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Research Article

How Important Are Government Expenditures And Exports For Indonesia's Economic Growth?

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Abstract: This study aims to examine and analyze the influences of government expenditures and net exports on Indonesia's economic growth both in short- and long-run over the period 1967-2017. Based on the error correction modeling, the study found that, in the long-run, both government expenditures and net exports significantly and positively affected Indonesia's economic growth. In the short-run, the study also documented the important role of government expenditure and net exports to further enhance economic growth. These findings show the importance of mixed economic policies, expansionary fiscal and monetary policies by allocating more government expenditures into productive economic sectors and offering more tax- and interest-incentives for the exporters to further transact their products and services into the international trading markets.

Keywords: Government spending, net exports, economic growth, Indonesian economy.

INTRODUCTION

Economic growth is one of the indicators of the success of development in an economy. Economic growth measures the achievement of the development of an economy from one period to the next. The progress of an economy is determined by the magnitude of growth indicated by changes in national output. One of them is government expenditures that lead to productive activities and trigger output growth. Excess expenditure can be balanced with revenues, one of which is through export activities. Consequently, increased output growth can encourage export activities. In the view of Mitchell (2005), the ups and downs of economic growth in a country are often influenced by several macroeconomic determinants, one of which is government expenditures. It has a very influential role to stabilize the economy since the policy-maker uses them as the economic instruments for fiscal policy (Rosoiu, 2015).

As a big-open economy, trade between Indonesia and its major trading partners is not new. As a developing country with potential natural resources owned, Indonesia potentially generates abundant revenues through international trade activities. The existence of export activities could provide the government with income in the form of foreign exchange. The more export activities, the greater foreign exchange earned by the state. Amalia (2007) states that without cooperating and exchanging commodities with other countries for goods and services, it is not an easy task for Indonesia to enhance its economic development. International trade is one of the main factors to increase economic growth, which is commonly measured by the changes in the real Gross Domestic Product (GDP) (Ekananda, 2014). It shows the total expenditure on the output of goods and services in the economy and is divided into four groups of expenditure, namely consumption, investment, government expenditure, and net exports (Mankiw, 2006).

Furthermore, Esteves and Elvira (2018) view that the development of domestic demand is more relevant by explaining exports in countries with a low product concentration index (i.e., more diverse exports). The negative relationship between domestic demand and export performance points to some substitution of company sales between domestic and foreign markets. Besides, the substitution effect is very important when

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domestic demand is depressed. This is an additional channel of adjustment to the real exchange rate implied by low inflation and a fixed exchange rate. Different export behavior, the final evaluation of adjustments will also be different.

The above delineation shows the important role of trade in the form of exports as the engine of economic growth for developing countries, including Indonesia. Increasing export growth illustrates that the economic activities that are taking place in a country are going smoothly (Salvatore, 2014). Case and Fair (2009) find that net exports greatly affect income and in turns, it stimulates economic growth. If the net export value is positive, it means that the export value is greater than the import value. On the contrary, if net exports are negative, that means that the export value is smaller than the import value.

Overall, the ups and downs of economic growth in Indonesia have been contributed by several macroeconomic factors, including government expenditures and net exports. Government expenditures could lead to productive activities and in turns trigger output growth. Excess expenditure can be balanced with revenues, one of which is through export activities. In the macroeconomic model, this relationship is explained by Keynes' model, $Y = C + I + G + (X-M)$. If there is an increase in consumption, investment, government expenditure, and net exports, it will increase the production of goods and services. The increase in the production of goods and services cause the output to increase and consequently promote economic growth (Umar, 2016).

There have been few studies investigated the effects of government expenditures and net exports on and economic growth for the cases of different countries and with data period, including Indonesia. Different to study by Nizar (2015) on the Indonesian economy that only investigated the role of government expenditures on economic growth using vector autoregressive method with a shorter period of study; this study investigates the effects of both government expenditures and exports with a longer data period, 1967-2017 on Indonesia's economy in the short- and long-run perspectives. By filling the existing research gaps, the findings of this study are hoped to shed some lights for policy-makers on the importance of government expenditures and exports in promoting the national economy of Indonesia.

The rest of this study proceeds to provide the selected literature reviews in Section 2 and followed by the discussion on research method in Section 3. Section 4 provides the findings and their discussion and ended with the concluding remarks in Section 5.

LITERATURE REVIEW

To measure economic growth, the Growth Domestic Product (GDP) is commonly used. According to Latumaerissa (2015), the GDP shows the total value of all goods and services produced by a country in a certain period of one year including goods and services produced by companies belonging to the population of that country and by residents of other countries living in the country concerned. The GDP summarizes economic activity in a certain value of money over a period of time. Furthermore, as total expenditure on the output of goods and services in the economy, GDP is divided into four expenditure groups, namely consumption (CON), Investment (INV), government expenditure (GEX), and net exports (NEX) (Mankiw, 2006). CON is all goods and services purchased by households; INV is goods purchased for future use; GEX is goods and services purchased by the central and regional governments; and NEX is the value of goods and services exported to other countries minus the value of goods and services imported from other countries.

To promote economic growth, there are many macroeconomic determinants need to be focused on such as government expenditures and exports. For example, for the case of the U.S economy, Atems (2019) found that an increase in government expenditure shocks has contributed to an increase in economic activity, real output, employment, and real wages. For the UK economy, Glocker *et al.*, (2019) showed that government expenditure varies over time, and it has affected the economy.

Another study by Maulana (2015) and Lelis *et al.*, (2018) explored the contribution of exports on the economy. Maulana (2015) documented that foreign direct investment, net exports, and budget policy deficits caused changes in the economic growth of the ASEAN countries. Specifically, foreign direct investment and net exports have a positive and significant influence on economic growth, while the budget deficit has a negative and significant influence on economic growth. Lelis *et al.*, (2018), in their study, found a low sensitivity of exports to changes in real exchange rates, but exports were more sensitive to changes in commodity prices than changes in real exchange rates. Finally, Sunde (2017) found that net exports had a positive effect on economic growth, showing a sign of a high level of international competitiveness, where if net exports are positive, it will increase national income (Olczyk *et al.*,, 2017).

Furthermore, Ozatac (2018) explored the relationship between government spending on education and economic growth in France and found that government spending is one of the determining factors for economic growth. Similarly, Mitchell (2005) showed that the impact of the ups and downs of economic growth in a country is often influenced by

several factors in economic activity, one of which is government expenditure. Babatunde (2018) examined the effect of government spending on infrastructure and economic growth in Nigeria and documented that government spending has a significant influence on economic growth.

The above-reviewed studies show the importance of government expenditure and exports on the economy both developed and developing economies. This study tries to fill up the existing gaps in the government expenditure-exports-economic growth interconnections both in short- and long-run perspectives in Indonesia's economy.

RESEARCH METHODS

Annual time series data of government expenditures, net exports, and economic growth over the period 1967 to 2017 were used in this study. All data were obtained from the World Bank Report and Indonesian Statistical Bureau. Government expenditures are the total expenditures spent by the government for development purposes measured in the IDR, net exports are the total value of exports minus the total value of imports measured in the IDR, and economic growth is measured by the changes in the value of the real gross domestic product in the IDR.

The cointegration approach and Error Correction Model (ECM) are used in this study to explore the existence of long-run equilibrium and short- and long-run relationships between government expenditure, net exports, and economic growth in Indonesia. Since the study uses the time series data, thus the unit root test based on the Phillips-Perron analysis is performed first to ensure the stationary data as an important basis for the validity of the time series estimation process. The advantage of this model is that if there are circumstances where the variables are non-stationary, but the linear combination is stationary then the condition is known as cointegration. One of the requirements of the ECM is that for the cointegration test, all variables should be non-stationarity at the same level of integration. After ensuring all variables are stationary, the study then proceeds to test the existence of cointegration among the investigated variables.

Finally, to measure the short- and long-run relationship among the variables, the following ECM equations are estimated:

$$ECG_t = \beta_1 + \beta_2 \Delta GEXP_{t-i} + \beta_3 \Delta NEX_{t-i} + \beta_4 ECt_{t-1} \quad (3.1)$$

Where ECG is the economic growth, GEX is the government expenditure, NEX is the net exports, ECT is the error correction term, and β_i are the estimated coefficients.

The coefficient of the ECT describes the speed of adjustment from the short-term to the long-term balance, where imbalances due to shocks in the previous year will be corrected for the long-term balance in the next period. According to Majid (2007a; 2007b; 2007c), Majid *et al.*, (2007), and Majid and Kassim (2015) to have a valid model, the cointegrated variables must have a negative ECT value and statistically significant. The cointegration equation is used to measure the long-run relationship, while the ECM is used to analyze the short-term relationship between variables.

FINDINGS AND DISCUSSION

Table 1 reports the stationary test results of the variables based on the Phillips-Perron test. As observed from Table 1, all variables were non-stationary at the level, but they become stationary at the first-difference at the 1% level of significance. Based on this finding, thus the cointegration test can be further conducted as the variables were stationary at the same level of integration, *I*(1).

Table1. Findings of the Phillips-Perron stationarity' test

Variable	Probability	
	At Level	At First-Difference
ECG	0.3955	0.0000***
GEX	0.1100	0.0001***
NEX	0.2400	0.0000***

Note: *** indicates significance at the 1% level.

After confirming the stationarity of all variables, the study proceeded to test the cointegration and found that there existed long-run equilibrium among the variables. This finding indicates that all variables tend to move together in the long-run, thus by relying on one variable; the other variables in the model could be estimated.

Table2. Findings of the short- and Long-run relationships based on the ECM

Variable	Coefficient	t-statistic	Probability
GEX	0.0109	1.7573*	0.0855
NEX	1.1837	24.2753***	0.0000
ECT(-1)	-0.2158	-2.0963**	0.0416
Constant	-14.6357	-8.7876***	0.0000
Adj-R-square = 0.93759; F-statistic = 0.0000			

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

As illustrated in Table 2, the study found that, in the long-run, government and net export positively and significantly affected economic growth at 10% and 1% levels, respectively. Specifically, as the government expenditures and net exports increased by 10%, it has contributed to an increase in economic growth by 0.109% and 11.837%, respectively. This study also documented the greater importance of export to the economy as compared to government expenditures. This finding simply due to the government expenditures are based on government revenue, which is one of

them, is from exports. This finding is in line with the previous studies by Cooray (2009), Umar (2016), and Sunde (2017) who found that government expenditures and net exports have a positive effect on economic growth. An increase in government expenditures would enhance productivity levels and consequently promote economic growth.

Furthermore, our findings are also similar to those of Rosoiu (2015), Olczyk *et al.,* (2017), and Ozatac *et al.,* (2018). Rosoiu (2015) and Ozatac *et al.,* (2018) found a positive relationship between government expenditures and economic growth. As one of the fiscal policy instruments, thus the Indonesian government must design expansionary fiscal policy by increasing government expenditure to further promote the national economic growth. Expansionary fiscal policy would enhance productivity levels, which is one of the most crucial factors contributing to economic growth. However, policy-makers must be aware of allocating more resources to boost productive economic activities so that it could strengthen the impact of government expenditure on the national economy.

The net export has also been found by Olczyk *et al.,* (2017) to positively affect economic growth. This finding further suggests the importance of promoting more exports and reducing imports. The government might provide more incentives such as tax incentives and lower lending interest rate for exporters, either individual businesses or companies who export their products and services to foreign countries. Additionally, the government should also stabilize the IDR exchange rate, since the higher volatility of the exchange rate in the country offers riskier international trading activities.

Finally, Table 2 also shows the results of short-term estimation through the presence of the error correction term (ECT) in the model. The ECT value in the ECM model determines the speed of short-term balance adjustment towards the long-run equilibrium. As illustrated in Table 2, the ECT has a negative value (-0.2158) and significance at the 5% level, showing that the difference between the desired results and the actual error or an existing short-run disequilibrium in the Indonesian growth, it would be corrected by 21.58% in the next year moving towards long-run equilibrium. In other words, to clear the short-run equilibrium between the government expenditures and net export and economic growth, it takes 4.6 years to restore to the long-run equilibrium in the context of the Indonesian economy.

CONCLUSION

This study empirically examined and analyzed the short- and long-term relationships between government expenditures and net exports on Indonesia's economic growth over the period 1967-2017 using the error correction model. In the long-run, the study documented that both government expenditures and net exports significantly and positively affected Indonesia's economic growth. In the short-run, the study also documented the important role of government expenditure and net exports to further enhance economic growth. Our findings suggest the policy-makers on the importance of designing mixed economic policies to promote the economic growth of the country. Expansionary fiscal and monetary policies could be done through the allocation of more government expenditures into productive economic sectors and offering more tax- and interest-incentives for the exporters to further increase exports of their products and services into the foreign markets.

Further studies on the relationship between government expenditures, net exports, and economic growth are suggested to consider more socio-economic factors into the model. Identifying the causalities among the variables would also provide an inclusive insight into the directional causal effects between government expenditures, net exports, and economic growth.

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