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The Effects of Trade Liberalization, Financial Development and Economic Crisis on Economic Growth in Indonesia

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Abstract
Debate on the influence of trade liberalization and financial development on economic growth is still going on. Most economists believe that both policy will encourage economic growth, while another group of economists believe that the two policies would likely depress economic growth and encourage economic volatility. This study is aimed to test the effect of the two policies on economic growth in Indonesia. In addition, this study also tests the effect of the events of the Asian economic crisis in 1997 and global economic crisis in 2008 on economic growth. By using time series data from the years of 1990 to 2014, cointegration test that takes into account on structural break data, and ECM, this study shows that trade liberalization and financial development that occurred in Indonesia is able to influence and promote economic growth. This study shows also that the event of the Asian economic crisis in 1997 has a negative impact on economic growth in Indonesia compared to the global economic crisis in 2008.
Keywords: trade liberalization, financial development, economic crisis, economic growth

1. Introduction

Most economists are still debating the benefits of trade liberalization and financial development for the economic growth (Altaee, Saied, and Esmaeel, 2014; Rahim and Abedin, 2013; Muhammad and Abdul, 2006; Yao and Wei, 2007; Mitra, Bang, and Wunnava, 2014). There are two groups that have different opinion to each other. The first group of economists believed that trade liberalization can be beneficial economically for the domestic economy, because the economy that is increasingly open will improve market access and surplus for overall economy (Azman-Saini, Law, and Ahmad, 20102; Rahim and Abedin, 2013; Chaudhry, Malik, and Faridi, 2010). Meanwhile, the growing financial sector is also believed to be able to boost economic growth through reduction in various costs, such as transaction costs, information costs, and the monitoring costs (Levine, 1997; Levine, Loayza, and Beck, 2000). In addition, the growing financial sector can encourage economic growth through technological innovation, can facilitate transactions and reduce the risk and uncertainty (Bencivenga and Smith, 1991; Beck, Levine, and Loayza, 2000).

The second group doubt the benefits of trade liberalization and financial development for economic growth. This group argues that the liberalization policy will kill domestic economy and the domestic economy is supposed to be protected from competition in world trade (Din, Musleh-Ghani, and Siddique, 2003; Greenway, Wyn, and Wright, 2002). The argument arose from the group is "infant industry argument" that is an argument that the domestic industry should have been protected by the state, until the industry is able to compete in international markets. Trade liberalization is marked by the reduction or even elimination of trade barriers such as tariffs and non tariff (Nongsina and Hutabarat, 2007). Through the removal of trade barriers, it will encourage the flow of goods and services. Meanwhile, the financial liberalization marked by the removal of the ceiling interest rate of financial repression (Fry, 1998). It can be indicated by the interest rates that may cause a scarcity of savings and loans that will eventually hamper the growth process.

The results of empirical studies of the effect of trade liberalization and financial development to economic growth still showed mixed results. While not a few who find also that the liberalization of trade and financial development does not significantly like economic growth. Research Greenway et al. (2002) later Din et al. (2003) showed that the impact of trade liberalization on economic growth and increased exports. Siddiki (2012) also showed that trade and financial liberalization can increase growth through reduced costs and increased market research for new products. The existence of these two policies in Bangladesh was able to reduce tariffs and then be able to influence the development of imports. The existence of a more liberal policy in the country was also able to increase the growth of exports and imports.

Altaee et al. (2014) by using econometrics methods, such as unit roots test, Johansen cointegration test and Granger causality test seeks to answer the relationship between trade liberalization, financial development and economic growth in Sultanate of Oman. The test results find unidirectional causality from economic growth to financial development, and shock on trade liberalization greatly affects the Gross Domestic Product (GDP) surprises and financial developments. This test also found unidirectional causality relationship of inflammation to the liberalization of financial development and economic growth. Liberalization policy is believed to be a positive impact on financial development and economic growth.

According to Rahim and Abedin (2014) liberalization of trade and finance policies are believed to reduce the cost and inefficiency in the production process. A decrease in costs in these sectors, in turn, will be a positive influence on economic growth. The conclusions derived from studies of the impact of trade liberalization and financial development to economic growth in Malaysia. The study uses time series data 1970-2011 period and Granger causality analysis tools. Estimates by the analysis tools, the study found one-way causality from economic growth to financial development. As for the case of the development of trade and financial liberalization, the study found unidirectional causality, namely trade liberalization causes financial development, but financial development led to the liberalization of trade.

Chaudhry et al. (2010) by using Granger causality analysis examined the relationship between trade liberalization and economic growth. The results showed that in the long term, there is a positive and significant relationship between economic growth, human capital and liberalization. This study also found that in the short term, the labor force is also associated positive and significant impact on growth. Jallab (2011) examined the relationship between liberalization and economic growth with the use of economic data in several countries in Africa and Asia. The results showed that predicted the existence of trade liberalization in these countries can promote economic growth and strengthen competitiveness.

Ali and Abullah (2015) using time series data from the years of 1980 to 2010 to test the effect of trade openness policy to economic growth in Pakistan. Analytical tool is used to examine the effect of Johansen cointegration test proficiency level policy and Vector Error Correction Model (VECM). The research data whether it is stationary or not is observed with the unit roots test Phillips Perron (PP) and Augmented Dickey Fuller (ADF). This study found that in the short term impact of trade liberalization policies on economic growth. While in the long term, the study found that the results of trade liberalization negatively impact economic growth. In that study demonstrated no effect of international trade to economic growth due to poor management of the institution in charge of international inflammation and reduction in the level of exports.

Siddiki (2002) by using Error Correction Model (ECM) observed the relationship between financial development and economic growth in Bangladesh. The estimation results indicate that financial development in Bangladesh in the period 1975-1999 can significantly boost economic growth. It was also found that the financial development in promoting economic growth through improving the quality of human resources, the availability of funds for training, and the allocation of funds provided by private education is increased.

M'rad (2002) by using the analyzer of Vector Autoregression (VAR) conducted a study to increase the number of observations is not only limited to the development of the financial sector in Turkey and Tunisia, but including also Greece, Jordan, Lebanon, and Morocco. The study found that among the variables of financial sector development and economic growth mutually cointegrated. Results of research in Turkey, Tunisia, and Jordan found that the relationship between financial sector development and economic growth is a reciprocal relationship. Financial sector development in Morocco and Lebanon turns to follow the demand-following hypothesis, namely the development of the financial sector in both countries is a result of economic growth.

Further research done by Kar and Pentecost (2000) reinforced the notion that the relationship between financial sector development and economic growth is very sensitive to the selection of indicators of financial sector development. Kar and Pentecost (2000) research in Turkey in the period from 1963 to 1999 and an analysis tool used is the Granger causality finding, when the financial development indicator used is the ratio of M2 to GDP, the financial development in the long run may boost economic growth. However, when indicators of financial development is measured by the ratio of private sector credit to GDP, the high economic growth in the short term and long term to encourage the development of the financial sector.

For the case in Indonesia, trade and financial liberalization policies had begun in the 1980s, when the domestic economy was experiencing the shock of oil prices plummeted (Hill, 2000). Such conditions forced the government to reform trade policies by lowering tariffs and convert several import licenses. Meanwhile, the financial development in Indonesia here can be separated by deregulation package in June (PAKJUN) in October 1983 and the deregulation package (PAKTO) 1988. The essence of the policy is to remove barriers for investors to set up a new bank, to provide flexibility for banks to open branch offices, lowering the required reserve ratio, and encourage the development of the money market and capital market. Through these two policies, it can mobilize public funds which can then be pushed back economic growth (Nasution, 1990).

After experiencing rapid economic growth in the 1980s until the early 1990s, the Indonesian economy in 1997 had the lowest economic crisis that was 18,26%.The crisis led to decline in economic growth, even in the fourth quarter of 1998 touched the lowest number. Furthermore, until the period of 1999-2002 economic growth has not shown a significant of 0,316% per year. The average is still more specifically, the crisis resulted in living standards have declined by 25% (Thomas et al., 20019). Even more alarming condition happens to the poor who have to bear the cost of living increases to 130% (Levinsohn, Berry, and Friedman, 1999).

In the event of 2008 global economic crisis, the Indonesian economy is also affected. The crisis occurred because of the tragedy triggered by subprime mortgages in the United States (Prasmuko and Grace, 2010). Propagation of the crisis can be observed through the financial channels and trade channel. In the financial

channels, the crisis boosted the funds to be used for unforeseen activities (precautionary saving), accompanied by a decline in asset prices that resulted in the weakening of consumer sentiment that attract consumer spending. Furthermore, both of these together result in a contraction of domestic economic activity, which in turn lowers the GDP. Besides, the result of economic slowdown in developed countries also impact on the demand for both foreign and domestic (Prasmuko and Grace, 2010). The condition occurs due to lack of export demand, so companies tend to reduce production.

With still have a contradictory effect of inflammation and the development of financial liberalization on economic growth, it is very interesting research on the effects of these two variables to the context of economic growth in the Indonesian economy. This study aims to determine the effect of trade liberalization and financial sector development has been done in Indonesia to economic growth. In addition, this study aims also want to know the effect of the 1997 Asian economic crisis of 2008 global economic crisis on economic growth. The strengths of this study is the use of econometrics analysis tools that incorporate structural changes in the data due to the economic crisis in 1997 and 2008 into the model testing. Therefore, in this study unit root test and cointegration used is the test that incorporates the structural data into the model, the test unit roots Zivot-Andrews and Gregory-Hansen cointegration test. Whereas, to determine the long-term and short-term, this research uses ECM.

2. Research Methods

2.1. Specifications Model and Measurement of Variables

The basic model used in this study refers to the model of Barro (2001), Chongvilaivan (2010), and Raz et al. (2012) in which the economic growth is determined by the initial income, capital expenditures, investment, and trade. In this study, the model was then developed, namely that economic growth is not only determined by the initial income, capital expenditures, investment, and trade, but is also determined by developments in the financial sector (Levine and Zervos, 1996 and 1998; Arestis, Demetriades and Luintel 2001; Beck et al., 2000). While Raz et al. (2012), argued also that economic growth is also determined by the economic crisis. Referring to the theories mentioned above, the model factors that determine economic growth developed in this study in full is as follows:

$$Y_t = \mu_t + \beta_1 Inc_t + \beta_2 Cap_t + \beta_3 FDI_t + \beta_4 TrLib_t + \beta_5 FD_t + \beta_6 Cr97_t + \beta_7 Cr08_t + \varepsilon_t \quad (1)$$

in which t = 1, 2, ... indicate a period of time.

In this study economic growth variable (Y) is measured by the growth of GDP per capita. Variable income (Inc), measured by GDP per capita. Variable capital (Cap) in this study was measured as gross fixed capital formation as a percentage of GDP. As in Raz et al. (2012) capital variable measures the level of economic productivity. High productivity of the economy, then the accumulation of capital is too high, thereby increasing revenue growth. Variable foreign direct investment (FDI) was measured by net foreign direct investment as a percentage of GDP. Foreign direct investment contributes to growth because it can provide and facilitate capital externalities and spillover effects that can increase the efficiency of the productivity of local firms (Yao and Wei, 2007).

Trade liberalization (TrLib) Variable measured by the ratio of exports and imports to GDP. According to Raz et al. (2012) the effect of trade liberalization on economic growth may be negative and can also be positive depending on whether international trade can lead to trade creation or trade diversion. Trade liberalization will have a positive impact on economic growth if the trade can increase welfare without compromising the trade alliance members and non-members. Meanwhile, trade liberalization would have a negative impact on economic growth when the trade alliance is formed at the expense of non-members. Thus, trade liberalization will affect whether positive or negative depending on the influence which of the two is the stronger the effect.

Financial liberalization (FD) is measured by the ratio of the money supply in the broad sense (M2) on GDP. This measurement shows the depth of the financial sector in real terms the economy is experiencing growth, the financial sector's ability to provide services to the transaction or receive public savings (Calderon and Liu, 2003). This indicator is going up (down) if the financial sector grew faster (slower) than the real sector (Darrat and Haj, 1999). The development of the financial sector will have positive impact on economic growth if growth in the sector can reduce agency costs, risk costs, the acceleration of resource allocation, and ease of transaction processing Levine (1997) and Levine et al. (2000). Financial development would likely have a negative impact on economic growth, if developments in the financial sector increase moral hazard and adverse selection occurs then channeling savings into projects that are not productive and high risk.

Asian economic crisis variable in 1997 (Cr97) and the global economic crisis in 2008 (Cr08) successively measured as a dummy, which is worth one during the crisis period and zero otherwise. In line with the thinking Raz et al. (2012), the coefficient of dummy crisis in this study predicted negative economic growth. In this study, the coefficient of the crisis that occurred in 1997 is expected to be larger than the coefficient of the crisis in 2008. The condition occurs because, during the economic crisis 19 997 Indonesia's economic fundamentals have not so strong compared to when the global financial crisis of 2008.

This study uses triplet time series data, from the period of 1990 through 2014. The data used in this study

comes from statistical reports of Bank Indonesia data from CD ROM of International Financial Statistics (IFS).

2.2. Testing Procedure

2.2.1. Normality Test Data

In this study, the data before the analysis will be tested beforehand whether the data is normally distributed or not. The type of test to detect the test is Jarque-Bera (JB Test). JB statistical value is calculated through (Gujarati, 2003):

$$JB = T\left[\frac{S^2}{6} + \frac{(K-3)^2}{24}\right] \quad (2)$$

In which P is the number of observations, S is the skewness value and K is the kurtosis value. In this test, if it produces a JB statistical value which is smaller than the chi-square table (χ^2), then accept the null hypothesis that stated the normal distribution data. Furthermore, if the data condition is not normal, then the data will be transformed into a logarithmic form.

2.2.2. Stationarity Test Data

The data after the normal distribution is known, then the data is tested whether stationary or not. Data that is not stationary when used in research, it will generate spurious regression. Stationarity test used in this study is to test the unit roots developed by Zivot-Andrews (1992). The test is more appropriately used to determine the stationary time series data that undergo structural break, such as the 1997 Asian economic crisis and the global economic crisis of 2008 (Dinar, Dalgiç, Iyidoğan, 2015; Granger, Huang, and Yang, 2000). The test model roots units Zivot-Andrews applied in this study is as follows:

$$\Delta y_t = \mu + \beta t + \psi DU_t(\lambda) + \gamma y_{t-1} + \sum_{j=1}^{k} \phi_j \Delta y_{t-j} + \varepsilon_t \quad (3)$$

y_t is the representation from variable Y, Inc, Cap, FDI, TrLib, and FD. Variable shift DU_t is determined through:

$$DU_t(\lambda) = \begin{cases} 1 \text{ if } \quad t > T\lambda \\ 0 \text{ if it reverse.} \end{cases} \quad (4)$$

λ value sought by the way $\lambda = \frac{T_B}{T}$,

T indicates the number of observations, and TB showed a structural break. Lag optimal in this test will be determined by Akaike AIC criteria guidelines.

2.2.3. Cointegration Test

After the data has been stationary, the next step is to test the cointegration. Cointegration test in this study using a Gregory-Hansen procedure. This procedure is done through a two-step estimation (Gregory and Hansen, 1996; Granger et al., 2000). The first step is estimating cointegration models in the model has incorporated variable structural break. For example, the variable Y is economic growth and the variable X are variables that influence it, namely Inc, Cap, FDI, TrLib, and FD, the Gregory-Hansen cointegration models are as follows.

$$Y_t = \mu + \psi DU_t(\lambda) + \phi X_t + \varepsilon_t \quad (5)$$

Shifting variable angle is determined in the same manner as in the unit roots Zivot and Andrews.

The second step is, residual test the test results as in equation 5 whether stationary or not. In this study, a test to determine whether the residual is stationary or not to test unit root Augmented Dickey-Fuller (ADF) is as follows.

$$\Delta\hat{\varepsilon}_t = \gamma\hat{\varepsilon}_{t-1} + \sum_{j=1}^{k} \phi_j \Delta\hat{\varepsilon}_{t-j} + \nu_t \quad (6)$$

Statistical value equation 6 compared with the table cointegration of Gregory and Hansen (1996). If these estimates produce a statistical value that is greater than the value of table Gregory-Hansen, it can be concluded that the residual is stationary or ε~I(0). The condition is equivalent to reject the null hypothesis which states that that a group of variables X and Y is non-cointegration.

2.2.4. Test Error Correction Model (ECM)

After the variables Inc, Cap, FDI, TrLib, and FD with a variable Y cointegrated, then, to determine the effect of these variables with a variable Y, a good influence in the short term and long term, this research will apply the ECM. The first step in using ECM is to observe whether the residual (ε) in the Gregory-Hansen cointegration models are stasioner, ε~I(0). If this residual model adalah is, then ECM used is:

$$\Delta Y_t = \mu + \sum_{i=1}^{k} \alpha_{1i} \Delta Y_{t-i} + \sum_{i=1}^{l} \alpha_{2i} \Delta X_{1t-i} + \sum_{i=1}^{m} \alpha_{3i} \Delta X_{2t-i} + \alpha_4 DU_t(\lambda) + \gamma\hat{\varepsilon}_{t-1} + \nu_t \quad (7)$$

Variable Y is economic growth and the variable X is the variables that influence it that is Inc, Cap, FDI, TrLib, and FD and DUT variable is determined as the Zivot-Andrews tests. The variable is the error correction term (ECT)

obtained from the Gregory-Hansen cointegration test. This variable if it is not significant, the effect of long-term equilibrium as desired on the model of cointegration Gregory-Hansen did not happen. In this study the long inaction k, l, and m is determined by the F test (general F-testing). Then in order to get the results of the estimation of the most simple (parsimonious regression), in this test method is used *Hendry's General-to-Specific Modeling (HGSM)* strategy developed by Hendry (Gujarati, 2003).

3. Results and Discussion

In this study, the tool to be used to solve an Econometrics test is computer program called EViews program. Furthermore, through the Jarque-Bera test is known that not all the data used in this study are normally distributed. With these tests it is known that the income data, the data of trade liberalization, financial liberalization and data, data distribution that is not normal. The results can be known because of the JB statistic test generates greater value than the value of chi-square (χ^2). Then the third distribution data is close to normal, so in this study the data will be transformed into a logarithmic form.

Table 1. Zivot and Andrews Test Results

Variable	λ	Statistical Value of Zivot-Andrews			
		Non-differencing Data		One time Data Differencing (Δ)	
Y	0,517	[3]	-2.520	[3]	-4.351**
lInc	0.517	[2]	-3.537	[2]	-6.362***
Cap	0.517	[5]	-2.742	[3]	-4.572**
FDI	0.517	[3]	-3.312	[4]	-6.283***
lTrLib	0.517	[6]	-2.732	[4]	-7.621***
lFD	0.517	[4]	-3.625	[4]	-6.723***

Description: (a) *l* shows the logarithm; (b) The value of Zivot-Andrews for λ = 0.5 at a significance level of 1% and 5% respectively -4.78 and -3.96. This critical value is available on the Zivot-Andrews (1992). If the statistics ZA value is greater than the ZA critical value, the null hypothesis which states that the data is non-stationary can be rejected; (c) Numbers in sign [...] show the optimal inaction based on Akaike criteria; (d) ***, ** and * respectively indicate significance at 1%, 5% and 10%.

Source: Adapted from Statistics Data Bank Indonesia and the International Financial Statistics, 2015.

Once it is certain that the data used in this study are normally distributed, then the test continued with test unit roots tests. The test results are shown in Table 1. The value of the DU_t (λ) is determined by assuming that the incidence of structural break (TB) of data occurs because there are events of the economic crisis, the Asian economic crisis in 1997 and the global economic crisis in 2008. The length of inaction used in this test was determined through *Akaike* criterion by choosing a model that has the lowest Akaike AIC criteria. = This test guideline is that at λ=0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9 and 5% significance level, the critical value is -3.65 respectively; -3.80; -3.87; -3.94; -3.96; -3.95; -3.85; -3.82; -3.68.

Table 2. The Result of Cointegration Test Gregory-Hansen

Research Model	λ	Residual Test			
		Statistic Value ADF		Statistic Value PP	
Y = f(lInc, Cap, FDI, lTrLib, lFD, Cr97, Cr98)	0.429	[5]	-7.351***	[3]	-8.361***

Description: (a) The value of the ADF statistic is confirmed by the critical value of Gregory-Hansen for λ = 0.5 on a confidence level of 1%, 5% and 10% respectively was 5.62; The critical value for 4.34; and 3.73. The critical value can be seen in Gregory and Hansen (1996). If the value of the ADF statistic is greater than the critical value Gregory-Hansen, the null hypothesis of non-cointegration can be rejected; (b) ***, ** and * respectively indicate significance at 1%, 5% and 10%; (c)Numbers in sign [...] shows long delays that are used.

Source: Adapted from Statistics Data Bank Indonesia and the International Financial Statistics, 2015.

The roots test results of Zivot-Andrews unit in a non-differencing data obtained values that were not statistically significant or not reject the null hypothesis of non-stationary at all observed data. Furthermore, by differentiating these data only once, and then apply the same test procedure, obtained statistically significant values and are able to reject the null hypothesis of non-stationary. Finally, through these tests it is known that the data of economic growth, income, capital, foreign investment, trade liberalization and financial developments were used in this study is not stationary and to be stationary such data should differentiate one time, I (1).

Having obtained the data are which are stationary and have the same degree of integration, the next step is to apply cointegration test of Gregory-Hansen. Cointegration test results found that the residuals generated from these tests is stationary or (Table 2). These results indicate that in the long term between the income variable, the variable capital, foreign investment variable, the variable trade liberalization and financial development variables with the variables of economic growth will be interconnected and are predicted to lead as desired equilibrium

theory.

However, cointegration test results are not yet able to predict the effect of variable income, capital, foreign investment, trade liberalization, financial liberalization, the Asian economic crisis of 1997, and the 2008 global economic crisis on growth in both the short and long term. In the long term, the variation of these variables are mutually cointegrated and on each other such that the desired balance in theory. But in the short term, it can happen that the opposite condition that the variable income, capital, foreign investment, trade liberalization, financial liberalization, and the 1997 Asian economic crisis and the 2008 global economic crisis may have no impact at all on economic growth. To overcome these prediction error, in this study used the ECM.

The estimation on the ECM model can be seen in Table 3. The estimated value of ECM model generates error correction term (ECT) of 0.192 and the coefficient of determination or R^2 of 0.621. The determination value, although it does not indicate a high rate and spectacular in the regression using time series data, but the value is still reasonable. This is because the determination value is only estimate the relationship between the independent variables used in ECM (including variable inaction), and did not assess the relationship between the explanatory variables (explanatory variables) on the dependent variable.

Table 3. The Result of ECM Estimation with Economic Growth (Y) as the Dependent Variable

Independent Variable	Short Term Coefficient	Long Term Koefisien
Const.	9.2634	10.2834
lInc	0.1425*	0.2528*
Cap	0.3222**	0.4023**
FDI	0.1132**	0.2095**
lTrLib	0.1323*	0.1812**
lFD	0.1775*	0.2193***
Cris97	-0.2313***	-0.2712***
Cris08	-0.1837**	-0.0281**
Classical Assumption Test		
1. Normality: JB test	1.252 (8.251)	χ^2 count < χ^2 table, the empirical model has residual which is normally distributed and can not be rejected.
2. Linearity: LM test	3.121 (7.783)	F-count < F table, the specification model in form or linear function and can be rejected.
3. Heteroscedasticity: White Test	2.183 (8.351)	χ^2 count < χ^2 table, the heteroscedasticity problem in this model can not be accepted.
4. Autocorelation: B-G test	2.312 (6.315)	χ^2 count < χ^2 table stated that autocorrelation in this model can not be accepted.
5. Multicolinearity: Gujarati test	-	Correlation between two explaining variable does not over 0.8, thus the multicolinearity problem in this model can not be accepted.

Source: Adapted from Statistics Data Bank Indonesia and the International Financial Statistics, 2015.

These results indicate that the variation occurs in the variable income, capital, foreign investment, trade liberalization and financial developments can predict economic growth in Indonesia, both in the short and long term. ECT value of 0.192 indicates that the speed adjustment (speed of adjustment) economic growth caused by variations that occur in the model. This study shows that liberalization of trade and financial development that occurred in Indonesia turned out to have a positive impact on economic growth.

The results are consistent with the theory that the liberalization of trade in Indonesia is able to boost economic growth. The increased international trade can push specializes in producing goods and services, so it is relatively efficient. Trade liberalization that occurred in Indonesia is also able to reduce costs and in-efficiency in the production process. A decrease in the cost of producing goods and services will in turn positively influence on economic growth. In addition, the positive role of trade liberalization on growth indicates that the policy is beneficial for low-income residents, because of the export product of the trade is a labor-intensive product. The degree of benefits and advantages of trade liberalization is highly dependent on policy reforms are taken and the state of Indonesia's economic structure. Trade liberalization has positive influence on economic growth also suggests that policy is able to eliminate the inefficiency caused by the protection.

The results are consistent with the findings by Altaee et al. (2014) which indicated that a shock on trade liberalization greatly affects the GDP shock and financial developments. In addition, in line with the findings of this study, Rahim and Abedin (2014) stated that the policy of trade liberalization may reduce in-efficiency in the production process. Results of this study are also consistent with research Chaudhry et al. (2010) and Ali and Abullah (2015) that trade liberalization would be able to promote economic growth and strengthen competitiveness.

Financial development has a positive influence on economic growth that suggests financial development

in Indonesia can lower transaction costs and information. This is because financial development can reduce the costs of the contract when the investor will invest. These findings are consistent with the findings of Levine (1997) and Levine et al. (2000) which shows that financial development is believed to lower the costs for all economic agents. The savings occur in all economic agents will be able to boost economic growth.

Financial developments that occurred in Indonesia is also able to reduce the risks faced by individuals. Research that is consistent with the finding by Bencivenga and Smith (1991) which showed that financial development can stimulate economic growth by channeling savings into projects that have a high level of productivity and at the same time can reduce the risk of liquidity faced by individuals. Each individual must face the uncertainty of future liquidity needs. The individual can choose investment in liquid assets and not at risk, but has a low productivity level. Besides this individual may also choose illiquid assets and risk, but has a high level of productivity. Based on this, financial development can stimulate economic growth by channeling savings to meet future liquidity.

In addition to lowering the risk of liquidity, financial development in Indonesia can reduce investment risk. This can be explained as follows, when people do not like risk, then risky investments that will offer a high income. Instead of less risky investments that would offer low income. Financial development in Indonesia is able to affect the economic growth due to the growing financial sector turns are able to mobilize funding and then allocate the funds to a sector that is profitable and has a great prospect. Financial development in Indonesia is also able to accelerate the allocation of resources from slow-growing sector to a fast-growing sector.

The results of this study are also consistent with Siddiki (2002) and Garcia and Liu (2000) which showed that financial development can facilitate education and training which can then improve the quality of human resources. Financial development will stimulate the growth of education and training institutions. The existence of education and training institutions managed by the private sector are generally very dependent on easy loans provided by financial institutions.

ECM estimation results also show that Asian economic crisis in 1997 and the global economic crisis in 2008 negatively affect the economic growth in Indonesia. Although the negative effect of the crisis on economic growth in Indonesia, but the impact of the crisis is different. Dummy variable estimation results show the influence of the Asian economic crisis in 1997 had a higher intensity than the global economic crisis of 2008. The findings are consistent with research results Raz et al. (2012) that intuitively effects of the 1997 Asian economic crisis on Indonesia's economic growth is believed to be greater than the global economic crisis of 2008. As well as research Raz et al. (2012), this study shows that the effect of the Asian economic crisis in 1997 on economic growth in Indonesia is greater than the global economic crisis in 2008.

This condition can occur because the Asian economic crisis in 1997 caused by internal conditions such as lack of credibility of policy and inadequate financial infrastructure in Indonesia. The development of the financial sector and capital market so rapidly at that time was not accompanied by regulations clear and transparent. These conditions encourage moral hazard and macroeconomic volatility which ultimately exacerbates the crisis. Due to the 1997 Asian economic crisis some banks are categorized as unhealthy forced to close and the real deposit rate back to a negative number, that is an average of -1.50% per year (1998-2001). Capital market performance previously experienced its heyday, eventually again decreased and at the end of 1997, which contained 59% of issuers whose condition is technically bankrupt.

The Asian economic crisis in 1997 also led to economic growth in Indonesia has decreased, even in the fourth quarter of 1998 touched the lowest -18,26%. Furthermore, until the period of 1999-2002 economic growth in Indonesia has not shown an increase in which the average is still -0,316% per year More specifically, the crisis resulted in living standards have declined by 25%. The crisis is also exacerbating the suffering of the poor in which they must bear the cost of living increases to 130%.

In contrast to the Asian economic crisis in 1997 which adversely affect the Indonesian economy, the global economic crisis in 2008 has less impact on the economy. The influence of the global economic crisis in 2008 relatively gave a little impact on economic growth, because of the economic shock is only contagious effects of the crisis of the developed countries, particularly the United States. In addition, the crisis did not have a negative impact on the domestic economy because the crisis is not originated from the domestic economy. More importantly, the impact of the global economic crisis in 2008 has been well anticipated by the government at that time well. On the other hand, the crisis did not adversely affect the Indonesian economy by increasing the financial structure, the high contribution of regional trade, and the more rational monetary and fiscal policies by the Indonesian government at that time.

ECM estimation results in this study also shows that FDI has positive influence on economic growth. These results are in line with the neo-classical growth theory that the FDI will be followed by research and development (R&D), capital accumulation, and externalities. Through FDI, it could result in increased increasing returns to scale in domestic production through spillover. This is in line with the assumption that with FDI increasing, the production activities of multinational corporations surged. Through the production activity, technology transfer will occur indirectly and with R & D, it can encourage economic growth.

This study indicates that FDI has positive influence on economic growth, due to the increased FDI that is able to provide employment with the construction of new factories. The increase in employment opportunities, the demand side of the economy turned out to be a positive impact for Indonesia with the increasing ability of public spending and improving demand in the domestic market. The positive value of the variable FDI shows that the impact of the increase in public revenue as a result of FDI was not followed by the addition of consumption demand of imported goods. if additional public revenue as a result of the FDI is followed by the import of goods, the impact of FDI on economic growth will be negative. Additionally, if it happened more rapid import growth than export growth, it is caused by the presence of FDI, in fact trade deficit and this means that the presence of FDI will have more negatively affect on economic growth in Indonesia.

The findings of this study also support that the model of neo-classical economic growth is mainly related to convergence. ECM estimation results in this study indicates that the economic growth that occurred in Indonesia, as determined by trade liberalization, financial sector development and FDI also determined by income and capital accumulation. The estimation results indicate that economic growth in Indonesia is also influenced by changes in the factors of production of physical capital (savings and investments), while the technology that describes the level of efficiency is an exogenous variable and is regarded as residual.

3. Conclusions

This study shows that trade liberalization and financial development that occurred in Indonesia are able to affect the economic growth. By using cointegration test of Gregory-Hansen, in the long run, these two variables can be balance as believed one that supports the theory that the policy could encourage economic growth. Consistent with Gregory-Hansen cointegration test, the use of ECM in the short term, the two policies are also able to boost economic growth.

Trade liberalization will facilitate economic growth, due to the policy that is capable of increasing specialization and lower costs or in-efficiency in the production process. Trade liberalization policies can also be beneficial for low-income residents, because the export of products from the trade of Indonesia, more labor-intensive. Financial development has positive influence on economic growth due to financial development in Indonesia can lower transaction costs and information. Financial development in Indonesia is also able to reduce the cost of information, monitoring costs, and promote economic growth through technological innovation, facilitate transactions, and reduce risk and uncertainty. ECM estimation results also show that the Asian economic crisis in 1997 and the global economic crisis in 2008 negatively affecting economic growth in Indonesia. These results show that the events of the Asian economic crisis in 1997 have a negative impact on economic growth in Indonesia compared to the global economic crisis in 2008.

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