

DOES TRADE OPENNESS AND FISCAL POLICY AFFECT INEQUALITY AND ECONOMIC GROWTH? A STUDY IN INDONESIA

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Abstract

This paper examines the impact of trade openness and Indonesia's fiscal policy on income inequality and economic growth. The error correction model approach was used to analyze the effect during the period 1980 to 2015. The results show that trade openness can improve inequality but at the same time impede growth. The effect of fiscal policy on reducing inequality is only generated by tax collection but is temporary. Meanwhile, government spending on infrastructure and health proved to encourage growth. On the other hand, education sector spending and tax collection can actually hamper growth.

Keywords: Trade Openness, Inequality, Growth, Fiscal Policy

JEL classification: E62, F63, H50, O40

1. Introduction

The speed of increasing inequality in Indonesia from 1990 to 2000 is ranked second in East Asia (World Bank, 2016). Data as of March 2015 shows the gini index is at 41 (Badan Pusat Statistik, 2016). This condition indicates inequality in Indonesia entering an unsettling stage. The international trade balance deficit in recent years adds to concerns when it adversely affects both inequality and growth.

On the other hand, government efforts to reduce inequality and encourage growth are not running smooth. The Indonesian government is faced with a large burden of personnel and subsidy expenditures, particularly fuel subsidies. The narrowness of fiscal space is exacerbated by the tax unachieved revenue targets. This causes the government's ability to influence inequality and growth is questionable.

The impact of fiscal policy and trade openness on equality and growth is debated. Several literatures show that fiscal policy has a positive impact on reducing inequality (López, 2010; Ostry, Berg, & Tsangarides, 2014; Turnovsky, 2015) but other studies show otherwise (Barro, 2000; Sabir, Yustika, Susilo, & Maskie, 2015). The effect of fiscal policy on growth also varies. Some suggest that fiscal policy positively impacts growth (Bania, Gray, & Stone, 2007; Cashin, 1995; Hur, 2014) while others argue that fiscal policy has a negative impact (Fölster & Henrekson, 2001; Lundberg & Squire, 2003). In line with the impact of fiscal policy, the effect of trade openness in some studies provides mixed results. Dollar & Kraay (2004) concluded that trade is good for encouraging growth but is doubtful of its impact on inequality. The positive effect of trade on growth is also supported by research by Majeed (2016) and Tahir (2015). The impact of trade on inequality will be different in countries with different economic levels. Other studies say, trade has no effect on inequality in developed countries whereas in poor countries show ambiguous results (Babones & Xi, 2008).

Several existing studies have analyzed the economic data sets of several countries. The use of economic data of some countries has a number of weaknesses. The weakness lies in the differences in the character of each country (Wooldridge, 2009). The use of long cross section data resulted in a bias in the study because it is affected by the demographic conditions of each country, the failure to capture the endogenous policies, and can eliminate individual

characters (Fölster & Henrekson, 2001). The same opinion was also expressed by Revallion (2004) in which panel data may obscure the results of the study. With this deficiency, this research will use time series data with focus on Indonesian economy as suggested by Hur (2014).

The new thing that is also raised in this paper rather than writing about other Indonesian inequality is to maximize the use of standardized world income inequality database (SWIID). The use of SWIID data is intended to be comparable to the conditions of other countries. In addition, the maximum use of SWIID data is intended to minimize the possibility of errors in measurement of inequality by the Indonesian Central Bureau of Statistics (Asra, 2000; Leeuwen & Foldvari, 2012).

Given that there have been many studies with various analytical methods and result, this study offers the use of error correction model as an alternative analytical tool. There are two basic questions to be answered in this paper. First, how is the impact of trade openness on growth and inequality. Second, how is the influence of fiscal policy on growth and inequality. This paper consists of several parts. A description of the supporting literature is found in the first section. The second part contains the data and explanation of the methods used. The third section will explain the results and concluded with the conclusion at the end.

2. Literature Review

The Influence of Fiscal Policy on Growth and Inequality

Keynesian theory and endogenous growth models differ in view of tax collection and spending. If Keynes suggested the government encourages growth through the absorption of aggregate supply excess then Barro's growth model encourages growth through the addition of capital accumulation. In the perspective of endogenous growth model, capital is not only physical but also non-physical. Investment in human resources can have an impact on growth, (Muinelo-Gallo & Roca-Sagales, 2012). Taxes in Barro's endogenous growth model can positively affect growth as long as it is used to finance productive activities and would otherwise lead to crowd out when used for non-productive spending (Bania et al., 2007). In opposite positions, Keynes argues that taxes will reduce growth through reduced purchasing power.

Even though there is no definitive definition of productive spending, but some literature classifies some type of spending into productive spending. Infrastructure spending, spending on security and order, education and health are classified as productive spending (Bania et al., 2007; Barro, 1990; Glomm & Ravikumar, 1997; Hur, 2014). In addition to some of these types of spending, Cashin (1995) adds transfer spending as a productive expense. The assumption used is that transfer can increase marginal product of capital through patent protection and pension for private employee. Protection of innovation from counterfeiting through patents is intended to encourage new innovations that can increase productivity (Khusaini, 2006). Pension is also intended for the same purpose through the ease of the company to replace old workers with new, more competent workers.

With the same types of spending and taxes, fiscal policy can affect inequality through its ability to redistribute income and provide facilities that benefit its citizens. One of the causes of the rapid increase in inequality in Indonesia is the unequal educational and health opportunities gained when a person is born (World Bank, 2015a). This is the basis for the necessity of the government's role. Investment in the provision of education and health facilities for the poor does not appeal to the private sector so the government is obliged to provide. With the provision of adequate basic facilities, it is expected that every citizen has the same fitness in the economy as the key to inclusive growth (Felipe, 2012; Ranieri & Ramos, 2013). In addition to the direct provision of basic facilities, government policies that remove growth barriers, provide employment, and a favorable investment climate can overcome inequality (Hur, 2014). Furthermore, other opinions said high inequality signifies the failure of fiscal policy to redistribute (Goñi, López, & Servén, 2011). Hassine (2014) said, one of the reasons for the lack of growth influence on inequality is that the government does not focus on developing inclusive growth. In the context of Indonesia this indication can be seen from the study of Khusaini (2014) which concluded that the planning and budgeting in the local government level are not consistent.

Although some opinions said that government intervention in equality can hamper growth (Okun, 1975) but with good policy, negative impacts can be avoided. A number of studies based on inclusive growth show that although income distribution can undermine growth because of its direct impact, the indirect impact of taxes and subsidies actually increases growth (Aoyagi & Ganelli, 2015). Meanwhile, according to Ostry et al. (2014) income redistribution programs through public investment in infrastructure, health, education, social security will have an impact on economic growth and equality. In addition to spending, the ability of fiscal policy is also influenced by the type of tax that is the source of financing (Turnovsky, 2015).

The Effect of Trade on Growth and Inequality

Trade can have both positive and negative effects on growth. Trade is useful because it can increase the production of goods that have comparative advantages, expand the product market, knowledge and technology spillover. Transfer of technology is very useful for countries that do not have the ability to produce new technology but possessing qualified human resources qualities. For the public, trade can improve the standard of living and purchasing power because of the availability of goods at lower prices. Producers benefit arise from the availability of cheaper input factors in the international market (Majeed, 2016). But trade can also be a problem for sustainable growth in the event of distortions such as political instability, weak institutional and minimal infrastructure.

The Heckscher-Ohlin-Samuelson theorem is the foundation for examining the impact of trade on inequality in some literature. Based on Heckscher-Ohlin's trading theory, HOS's theorem argues that the opening of trade will have two consequences. For products whose production factors are abundant results in an increase in product demand and input factor prices. As for products whose production factors are limited, import influence causes domestic demand for products to decline to be replaced with imported products. Decrease in demand for domestic products will affect the price in the input market (Salvatore, 2014). The decline in demand for domestic products based on rare inputs will lead to a decrease in the premium tariff of workers on the products (Amiti & Cameron, 2012). This situation causes the decrease in inequality. However, the increase in wages due to trade is in fact not as great as expected. The difference in mobility between capital and labor factors results in a lower bargaining power of workers than capital owners. As a result wage increases will not be as much as productivity increases (Stiglitz, 2013)

Some studies try to prove HOS Theorem. Trade openness will have a different impact on a country depending on its economic level. In developed countries trade openness will have an impact on increasing inequality while in poor countries, it will reduce inequality (Revallion, 2004). This result is denied by Dollar dan Kraay (2004) which states that trade has no significant relationship with inequality. Similarly, Babones dan Xi (2008) studies argue that trade has no effect on inequality in rich countries and provides ambiguous results in poor countries. Some studies that use data from several countries with different economic levels indicate that the increase in trade actually increases inequality (Barro, 1999; López, 2010; Lundberg & Squire, 2003).

3. Research Methodology

Data

The main sources of inequality data (Gini) used are from Standardized World Income Inequality Database version 3 (Solt, 2016) plus Central Bureau of Statistics (BPS) data for 1982, 1983, 1985, 1986, 2014 and 2015. Use of BPS data can't be avoided, given the unavailability of such data on the SWIID. Although there are differences in data sources but when compared between the two data sources there is no significant difference.

Infrastructure (infr), education (Ed), health (H), transfers (Tr), and tax (Tx) data are the percentage of central government expenditure / revenues derived from the Central Government Financial Report (LKPP) to GDP. The infrastructure expenditure in this study referred to spending on roads, bridges, transportation infrastructure, irrigation facilities, electricity. The transfers in this study use subsidy and social assistance data referred to

Indonesia's budget structure. On the revenue side, the taxes analyzed in this study are the percentage of total income tax plus value added tax (VAT) on GDP. Meanwhile, trade disclosure data (Trade) is the percentage of trade (exports plus imports) to GDP. Trade and GDP sourced from the World Development Indicators.

Analysis Tools

The main purpose of this paper is to examine the effect of trade openness and fiscal policy on inequality during 1980-2015. In addition to the influence of inequality, the influence on growth is analyzed to determine the government's ability to achieve equality as well as growth. The model used in this paper is based on the model created by Hur (2014) with differences in the use of analytical tools (ECM). The model used can be written as follows:

$$\text{Gini} = \beta_0 + \beta_{1t}\text{Infr} + \beta_{2t}\text{Ed} + \beta_{3t}\text{H} + \beta_{4t}\text{Tr} + \beta_{5t}\text{Tx} + \beta_{6t}\text{Trade} + \varepsilon_t \quad (1)$$

$$\text{GDP} = \beta_0 + \beta_{1t}\text{Infr} + \beta_{2t}\text{Ed} + \beta_{3t}\text{H} + \beta_{4t}\text{Tr} + \beta_{5t}\text{Tx} + \beta_{6t}\text{Trade} + \varepsilon_t \quad (2)$$

$$\Delta\text{Gini} = \beta_0 + \beta_{1t}\Delta\text{Infr} + \beta_{2t}\Delta\text{Ed} + \beta_{3t}\Delta\text{H} + \beta_{4t}\Delta\text{Tr} + \beta_{5t}\Delta\text{Tx} + \beta_{6t}\Delta\text{Trade} + \beta_{7t}u_{t-1} + \varepsilon_t \quad (3)$$

$$\Delta\text{GDP} = \beta_0 + \beta_{1t}\Delta\text{Infr} + \beta_{2t}\Delta\text{Ed} + \beta_{3t}\Delta\text{H} + \beta_{4t}\Delta\text{Tr} + \beta_{5t}\Delta\text{Tx} + \beta_{6t}\Delta\text{Trade} + \beta_{7t}u_{t-1} + \varepsilon_t \quad (4)$$

The ECM approach is chosen because it can see the relationship of the variables both in the short term and in the long term (Gujarati, 2004). In addition, the characteristics of economic variables are generally not integrated of order zero. The use of the ECM model is intended to avoid the occurrence of spurious regression due to non stationary data while ensuring that no information at the zero order is neglected (Leighton, 1997; Maddala, 1992).

The ECM analysis used in this study used the Engle-Granger two steps approach (EG-ECM). Several steps must be taken in this approach (Enders, 2010). The first step, ensuring that data is stationary on the same degree i.e. integrated of order 1 or 2. Augmented Dickey-Fuller (ADF) test was used to know stationary. If the variables have different degrees of stationary then use stationary with the highest degree (Widyawati & Wahyudi, 2016). The second step, check whether there is co-integration between variables. In the EG-ECM approach the co-integration test is performed by observing the stationary of residual (ut) long-term equation. Therefore, prior to co-integration testing it is necessary to estimate long-term equations (equations 1 and 2). The final step is to make short-term estimates (equations 3 and 4).

4. Results

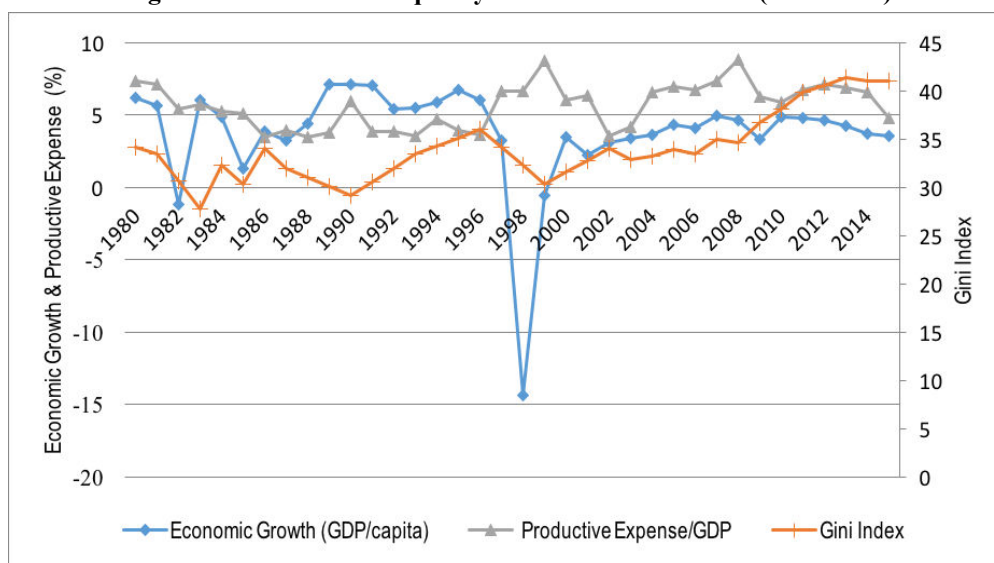
The economic development of Indonesia can be clearly illustrated during the period 1980 to 2015. Some important notes can be taken in this period. First, there is a shift in the economic structure from agriculture to industry. Second, Indonesia's growth experienced a high growth of 7.1% in 1989. Third, Indonesia had experienced economic downturn to experience negative growth of 14.3% during the monetary crisis of 1998. Fourth, interesting thing about this crisis is the level of inequality decreased (figure 1). This is due to the monetary crisis targeting rich people who have financial assets compared to the poor (Akita & Alisjahbana, 2001; López, 2010). But as the economy recovers, inequality rates rise again. The high economic growth (5.4%) causes the poverty rate to decline and encourages the growth of the middle society by 10% each year. But economic growth has not succeeded in pushing the lives of 250 million other people to be more prosperous (World Bank, 2016).

In this period, fiscal governance experienced significant changes. At the beginning of the New Order regime, especially in the oil boom era, development relied heavily on revenue from oil exports. However, after the oil price has fallen, Indonesia started to think about budget financing through tax mechanism (Eng, 2009). Another change in fiscal governance is with the issuance of several laws on the management of state finances. This law requires a more transparent, accountable, and implementation best-practice in budget management.

On the trade side, Indonesia's trade data shows a dynamic condition during the period 1980 to 2015 (figure 2). In 1998 there was an increase in trading volume. This increase is due to the decline in the rupiah exchange rate against the US Dollar. This condition causes Indonesian products to be more attractive because of the cheaper price. After several years, when the Rupiah exchange rate has improved, trading volume has dropped quite drastically. Indonesia's

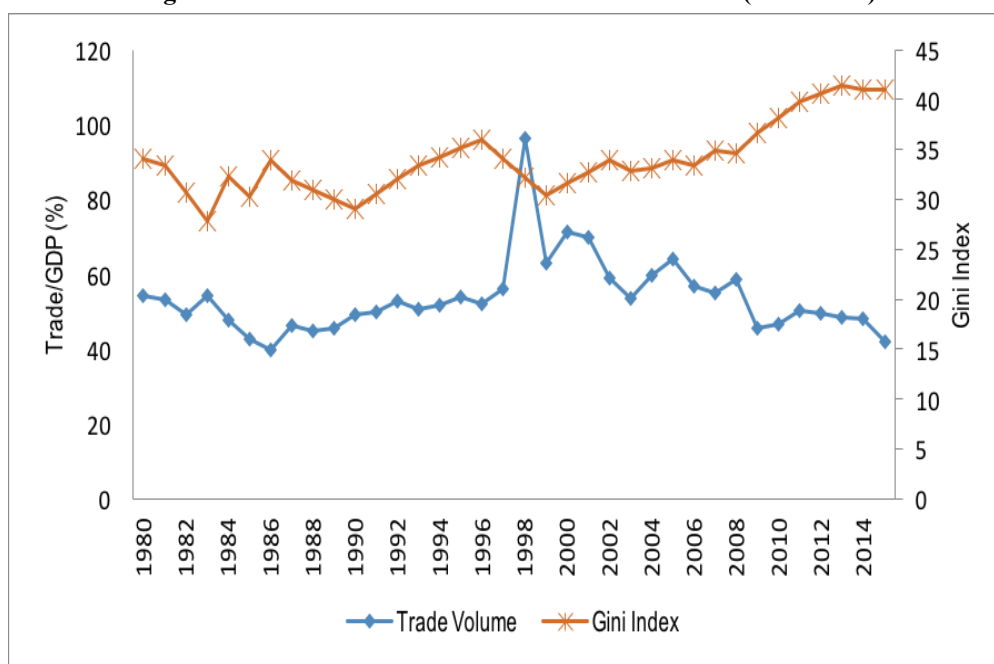
trade balance has experienced deficits in recent years. Recorded since 2012 to 2015 Indonesia's trade balance has a deficit, -0.39%, -0.79%, -0.78% respectively (net exports to GDP). The same thing happens with the volume of foreign trade to GDP which shows a decrease every year from 2012 to 2015 (49.58%; 48.63%; 48.05%).

Figure 1. Indonesia's Inequality and Economic Growth (1980-2015)



Source: WDI, SWIID, BPS (processed)

Figure 2. Indonesia's Trade Volume and Gini Index (1980-2015)



Source: WDI, SWIID, BPS (processed)

When looking at the movement of data as shown in Figures 1 and 2, the question arises as to whether the movement of these data indicates any influence between fiscal policy, trade openness, economic growth and inequality. From figure 1 and 2 cannot be drawn a conclusion directly about the influence between variables. An appropriate analysis is needed to answer this question. Using ECM, the influence of variables can be explained as follows.

Table 1 shows that the stationary of the data is diverse. For that, this research is use first-order difference data. These results indicate the possibility of co-integrating among variables. This indication is shown in Table 2 which shows the existence of co-integration. Using the

Engle-Granger two step, it can be seen that the residuals of the equation estimate 1 and 2 are stationary at the zero order. This result ensures that the variables contained in the model are co-integrated and can be used by ECM as an analytical tool.

Table 1. Stationary Test Result

| Variable | I(0) | I(1) |
|------------------------|---------------|-------------|
| Gini | -0.360700 | -7.800952 * |
| PDB | -4.364936 * | -7.715774 * |
| Infrastructure (Infr) | -1.783254 | -7.766065 * |
| Health (H) | -3.845797 * | -7.591158 * |
| Education (E) | -4.330946 * | -10.32651 * |
| Transfer (Tr) | -1.951882 | -6.103546 * |
| Tax (Tx) | -2.738147 *** | -6.197970 * |
| Trade Openness (Trade) | -3.142418 ** | -9.055567 * |

Source: Authors' calculations based on E-Views 7.1

* Significant at the 1% level *** significant at the rate of 10%

** significant at the rate of 5%

Table 2. Co-integration Test Results

| Variable | I(0) | |
|--------------|-----------------|-------------|
| | Critical Values | t-statistik |
| u_t (Gini) | -3.632900 | -4.048918 * |
| u_t (PDB) | -3.639407 | 5.121884 * |

Source: Authors' calculations based on E-Views 7.1

* Significant at the 1% level *** significant at the rate of 10%

** significant at the rate of 5%

Table 3. Long Term Equation Estimation Result

| Independent Variable | Dependent Variable | | | |
|----------------------|--------------------|---------------------------|----------------|---------------------------|
| | Gini | | GDP | |
| | estimate | t-statistic | estimate | t-statistic |
| Konstanta | 0.439956* | 8.889817 | 26.06594 * | 6.25089 |
| Infr | -0.0171 | -1.445143 | 1.876912 *** | 1.776272 |
| H | -0.076989 | -1.104900 | 15.29506 ** | 2.468328 |
| E | 0.031566 | 1.310445 | -6.839591 * | -3.191933 |
| Tr | 0.004463 | 1.076669 | 0.557148 | 1.511369 |
| Tx | -0.003790 | -1.656194 | -0.349842 *** | -1.718941 |
| Trade Opennes | -0.001254 ** | -2.177012 | -0.344726 * | -6.727438 |
| | R ² | R ² : 0.529960 | R ² | R ² : 0.635922 |

Source: Authors' calculations based on E-Views 7.1

* Significant at the 1% level *** significant at the rate of 10%

** significant at the rate of 5%

Table 4. Results of Short-Term Equations Estimates

| Independent Variable | Dependent Variable | | | |
|----------------------|---------------------------|-------------|---------------------------|-------------|
| | DGini | | DGDP | |
| | estimate | t-statistic | estimate | t-statistic |
| Konstanta | 0.000154 | 0.049340 | -0.047769 | -0.119636 |
| D(Infr) | -0.015090 | -1.600164 | 0.703013 | 0.588423 |
| D(H) | 0.022398 | 0.047510 | 13.27291 ** | 2.332410 |
| D(E) | -0.014403 | -0.833375 | -3.974648 *** | -1.968528 |
| D(Tr) | -0.001202 | -0.451904 | 0.472898 | 1.399797 |
| D(Tx) | -0.003305 *** | -1.712902 | -0.092635 | -0.358937 |
| D(Trade) | -0.000318 | -0.982723 | -0.316464 * | -7.700506 |
| ECT(-1) | -0.307981 *** | -1.996852 | -0.915040 * | -4.549968 |
| | R ² : 0.363053 | | R ² : 0.781010 | |

Source: Authors' calculations based on E-Views 7.1

* Significant at the 1% level *** significant at the rate of 10%

** significant at the rate of 5%

The Influence of Trade Openness

Based on the results of long-term (table 3) and short (table 4) term estimates, trade has been able to reduce inequality but has the potential to inhibit growth. The influence of openness to inequality is smaller (0.0012%) than its ability to encourage growth (0.35%) in the long run. Trade capability to encourage growth is consistent in both the long and short term. Meanwhile, trade openness is only able to reduce inequality in short term. Referring to the HOS Theorem, this means that trade between countries does not necessarily alter the balance in the labor market. Looking at the error correction term value of -0.307, the new trade openness can increase wages after 4 months.

The impact of trade openness on inequality in this study confirms the HOS Theorem (Salvatore, 2014; Yarbrough & Yarbrough, 1994). However, this study is not in line with the results of Barro (1999) López (2010), Lundberg & Squire (2003) who see that trade openness has an impact on increasing income inequality. Looking at existing data, the ability of trade openness reduces the inequality based on Indonesia's export commodities that dominated by primary sectors, agriculture and natural resources (World Bank, 2015b). The agricultural and natural resources sectors are the sectors with abundant inputs in Indonesia. This study was reinforced by Sabaruddin (2015) which concluded that the increase in welfare due to the impact of international trade occurred through, amongst other increased wages of the agricultural sector.

Negative effects of trade openness to Indonesia's growth are thought to be endorsed by several factors. The first factor is Indonesia's unpreparedness in facing a free market. It can be seen from the inferiority of local products when competing with foreign products (Simorangkir, 2006). Based on the Global Competitiveness Index 2007-2008, Indonesia's unpreparedness can be seen from the low competitiveness of technology and infrastructure (Wahyuni & Ng, 2012). In addition to unpreparedness in facing the free market, the composition of international trade also contributes to the negative effects of trade openness into the country. Indonesia's exports are dominated by primary products by 63% while manufactured products contribute 37% of exports (Kementerian Perdagangan RI, 2015). From 37% of manufactured products exported, 65% of its input comes from imports (OECD-WTO, 2015). This fact shows that although Indonesia receives profits from manufacturing exports but a portion of profits must be compensated with the value of imports of intermediate materials. Another factor that plays a role is the low value added of domestic products. The majority of imported products are intermediate goods with high added value. With imports dominated by high value-added products while export-added value is low, Indonesia's export performance has declined in recent years (Tijaja & Faisal, 2014).

Influence of Fiscal Policy

The influence of fiscal policy in this study is vary. In general, fiscal policy in the form of expenditure does not affect the level of inequality. The only fiscal policy that can be used to improve the condition of inequality is tax collection. The effect of infrastructure spending on this research is contrary to research by López (2010), Stiglitz (2013), Turnovsky (2015) which concluded that infrastructure spending is able to reduce inequality. However, this study is in line with the results obtained by Sabir et al. (2015) in the context of South Sulawesi Province and Hur (2014) in OECD and ADB countries. The lack of infrastructure spending to improve inequality can be due to several things. Among the reasons is the smallness of the infrastructure budget, especially since the reforms, ranged from 2% to 3% of GDP (Tabor, 2015). The development of infrastructure is concentrated in Java and Sumatera Island (Keliat, Virgianita, & Astriana, 2013). This condition is causing the price of goods, especially in eastern Indonesia is so high. This is suspected to be one cause of non-significant infrastructure spending on overcoming inequality.

As shown in table 3 and table 4, health and education expenditures have no effect on inequality. Health and education spending that has no effect on inequality is in accordance with Hur's (2014) study. The uneven condition of health and education facilities has resulted in the absence of any influence from this the two expenditures. Health and education facilities such as infrastructure are also concentrated in Java, while in the eastern (Nusa Tenggara, Maluku, and Papua) regions are limited (Kementerian Kesehatan RI, 2013; World Bank, 2015b).

In addition to the distribution problem, the small health budget also adds insignificant influence despite its good potential effect (World Bank, 2015c). Low quality health insurance systems and limited health facilities, causing 40 million workers lose or decreased their productivity and income due to health problems. The World Bank estimates that 2.3 million Indonesians are poor due to enormous health expenditures (World Bank, 2015b).

The incapacity of educational facilities plus increased school fees leads to declining school enrollment rates at each level for the poor (World Bank, 2016). As a result, higher education financed by the government is more enjoyed by middle/upper class. As is known, the higher the level of education the higher the income received (Lemieux, 2006; Reza & Widodo, 2013; World Bank, 2015b). With the low level of education among the poor, the welfare increase is not significant. This is exacerbated by the conditions that most job vacancies available are low-paid (World Bank, 2016). Thus, although the poor are successful to reach higher education but they are faced with the option of working on low wages or unemployed.

Third and fourth table show the positive effect of infrastructure and health spending on growth. The positive effects of infrastructure spending are in line with Cashin (1995), Hur (2014), Nursini (2017), Ostry et al. (2014) Sabir et al. (2015) and Turnovsky (2015), while the effect of health spending on growth is in accordance with research by Glomm & Ravikumar (1997) dan Ostry et al. (2014).. The fact that the distribution of infrastructure and health along with the economic center is concentrated in Java has a good impact on growth. From the perspective of endogenous growth the results of this study confirm the ability of governments to move the economy through the accumulation of capital both physical and non-physical (Barro, 1990; Cashin, 1995; Glomm & Ravikumar, 1997). The significance of infrastructure spending is only existed in the long term as production capacity takes time to adjust to the accumulation of capital increase.

In contrast to the impact of infrastructure and health spending, education spending has actually led to an economic slowdown. This result is contrary to the conclusion of Khusaini (2016) which states that the education budget can encourage growth in the case of East Java Province. Increasing school enrollment, cannot describe the quality of graduates. As Stiglitz (1973) notes, the increasing number of prospective workers with higher levels of education makes the education rno longer an indicator of competence (productivity) but as a fair tool for screening job applicants. This seems to be the case in Indonesia. Based on the trend score in mathematics and science studies (TIMSS) and the international student assessment (PISA) program, Indonesia is on the bottom line (OECD, 2015; Tobias, Wales, Syamsulhakim, & Suharti, 2014; World Bank, 2016). This is directly proportional to the low competence and productivity of workers among some Asian countries (Asian Productivity Organization, 2016; World Bank, 2016). In such condition, the difference between minimum wage setting and

average wage is very high (63%). This leads to a decline in the competitiveness of enterprises and hampers the growth of new jobs.

Tax collection in this study turned out to hamper growth in the long term. Conceptually these results do not conform to the endogenous growth model (Barro, 1990). Although contrary to endogenous growth models, these results are supported by Barro (1990), Fölster & Henrekson (2001), Ostry et al. (2014). In the literature there are several factors that can cause this condition. The size of the government measured by the total budget to GDP is considered as one of the causes (Barro, 1990; Gwartney, Lawson, & Holcombe, 1998). The larger the size of the government, the tax collection will have a negative impact. Considering that tax relation, government size, and growth are determined by the amount and type of spending, thus when more unproductive spending are present, the tax collection will have minimizing or negative impact on growth (Bania et al., 2007).

The short term effect tax collection on inequality in this study is generally consistent with Aoyagi & Ganelli (2015) and (Goñi et al., 2011) The difference in the impact of tax collection is determined by the type of tax, type of inequality and time period (OECD, 2012; Turnovsky, 2015). According to the World Bank report, there is a wrong tax tariff policy applied in Indonesia (World Bank, 2016). The income tax tariff derived from wages is much larger (30%) than the income tax from capital income (10%). This causes the imposition of taxes can decrease income inequality in the short term but inequality will remain high in the long term because the accumulation of capital / wealth continues.

Turning to subsequent variables, subsidies/transfers have no effect, either on inequality or growth. This can be traced from the type of subsidy and the allocated budget. For several years, the largest budget was allocated to the type of energy subsidy spending (fuel). The fact, this subsidy was mostly enjoyed by middle/upper class. In 2008 the richest group in Indonesia enjoyed 41% of the fuel subsidy. The three richest groups enjoy 72% of the fuel subsidy while only 4% percent of the fuel subsidy is enjoyed by 30 per cent of the poor. The average fuel subsidy received by the rich is Rp111,533/month/capita while the poor receive only 10% from that number (Dartanto, 2013). The budget allocation for activities that directly touch the welfare of the people and have a big contribution to equality (Family Hope Program/PKH) gets little allocation ((World Bank, 2015c). The subsidy allocation is not only unsupportive to the decrease in inequality but also unsupportive to growth. The type of subsidy / transfer spending on the budget structure does not indicate government support for private capital accumulation such as support for R & D, copyright protection, and private pension funds. This is what causes the subsidy/transfer budget does not affect growth and inequality.

5. Conclusion

This study is based on the question of whether the impact of trade openness and government policy can affect inequality and growth. In this research it is proved that inequality can be overcome by trade openness and taxation. On the other hand, the government's efforts to overcome inequality through subsidies / transfers are not reliable, as well as their impact on growth. Government efforts to promote growth can be done by increasing the budget allocation for infrastructure and health development. Meanwhile, education spending and taxation and trade openness turned out to be a barrier to the growth rate.

The government's failure to cope with inequality through budget is thought to be due to the government's lack of focus on designing inclusive growth. This can be seen from development priorities and budgets. Development that is allegedly Java-centric was one of the causes. In addition, the preparation of quality human resources through education and provision of productive employment remains a big task to complete by government. On the other hand, the government should think about the best way to export not only the primary sector but also the manufacturing sector. The key to the ability of trade to influence growth is the added value of export products that must be increased and reduce the dependence of imported products as raw materials.

Further research is required to find definitive transmission of how fiscal and trade policies can affect inequality and growth. In addition, technical issues such as availability of data and

proper use of proxies should be of concern. It is hoped that this refinement can provide a more convincing and comprehensive picture of inter-variables.

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