

IMPACT OF EXPORTS AND TRADE TAXES ON INDONESIA'S ECONOMIC GROWTH

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Abstract

This research endeavors to comprehensively investigate the intricate dynamics between the export of goods and services, as well as international trade tax receipts, encompassing import and export duties, and their collective impact on the economic growth trajectory of Indonesia over the period spanning from 1985 to 2019. The study meticulously employs secondary data gleaned from reputable sources such as the World Bank and the Ministry of Finance. Utilizing the robust analytical framework of the Error Correction Model within a linear regression analysis, this research delves into the nuanced relationships and temporal aspects that underscore the interplay between these critical economic variables. The findings of this study unveil compelling insights into the long-term effects of exports, import volumes, and the revenues generated from import and export duties on the overall economic growth of Indonesia. Notably, the research establishes that, over the extended time horizon, these variables exhibit a statistically significant influence on economic growth. However, the short-term dynamics present a nuanced picture, as the study reveals that, in the immediate context, neither exports nor import and export duties manifest a discernible impact on economic growth. In conclusion, this research contributes to the existing body of knowledge by shedding light on the multifaceted relationships between key components of international trade and economic growth in Indonesia. The implications of these findings extend beyond the confines of this specific study, providing valuable insights for policymakers, economists, and stakeholders seeking a deeper understanding of the intricate economic landscape.

Keywords: Taxes, Expor, Economic Growth, ECM.

1. INTRODUCTION

Economic growth which has the same meaning as economic development, economic progress, economic welfare (Jhingan 1987) is the process of increasing output per capita in the long term. Economic growth is a quantitative measure that describes the development of an economy in a particular year compared to the previous year and is always in percentages (Sadono 2010). The most important indicator of economic growth is the increase in gross domestic product (GDP) and gross national product (GNP).

Figure 1 below shows that Indonesia's GDP per capita during the 2015-2019 period has changed with an upward trend from year to year. Indonesia's GDP per capita reported by World Development Indicators amounted to 40,459,014.20 (in million rupiah) in 2019 and became the highest figure during that period. The increase in economic growth cannot be separated from several factors that influence it.

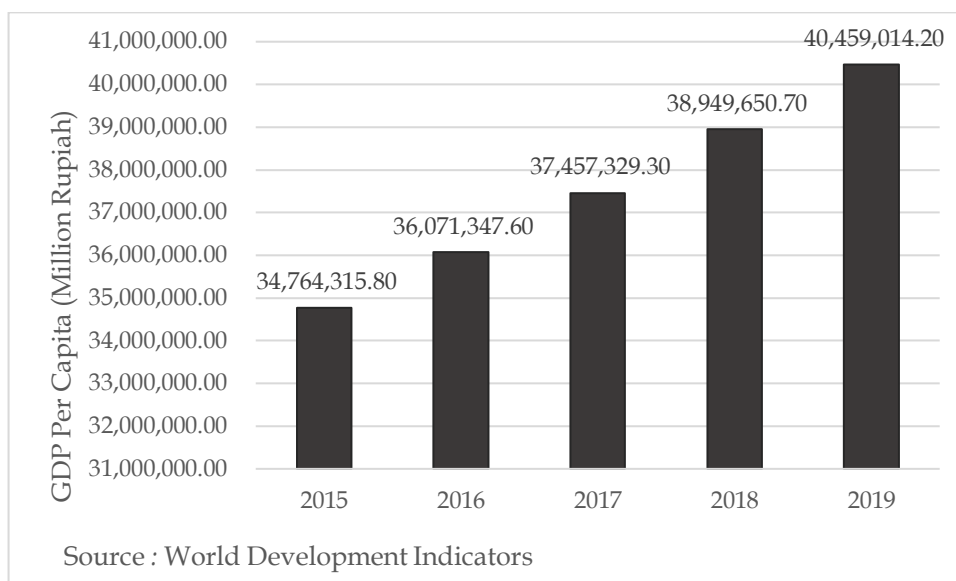


Figure 1. Indonesia's GDP Per Capita 2015-2019

Many factors can affect the growth of GDP output or GDP. Some of them, as stated in Keynes' theory, are export and import and consumption. Consumption also affects economic growth which is also influenced by several other factors, one of which is the role of the taxation system in Indonesia. Taxes have a very important role in economic growth and for state income, even most of the income for the state comes from taxes. Based on the KUP Law NUMBER 28 YEAR 2007, article 1, paragraph 1, the definition of Tax is a mandatory contribution to the state owed by individuals or entities that are compelling based on law, with no direct reward and used for state purposes for the prosperity of the people.

Tax revenue in Indonesia in recent years has always increased. In the realization of the state revenue and expenditure budget, the increase in tax revenue occurred in 2010, tax revenue was realized at 743,325.906 (in billion rupiah) and continued to increase until 2019 at 2,164,676.52 (in billion rupiah). In the proportion of tax revenue, there are international trade tax revenues which include import duties and export duties which also become a small part in contributing to the budget revenue, which is around 2% of the total tax revenue in 2019, although it has a small number in the percentage of contributions to total tax revenue, it does not rule out the possibility of import duty tax revenues and export duty taxes still having an impact on economic growth in Indonesia.

Export duty is a state levy based on this Law imposed on exported goods while import duty is a state levy on imported goods in accordance with the provisions of the applicable Law, the imported goods are then subject to tariffs based on the classification of goods. the determination of Import Duty rates on imported goods is grouped based on the goods classification system (Article 12) in Law No. 17 of 2006 concerning Amendments to Law No. 10 of 1995 concerning Customs. Meanwhile, Taxes in the Framework of Import (PDRI) are taxes levied by the Directorate General of Customs and Excise on Imported Goods consisting of Income Tax (PPN), Luxury Goods Sales Tax (PPnBM), and Income Tax Article 22 (PPh Article 22).

If it continues to increase, taxes will increasingly affect consumption, which has an impact on reducing the level of consumption, therefore other factors are needed that have

a major influence to support economic growth in Indonesia, for example implementing international trade in export and import activities.

According to Adam Smith's classical theory in Suryana (2000) there are two main aspects determining economic growth, namely total GDP (Gross Domestic Product) output growth and population growth. According to Smith, total GDP output growth can occur when a country makes a profit, while the country carries out activities to gain more profit through international trade. The activity is in the form of export and import activities, the profit is obtained from the reduction of exports to imports called net exports.

Some economists at that time, namely David Ricardo (1772-1823), Adam Smith (1723-1790) and John Stuart Mill have shown that foreign trade, especially exports, can provide several benefits to national income which in turn will encourage the economic growth of a country. This has been studied by Nopeline and Simanjuntak (2017) with results showing that exports affect GDP in the long term, then exports in the short term show a positive relationship with economic growth or GDP.

It has been mentioned that Indonesia's economic growth based on GDP per capita has always increased in the 2015-2019 period, but this is different from the value of Indonesia's exports of goods and services. The value of exports of goods and services in Indonesia based on data obtained from the World Bank in 2016 the value of exports fell by around 33 trillion from the original 2015 amount of 2,004 trillion to 1,971 trillion. The decline in exports also occurred in 2019 by 20 trillion. Based on this data, it can provide an illustration or assumption that when the value of exports of goods and services decreases, it will not cause economic growth to decrease as well.

Based on the description above, the researcher wants to ensure that how exports affect economic growth and wants to know how the influence of international trade tax revenues which include import duties and export duties on economic growth in Indonesia during the 1985-2019 period in the long term and short term using multiple regression analysis with the ECM method. In this case, a title was written "The Effect of International Trade Tax Revenues and Exports on Economic Growth in Indonesia".

2. LITERATURE REVIEW

2.1. Economic Growth

Economic growth theory can be defined as an explanation of what factors determine the increase in output per capita in the long run and an explanation of how these factors so that the growth process occurs (Boediono 2002). To explain output per capita, growth theory must include the theory of total GDP and the theory of population growth. While the long-term perspective explains that growth or at least the trend of growth occurs in the long term, at least 10 years.

Todaro (1994:282) argues that economic growth can be defined as a steady process in which the productive capacity of an economy increases over time to produce a greater level of national/local income (Terakhir et al. 2010). Meanwhile, Prof. Kuznet, who received the Nobel Prize in "Economic Sciences" in 1971, defines economic growth as the long-term ability to provide an increasing range of economic goods to society. This ability grows on the basis of the necessary technological, institutional, and ideological advances (Suryana 2000).

According to the definition of economic growth above, the measurement indicator of economic growth that meets these criteria is gross domestic product (GDP) or the term

in Indonesian is defined as gross domestic product (GDP), which is defined as the total value or market price of all final goods and services produced by an economy during a certain period of time (usually 1 year) (Terakhir et al. 2010).

Economic growth theory is divided into two schools, namely the historical school and the analytical school (Zainuddin 2017). Some important growth theories, which are included in the analytical school are classical growth theories, Neoclassical Growth Theory and Endogenous Growth Theory (New Growth Theory).

2.1.1. Classical Growth Theories

According to Classical Economic Theory (Adam Smith) the main elements of the production system are natural resources, human resources (number and quality of population), and capital stock. According to this theory, available natural resources are the maximum limit for economic growth. At the stage where the natural resource element has not been fully utilized, the increase in production will be determined by human resources and capital stock. As output continues to increase, natural resources will be fully utilized.

The second element of production is population. According to this theory, population is passive, adjusting to the level of labor demand. Furthermore, the increase in population will give birth to occupational specialization, which in turn will increase productivity. Smith placed the central role of the third element, the growth of capital stock or capital accumulation, in the process of output growth. According to Smith, the capital stock has two influences on the level of total output, namely the direct influence in the form of additional capital and the indirect influence in the form of increased productivity through the possibility of increased specialization and division of labor. The larger the capital stock, the greater the possibility of specialization and division of labor, and the higher the productivity per worker. Two important factors related to capital accumulation are market expansion and the rate of profit above the minimum profit level. Smith underlined the importance of market expansion and freedom (competition) in promoting economic growth which can be done by eliminating regulations, laws that become obstacles to freedom of business and economic activity.

David Ricardo developed Smith's Classical Theory of Growth into a sharper model both in terms of concepts and in terms of the mechanism of the growth process. According to Ricardo, with limited land, population growth will produce a decreasing marginal product, better known as the law of diminishing return. The only opportunity to keep increasing economic growth is the possibility of technological progress.

2.1.2. Neoclassical Growth Model (Solow-Swan)

According to Neoclassical Theory, economic growth depends on the availability of factors of production: population, labor, and capital accumulation and the level of technological progress (Arsyad 2010). The analysis of this theory is based on the assumptions of classical theory, namely that the economy is at full employment and full utilization of its factors of production. The model explains that the technology used determines the amount of output produced from a given amount of capital and labor. The Neoclassical Growth Theory presented in the Cobb-Douglas function emphasizes the role of capital formation as one of the important factors in growth. Solow (in Jhingan, 1983; Mankiw, 2007) emphasizes long-term growth and the role of capital, labor and technology as factors of production. Furthermore, according to Solow, growth will occur

if there is capital, population growth and technology, although technology is still considered an exogenous factor. Thus the production function can be formulated into the following Equation 2.1:

$$Y = F(K, L \times E)$$

Where E is a variable called labor efficiency. $L \times E$ measures the number of effective workers which takes into account the number of workers L and the efficiency of each worker. This production function states that total output Y depends on the number of capital units K and the number of effective workers $L \times E$. This means that an increase in labor efficiency E goes hand in hand with an increase in the labor force L (Mankiw, 2007). In this model, savings will temporarily boost economic growth, but the diminishing returns to capital will eventually lead to a steady-state economy dependent on (exogenous) technological progress.

2.1.3. Endogenous Growth Model (New Growth Theory)

One of the goals of growth theory is to explain the sustained rise in living standards. The Solow Growth Model suggests that sustainable growth comes from technological progress. But where technological progress comes from is seen as an exogenous factor that is still an assumption, which is often called the Solow Residue. Next came the Endogenous Growth Theory developed by Paul Romer in the late 80's. This theory views that growth is determined by the system that regulates the production process (endogenous) not by forces from outside the system. Therefore, this theory considers it important to identify and analyze factors that are endogenous to the economic system, which affect economic growth (Todaro, 2006; Gordon, 2000; Mankiw, 2007). The Endogenous Growth Theory pays attention to the return to capital in maintaining sustainable growth. If the production function is $Y=AK$, where Y is output, K is capital stock, and A is a constant that measures the amount of output produced for each unit of capital, then $\Delta K = \delta Y - \delta K$, where ΔK is the change in capital stock, sY is investment and δK is depreciation, then the growth rate of output is shown by Equation 2.2 (Mankiw, 2007):

$$\frac{\Delta Y}{Y} = \frac{\Delta K}{K} = \delta A - \delta$$

Where $\frac{\Delta Y}{Y}$ is the growth rate of output, $\frac{\Delta K}{K}$ is the growth rate of capital. As long as $sA > \delta$ or $sA - \delta$ is greater than one, economic growth can take place even without the assumption of technological progress.

In Endogenous Growth, savings and investment can drive sustainable growth, with K (capital) assumed more broadly to include knowledge. Endogenous Growth Theory explains the factors that determine the magnitude of A, the growth rate of GDP, which is not explained and is considered an exogenous variable in the Neoclassical Solow Growth calculation (Solow Residual). Paul Romer explains three basic elements in endogenous growth, namely technological change that is endogenous through a process of accumulation of knowledge, new ideas by companies as a result of the knowledge spillover mechanism, and the production of consumer goods produced by the production factor of science will grow without limit (Arsyad 2010).

2.1.4. Keynesian Theory

Keynesianism is a manifestation of capitalism that has reached a mature stage which essentially requires government intervention in an effort to increase economic growth (Kuncoro 2010).

Keynesian theory states that the growth of national income is determined by the amount of consumption expenditure, government expenditure, investment and net exports. To increase economic growth as measured by the increase in national income, it is necessary to increase consumption demand, government spending demand, investment demand, and export and import demand which can be formulated as follows:

$$Y = C + I + G + X - M$$

Where (Y) is the total value of all production of goods and services produced by a country within a certain period of time. In terms of approach, National Income expenditure is the sum of expenditures made by all sectors in a country. These sectors are the household sector, the business sector, the government sector and the international trade sector. Household sector spending is reflected by public consumption (C), business sector spending is reflected by investment made by companies (I), government sector spending and income (G), while foreign trade spending is reflected in the difference between exports and imports of the country concerned (X-M).

The above theories place economic growth factors in the form of capital (money invested by both private and government parties) and labor as important determinants of growth. However, in ensuring long-term growth, the role of technology is important.

2.2. Export

According to theory, exports are the activities of selling goods and services carried out by domestic producers to foreign consumers, usually through bank intermediaries as guarantors and to facilitate transactions (Nopeline and Simanjuntak 2017). Exports do not depend on the situation in the country, but instead affect the income of people abroad. Exports, especially net exports, can affect a country's Gross Domestic Product (GDP). An increase in exports will increase net exports, which of course will increase GDP at the same time. An important function of the export component of foreign trade is that the country makes a profit and national income rises, which in turn increases the amount of output and the rate of economic growth. With higher output levels the vicious cycle of poverty can be broken and economic development can be enhanced (Jhingan 2010).

Meanwhile, according to (Solow, 1956) according to the neo-classical theory of exogenous economic growth explains that the role of exports has no influence on economic growth. This is because according to neo-classical theory, economic growth is only influenced by production input factors such as capital and labor and technological improvements (Ginting 2017).

Relatively high export growth may bring relatively high economic growth. Therefore policies that stimulate and encourage exports need to be taken to achieve economic growth.

The results showed that in the first model to see the effect of aggregate exports on economic growth showed that imports of capital goods had a significant effect in the short term on economic growth. While in the long run, the variable that has a significant effect

on economic growth is capital investment. While the second model to see the role of exports by sector on economic growth found that industrial sector exports have a significant influence both in the short and long term on economic growth (Asbiantari, Hutagaol, and Asmara 2016).

2.3. Import Duty

According to (Jafar, 2015), Import duty is a state levy imposed on goods imported for use. The Minister of Finance is authorized to exempt import duties on imported goods for certain reasons as stipulated in Law of the Republic of Indonesia Number 17 of 2006 concerning Amendments to Law Number 10 of 1995 concerning Customs. The imposition of Import Duty tariffs in accordance with the laws governing it, namely on imported goods, Import Duty is levied based on a rate of up to 40% (forty) percent of the customs value for the calculation of Import Duty. There are 2 (two) ways of imposing Import Duty tariffs, namely:

- a) Advalorem tariff (percentage).
- b) Specific tariffs Based on the explanation above, it can be concluded that Import Duty is a state levy for imported goods that must be paid when the goods are imported for use or in accordance with the provisions of the Minister of Finance.

Based on the explanation above, it can be concluded that Import Duty is a state levy for imported goods that must be paid when the goods are imported for use or in accordance with the provisions of the Minister of Finance (Sari, Hidayat, and Setyawan 2016).

2.4. Import Duty

Import-export transactions are simple international trade transactions and are nothing more than buying and selling goods between entrepreneurs located in different countries. International trade is a cross-border buying and selling transaction, which involves two parties buying and selling across national borders (Maisyarah 2019).

In contrast to import duties, export duties are levies by the state based on laws imposed on goods leaving Indonesian territory. Exit duty itself is often referred to as export duty because the duty is imposed on exported goods. But, what do exports have to pay duties for? It turns out that export duties are imposed for the purpose of ensuring the fulfillment of domestic needs, aka so that there is no massive export without considering national needs. In addition, the implementation of export duties also aims to protect the preservation of natural resources, anticipate drastic price increases due to lack of domestic commodities, and maintain price stability.

Like import duties, goods subject to import duties must also fulfill several conditions. According to Minister of Finance Regulation Number 13/PMK.011/2017, there are five types of goods subject to export duty. The five types of goods or commodities are as follows:

1. Processed metal mineral products and metal mineral products with certain criteria.
2. Leather, both raw leather, pickled leather, tanned leather (wet blue), and hides.
3. Wood, whether in the form of wood chips, processed wood, or veneer.
4. Palm oil or CPO (Crude Palm Oil).
5. Cocoa Beans.

In theory, an exit tax will lower the domestic price of the commodity subject to the exit tax. This will then benefit the domestic processing industry that uses the commodity's

raw materials due to the availability of raw materials at a lower price as a result of the abundance of the commodity. Meanwhile, from the household side, the export tax will affect three things. First, the export tax will affect gross household income (Maisyarah 2019).

Export tax policy is considered as one of the most effective policy options to control the export of raw materials. One of the objectives of the export tax is to maintain availability and price stabilization (Agusalim 2014).

3. RESEARCH METHODS

This research uses a quantitative approach. According to Sugiono (2016), quantitative method is a scientific approach that views a reality that can be classified, concrete, observable and measurable, variable relationships are causal where the research data is in the form of numbers. This study focuses on explaining the effect of exports, import duties and export duties as dependent variables and economic growth as an independent variable in Indonesia using time series data from 1985-2019. The type of data used in this study is secondary data obtained from the World Bank.

The variables in this study are grouped into 2 (two), namely the dependent variable (dependent variable) and the independent variable (independent variable). The dependent variable used in this study is economic growth while the independent variables used are exports, import duties and export duties. The variables used in this study are: First, GDP stands for Gross Domestic Product or also called Gross Domestic Product (GDP).

Based on the official website of the Central Statistics Agency (BPS), GDP is one of the important indicators to determine the economic conditions in a country in a period, both at current prices and at constant prices. GDP is the sum of added value generated by all business units in a particular country, or is the sum of the value of final goods and services produced by all economic units. GDP at current prices represents the value added of goods and services calculated using prices prevailing in each year. Meanwhile, GDP at constant prices shows the added value of these goods and services calculated using prices prevailing in a particular year as a basis. This study uses annual constant GDP per capita in currency. The data is taken from the World Bank.

Second, export (Ex) is the process of selling goods or commodities from one country to another. A country can export the goods it produces to other countries that cannot produce the goods produced by the exporting country. Exports used in this study are exports of goods and services.

The third and fourth, namely export duties and import duties, are state levies based on this Law imposed on exported goods and imported goods.

In this study to answer the problem, the model used in this time series data is an error correction model or ECM (Error Correction Model) with the main requirement that the data for each variable is not stationary at the level, but stationary at the degree of integration or first difference and the variables are cointegrated. The model is used to see short-term and long-term effects.

ECM can be done with several stages, such as stationarity test, cointegration test, ECM test and classical assumption test (normality, multicollinearity, heteroscedasticity, autocorrelation). The models in this study are:

The general model of multiple regression is:

$$Y_t = \alpha_0 + \beta_1 X_t + \varepsilon_t \dots\dots\dots(1)$$

The general model of Error Correction Model (ECM) is:

$$\Delta Y_t = \alpha_0 + \beta_1 \Delta X_{t-1} + \beta_2 \Delta ect_{t-1} + \epsilon_t \dots\dots\dots(2)$$

The Ordinary Least Square (OLS) multiple regression model is:

$$GDPT_t = \alpha_0 + \beta_1 Ext_t + \beta_2 Bmt_t + \beta_3 Bkt_t + \epsilon_t \dots\dots\dots(3)$$

Error Correction Model (ECM), namely:

$$GDPT_t = \alpha_0 + \beta_1 Ext_t + \beta_2 Bmt_t + \beta_3 Bkt_t + ect_{t-1} + \epsilon_t \dots\dots\dots(4)$$

Description:

- GDPT_t = Economic Growth period t
- Ext = Exports of Goods and Services period t
- Bmt = Import Duty period t
- Bkt = Export Duty period t
- α₀ = Constant
- β₁, β₂, β₃ = Coefficient
- ε_t = Error term
- ect-1 = Error Correction Term

The stages of data analysis in this study were carried out through several stages, namely: First, Stationarity Test (Unit Root Test), the data used in this study is time series data. The basic rule in using time series data is that a stationarity test must be carried out, so that no regression occurs so that the time series data can be used at any time and under any conditions (Gujarati 2009). Data stationarity test methods have developed rapidly along with the attention of econometricians to time series econometrics. A recently used method to test data stationarity is the unit root test. One test that can be used and which was developed by Dickey Fuller and is known as the Dickey Fuller (DF) unit root test. In the Augmented Dickey Fuller method, the statistical results of the ADF estimation results are compared with the critical value of the Mackinon statistical distribution. If the absolute value of the ADF statistic is greater than its critical value, then the data under study shows stationary and otherwise the data is not stationary (Widarjono 2018).

Second, Cointegration is a long-term relationship between variables. The purpose of this cointegration test is that all variables are integrated at the same level. An alternative cointegration test that is now often used is the Johansen cointegration test developed by Johansen.

Third, if it passes the cointegration test then corrects the short-term imbalance towards the long-term balance called the Error Corection Model (ECM), which was introduced by Saran and popularized by Engle-Granger. The ECM model is generally a time series econometric model concept that aims to balance short-term conditions with long-term equilibrium conditions through an adjustment process (Astuti and Ayuningtyas 2018).

In addition, in econometrics ECM is useful in overcoming the problem of non-stationary time series data. Analysis using ECM goes through 3 steps of data analysis, namely (1) data stationary test, (2) cointegration test to determine whether there is a long-term relationship between variables X and Y, and (3) compile an Error-Correction Model (Gujarati 2009).

4. RESULTS AND DISCUSSION

According to Widarjono (2009) time series data are often non-stationary, causing spurious regression. Non-stationary data often show a short-term imbalance relationship, but there is a tendency for an equilibrium relationship in the long run. In analyzing the estimation results of the ECM model in the long term and short term, data testing was previously carried out. The data used in the study need to be tested using two data stationarity tests, namely the unit root test and the cointegration test. Data stationarity testing conducted on all variables in the research model is based on the Augmented Dickey Fuller (ADF) Test, which is calculated using computer assistance with the EViews 10 program.

The part to note is the Probability column at the bottom of the output. Since the desired test result is that all variables are not stationary at level, the probability value of each variable must be greater than the specified alpha.

Table 1. ADF Unit Root Test Results at Level

Variabel	Probability	Description
GDP	0.9999	Non-stationary
EXPORT	0.9603	Non-stationary
Import Duty	0.9956	Non-stationary
Export Duty	0.0895	Non-stationary

Source: Data processed

Based on table 1, it can be shown that all variables are not stationary at the level because the alpha value used is 0.05, because all values are greater than 0.05. Non-stationary data when regressed will have a tendency for spurious regression. Therefore, for the purposes of ECM regression, it is necessary to differentiate the data above so that the data is stationary at the same degree. At the first level of differentiation, it is likely that the data is stationary. If it is not, it is likely that the second differentiation is stationary. Because the results from the table above show that it is still not stationary, it is continued to the first difference level. The Augmented Dickey Fuller (ADF) unit root test results at the first difference level are as follows:

Table 2. ADF Unit Root Test Results on First Difference

Variabel	Probability	Description
GDP	0.0087	Stationary
EXPORT	0.0000	Stationary
Import Duty	0.0002	Stationary
Export Duty	0.0005	Stationary

Source: Data processed

The table above shows the Augmented Dickey Fuller (ADF) unit root test results that all data have been stationary at the same degree, namely the first difference. After the stationarity test through the unit root test and the degree of integration at the first difference is fulfilled, and it means that the application of ECM can be continued, the next step is to conduct a cointegration test to determine whether two or more variables have a long-term equilibrium relationship.

Table 3. Augmented Dickey-Fuller Test Results for Residuals

		t-Statistic	Prob.*
Augmented Dickey-Fuller Test Statistic		-3.357550	0.0199
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

Source: Data processed

Table 3 above shows the results that the residuals of the regression equation are stationary at the level with a critical value of 5% where the ADF value is -3.357550 and -2.951125 for the MacKinnon critical value of 5%. Therefore, the results of the augmented dickey-fuller test on the residuals corroborate that there is cointegration among the variables used, this means that in the long run there will be an equilibrium.

After knowing the existence of cointegration among the variables in the study, then to find out the relationship between the independent variable and the dependent variable can be seen by using the estimation results of the long-term ECM model in Table 4 below.

Table 4. Estimation Results of Long-Term ECM Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXPORT	0.008697	0.001135	7.663824	0.0000
ID	218.2800	55.05666	3.964643	0.0004
ED	-80.84989	37.10573	-2.178906	0.0371
C	10701092	687679.8	15.56115	0.0000
R-squared	0.977609			
Adjusted R-squared	0.975442			
F-statistic	451.1558			
Prob(F-statistic)	0.000000			

Source: Data processed

The dependent variable in the study is economic growth (GDP) while the independent variables used are import duty tax, export duty tax and export of goods and services. The estimation results show an Adjusted R-squared value of 0.975. This shows that the independent variables in the long-term model can explain the dependent variables by 97.5%. The remaining 2.5% is explained by other variables outside the model. In the long-term equation, the F-statistic value shows a number of 451.1558, which means that the independent variables together have an influence on the level of economic growth.

We can see that the three independent variables namely exports, import duty tax, and export duty tax are significant at the 5% level. It can be concluded that in the long run, the amount of exports, import duties and export duties have a significant effect on economic growth.

From the estimation results it can be seen that the amount of exports has a positive and significant effect on economic growth. When the number of exports increases by 1 unit, it will increase economic growth by 0.008697%. Conversely, when the number of exports decreases by 1 unit, it will reduce economic growth by 0.008697%.

As for the amount of import and export duty tax revenue, each has a significant positive and significant negative effect on economic growth. If the amount of import duty tax revenue increases by 1 unit it will increase economic growth by 218.28% and when the amount of tax revenue decreases by 1 unit it will reduce the level of economic growth by 218.28%. Then for every 1 unit increase in the amount of export duty tax, it will reduce the economic growth rate by 80.84989%. If there is a decrease in the amount of export duty tax, it will increase economic growth by 80.84989%.

The conditions for short-term regression can be met, namely if the ECT coefficient value must be significant (t-statistic > t-table or ECT probability < 0.05). The ECM model is said to be valid if the sign of the error correction coefficient (ECT) is negative and statistically significant (Widarjono 2009).

Table 5. Estimation Results of Short-Term ECM Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D1_EXPORT	0.002154	0.001375	1.566774	0.1280
D1_ID	25.46580	60.04627	0.424103	0.6746
D1_ED	-15.64235	29.99732	-0.521458	0.6060
RESID01_ET				
C(-1)	-0.270666	0.128502	-2.106316	0.0439
C	653351.0	173360.4	3.768745	0.0007
R-squared	0.153744			
Adjusted R-squared	0.037019			
F-statistic	1.317148			
Prob(F-statistic)	0.287000			

Source: Data processed

From the short-term estimation results shown in the table above, the ECT value is -0.270666. The t-statistic value is -2.106316 and the significance probability is smaller than 0.05 (0.0439 > 0.05). So it can be concluded that the requirements of the ECM method are met or valid and the next estimation step can be done.

Adjusted R-squared shows a value of 0.037019, meaning that 3.7019% of the variation in economic growth variables together can be explained by the independent variables consisting of exports, import duties and export duties. While the remaining 96.2981% variable other variables outside the model. The Prob(F-statistic) value of 0.287000 indicates that the independent variables together have no effect on the level of economic growth.

Then partially the export variables, import duties and export duties are all three insignificant at 5% or 10% significance. This concludes that the three variables in the short term have no influence on economic growth. The increase and decrease in these variables has no effect on economic growth.

After the test stages that have been carried out previously, the next step is to test the classical assumptions as a requirement that the econometric model can be said to be good. So that the model used will be free from BLUE (Best, Linear, Unbiased, Estimator) properties. The series of tests carried out in the classical assumption test include normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

Table 6. Classical Assumption Test Results

Classical Assumption Test	Results	Description
Normality Test	The Jarque Bera probability is 0.000000 which is smaller than 0.05	Not Normal
Multicollinearity Test	VIF value more than 10	No Multicollinearity
Heteroscedasticity Test	The chi square probability is 0.0775 which is greater than 0.05	No Heteroscedasticity
Autocorrelation Test	P value 0.1717 > 0.05	No Autocorrelation

Source: Data processed

The classical assumption test is carried out to determine whether the research data has met the requirements of the econometric model. The test tools in this study are Jarque Bera test, variance inflation factors test, Breusch-Pagan-Godfrey test, and Breusch-Godfrey Serial Correlation LM Test. From the test results in table 6, it can be seen that the normality assumption is not met (the probability of Jarque Bera is smaller than 0.05) so it can be said that the residual errors are not normally distributed. There is no linear relationship between the independent variables or in other words the multicollinearity assumption is met (VIF value is more than 10). The assumption of non-heteroscedasticity is met (chi square probability is more than 0.05) so it can be said that the variance is not constant. And the autocorrelation assumption is met (p value $0.1717 > 0.05$).

4.1. Discussion

Based on the estimation of the ECM model, the results show that in the long run the export variable has a positive and significant effect on economic growth. Exports can provide an overview of a country's ability to produce goods and services. Export activities have an important role in increasing economic growth. When exports increase, economic growth also increases. This shows that economic growth (GDP) in the long run depends to some extent on its export performance. Export growth generally increases economic growth through foreign trade, available foreign exchange, production potential, and the volume of competition in the export market. This affects economies of scale and accelerates technical progress in production. This is in line with the theory of international trade, if the number of goods or services exported abroad is increasing, the country must produce more goods and services as well. The more goods that are exported abroad, the more capital flows into the country. The capital inflow will be managed through capital funding for large, small and medium enterprises. This will increase the amount of output of both goods and services which will increase economic growth in the long run. The results of this study are in line with Astuti and Ayuningtyas (2018); Karunia (2017); Ginting (2017) that exports have a positive and significant effect on economic growth.

Meanwhile, the results of the ECM model estimation in the short term show that exports have no significant effect on economic growth. According to the neo-classical

theory of exogenous economic growth, it explains that the role of exports has no effect on economic growth. This is because according to neo-classical theory, economic growth is only influenced by production input factors such as capital and labor and technological improvements. This research is in line with (Lihan 2003) that exports have no real influence on economic growth. Most developing countries do not show empirical support that export growth will encourage economic growth. Other research that is also in line with this study also states that if the export sector is still dependent on imported inputs, its effect on GRDP is not real.

Furthermore, in the estimation of the long-term ECM model, the results show that import duty tax has a positive and significant effect on economic growth. With the revenue on import duty tax, it will increase the government's revenue base and provide funds for development purposes that will accelerate economic growth. This result is in line with research (Owino 2019) that import duties have a positive and significant effect on economic growth.

In the short-term ECM model estimation, the results show that import duty tax has no significant effect on economic growth. This research is in line with DeJong and Ripoll(2006) who examined the relationship between import duty revenues and economic growth rates. In his research, he found a negative relationship between import duty revenue and economic growth. Another study by Sameti and Rafie (2010) also showed a negative relationship between import duties and economic growth.

Then, in the estimation of the long-term ECM model, it was also found that export duty tax has a negative and significant effect on economic growth. This is in line with the theory of the general equilibrium impact of the imposition of export duties or taxes by (Salvatore 1997) in Agusalim (2014) which states that the export duty or export tax policy of a country that does not have market power will worsen economic growth and national welfare. On the other hand, import duty taxes in the short-term model have no effect on economic growth. This means that every time there is or enforces an export duty tax policy, the change has no effect on economic growth.

5. CONCLUSION

The conclusion that can be drawn from this study is that in the long run, the amount of exports, import duties and export duties have a significant effect on economic growth. From the estimation results, it can be seen that the number of exports has a positive and significant effect on economic growth. This is in line with the theory of international trade, when the number of goods or services exported abroad is increasing, the country must produce more goods and services.

In the short term, the three independent variables, namely the number of exports, import duties and export duties in the short term have no effect on economic growth. The three variables are not significant at the 5% or 10% significance level. Increases and decreases in these variables have no effect on economic growth. Increased exports will encourage increased domestic production. Increased production will drive the wheels of the domestic economy so that economic growth increases. If goods and services imported from abroad increase, it will encourage an increase in domestic economic activities, both production, consumption and distribution. If economic activity goes well, it will increase economic growth.

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