THE INFLUENCE OF FOREIGN DIRECT INVESTMENT, EXPORT AND IMPORT ON GROSS DOMESTIC PRODUCT IN INDONESIA PERIOD 1985-2016

Tika Emilia Munte

ABSTRACT

This study aims to know the influence of foreign direct investment, export and import on gross domestic product in Indonesia. This study employed the quantitaitve approach by using secondary data from 1985 to 2016. Analysis tool that is used in this study is Multiple Linear Regression. Variables that are used namely Gross Domestic Product (GDP), Foreign Direct Investment (FDI), Export and Import. The Result of this study indicates that Export and Import have an influence on gross domestic product (GDP) and have a positife result. While Foreign Direct Investment has a negative result and insignificant on gross domestic product(GDP).

Keywords : Gross Domestic Product (GDP), Foreign Direct Investment (FDI), Export, Import, Multiple Linear Regression.

A. Background

Economic growth is defined as the development of activities in the economy that cause goods and services in production increases and prosperity also increases, so that the welfare of society also increases. Economic growth is also defined as an increasing in gross domestic product/gross national product, or a process of increasing per capita output over the long term. The stronger and higher the economic growth of a country the better the economy of the country. A country can be said either through an increase in the amount

of goods and services generated by the calculation of the rate of economic growth. The indicator of the amount of goods and services produced in the economy is known as gross domestic product. Economic growth is a long-term macro issue whereby each country will seek to improve its ability to produce goods and services in each period, the goal being to increase real production levels (national income) and living standards (real incomes per capita) through the provision and direction of factors of production factors (Sukirno, 1994).

Gross domestic product (GDP) is mostly used as a barometer to measure a country's economic progress. Economic policies leading to economic growth and development have been studied by many economists such as Mercantilists, Adam Smith, and David Ricardo for a long time. Some of these variables are investment, savings, inflation, inflation variability, government expenditure as a percentage of GDP, government deficits, and other macroeconomic variables.

Indonesia is a developing country with a large population and abundant natural resources, but large populations and abundant natural resources are unable to solve and provide solutions to the Indonesian economy. Indonesia needs to improve human and technological resources to manage natural resources well and totality, and these all require large capital. Investment is one of part of gross domestic product, and developing countries like Indonesia is often faced with funding problems, this becomes a serious conversation for developing countries. Developing countries have not been

able to provide large investments to support their economic development and their national income. One way to get a capital injection is to attract foreign direct investment.

Athukorala (2003) said, foreign direct investment has a positive impact on the host country's economy because through foreign investment it can increase the availability of funds for the host country (recipient country). Athukorala also conducted a study using the co-operative econometric model and the 1959 series of time data up to 2012 to analyze the relationship between foreign direct Investment and gross domestic product in Sri Lanka. The results show that foreign direct investment has a positive effect on gross domestic product (GDP) and a causal relationship between foreign direct investment and gross domestic product (GDP) in Sri Lanka.

In addition to foreign direct investment, export is also part of the national income. In many countries, exports and imports are one of the major factors for increasing gross domestic product. Export can expand the market and allow the exporting country to gain profit as well as the national income will increase so that in turn can increase economic growth (Setyowati and Kuswati, 2008).

Export and import activities have an equally important role in a country's economy. When a country has the advantage of a product that can not be produced by another country and the country requires the product, it can export it and vice versa. Export activity now is a must for a country to increase its economic growth (Bustami, 2013).

Export is able to expand the market and will certainly give benefit. Many entrepreneurs do not run their machines or tools of production maximally, because they are worried about the excess of production then the price of its product will fall. With the existence of export activity then the entrepreneur can run the machines maximally and sell excess product abroad. The other benefit comes from technology, with export and import activities allow a country to learn more efficient production technique and modern ways of management.

Import activity should be done to meet domestic needs that can not be produced in the country. Whether it is raw materials and machinery and production equipment. Indonesia has not been able to produce all its own needs, so import becomes the important part ofgross domestic product. Import is a reflection of the economic sovereignty of a country. Import etymologically defined as an activity or purchasing goods from aboard wich then the material will be sold in the country for domestic needs. The main factor of import is usually due to natural factors such as climate weather in different countries, each country has its own natural wealth.

B. Problem Formulation

Based on the description from the background above, the problem can be formulated in this research are:

1. How far the influence of foreign direct investment on gross domestic product in Indonesia ?
2. How far the influence of export on gross domestic product in Indonesia?

3. How far the influence of import on gross domestic product in Indonesia ?

C. Research Purpose

Based on the formulation problem, thus objectives of this paper are:

1. In order to know about the influence of foreign direct investment on gross domestic product in Indonesia.
2. In order to know about ithe influence of export on gross domestic product in Indonesia.
3. In order to know about the influence of import on gross domestic product in Indonesia.

D. Research Benefit

Some Benefits want to be achieved by the researcher are:

1. It can help to explain about the influence of foreign direct investment, export and import on gross domestic product in Indonesia.
2. It is expected tobe useful as a consideration in deciding policies on foreign direct investment, export and import
3. Student, lecture, and academics are expected to become a reference and further information for research.

E. THEORITICAL BASIS AND LITERATURE REVIEW

Gross Domestic Product is the most important economic statistics because it is considered as the single best measure of public welfare. The underlying thing is that GDP measures two things at the same time: the total

income of all people in the economy and the total expenditure of the state to buy goods and services resulting from the economy. The reason for GDP can measure the total income and expenditure due to an economy as a whole, the income must be the same as expenditure (Mankiw, 2006).

Components of GDP can be divided into 4 (Mankiw, 2006)

a. Private consumption; calculate consumption from individuals or households for several types of goods such as; Durable Goods are goods that are durable or not damaged quickly which generally have a relatively long life or can be said to be more than 3 years. Examples of motorcycles, cars, electronics and others but not included for the purchase of new homes. Non-Durable Goods are goods that are directly consumed and used up. Examples, food, drinks, shoes and others. Service namely consumption for services. For example, doctor's services.
b. Investment; calculate an expenditure for capital goods. Example: buying a house, building a new factory, new programs and various other types of investments.
c. Government Expenditures; calculate all expenses that the Government does. For example: paying salaries of civil servants or government employees, buying military equipment, building roads and others.
d. Net Export; calculate the difference obtained from Total Export minus Total Import.

And the formula for GDP is **GDP=C+I+G(X-M).**

Where C for cosumption, I for investment, G for governement expenditure, X for export and M for import.

1. The relationship between foreign direct investment and gross domestci product

   To increase the gross domestic product in Indonesia, investment has important role to play, because investment is one part of gross domestic product. Investment will lead to dramatic changes in aggregate demand, as investment is a component of large and volatile expenditures. In economic growth, one of them is the accumulation of capital, in which the accumulation of capital will help in the improvement of national output which will ultimately lead to long-term economic growth (Samuelson, 2001).

   Investment activity will cause an increasing in output productivity where investment productivity is the amount of output that can be generated from one investment unit of one unit of investment made, where investment productivity can be measured by the inverse of the capital output ratio $\Delta Y/\Delta K$. Then by multiplying the available level of investment in the saving ratio is a way to keep the total growth rate of output out, $s = I / Y$ with investment productivity of $1/K$. Based on the description above can be summarized below equation: Total total growth rate outuput = investment ratio x investment productivity (Jones, 1975).

2. The Relationship between export and gross domestic product

Pranoto (2016) Said the greater the export value of a country will cause the higher economic activity to be achieved by the country. The existence of export activities in Indonesia makes it possible to produce various goods and services that exceed the amount of production needed for the country itself. In addition, the existence of export activities will also increase the level of economic activity in Indonesia and the level of state income will increase so as to encourage economic growth.

3. The relationship between import and gross domestic product

Import activity is opposite to export activity. If the export is said to flow to obtain visas and injection for the economy of a country while import is a leak of national income. Import is said to be a leak of national income because imports themselves are plagued by the ability to produce goods that compete with foreign-made products. This means that import value depends on the value of the country's national income level. If the higher the national income and the lower the ability to produce certain goods, the imported food will be higher. As a result many leaks of national income (Sukirno, 2008).

Maina (2008) argued that a nation pays for its imports either with current output exports or with financial claims to future output. When exports rise (or fall) in line with imports, GDP remains unaffected. Exports add to the exact calculation of output minus imports and net exports (trade balance) unchanged. The need to finance imports with exports that add direct output or to capital inflows that maintain other

types of expenditures ensures that imports do not decrease GDP or growth rates. Conversely, there is a positive relationship between import and economic growth.

Keller (2000) argues that developing countries will gain more both in terms of importable products and the direct knowledge they can gain from developed countries, which will be imported from other developing countries. This implies that importing new (or better) types of semi-finished goods will increase the level of specialization in the production of other products. One example, seen in this case, is the importation of raw fertilizer, which is a high-tech import from developed countries to developing countries. This is a foreign technology transfer that helps increase productivity in the agricultural sector.

F. Research Methodology

This study uses quantitative methods, derived from numerical data to be processed into information. So the quantitative method is a method that is numerical and statistical analysis and then processed into information. In quantitative research there are two variables that function as model, independent variable and dependent variable. In this study there are 4 variables to be used, one dependent variable, and 3 independent variables. Dependent variable is gross domestic product (GDP), while independent variable is, foreign direct investment, export and import. Multiple linear regression analysis ordinary least square method to analyze data and model in this research.

G. Result Analysis

a. Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between independent variables. A good regression model should not be correlated between independent variables. Variance inflation factors (VIF) values must be less than 10 in order to be said to be free of multicollinearity (Ghozali, 2011).

Table 1.Multicollinearity Test

Variable	**Coefficient Variance**	**Uncentered VIF**	**Centered VIF**
C	3.41E+20	3.783059	NA
FDI	6.525467	6.940794	4.062326
EKSPOR	0.125048	18.09856	6.242957
IMPOR	0.169712	18.39109	6.000837

Variance inflation factors (VIF) values of foreign direct investment is 4.062326, the value of export is 6.242967 and Variance inflation factors (VIF) of import is 6.000837. The whole value less then 10, so it can be concluded there no multicollienarity.

b. Heterocedasticity Test

The heteroskedasticity test aims to test whether in the regression model there is a variance inequality of the residual one observation to another observation. If the variance of the residuals of one other

observation remains, then it is called Homoscedasticity and if different is called Heteroskedasticity. (Ghozali, 2011)

Table 2 The Breusch-Pagan-Godfrey Heteroskedasticity Test Result

Breusch-Pagan-Godfrey Heteroskedasticity Test:			
F-statistic	2.783026	Probability	0.0593
Obs*R-squared	7.350131	Probability	0.0615

The probability value of Obs*R-squared can be seen from the probability of Chi-Square. From the test results using this Breusch-Pagan-Godfrey probability value is 0.0615 or greater than α = 5% which means there is no heteroskedasticity imultiple linear regression model.

c. Auto Correllation

Auto correlation is defined as the correlation between members of a series of observations sorted by space and time (Gujarati, 2003). Autocorrelation indicates a correlation between members of a series of observations. If the model has a correlation, the estimated parameter becomes biased and the variation is no longer the minimum and the model becomes inefficient (Basuki, 2015).

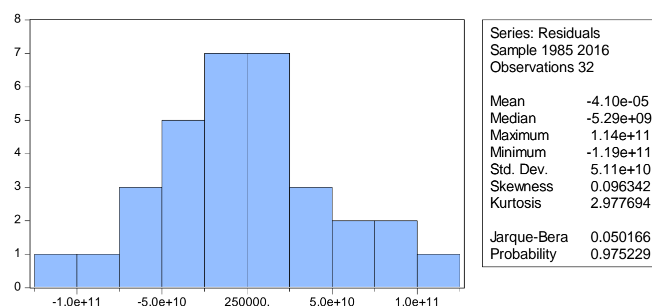
Table 3 The Lagrange Multiplier Test (LM) Result

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.294548	Prob F	0.1209
Obs*R-squared	4.800765	Prob.Chi-Square(2)	0.0907

Based on the above table it has been explained that the value of Obs * R-Squared is 4.800765 and the probability value is 0.0907 which is greater than 0.05 so it can be concluded that the data in this study is free and there is no problem auto correlation.

d. Normality Test

The normality test is performed to check whether the error term approaches the normal distribution or not. If this assumption is not met then the test procedure using t-statistic becomes invalid. The error term normality test is a Jarque-Bera test which test is based on error and least squares estimator.



Based on the result in table above, the jarque-Berra probability value is 0,0975229. The result states that the Jarque-Berra probability value is more than α = 5%, it can be interpreted that the data in multiple linear regression of this model is normally distributed.

e. Result of Regression Estimation

Variables	Coefficient	t-Statistic	Prob
C	2.07E+11	11.18947	0.0000
FDI	-4.421197	-1.730749	0.0945
Export	1.817684	5.140209	0.0000
Import	2.371753	5.757221	0.0000
R-squared	0.950991		
F-statistic	181.1090		
Prob(F-statistic)	0.000000		

Foreign Direct Investment has a negative and insignificant effect on Gross domestic product in Indonesia, the significance of variable is 0.0945> with the regression coefficient generated equal to -4.421197.

Export has a significant positive effect on gross domestic product in Indonesia significance of 0.000 variables which stated that 0.000 <0,05 with regression coefficient generated equal to 1.817684. It is explained that every 1 dollar increase of export growth will increase gross domestic product level in Indonesia equal to 1.81 dollar with assumptions of other variables are fixed.

Import has a significant positive effect on gross domestic product in Indonesia significance variable of 0,0000 stated that 0,0000 <0,05 with regression coefficient yielded 2,371753, it is explained that every 1 dollar increase of import development in Indonesia will raise level of gross domestic product equal to 2.37 dollar. It can be asumed that the other variables are fixed.

The value of positive value coefficient is indicated that 95% of GDP variables can be explained by other variables, namely Foreign direct investment (FDI), export and import. While the remaining 5% can be explained by other variables outside this research. The result of regression test that has been done shows the value of foreign direct investment significance 0,09415 which means> 0,05, and has a coefficent -4.421197. It can be concluded that the change of foreign direct investment value has an insignificant and negative effect on the gross domestic product. Investment is one part on gross domestic product, but the results do not fit the hypothesis that there is a significant and positive relationship between foreign direct investment and gross domestic product Indonesia in 1985 to 2016. This condition is due to the circumstances and reality in Indonesia that foreign direct investment in Indonesia is very fluctuated.

This is due to the many barriers to entry for foreign investors such as less efficient bureaucracy and less supportive infrastructure is the reason why Indonesia is less desirable by foreign investors. Therefore, the government should pay more attention to the policy on foreign direct investment in order to encourage better economic improvement.

Regression results showed a positive influence and significant 0.000. The value of significance found in less than 0.05.

And has a coeffiecient 1.817684. It means can be concluded that exports have a significant and positive relationship to gross domestic product in Indonesia from 1985 to 2016. Export is one patt of gross domestic product , exports will increase demand for goods and services in the country, increasing domestic demand will also affect the level of productivity in land, so that natural and human resources can be allocated properly.

The greater the export value of a country will cause the higher economic activity to be achieved by the country. The existence of export activities in Indonesia makes it possible to produce various goods and services that exceed the amount of production needed for the country itself. In addition, the existence of export activities will also increase the level of economic activity in Indonesia and the level of state income will increase so as to encourage economic growth.

Regression results showed a positive influence and significant 0.000. The value of significance found in less than 0.05, it means can be concluded that imports have a significant and positive relationship to gross domestic product in Indonesia from 1985 to 2016.The State does international trade in the form of goods and services due to natural resources between the country. This opinion suggests that international trade is actually influenced by the interaction between state-owned resources (relatively abundant

factor of production factor) and production technology (which affects the relative intensity in which various factors of production are used during the production cycle.

The contribution of imports to industrialization and growth in less developed countries requires reallocation of resources and increased investment. In this effort, imports play an additional role, that is, increasing the efficiency of capital accumulation by importing relatively cheaper capital goods from high-income countries in R & D.

H. Conclusion and Suggestion

Conclusions :

a. Foreign Direct Investement has a negative and insignifant impact to gross domestic product in Indonesia .
b. Export has a positive and significant impact to gross domestic product in Indonesia
c. Import has a positive and significant impact to gross domestic product in Indonesia.

Suggestions:

a. Government should oversee the exploratio rights granted to companies invested by foreign capital in order not to exploit the natural wealth and adversely affected to the economic growth. Government should carefully concider the treaty and diciplineary agreement between the Indonesian state and the foreign investor.

b. Government should improve the exports because its extremally help Indonesian gross domestic product.

c. Government should more selective goods and services to impore, in order to maximally gross domestic product in Indonesia.

References

Agma, S. F. (2015). Peranan Foreign Direct Investment Terhadap Pertumbuhan Ekonomi Indonesia. *Jurnal Ilmiah*, 1–14.

Athukorala, P.P.A Washanta. 2003. *The Impact of Foreign Direct Investment for Economic Growth: A Case Study in Sri Lanka*. University of Peradineya

Basuki, A. T., & Yuliadi, I. (2015). *Elektronic Data Processing (SPSS 15 dan Eviews 7)*. Yogyakarta: Danisa Media.

Baark, E. (1988). *Strategic Issues and Technology Policies for Developing Countries: Capital Goods*. Paper No 184

Bustami, Budi Ramanda. 2013. Analisis Daya Saing Produk Ekspor Provinsi Sumatra Utara. *Jurnal Ekonomi dan Keuangan*, Vol. No.2.

Coe, D. T., & Helpman, E. (1993). *International R and D spillovers*. IMF Working Papers, No.84

Dian Rizky Ayu. 2013. Pengaruh Penanaman Modal Asing dan Ekspor Terhadap Pertumbuhan Ekonomi di Provinsi Jawa Timur. *E-Journal UNESA Jurnal Pendidikan Ekonom*i, Vol.1 No.1.

Ekaynayake. E.M. (1994). Export and economic growth in Asian Developing Countries: Cointegration and error corection model. *Journal of Economic Development*, 24(2), December 1999.

Ghozali, I. (2011). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Badan Penerbit Universitas Diponegoro, Semarang.

hozali, I (2013). *Analisis Multivariat dan Ekonometrika : Teori, Konsep, dan Aplikasi dengan EVIEWS 8*. Badan Penerbit Universitas Dipenogor, Semarang.

Ginting, A. M. (2017). Analisi Pengaruh Ekspor Terhadap Pertumbuhan Ekonomi Indonesia. *Buletin Ilmiah Litbang Perdagangan*, *11*(1), 1–20.

Hady, H. (2004). *Teori dan kebijakan Perdagangan Internasional.* Jakarta: Ghalia Indonesia, Jakarta.

Hutabarat, R. (1996). *Transaksi ekspor dan impor.* Jakarta: Erlangga.

Khan,M. S. (1974). Import and Export Demand in Developing Countries. *IMF Staff Papers*,vol.21, pp. 678-693

Jhingan, M. (2004). *Ekonomi Pembangunan dan Perencanaan, Edisi 1 cetakan Ke-10.* Jakarta: PT. Grafindo Persara.

Jones, Hywel G. 1975. *An Introduction to Modern Theories of Economic Growth*. Great Britain : Thomas Nelson and Sons,Ltd.

Jufrida, F, & Nasir, M (2016). Analisis Pengaruh Investasi Asing Langsung dan Investasi Dalam Negri Terhadap Pertumbuhan Ekonomi Indonesia. *Jurnal Perspektif Ekonomi Islam Darusslam 2,2502-6976.*

Keller, W. (2004). International technology diffusion. *Journal of Economic Literature XLII*, 752–782.

Kholis, M. 2012. *Dampak Foreign Direct Investment Terhadap Pertumbuhan Ekonomi Indonesia*. Surakarta : UPBJJ UT 8(2), 111-120

Levine R., & Renelt, D. (1992). A Sensitivity Analysis of Cross-Country growth. *American Economic Review* 82(4), 942-6.

Maingi, J. N. (1999). *Determinants of the real Gross Domestic Product growth rate in Kenya, 1973-97.* Kenyatta University, Kenya

Mankiw, N. g. (2003). *Teroi Makro Ekonomi Terjemahan.* Jakarta: PT. Grammedia Pustaka Utama.

Mankiw, N. Gregory. 2006. *Principle Of Economics.* Pengantar Ekonomi Mikro. Jakarta: Salemba Empat.

Muqarrabin, Y. (2015). Factors Influencing Economic Growth In Indonesia.*Jurnal Ekonomi dan Studi Pembangunan* ,1*6*, 1–13.

Pranoto, O. S. (2016). Pengaruh Ekspor dan Foreign Direct Investment Terhadap Pertumbuhan Produk Domestik Bruto Indonesia ”, *10*, 49–53.

Salvator, D. (1990). *International Economics*. 3th Edition. New York: MacMicllan Publishing Company.

Samuelson, P. A. (2001). *Ilmi Makro Ekonomi.* Jakarta : PT. Media Edukasi.

Saputra, I. G., & Kesumajaya, I. W. W. (2016). Pengaruh Utang Luar Negeri, Ekspor, dan Impor Terhadap Pertumbuhan Ekonomi Indonesia Periode 1996-2013. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, *5*(4), 385–412.

Setyowati, E., & Kuswati, W. D. (2008). Kausalitas Investasi Asing terhadap Pertumbuhan Ekonomi. *Jurnal Ekonomi dan Studi Pembangunan Volume 9* , 69-88.

Sugema, I. (2012). Krisis Keuangan Global 2008-2009 dan Implikasinya pada PerekonomianIndonesia. *Jurnal Ilmu Pertanian Indonesia (JIPI) volume 17* , 145-152.

Sukirno, S. (1985). *Ekonomi Pembangunan.* Jakarta: LPEF-UI Bima Grafika.

Sukirno, S. (1994). *Pengantar Teori Ekonomi.* Jakarta: PT. Raja Grafindo.

Sukirno, S. (2008). *Makro Ekonorni Teori Pengantar.* Jakarta: PT. Raja Grafindo Persada.

Sukirno, Sadono, 1976, *Beberapa Aspek Dalam Persoalan Pembangunan Daerah*, Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia, Jakarta.

Suparmoko, M. I. (1992). *Ekonomi Pembangunan.* Yogyakarta: BPFE UGM.

Susanti, P. (1996). *Analisis Perhitungan Pendapatan Nasional.* . Jakarta: Liberty

Sutawijaya, A. (2010). Pengaruh Ekspor dan Investasi Terhadap Pertumbuhan Ekonomi Indonesia Tahun 1980-2006. *Jurnal Organisasi Dan Manajemen*, *6*(1), 14–27.