



Impact Non-Oil and Gas Exports and Oil and Gas Exports on The Position of Indonesia Foreign Exchange Reserves

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Abstract

This study aims to determine and analyze the effect of Non-Oil and Gas Exports and Oil and Gas Exports on the Position of Indonesian Foreign Exchange Reserves partially in the period 1996 to 2017 which employs 22 data annually using SPSS 24. The dependent variable in this study is Indonesia's foreign exchange reserves, while the independent variables are non-oil and gas exports and oil and gas exports. To see the effect of independent variables on the dependent variable, the researcher did multiple linier regression analysis. Based on the results of this research, it is known that partially non-oil and gas export and oil and gas export have a positive and significant impact on Indonesia's foreign exchange reserves.

Abstrak

Penelitian ini bertujuan untuk mengetahui dan menganalisis pengaruh Ekspor Nonmigas dan Ekspor Migas terhadap Posisi Cadangan Devisa Indonesia secara parsial pada periode 1996 hingga 2017 yang menggunakan 22 data setiap tahun menggunakan SPSS 24. Variabel dependen dalam penelitian ini adalah: Studi ini adalah cadangan devisa Indonesia, sedangkan variabel independennya adalah ekspor nonmigas dan ekspor migas. Untuk melihat pengaruh variabel independen terhadap variabel dependen, peneliti melakukan analisis regresi linier berganda. Berdasarkan hasil penelitian ini, diketahui bahwa sebagian ekspor nonmigas dan ekspor migas memiliki dampak positif dan signifikan terhadap cadangan devisa Indonesia.

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INTRODUCTION

In the era of globalization, trade plays an important role for economics of countries all over the world. Increase in both export and import would rise the activities of factors and goods markets, money and capital markets as well as the flow of income and expenditure. Export would result in foreign exchange because the higher the export, the higher national income will be. The size of export depends on country demands either bilaterally or multilaterally. For more, export has a significant influence on national real income. The ratio of export on Gross Domestic Product (GDP) is more appropriately used to directly decide the externality of exports sectors on other sectors (Sengupta, 1998).

Based on calculations done by Hill (Sundrum, 1990) on the contribution of each economic sector to Indonesia's economic growth for several years, the beginning of the economic recovery in 1967-1973 showed that the agricultural and trade sectors made a dominant contribution, each at 28.2 percent and 25.4 percent. These results were followed by the mining sector 12.8 percent, and industrial sector 10.0 percent, while other sectors were under 5 percent of Indonesia economic growth. At the beginning of the construction of PJP I (1967-1973), Indonesia economic growth rate averaged 7.9 percent per year. In relation to this, there are three approaches that can be employed to calculate the sources of economic growth, which are the production factor approach (Neo Classical), sectoral approaches and expenditure approaches, including consumption, investment, government expenditure and the difference between exports and imports (Samuelson & Nordhaus, 2004).

For Indonesia, the results of natural resources both non-oil and gas and oil and gas commodities become the foundation of a comparative superiority, so commodities can be traded through exports. Trading activities with other countries will provide various benefits, such as buying goods at relatively cheaper prices so that the goods can be traded back abroad with relatively higher prices. The reason why foreign trade often arises is because of the differences in the price of goods in various countries (Nopirin, 1997).

Many developed countries in Europe experienced rapid economic growth due to relying on export activities. This proves that export as an international trade activity has a role as "the engine of growth" for developing countries. With export activities, many developing countries can increase their foreign exchange, so that it will increase country revenues which can indirectly increase community per capita income (the export led growth hypothesis). (Sari, 2013).

Exports of goods and services represent one of the most important sources of foreign exchange income that ease the pressure on the balance of payments and create employments opportunities, Ruba and Thikraiat, (2014). Generally, export activities are said to stimulate economic growth in a number of ways such as: through production and demand linkages, and economies of scale due to larger international markets.

Export-led-Growth is said to be an economic development strategy in which export expansion plays a central role in a country's economic growth. Although practical evidence in support of export led growth may not be universal, it is widely agreed that carefully managed international trade through an export led growth can be a mechanism for achieving rapid growth, Giles and Williams, (2000).

Currently, Indonesia export growth in 2017 tends to rise. As a result, it provides optimism for the Indonesia economy. However, if we see in the past few years, Indonesia export performance was actually distressing because, since last 2011, Indonesia export performance has continued to decline.

The weakening of the global economy is the main cause of the decline in Indonesia exports. Indonesia main export destination countries, such as China, Japan, the US and European countries are experiencing an economic slowdown. As a result, demand for goods from Indonesia has declined. However, if the reason is the weakening of the global economy, exports to countries equivalent to Indonesia, such as Thailand, the Philippines and Malaysia, should also fall within the same period and scale. In fact, the export performance of these countries is not as bad as Indonesia. Indonesia experienced a constant decline in export value during the period of 2011 -

2015. On the other hand, Philippine exports tended to rise until 2014 before finally dropping in 2015. Similarly, Thailand exports value was relatively stable until 2014 before finally falling in 2015. Malaysia also experienced a similar pattern. Even, Singapore exports continued to rise in 2015. In general, exports of neighboring countries tended to weaken in 2015 when the global economy was truly down, although the trend of exports declined from 2011 to 2015. Such conditions indicated the existence of serious problems with the competitiveness of Indonesia exports where the influx of imported goods enters makes domestic industries pressed. Fortunately, the decline in export performance did not correlate positively with the amount of production of goods produced domestically. That is why the production of agricultural commodities and processed goods in the country continues to increase at a good rate.

Indonesia populations are 255 million, the fourth largest in the world after China, India and the United States, and can be said as a large market share. These mean that local products can still be absorbed by the domestic market. This kind of situation is actually very tricky because it raises fears and pessimism. But, on the other hand, it arises hope and optimism. If local products rely solely on domestic absorption, then it will not last. It is because the openness of international trade, such as the implementation of the ASEAN Economic Community (MEA) makes foreign products easily enter Indonesia so that they will eject local players. Conversely, if viewed from the side of optimism, there is much opportunity in the domestic industries to develop. Thus, with high competitiveness, local products not only enjoy a large domestic market, but also have the opportunity to increase production for exports. Even if only relying on the absorption of the domestic market, the industry and economy of Indonesia can grow, especially if added to exports. That is, if Indonesia exports are increased, Indonesia economic growth can skyrocket. This is what is seen in the trend of export values in table 1.

The table above clearly shows that from 1996 to 2017 there has been 8 decline of 8 times non-oil and gas exports and 10 times in oil and gas exports. One of them was caused by the weakening of the rupiah exchange rate against the US dollar. In addition, the impact of the global economic crisis also contributed to the weakening of the Indonesia economy. As for other factors, there were the weakening level of consumption and purchasing power of the people;

Table 1. Non-oil and gas and oil and gas export value (Million US \$)

Period 1996 – 2017

No	Years	Non-Oil and Gas Exports	Oil and Gas Exports	No	Years	Non-Oil and Gas Exports	Oil and Gas Exports
1	1996	38,093.00	11,721.80	12	2007	92,012.30	22,088.60
2	1997	41,821.10	11,622.50	13	2008	107,894.10	29,126.30
3	1998	40,975.50	7,872.10	14	2009	97,491.70	19,018.30
4	1999	38,873.20	9,792.20	15	2010	129,739.50	28,039.60
5	2000	47,757.40	14,366.60	16	2011	162,019.60	41,477.00
6	2001	43,684.60	12,636.30	17	2012	153,043.00	36,977.30
7	2002	45,046.10	12,112.70	18	2013	149,918.80	32,633.00
8	2003	47,406.80	13,651.40	19	2014	145,961.20	30,018.80
9	2004	55,939.30	15,645.30	20	2015	131,791.90	18,574.40
10	2005	66,428.40	19,231.60	21	2016	132,080.80	13,105.50
11	2006	79,589.10	21,209.50	22	2017	153,072.40	15,738.30

Source : Central Bureau of Statistics (BPS), 2018

expensive logistics costs; declining foreign investor confidence; bureaucratic structure and procedures for managing export and import documents for a long time; the issue of competitiveness, especially the cost of labor which was relatively expensive and the quality of human resources was still low.

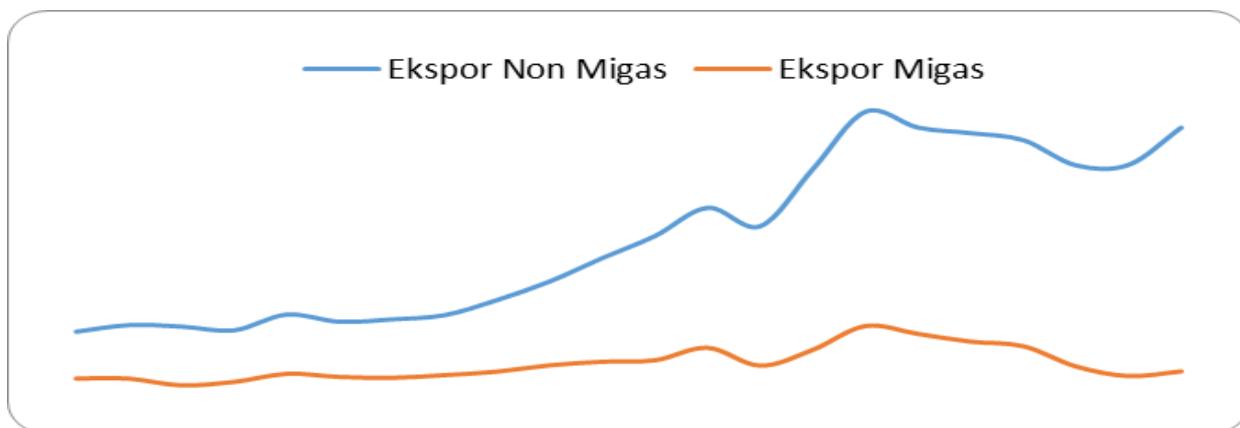
From the graph trend, it was clear that there was a sharp decline in Indonesian exports in 2009. The decline was due to the condition of the global economic crisis which was still under pressure and had an impact on the Indonesian economy. The challenge was quite prominent in early 2009 due to a strong impact of the global crisis in the fourth quarter of 2008. Uncertainty, which might not only causes high risk in the financial sector, but negatively impacted economic activity in the domestic real sector. This condition resulted in monetary and financial system stability in the first quarter of 2009 which still experienced heavy pressure, while the trend of economic growth also declined due to the contraction in exports of goods and services that were quite deep. These conditions decreased the confidence of economic actors in the financial sector and the real sector, and had the potential to reduce the various positive performance achieved in the previous years (<http://www.bi.go.id>).

Meanwhile, the foreign exchange reserves throughout 1996 to 2017 experienced 5 times decline, including in 2001; 2005; 2008; 2013; 2015. Additionally, the most drastic decline occurred in 2013 amounting to US \$ 92,882.00 million, see Table 2. Even though this number is quite safe to support the resilience of the external sector, foreign exchange reserves are still above the international adequacy standard (<http://www.bps.go.id>).

In the non-oil and gas and oil and gas export sector, it is a sector that contributes to the increase of Indonesia's foreign exchange reserves. While increasing foreign exchange reserves, there are several problems to find out the answer. These problems can be formulated, does non-oil and gas and oil and gas exports affect Indonesia's foreign exchange reserves?

While the purpose of this research is to find out how the influence of non-oil and gas and oil and gas exports on the increase in Indonesia's foreign exchange reserves.

Several researchers which include, Javad et.al (2014); Kilavuz and Topcu (2012); Udude and Okulegu (2012); Safdari and Zaroki (2012); Oyatoye et.al (2011); among others studied the relationship between export and economic growth within the neo-classical framework. These studies concluded in support of the export-led growth. Syed (2015) and Noula et.al (2013) found negative relationship and mixed effect of export on economic growth. Researchers such as Abayomi et.al (2015), Adedokun (2012), Baghebo and Atima (2013) among others had also tended to focus attention on the relationship between oil export and economic growth. While some studies had focused attention on the relationship between non-oil export and economic growth these include Ali Shah et.al (2015), Abogan et.al (2014), Kalu and Agodi (2014), Mehrara (2013).



Source: BPS Data, 2018

Graph 1. Indonesia Non-Oil and Gas and Oil and Gas Export Value

But few research works which include Muhrabadi et.al (2012), Mohsen (2015), Hosseini and Tang (2014) had sought to examine the effect of oil and non-oil export on economic growth. It is important therefore to contribute to this area by investigating the extent of the contribution of oil and non oil export on the growth of Nigeria economy and to offer appropriate suggestions based on the findings of the study.

In international trade there are two advantages: 1) allowing a country to expand its market or products, and 2) allow the country to use technology developed abroad that is better than domestic. (Sukirno, 2011). There are three effects that cause a country's export activities to increase faster or slower: (Nurlatifah, 2011). First, the effects of commodity composition. Exports may be concentrated in commodities with relatively elastic or inelastic demand for revenue. Second, the effects of market distribution. Exports may be directed to markets that are growing more rapidly or slower than the world average. Third, the effects of competitiveness. Exports may be able to compete with other exporting countries either because of higher or lower productivity growth or undervaluation of the domestic currency.

Export activities have a considerable influence on the country economy and play an important role in the development of productivity, especially for developing countries, then reaches all economic sectors. Export development is a major part of substance 2 economic perspectives, macro and microeconomic perspective. A macroeconomic perspective, where export activities enable the national economy to be better for expanding foreign exchange reserves, providing employment, creating backward and forward linkages, and finally achieving a higher standard of living. Meanwhile, from the micro perspective, export activities provide competitive advantages for individual companies, improve a company's financial position, increase capacity utilization, and raise technological standards.

We surely know that foreign exchange reserves will experience a decrease when a country foreign exchange reserves reduce, generally due to the value of imports higher than the value of exports; a rate of exchange differences against US dollars; foreign loans. Another recent phenomenon, namely foreign exchange reserves and an increase in exports, apparently was only supported by the increase in international commodity prices and the flow of hot money which could backfire on the Indonesia economy as what happened in 1997/1998 crisis. Therefore,

Table 2. Indonesian Foreign Exchange Reserves (Million US \$)
Period 1996 – 2017

No	Years	Foreign Exchange Reserves	No	Years	Foreign Exchange Reserves
1	1996	19,125.00	12	2007	54,556.00
2	1997	21,418.00	13	2008	49,164.00
3	1998	23,762.00	14	2009	60,369.00
4	1999	27,054.00	15	2010	89,751.00
5	2000	29,394.00	16	2011	103,380.00
6	2001	28,004.00	17	2012	105,343.00
7	2002	32,039.00	18	2013	92,872.00
8	2003	36,296.00	19	2014	105,504.00
9	2004	36,320.00	20	2015	100,072.00
10	2005	32,774.19	21	2016	110,341.00
11	2006	40,697.00	22	2017	130,196.00

Source: BPS Data, 2018

relying on foreign exchange reserves with hot money is very vulnerable to investment capital flight. As a result, it is appropriate for the government to be aware of the movements of hot money funds parked in Indonesia. (Febriyenti M, 2013).

In the development of the Indonesia economy, there are two terms of foreign exchange reserves, the official foreign exchange reserve and the country foreign exchange reserve. First, the managed state-owned foreign exchange reserves managed and administered by the central bank in accordance with Law No. 13 of 1968. Second, covering all foreign exchange held by entities, individuals, national financial institutions is a monetary part of national wealth (Benny J, 2013). Hence, Indonesia contribution in the participation of international trade can increase foreign exchange reserves both with bilateral and multilateral cooperation which further gives benefit the progress of the Indonesia economy in a broad coverage.

Several studies have examined the export-led growth hypothesis, findings from the empirical literature point to the possibility of several types of relationships between exports and economic growth. Depending on the econometric model, data frequency, and the country or region studied, export causes growth, growth causes export, there is bidirectional causality, and there is no causality, Konya (2004).

Shujaat (2012), examined the causal relationship between GDP and exports for the period of 1975 to 2010. The aim of the study is to check affectivity of export promotion policy adopted by Pakistan during 1990s. Johansen test of Co-integration and Granger Causality employed to determine short run and long run causality. The result of Cointegration reveals existence of one positive co-integrating equation. The result of Causality test shows short run and long run causality run from GDP to exports. The result concludes that both in short and long run only growth in production cause exports growth.

Safdari and Zaroki (2012), observed the effect of exports on economic growth (industry & mining sector, services and agriculture). The data were collected from 1961-2006 and were analyzed using Ordinary Least Squares (OLS) model. The results of this study show that each section export growth has a positive effect on the growth of value added in the same section. But the effect of export growth on the value added in industry and mining sector is more than other sectors.

Mehrabadi et.al (2012), examined the effects of oil and non-oil export on economic growth. Time series data and VAR (Vector Auto Regressive) method were used in the analysis. It was found that both oil and non-oil export had positive effect on the economic growth of Iran. Udude and Okulegu (2012), examined whether there is bi-directional relationship between exports and economic growth in Nigeria. It also tries to evaluate significant impact of exports on the economic growth in Nigeria. It was found that there exists a long-run relationship with economic growth and export in Nigeria. Having integrated the short run dynamics and long run equilibrium, Imports (IMP) and Exchange Rate were positively correlated with GDP while Exports (EXC) was negatively related with GDP. The short-run dynamics adjusts to the long-run equilibrium at the rate of 0.866% per annum.

Noula et.al (2013), explored and quantified the contribution of agricultural exports to economic growth in Cameroon. It employs an extended generalized Cobb Douglas production function model, using food and agricultural organization data and World Bank Data from 1975 to 2009. The findings showed that the agricultural exports have mixed effect on economic growth in Cameroon. Coffee and banana export has a positive and significant relationship with economic growth. On the other hand, cocoa export was found to have a negative and insignificant effect on economic growth.

Javad et.al (2014), examined the relationship between exports and economic growth in the industrial sector in Iran. Based on the research results, the hypothesis of a positive impact of increased exports on the growth of the industrial sector in Iran is to be accepted. Ruba and Thikraiat (2014), examined the causal relationship between economic growth and exports in Jordan using the Granger methodology in order to determine the direction of the relationship

between the two variables during the period 2000-2012. The study found that there is a causal relationship going from the economic growth to Export, and not vice versa.

Turan and Bernard (2014), observed the relationship between export, import and Gross Domestic Product (GDP) in Albania by using annual data for the period between 1984 and 2012. Different empirical researches and macro econometric models indicates that there is an equilibrium relationship between exports, imports and GDP in the long term. Based on the study done, the imports have negative relationship with GDP while exports have a significant positive relationship with GDP.

Abogan et.al (2014), observed the impact of non-oil export on economic growth in Nigeria between 1980 and 2010. It examined the significant role of non-oil export on economic growth which the previous studies might have ignored and the aggregate non-oil exports data used by them might bias their conclusions. This study revealed that the impact of non-oil export on the economic growth was moderate and not all heartening as a unit increase in non-oil export impacted positively by 29% on the productive capacity of goods and services in Nigeria during the period.

Mohsen (2015), investigated the role of oil and non-oil exports in the Syrian economic over the period of 1975-2010. The cointegration test indicates that GDP is positively and significantly related to oil and non-oil exports. The Granger causality test indicates bidirectional short-run causality relationships between GDP, oil exports and non-oil exports. There is also bidirectional long-run causality relationship between non-oil exports to GDP, and unidirectional long-run causality relationship running from oil exports to GDP. The study result indicates that oil exports have the biggest effect on the GDP.

Syed et.al (2015), estimated the relationship between Gross domestic product (GDP) and agricultural and non-agricultural exports for Pakistan employing Johansen co-integration technique by using secondary data for the period 1972-2008. It was found that agricultural exports have a negative relationship with economic growth of Pakistan while non-agricultural exports have positive relation with economic growth.

Istaiteyeh and Ismail (2015), analyzed the relationship between foreign direct investment, economic growth and exports in Jordan. The co-integration method and vector error correction model were applied. The results confirm the existence of long-term causal links between variables studied. The results show a positive impact of export on GDP, rather foreign direct investment has no effect on GDP.

There is a correlation between non-oil and gas and oil and gas exports to the increase in foreign exchange reserves, so the framework can be formulated, see Figure 1 for the relationship of X_1 , X_2 , Y . Based on the design of the model, the proposed hypotheses are:

$H_0 = \beta_1 = \beta_2 = 0$, meaning that the value of non-oil and gas exports and oil and gas exports partially does not have a significant influence on the value of foreign exchange reserves.

$H_1 = \beta_1 = \beta_2 \neq 0$, meaning that the value of non-oil and gas exports and oil and gas exports partially has a significant influence on the value of foreign exchange reserves. In the research of

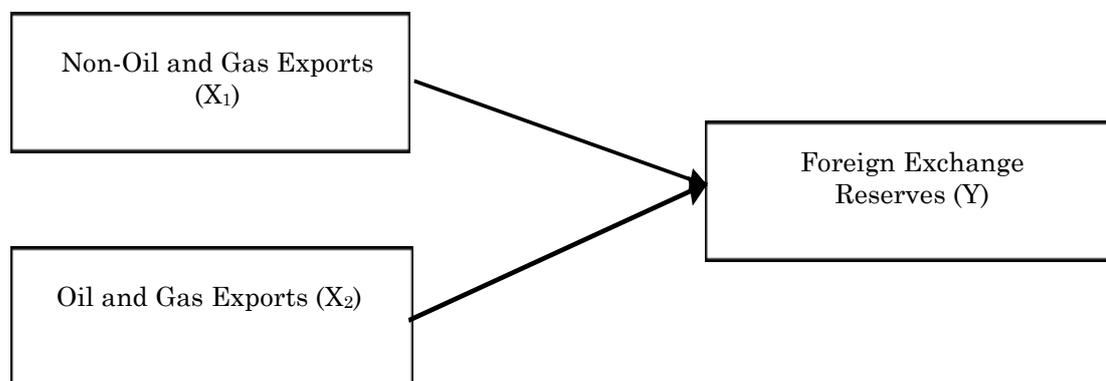


Figure 1. Conceptual Framework

explained above, each econometric estimate must be cleared of deviations from the basic assumptions.

At this phase, the One Sample Kolmogorov-Smirnov test was used to determine the distribution of data, namely whether it follows a normal, Poisson, uniform, or exponential distribution. Whereas, residual is normally distributed when the significance value is greater than 0.05 (> 0.05) (Gujarati & Porter, 2010). The result of normality test above can be concluded that data is normally distributed which can be seen in the significance value is greater than 0.05 ($0.092 > 0.05$).

This test was carried out using Run Test. In Table 3 shows that the significance value is greater than 0.05 ($0.126 > 0.05$). Therefore, there is no autocorrelation in the observation sample. This test was realized by using the Glejser test. This test will result a significant value for each independent variable on the dependent variable which show a significant value > 0.05 for each independent variable (Gujarati & Porter, 2010). From Table 4, it was concluded that all independent variables were free from the problem of heteroscedasticity.

In this test, the researchers compared the tolerance value and VIF. Alternatively, variables are said to have multicollinearity problems if the value of tolerance is < 0.1 or VIF value > 10 (Gujarati & Porter, 2010). In Table 5, it shows that each variable was free from multicollinearity.

Based on Table 5 above, a multiple linear regression equation was carried out, namely:

$$Y = -60.184 + 0.984X_1 + (-1.463X_2) + e$$

This regression has a negative constant of -60.184, meaning that if non-oil and gas and oil and gas exports were zero, then foreign exchange reserves would be negative, so an increase of 1 unit of application in the non-oil and gas exports variable (X_1) was as many as 0.984 by assuming that the oil and gas exports variable was permanent. Furthermore, if there were an increase in 1 unit of oil and gas export variable (X_2) of -1.463, it would be followed by a decline in foreign exchange reserves of 1.463 by assuming the variable of non-oil and gas exports was in a stable condition.

Table 2. Normality Test
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		
Normal Parameters ^{a,b}	Mean	0
	Std. Deviation	5995.044579
	Absolute	0.171
Most Extreme Differences	Positive	0.073
	Negative	-0.171
Test Statistic		
Asymp. Sig. (2-tailed)		.092 ^c

a. Test distribution is Normal.

b. Calculated from data

c. Lilliefors Significance Correction.

H. S. (2014) entitled "Analysis of Indonesian Oil and Gas and Non Oil and Gas Trade Balance Against Volatility of Foreign Exchange Reserves 2003-2013". Journal of Economic Development Analysis, states the results of his research: First, Bank Indonesia, as a party that has a monetary authority, Indonesia must be able to maintain the sustainability of foreign exchange reserves as an indicator that strengthens our economy. Second, the effective demand of the community will be responded by the industry to convince themselves to compete in foreign markets and support national income.

In Hasoloan's research, J. (2013) entitled "The Role of International Trade in Productivity and Economy", Edunomic Scientific Journal Pend. Economics, Volume 1 Number 2, 102-112, states the results of his research, which shows an increase in productivity through international relations such as the economies of scale, New Technology and Competition Stimulation. Where new technology is one that gets special assistance and attention from developing countries. Required on technology transfer from developed countries to developing countries is a topic that is often discussed in scientific circles or international negotiations between developing countries and developed countries.

Research Safdari and Zaroki, (2012), state the influence of exports on economic growth, indicating that each export growth has a positive influence on value-added growth, namely the industrial and mining sectors that enhance other sectors. Research Leftwich & M, (1980), states that national income is exports, increasing exports, the greater national income. Exports along with consumption, investment and government expenditure are injections of economic activity. The greater the injection, the greater the economic activity will take place.

METHOD

In doing the analysis, the researchers used partial equations in the linear equation model by involving the independent variable non-oil and gas exports (X1) and oil and gas exports (X2) on the dependent variable, foreign exchange reserves (Y). The analysis model used was multiple linear regression analysis to see whether there is influence of one or more independent variables on the dependent variable. (Siregar, 2013: 405) with the regression formula:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Notes:

- Y = Foreign Exchange Reserves (Million USD)
- X₁ = Non-Oil and Gas Exports (Million USD)
- X₂ = Oil and Gas Exports (Million USD)
- β₀ = Constants
- β₁ = Non-Oil and Gas Exports Regression Coefficient
- β₂ = Oil and Gas Export Regression Coefficient
- ε = Error Term (Standard Error)

The population of this study was foreign exchange reserves, non-oil and gas exports and oil and gas exports. This research is using annual data for a period of 22 years from 1996 to 2017. The study is based on the secondary data which is collected through various data sources of Statistical Center Bureau's publications, scientific journals, and related literature. While the time series data is in the form of Million USD.

RESULTS AND DISCUSSIONS

Prior to conducting a regression test, it is necessary to do normality, autocorrelation, multicollinearity and heteroscedasticity test to so that data and models can be said to meet the classical assumption test (Gujarati & Porter, 2010). After that, regression analysis can only be continued. The estimated parameters were tested statistically to see whether the hypotheses are accepted or rejected. For more, the testing was done by t-test, F-test and Adjusted R-squared. As

The results of partial hypothesis testing can be seen in table 5, which are: First, the significance value of the variable X₁ is 0,000 < 0,05, then H₁ was accepted and H₀ was rejected. Partially, variable X₁ has a positive and significant impact on foreign exchange reserves. Second, the significance value of the variable X₂ is 0,000 < 0,05, then H₁ was accepted and H₀ was rejected. Partially, variable X₂ has a positive and significant impact on foreign exchange reserves. Based on Table 6, it is shown that R-square is 0.973 which means that non-oil and gas exports and oil and gas exports in the regression equation are able to explain 97.3% of variations in changes in foreign exchange reserves, while the remaining 2.7% are influenced by other variables. Therefore, it is concluded that non-oil and gas exports and oil and gas exports has a strong impact simultaneously in increasing Indonesia's foreign exchange reserves.

Table 3. Autocorrelation Test Run Test

	Unstandardized Residual
Test Value ^a	1134,11290
Cases < Test Value	11
Cases >= Test Value	11
Total Cases	22
Number of Runs	8
Z	-1.529
Asymp. Sig. (2-tailed)	0.126

a. Median

Table 4. Glejser test Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2647.320	1437.217		1.842	0.081
Non-Oil and Gas Exports	-0.037	0.021	-0.546	-1.764	0.094
Oil and Gas Exports	0.288	0.104	0.857	2.771	0012

a. Dependent Variable: ABS_RES

Table 4. Glejser test Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constants)	-60.184	3286.104		-0.018	0.986		
Non-Oil and Gas Exports	0.984	0.048	1.253	20.555	0.000	0.386	2.593
Oil and Gas Exports	-1.463	0.237	-0.376	-6.166	0.000	0.386	2.593

a. Dependent Variable: Foreign Exchange Reserves

Thus, export activities are a way for a country to run sales of both non-oil and gas and oil and gas commodities that we have to the Country. It is done in accordance with government regulations to obtain benefits as an increase in foreign reserves. Further, the estimation and the results of the tests above are in accordance with the theory which states that if exports increase, the amount of foreign exchange reserves owned will also increase as well.

The results of this study are in line with the research of Safdari and Zaroki (2012) entitled "The Effect of Exports on Economic Growth" which shows that each export growth has a positive effect on value-added growth, namely the industrial and mining sectors that exceed other sectors. And confirmed also by the statement Leftwich & M (1980), that national income is a function of exports, if exports increase, the greater the national income, because together with consumption expenditure investment and government expenditure is an injection of economic activity, that the greater the injection, there will be greater economic activity.

Thus, the results of testing the relationship between non-oil and gas exports to foreign exchange reserves were in accordance with the expected hypothesis, that is a positive relationship. This means that non-oil and gas exports has a positive impact and influenced Indonesia foreign exchange reserves. In addition, the comparison of the development of non-oil and gas exports and oil and gas exports (see table 1) illustrated that the value of non-oil and gas exports is always higher than oil and gas exports. This means that non-oil and gas exports has turned into the dominant economic activity to become the engine of growth for Indonesia foreign exchange reserves, compared to oil and gas export activities which are lower in revenue for Indonesia foreign exchange reserves. This was due to the decline in oil and gas production capacity in almost all production fields of the Cooperation Contract Contractors (KKKS). It was known that more than 2.5 years the price of oil averaged below US \$ 45 per barrel, so it was not economical for all KKKS. This would reduce investment to drill development wells to keep production stable or to increase production. Whereas, efforts to increase oil and gas exports are highly dependent on world oil prices because from the first exploration, from the beginning to the sale stage, it took a range of 6 to 7 years. As a result, it requires a substantial investment from the state budget financing. If the state budget funds are insufficient, it will also affect Indonesia foreign exchange reserves.

Thus, export activities are a way for a country to run sales of both non-oil and gas and oil and gas commodities that we have to the Country. It is done in accordance with government regulations to obtain benefits as an increase in foreign reserves. Further, the estimation and the results of the tests above are in accordance with the theory which states that if exports increase, the amount of foreign exchange reserves owned will also increase as well.

The results of this study are in line with the research of Safdari and Zaroki (2012) entitled "The Effect of Exports on Economic Growth" which shows that each export growth has a positive effect on value-added growth, namely the industrial and mining sectors that exceed other sectors. And confirmed also by the statement Leftwich & M (1980), that national income is a function of exports, if exports increase, the greater the national income, because together with consumption expenditure investment and government expenditure is an injection of economic activity, that the greater the injection, there will be greater economic activity.

Table 6. Determination Coefficient Test (R_2) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,986 ^a	0.973	0.970	6302.68009

Predictors: (Constant), Oil and Gas Exports, Non-Oil and Gas Exports
 Dependent Variabel : Foreign Exchange Reserves

Thus, the results of testing the relationship between non-oil and gas exports to foreign exchange reserves were in accordance with the expected hypothesis, that is a positive relationship. This means that non-oil and gas exports has a positive impact and influenced Indonesia foreign exchange reserves. In addition, the comparison of the development of non-oil and gas exports and oil and gas exports (see Table 1) illustrated that the value of non-oil and gas exports is always higher than oil and gas exports. This means that non-oil and gas exports has turned into the dominant economic activity to become the engine of growth for Indonesia foreign exchange reserves, compared to oil and gas export activities which are lower in revenue for Indonesia foreign exchange reserves. This was due to the decline in oil and gas production capacity in almost all production fields of the Cooperation Contract Contractors (KKKS). It was known that more than 2.5 years the price of oil averaged below US \$ 45 per barrel, so it was not economical for all KKKS. This would reduce investment to drill development wells to keep production stable or to increase production. Whereas, efforts to increase oil and gas exports are highly dependent on world oil prices because from the first exploration, from the beginning to the sale stage, it took a range of 6 to 7 years. As a result, it requires a substantial investment from the state budget financing. If the state budget funds are insufficient, it will also affect Indonesia foreign exchange reserves.

CONCLUSION AND RECOMMENDATIONS

The results of the analysis that has been done concludes that partially variables X1 and X2 have a positive and significant influence on Y. This shows that when non-oil and gas exports and oil and gas exports rise, it will increase Indonesia foreign exchange reserves so that macro will increase Indonesia economic growth extensively.

This study provides suggestions as follows: First, the non-oil and gas sector needs to involve various government agencies, such as the Ministry of Trade, the Coordinating Ministry for Economic Affairs, the Ministry of Transportation and so on so that private agencies synergize with regional governments as commodity contributors; Empowering the role of regional governments to encourage commodities in their regions by standardizing and improving the quality of export commodities as their mainstay; Government participation is needed to provide support to entrepreneurs in the form of product subsidies and promotional subsidies, as well as there is a need for the establishment of promotional boards that market non-oil and gas commodities needed in the international market. This needs to be done in order to have competitiveness with foreign products; and the government needs to provide incentives in the form of decreasing export taxes.

Second, the oil and gas sector needs the role of the government in cooperating with investors to search for energy sources to diversify mines; Efforts are needed to find new and renewable energy as an energy source for the international market. Third, even though this model is free from the classic assumption test, but still relatively simple since there are still unmatched variables with the expected hypotheses. It is recommended for the next researcher to add other variables so as to give the estimation results more precisely.

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