect of economic openness on income inequality in Indonesia. In order to achieve the research objectives, the data analysis in this study will be carried out through an econometric model[10].

## 3. RELUST AND DISCUSSION

### 3.1 Income Inequality in Indonesia

When viewed from an island perspective as shown in Figure 6, it can be seen that income inequality in 29 provinces in Indonesia in the period 2007-2013 experienced fluctuating developments but tends to increase. The decline in income inequality occurred in 2008 and 2012 in 13 provinces in Indonesia. The islands of Java, Papua and Sulawesi tend to have income inequality levels above the national income inequality level.

### 3.2 Export in Indonesia

When viewed from an island perspective as in Figure 7, it can be seen that the island of Java dominates the national non-oil and gas exports with West Java as the province that contributes the highest national non-oil and gas exports. West Java excels with its main commodities in the form of electronic equipment, machinery, chemicals, and rubber/plastic products. In 2013 the island of Java contributed to non-oil exports of US\$ 69053 million or 47% of Indonesia's total non-oil exports. This is due to the fact that the majority of the industries that have export potential are located on the island of Java. Inequality in infrastructure, such as roads and electricity, as well as differences in the quality of human resources, are one of the reasons why capital owners are reluctant to establish industries outside Java.

### 3.3 Import in Indonesia

Based on the island perspective as shown in Figure 8, it can be seen that the island of Java dominates the national non-oil and gas imports. In 2013 the value of non-oil and gas imports from Java reached US\$ 127892 million or contributed 84.86% of Indonesia's total non-oil and gas imports. DKI Jakarta Province leads far above other provinces with the import value which has touched the figure of 70197 million US \$ in 2013. The large number of industrial raw material needs is the main cause of this dominance. The density of industry located in the capital city of Jakarta can be seen from the variety of imported products, namely machinery, mechanical aircraft, electrical equipment and vehicles and vehicle components, most of which cannot be produced domestically.

### 3.4 Foreign Investment (PMA) in Indonesia

In the inter-provincial perspective shown in graph 9, it can be seen that the position of the island of Java as the center of the Indonesian economy makes this island not only the largest contributor to non-oil exports and imports but also a favorite area for investors. Only the provinces of Central Java and DI Yogyakarta have low FDI. While the provinces of DKI Jakarta and West Java are the most favorite provinces for foreign investment, the position of the province of DKI Jakarta as the capital city of Indonesia makes foreign investors interested in placing their company addresses in this province. However, from 2012 to 2013, the province of West Java has taken over the national first position from the province of DKI Jakarta, In addition, in 2013 there was also an increase in FDI in the provinces of Banten and East Java, bringing these two provinces to the second and third national positions, while the FDI in DKI Jakarta province actually decreased to only occupying the fourth national position. This decrease is due to land problems in the DKI Jakarta province which are already narrow and it is difficult to find skilled workers.

### 3.5 Pure Participation Rate

High school level education is still an exclusive thing for a group of 56 Indonesians, because in 2013 this level of education could only be enjoyed by 54 percent of the Indonesian population. Meanwhile, when viewed from its development, between 2007 and 2010 the development of net participation rates in all provinces in Indonesia was very low. Significant developments have started to occur since 2011, although several provinces have experienced a decline, one of which is the change in the method of calculating the net participation rate indicator.

### 3.6 The Effect of Export Openness on Income Inequality at the Provincial Level in Indonesia

The export openness variable has a negative and significant coefficient at a significance level of 1% on income inequality. The coefficient of export openness is -0.025294 indicating that every 1% increase in export openness causes a decrease in income inequality by 0.025294%. This result supports the hypothesis that was built and is in accordance with the findings of Muradi (2014) which states that exports reduce inequality (gini ratio) in the Sulawesi-Indonesia Island Economic Corridor. Non-oil exports in Indonesia are dominated by the industrial sector. In 2013, 75.39% of Indonesia's exports came from the industrial sector, 20.07% from the mining sector, and only 3.81% came from the agricultural sector (Ministry of Trade).

### 3.7 The Effect of Import Openness on Income Inequality at the Provincial Level in Indonesia

The import openness variable is 0.8838, greater than the 10% error limit, so that this variable is declared to have no significant effect on income inequality. This result contradicts the hypothesis that was built, where import openness will affect income inequality. However, this is in line with research conducted by Jaumotte, et al (2013) which states that imports have no significant effect on income inequality (gini index).

### 3.8 The Effect of Openness to Foreign Investment on Income Inequality at the Provincial Level in Indonesia

The probability of the foreign investment openness variable is 0.7464, greater than the 10% error limit, so that this variable is declared to have no significant effect on income inequality. This result contradicts the hypothesis that was built, where the openness of foreign investment will affect income inequality. However, this is in line with research conducted by Ramly (2012), which states that the openness of foreign investment does not significantly affect income inequality (gini index).

### 3.9 The Effect of Net Enrollment Rate on Income Inequality at the Provincial Level in Indonesia

The probability of the pure participation rate variable is 0.1615, greater than the 10% error limit, so that this variable is declared to have no significant effect on income inequality. This result contradicts the hypothesis that was built, where the pure participation rate will affect income inequality. The net participation rate has no significant effect on income inequality due to differences in the estimation calculation methodology, where in 2010 the calculation of inflate was not based on the 5-year age group (0-4, 5-9, 10-14,...etc), while in 2011 the inflation calculation was based on a 5-year group.

### 3.10 The Effect of Average Years of Schooling on Income Inequality at the Provincial Level in Indonesia

The probability of the variable average length of schooling is 0.2175, greater than the error limit of 10%, so that this variable is declared to have no significant effect on income inequality. This result contradicts the hypothesis that was built, where the average length of school will affect income inequality.

### 3.11 The Effect of Labor in the Agricultural Sector on Income Inequality at the Provincial Level in Indonesia

The agricultural sector labor variable has a negative and significant coefficient at a significance level of 1% on income inequality. The coefficient of labor in the agricultural sector is negative 0.535163 indicating that every 1% decrease in labor in the agricultural sector causes an increase in income inequality by 0.535163%. These results support the hypothesis that the agricultural sector workforce has a significant effect on income inequality.

### 3.12 The Influence of Manpower in the Industrial Sector on Income Inequality at the Provincial Level in Indonesia

The probability of this variable is -0.108473, greater than the 10% error limit, so that this variable is declared to have no significant effect on income inequality. This result contradicts the hypothesis that was built, where industrial sector workers will affect income inequality. Simultaneously, the variables of export openness, import openness, foreign investment openness, net participation rate, average length of schooling, agricultural sector workers and industrial sector workers have a significant effect at the 1%

significance level on income inequality as seen from the probability (F -statistics) of 0.0000. The constant in this model is 48,738. which means that if all independent variables are 0 then income inequality or the Gini index will be 48,738

#### 4. CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that there is a significant negative effect of the export openness variable on income inequality at the provincial level in Indonesia with a significance level of 1%. Thus, it can be stated that an increase in export openness will reduce income inequality. There is no significant effect of import openness on income inequality at the provincial level in Indonesia. 3. There is no significant effect on the openness of foreign investment on income inequality. 4. The agricultural sector labor control variable has a significant influence on income inequality with a significance level of 1%. There is a significant effect on export openness, import openness,

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