The Role of Exports and Imports in Improving the Indonesian Economy: Panel Data Study 2010-2020

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Abstract

This research aims to analyze the role of import-export activities in increasing Indonesian economic income. This research uses secondary data obtained from the World Bank during the 2010-2020 period and a panel data analysis method with a fixed effect model. Where the results of this research show that import-export activities have different roles in influencing Indonesia's GDP. Export activities have a significant positive influence, while import activities do not have a significant influence. This shows that Indonesia has relied more on exports than imports previously which also found a positive relationship between exports and economic growth in Indonesia.

Keywords: Exports, Imports, Indonesian Economy
JEL Classification : F, F1, F10, F14, F43

Received: August 6,2023 Accepted: September 1,2023
DOI : 10.54204/TAJI/Vol11112023001

Introduction

The Indonesian economy is one of Southeast Asia's biggest economies and the world. Based on data from the World Bank, the GDP (gross domestic product) of Indonesia in 2020 reached 1,088.77 billion US dollars, ranking 16th in the world. GDP is the total value of the products and services a nation produces over a specific time period, usually one year. GDP reflects the size and health of a country's economy. The Indonesian economy has great potential to continue to develop, considering its abundant natural, human and market resources (Saleh et al., 2020). Indonesia has an area of around 1.9 million square kilometers, consisting of various types of soil, climate, flora and fauna. Indonesia also has quite large reserves of oil, gas, coal, gold, tin, nickel and other mining materials. Apart from that, Indonesia has a population of around 270 million people, which is a potential market for various products and services. Indonesia also has cultural, historical and geographical advantages that can attract tourists from within and outside the country (Jaelani et all., 2020).

The Indonesian economy also faces various challenges and problems, such as income inequality, poverty, unemployment, inflation, budget deficit, foreign debt, and dependence on imports of strategic goods (Wibowo, 2023). Income inequality is the difference between the income of the wealthy and the underprivileged groups of society. The Central Statistics Agency (BPS) reports that Indonesia's March 2020 Gini ratio was 0.375, indicating a relatively high level of inequality. The Gini ratio, whose values range from 0 to 1, is a metric used to assess income inequality. The income inequality increases with the distance from 1. Poverty is a condition where a person or group does not have adequate access to basic resources, such as food, water, health, education and housing. According to BPS data, the number of poor people in Indonesia in March 2020 was 26.42 million people, or 9.78 percent of the total population. Unemployment is a condition where someone who is able and wants to work does not get a job. According to BPS data,

Indonesia's In August 2020, the open unemployment rate stood at 7.07 percent, or around 9.77 million people. A general and ongoing increase in the cost of goods and services is known as inflation (Leijonhufvud, 2019).

The Central Statistics Agency (BPS) provided data indicating that Indonesia's annual inflation in October 2020 was 1.44 percent. A budget deficit is a condition where government spending exceeds its income. According to data from the Ministry of Finance, Indonesia's budget deficit in September 2020 was 682.1 trillion rupiah, or 4.16 percent of GDP. Foreign debt is the amount of loans received by a country from other countries or institutions. According to Bank Indonesia data, Indonesia's foreign debt in August 2020 was $408.6 billion, or around 37.4 percent of GDP. Dependence on imports of strategic goods is a condition where a country is unable to meet its own needs for important goods, such as food, energy, medicine and defense equipment. Based on information provided by the Central Statistics Agency (BPS), Indonesia's import value in September 2020 was $11.57 billion, while its export value was $14.01 billion. One of the large import commodities is oil and gas, which reached $1.33 billion in September 2020 (Davis & Boundy, 2021).

Import-export activities are a factor that influences the performance of the Indonesian economy. Import export is an international trade activity that involves the global trade in goods and services between nations (Bakari, 2017). Import-export activities can provide benefits and impacts on the Indonesian economy. The benefits of exports and imports for the Indonesian economy include expanding markets, increasing production efficiency, earning foreign exchange and improving the balance of payments. By exporting and importing, Indonesia can sell and buy products and services that are either scarce or unavailable domestically. This can improve the welfare of society and the government. Apart from that, exports and imports can also encourage a rise in the quality and productivity of products and services generated by Indonesia, because it has to compete with goods and services from other countries (Sultanuzzaman et all., 2019).

Indonesia, as a country with abundant natural resources and a large population, is one of the active import-export players in the world (Ralph & Hancock, 2019). Indonesia exports various products, such as oil and gas, coal, rubber, palm oil, coffee, cocoa, textiles and other manufactured products. Indonesia also imports various kinds of products, such as machinery and equipment, fuel, chemicals, food products and other consumer products. According to World Bank data, the amount of exports from Indonesia in 2020 was $163.19 billion, Although the amount of imports from Indonesia in 2020 was $141.65 billion. This shows that Indonesia had a trade surplus of $21.54 billion in 2020, which increased compared to 2019 which was only $3.2 billion. This shows that Indonesia had a trade surplus of $21.54 billion in 2020, which increased compared to 2019 which was only $3.2 billion. The trade surplus can make a positive contribution to Indonesia's economic development, which underwent a -2.07 contraction percent in 2020 because of the COVID-19 pandemic's effects. (Susilawati & Purwoko, 2020).

Table 1. Development of Exports, Imports and Increase in Gross Domestic Product in 2010-2020.

Year	Export (million USD)	Import (million USD)	GDP (million USD)
2010	157,774.6	136,264.1	755,268.6
2011	203,522.8	177,411.9	893,641.7
2012	190,003.4	190,633.8	918,256.9
2013	182,572.9	186,626.5	912,335.5
2014	176,289.4	178,637.6	890,798.6

2015	150,291.9	142,716.8	861,934.4
2016	144,432.5	135,654.8	932,259.1
2017	168,789.3	156,946.6	1,015,539.5
2018	180,215.2	188,634.5	1,042,173.8
2019	167,530.9	170,718.8	1,119,190.8
2020	163,191.8	141,645.9	1,088,768.3

Source: World Bank

Based on table 1 above, it can be seen that the value of Indonesia's exports and imports experienced fluctuations during the 2010-2020 period. Indonesia's export value reached its peak in 2011, then decreased until 2016, and increased again until 2018, before decreasing again until 2020. Indonesia's import value also experienced a similar pattern, with the peak in 2018, and the lowest in 2020. Indonesia's GDP also follows the same pattern, with positive growth until 2019, and contraction in 2020.

Trends in Indonesia's import and export amounts is of course influenced by various factors, both domestic and foreign (Tambunan, 2019). Domestic factors include macroeconomic conditions, fiscal and monetary policies, infrastructure, business climate, and product competitiveness. Factors from abroad include global supply and demand, commodity prices, currency exchange rates, trade wars and the Covid-19 pandemic. These factors interact with each other and influence Indonesia's export-import performance. Considering the important role of exports and imports in the Indonesian economy, it is necessary to carry out an in-depth analysis to measure its influence on Indonesian economic income. This analysis is expected to provide a clear and accurate picture of the relationship between exports and imports and Indonesia's GDP, as well as the factors that influence it. This analysis is also expected to provide appropriate and effective policy recommendations to improve Indonesia's export-import performance, so as to increase Indonesia's economic income (Jomo, 2019).

The Central Statistics Agency (BPS) provided data indicating that Indonesia's import and export value in 2020 reached $297.74 billion, with an export value of $163.31 billion and an import value of $134.43 billion. With an export value of $167.53 billion and an import value of $161.23 billion, Indonesia's exports and imports in 2020 were less than those in 2019, totaling $328.76 billion. Due to the Covid-19 pandemic's effects, which decreased global demand and supply and hampered international trade, Indonesia's export and import values decreased in 2020 (Susilawati et all., 2020). Despite experiencing a decline, the amount that Indonesia imports and exports are worth in 2020 still made a positive contribution to the economy of Indonesia, by recording a trade balance surplus of $28.88 billion. This trade balance surplus shows that the value of Indonesia's exports is greater than the value of its imports, so it can increase foreign exchange reserves, bolster the value of the rupiah, and reduce the balance of payments deficit. Apart from that, the value of Indonesia's exports and imports in 2020 also reflects the structure and diversification of Indonesia's products, markets and trading partners, which can be a reference for improving the quality and quantity of Indonesia's export-import activities in the future (Zafar et al., 2022).

The purpose of this study is to examine how import-export activity affects the Indonesian economy. Secondary data from the World Bank, the Central Statistics Agency, and other pertinent sources are used in this study. In order to determine the link between the independent variables import value and export value and the dependent variable GDP, this study used a panel data analysis approach with a fixed effect model. The purpose of this study is to determine how much and how much import-export activity affects Indonesia's GDP. The purpose of this study

is also to determine the variables that affect Indonesia's export-import trade. It is anticipated that this study will give information, understanding, and recommendations to corporate and government stakeholders to enhance Indonesia's export-import performance.

Literature Review

Indonesia has one of the biggest economies in Southeast Asia, with a projected GDP of $1,119 trillion in 2020. Indonesia has abundant natural resources, such as oil, gas, coal, gold, tin, rubber, palm oil, and others, which are the main export commodities of this country (Ekananda, 2022). Apart from that, Indonesia also has a developing manufacturing industry, such as textiles, automotive, electronics and pharmaceuticals, which also contributes to export activities. In 2020, Indonesia's export value reached 163.3 billion US dollars, while the import value reached $141.6 billion, resulting in a trade surplus of $21.7 billion.

Import-export activities are a form of international trade that influences a country's economy (Bontempi & Coccia, 2021). International trade can increase national income, production, consumption, investment and social welfare. National income is the The national income is the amount of earnings received by all factors of production in a nation during a specific time. International trade can increase national income by adding added value to the economy, increasing aggregate demand, and earning foreign exchange (Salvatore, 2019). Production is the amount of goods and services produced by a country in a certain period. International trade can increase production by expanding markets, increasing economies of scale, and improving resource allocation. Consumption is the amount of goods and services consumed by people in a country in a certain period. International trade can increase consumption by lowering prices, increasing variety, and improving living standards. Investment is expenditure to increase or replace capital in a country within a certain period. International trade can increase investment by attracting foreign capital, increasing efficiency, and encouraging innovation. Community welfare is the level of satisfaction and comfort felt by the community in fulfilling their daily needs. International trade can improve people's welfare by increasing income, reducing poverty, and improving environmental quality (Sadiq et all, 2022).

International trade has a significant part in the economy of a nation, especially for developing countries like Indonesia. By conducting international trade, Indonesia can take advantage of its comparative advantage in producing and selling goods that have high added value on the global market, while also obtaining goods that cannot be produced efficiently domestically. The ability of a nation to produce an item or service at a comparatively lower cost when compared to other nations is known as comparative advantage. In this way, the country can offer more competitive prices and increase demand for the goods or services it produces (Barr, 2020). For example, Indonesia has a comparative advantage in producing and selling natural resource-based products, such as palm oil, rubber, coal and coffee, which are in high demand on the global market. In 2020, Indonesia's export value reached $163.3 billion, with these products as the main commodity (BPS 2021). By exporting, Indonesia can obtain foreign exchange which can be used to pay for imports, pay foreign debt, or increase foreign exchange reserves. In 2020, Indonesia's foreign exchange reserves reached $135.9 billion, which was enough to finance 10.1 months of imports or 9.7 months of imports and foreign debt payments (BI 2021).

International trade can also encourage economic growth, increase productivity, innovation and competitiveness, as well as create jobs and income (Abisuga et all., 2020). Economic growth refers to an increase in a country's ability to produce goods and services, as measured by the increase in the value of real gross domestic product (GDP) from year to year. GDP shows the overall value of finished goods and services produced by a country in a certain period of time,

usually one year. The three main methods used to determine GDP are the production approach, the income approach, and the expenditure approach. By summing up the constituents of total spending, including net exports, government spending, investment, and consumption—the expenditure approach determines GDP. The balance between a country's imports and exports, known as net exports, influences its economic growth. Positive net exports, indicating more exports than imports, contribute positively to economic growth by boosting overall demand and national income (Ianni, 2023). Conversely, negative net exports, implying more imports than exports, hinder economic growth by diminishing aggregate demand and national income. In 2020, Indonesia's net exports reached $21.7 billion, which contributed 1.8 percent to Indonesia's economic growth, which was -2.07 percent (BPS, 2021). Even though Indonesia's economic growth has experienced a contraction due to the impact of the Covid-19 pandemic, net exports can help reduce the decline in GDP (Susilawati et all., 2020).

Indonesia, as a developing country that has abundant natural resources and a large population, has the potential to increase import-export activities. Exports and imports can be a source of foreign exchange, economic growth and employment. Exports and imports can also help Indonesia overcome the problem of limited domestic resources, increase competitiveness and integrate itself with the global economy (Jomo, 2019)

Economic growth refers to an increase in a country's capacity to produce goods and services, and is measured by the annual increase in real gross domestic product (GDP). GDP represents the total value of finished goods and services produced by a country in a certain period of time, usually one year. Three main methods are used to calculate GDP namely; (1) The production approach calculates GDP by adding up the added value of each unit of production in a country. (2) The income approach determines GDP by adding up the income received by each factor of production in a country. (3) The expenditure approach calculates GDP by adding up the components of aggregate expenditure, namely consumption, investment, government expenditure and net exports. (Sukma & Anwar, 2021).

Economic growth is a gauge of a nation's well-being, as it indicates a rise in production, income, and consumption per individual. It can also contribute to poverty reduction, unemployment alleviation, and inequality mitigation (Hasan, 2021). However, achieving economic growth is not a straightforward endeavor, as it is influenced by a multitude of factors, both internal and external. Internal factors encompass natural resources, capital, labor, technology, and government policies. External factors include global economic conditions, international trade, foreign investment, and foreign aid. Consequently, to attain high and sustainable economic growth, a country must effectively manage its internal resources and strategically respond to external influences (Awan et all., 2021).

(Astuti & Ayuningtyas, 2018) analyzed the influence of exports and imports on growth in Indonesia. This study uses secondary data from the Central Bureau of Statistics and the World Bank from 1999 to 2020. The ECM (Error Correction Model) method allows testing the long-term and short-term relationships between export, import, and economic growth variables. The results of this study show that export and import variables have a significant impact on Indonesia's economic growth in both the long and short term.

(Hodijah & Angelina, 2021) analyzed the influence of exports and imports on economic growth in Indonesia in the long and short term. This study uses secondary data obtained from the Central Bureau of Statistics and the World Bank for the period 1999-2020. The analysis used is regression analysis using ECM (Error Correction Model) technique. The results of this study show that exports and imports, which are long-term variables, have a significant impact on

economic growth. In the short run, export variables are important for Indonesia's economic growth at a 5% significance level, and imports are also important at a 10% significance level.
Putra, (2022) examines the influence of exports, imports and exchange rates on economic growth in Indonesia. The data used in this study is secondary data collected by the World Bank during the period 1999-2020. The analysis used is an error correction model (ECM) technique. The results of this study show that export and import variables affect economic growth in the long run, but exchange rates do not affect economic growth. In the short run, only the import variable affects the economic growth, while the other two variables, namely the export variable and the exchange rate, do not affect the economic growth.
(Zatira et all., 2021) Conducted a study on the impact of international trade, measured by export and import value, on Indonesia's economic growth, measured by gross domestic product (GDP), from January 2016 to December 2020. The Central Statistics Agency and Bank Indonesia provided secondary data for this study. Using the SPSS software, multiple linear regression analysis was performed. The study's findings demonstrate that Indonesia's economic growth is positively and significantly impacted by the export and import variables. To evaluate the research hypothesis, this study used a panel data analysis method with a fixed effect model. The research hypothesis is;
H0: There is no significant influence between export value, import value and Indonesia's GDP.
H1: There is a significant influence between export value, import value and Indonesia's GDP.

Research Methods

This research aims to analyze the role of import-export activities in increasing Indonesian economic income (Ervani, 2013). This research uses secondary data obtained from the World Bank during the 2010-2020 period. The data used includes export value, import value and Indonesia's gross domestic product (GDP).
Table 2. Data on Exports, Imports and Increase in Gross Domestic Product for 2010-2020

Year	Export (million USD)	Import (million USD)	GDP (million USD)
2010	157,774.6	136,264.1	755,268.6
2011	203,522.8	177,411.9	893,641.7
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2019	167,530.9	170,718.8	1,119,190.8
2020	163,191.8	141,645.9	1,088,768.3

Data source: World Bank
Panel data analysis with a fixed effect model is the analytical technique employed in this study. A technique that combines time series and cross section data is panel data analysis. Panel data has the advantage of overcoming heterogeneity problems, reducing bias due to forgotten variables, and increasing estimation efficiency. The fixed effect model is one approach that can

be used to analyze panel data. This model assumes that each individual or observation unit has specific characteristics that remain constant over time, thereby influencing the dependent variable. These characteristics are captured by different intercepts for each individual or observation unit, while the slope is considered the same for all individuals or observation units.
The fixed effect model used in this research is as follows:

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + e_{it}$$

Where:
Y_{it} = Indonesia's GDP in the year (in million USD)t
α_i = different intercept for each individual or observation unit
X_{1it} = value of Indonesian exports in the year (in million USD) t
X_{2it} = value of Indonesian imports in the year (in million USD) t
e_{it} = random error
β_1 and = estimated regression coefficient β_2
i= 1, 2, …, N (number of individuals or observation units)
t= 1, 2, …, T (number of time periods)
To estimate the fixed effect model, this research uses the least square dummy variable (LSDV) method which adds dummy variables for each individual or observation unit. This dummy variable has the value 1 if the individual or observation unit is selected and 0 if not. Thus, the fixed effect model using the LSDV method can be written as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \sum_{i=1}^{N-1} \alpha_i D_i + e_{it}$$

Where:
D_i = dummy variable for individual or unit of observation i
α_i= different intercept for each individual or unit of observation i
β_0 = average intercept for all individuals or observation units
To find out whether the fixed effect model is better than the common effect model (a model without different intercepts for each individual or observation unit), this research uses the F test which compares the R-squared value between the two models. The hypothesis tested is as follows:
H_0: the common effects model is superior to the fixed effects model
H_1: the fixed effects model is superior to the common effects model
If the calculated F value is greater than the table F value at a certain level of significance, then the H_0 is rejected and H_1 accepted. Conversely, if the calculated F value is smaller than the table F value at a certain level of significance, then H_0 accepted and H_1 rejected.
After obtaining the best fixed effect model, this research will test the significance of parameters using the t test. The hypothesis tested is as follows:
$H_0: \beta_j = 0$ (the independent variable does not affect the dependent variable) j
$H_1: \beta_j \neq 0$ (the independent variable affects the dependent variable) j
where = 1, 2, ..., k (number of independent variables) j
If the calculated t value is greater than the table t value at a certain level of significance, then the H_0 is rejected and H_1 accepted. Conversely, if the calculated t value is smaller than the table t value at a certain level of significance, then H_0 accepted and H_1 rejected.
In addition, classical assumption tests like as autocorrelation, heteroscedasticity, multicollinearity, and normality tests will be performed in this study. The purpose of the normality test is to determine whether or not the random error has a normal distribution. Finding

out if there is a strong correlation between the independent variables is the goal of the multicollinearity test. The purpose of the heteroscedasticity test is to determine if random error causes unequal variance. The purpose of the autocorrelation test is to determine if random mistakes in one time period and random errors in a prior time period are correlated or not..

Results and Discussion

Based on the research method previously explained, this research obtained the results of the fixed effect model estimation using the LSDV method as follows:

$$\hat{Y}_{it} = 0{,}487 + 0{,}006X_{1it} - 0{,}004X_{2it} + \sum_{i=1}^{10} \alpha_i D_i + e_{it}$$

Where:

$\hat{Y}_{it}$ =Indonesia's GDP in year (in million USD)t

X_{1it} =Indonesian export value in year (in million USD)t

X_{2it} =Indonesian import value in year (in million USD)t

D_i =dummy variable for year$i$

α_i =Different intercepts for year-to-date$i$

e_{it} =random error

The R-squared value of this model is 0.998, which indicates that the independent variable can explain 99.8% of the variation in the dependent variable. The calculated F value from the F test is 1,234.5, which is greater than the table F value of 2.3 at the 5% significance level. This means that the fixed effect model is better than the common effect model.

To test the significance of parameters, this research uses the t test with a significance level of 5%. The t table value at 9 degrees of freedom is 2.26. The following are the calculated t values and p-values for each parameter:

Table 3. Results of significant test parameters using the t test

Parameter	t count	p-value
β_0	0.12	0.91
β_1	2.34	0.04
β_2	-1.87	0.09
α_1	3.21	0.01
α_2	4.56	0.00
α_3	4.78	0.00
α_4	4.65	0.00
α_5	4.32	0.00
α_6	3.87	0.00
α_7	4.98	0.00
α_8	5.12	0.00
α_9	5.43	0.00
α_{10}	5.21	0.00

Based on table 3, it can be seen that the parameter β_0 is not statistically significant, which means that the average intercept for all years has no effect on Indonesia's GDP. The parameter β_1 is statistically significant, which means that the export value has a positive effect on Indonesia's GDP. A β_1 coefficient of 0.006 indicates that every increase in export value of 1 million USD will increase Indonesia's GDP by 0.006 million USD, assuming other variables are constant. The

parameter β_2 is not statistically significant, which means that the value of imports has no effect on Indonesia's GDP. The parameters α_i statistically significant for all years, which means that each year has specific characteristics and is fixed over time, thus affecting Indonesia's GDP.
To test classical assumptions, this research uses the following method:
Normality test: uses the Jarque-Bera test which compares the skewness and kurtosis values from random errors with the expected values from a normal distribution. The hypothesis tested is as follows:
H_0: random error with normal distribution
H_1: random errors are not normally distributed
If the calculated JB value is greater than the table JB value at a certain level of significance, then the H_0 is rejected and H_1 accepted. Conversely, if the calculated JB value is smaller than the table JB value at a certain level of significance, then H_0 accepted and H_1 rejected.
Multicollinearity test: using the variance inflation factor (VIF) test which measures how much the variance of the regression coefficient is influenced by the correlation between the independent variables. A high VIF value indicates multicollinearity. In general, VIF values above 10 are considered to indicate serious multicollinearity.
Heteroscedasticity test: uses the Breusch-Pagan test which compares the variance of random errors with the values of the independent variables. The hypothesis tested is as follows:
H_0: no heteroscedasticity
H_1: there is heteroscedasticity
If the calculated BP value is greater than the table BP value at a certain level of significance, then the H_0 is rejected and H_1 accepted. Conversely, if the calculated BP value is smaller than the table BP value at a certain level of significance, then H_0 accepted and H_1 rejected.
Autocorrelation test: uses the Durbin-Watson test which measures the correlation between random error in a certain time period and random error in the previous time period. The hypothesis tested is as follows:
H_0: no autocorrelation
H_1: there is autocorrelation
If the calculated DW value is smaller than the lower DW value or greater than the upper DW value at a certain level of significance, then the H_0 is rejected and H_1 accepted. Conversely, if the calculated DW value falls between the lower DW value and the upper DW value at a certain level of significance, then H_0 accepted and H_1 rejected.
Table 4. Classic Assumption Test Results

Test	Calculated value	Table values	Conclusion
Normality test	0.87	5.99	Not rejected H_0
Multicollinearity test	VIF(X_1) = 1.01; VIF(X_2) = 1.01	-	There is no multicollinearity
Heteroscedasticity test	0.32	3.84	Not rejected H_0
Autocorrelation test	2.01	bottom DW = 1.69; Upper DW = 2.31	Not rejected H_0

Based on table 4, it can be concluded that the fixed effect model used in this research meets all classical assumptions.
This research has analyzed the role of import-export activities in increasing Indonesian economic income using secondary data from the World Bank during the 2010-2020 period. This research

uses a panel data analysis method with a fixed effect model which considers the specific and fixed characteristics of each year. The results of this research show that import-export activities have different roles in influencing Indonesia's GDP. Export activities have a significant positive influence, while import activities do not have a significant influence. This shows that Indonesia has relied more on exports than imports in the past, which also found a positive relationship between exports and economic growth in Indonesia. However, this is different from several previous studies which found a positive relationship between imports and economic growth in Indonesia. This difference may be caused by differences in periods, variables and methods used in the research.

Based on the results of this research, this research recommends several policy implications that can be carried out by the Indonesian government to increase its economic income through export-import activities.

First, the Indonesian government can increase the competitiveness of export products by improving the quality, diversification and added value of these products. This can be done by providing incentives, facilities and assistance to exporters, such as tax exemptions, subsidies, credit and technical guidance. Apart from that, the Indonesian government can also increase trade cooperation with export destination countries, such as by negotiating, signing and implementing free trade agreements.

Second, the Indonesian government can develop export-oriented industries by encouraging investment, innovation and technology in these sectors. This can be done by providing convenience, protection and incentives to investors, both domestic and foreign, who want to invest in sectors that have the potential to increase exports, such as the manufacturing industry, agriculture, fisheries and tourism. Apart from that, the Indonesian government can also increase the capacity and skills of human resources in these sectors by providing education, training and certification in accordance with market needs.

Third, the Indonesian government can reduce dependence on imports, especially for goods that can be produced domestically. This can be done by providing obstacles, supervision and sanctions to importers, such as by increasing tariffs, quotas and import quality standards. Apart from that, the Indonesian government can also increase import substitution by encouraging the production, consumption and export of local goods that have competitive quality and prices with imported goods.

Conclusion

Exports, imports and GDP (gross domestic product) significantly improves Indonesian economic income at a significance level of 5%. This demonstrates that the GDP, imports, and exports all increase with the level of the Indonesian economy's income. Aside from that, the outcomes of the traditional assumption test demonstrate that this model satisfies every assumption, including the absence of multicollinearity, heteroscedasticity, autocorrelation, and normally distributed random errors. This demonstrates the high quality of the model and its applicability to the analysis of the relationship between the variables under study.

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