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THE EFFECT OF INTERNATIONAL TRADE AND THE RUPIAH EXCHANGE RATE ON INDONESIAN ECONOMIC GROWTH

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ABSTRACT

Economic growth is a real picture of the impact of a development policy implemented, especially in the economic sector. The purpose of this study is to determine the effect of exports on Indonesia's economic growth, to determine the effect of imports to Indonesia's economic growth and to determine the effect of the exchange rate on Indonesia's economic growth. The data used in this study is secondary data that is time series from 1991-2020. The data was obtained from the Ministry of Trade and the Central Statistics Agency. From the results of the analysis, it can be concluded that the variables of exports, imports, and exchange rates based on a joint test, all variables together have a significant effect on Indonesia's economic growth at a significance level of 5%. While individually, the export variable has no negative effect on economic growth in Indonesia. Import and exchange rate variables have a positive effect on economic growth in Indonesia.

Keywords: *Economic growth; Export; Import; Exchange rate.*

INTRODUCTION

Economic growth is a real picture of the impact of a development policy implemented, especially in the economic sector. Economic development marked by an increase in economic growth indicates a change in economic activity every year which is produced in the form of an increase in national income which is at the same time very closely related to the welfare of the community (Mankiw, 2019).

According to the International Trade Theory by Heckscher-Ohlin or the HO Theory proposed by Swedish economists Eli Heckscher (1919) and Bertil Ohlin (1935) which states that a country's comparative advantage over other countries comes from differences in the wealth of factors of production, such as labor or capital. A country is said to have a comparative advantage in the production of labor-intensive goods if it has an abundance of labor relative to capital. And vice versa with abroad. In the Heckscher-Ohlin view, the price of goods is largely determined by the prices of the factors of production (inputs) used (Diphayana, 2018).

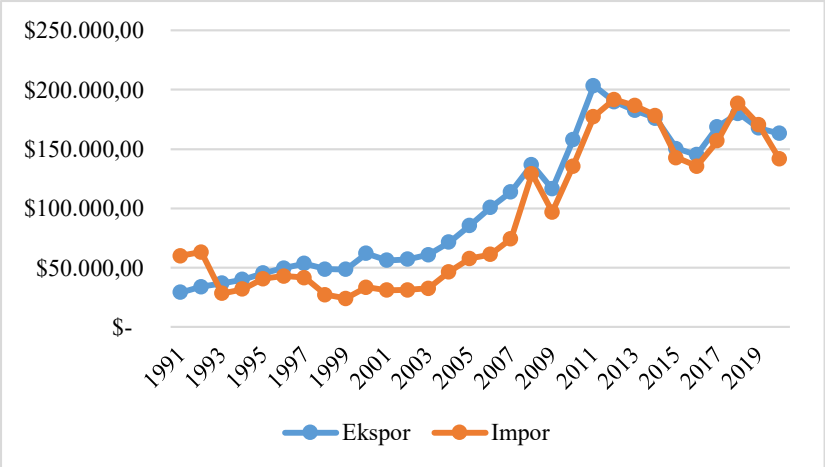
International trade (exports and imports) will cause differences in the currencies used between the countries concerned. As a result of currency differences between exporting and importing countries, there is a difference in currency exchange rates or what is commonly known as the exchange rate. According to the Mundell-Fleming theory that there is a negative relationship between the exchange rate and economic growth, where the higher the exchange rate, the lower net exports (the difference between exports and imports), this decline will have an impact on the reduced amount of output and will cause GDP (economic growth) decrease.

The current economic development of a country cannot be separated from global economic conditions. Economic relations between countries are important factors that influence the economic development of each country. This condition causes competitiveness as one of the determining factors in competition between countries in order to benefit from the increasingly open world economy. The advantage of the opening of the world economy can be seen from the state of a country's balance of payments.

According to Bank Indonesia, the balance of payments is a record of economic transactions between Indonesian residents and non-residents during a certain period. A country's balance of payments is said to be in a surplus if there is an excess of trade and investment funds compared to the obligations paid to the country, while it is said to be in a deficit if imports are greater than exports. The state of the balance of payments surplus or deficit affects Indonesia's economic growth.

Economic growth is an increase in the production capacity of an economy which is manifested in the form of an increase in national income (Rinaldi et al., 2017). The higher the national income of a country, the higher the economic growth. According to Mankiw (Rinaldi et al., 2017), Economic growth can also be said to be an increase in real Gross Domestic Product (GDP) in a given year which indicates an increase in a country's per capita income in the economy. In other words, an increase in GDP has implications for increasing economic growth (Amri & Aimon, 2017). Economic growth will increase, if there is an increase in income caused by the state doing more exports than imports (Fitriani, 2019).

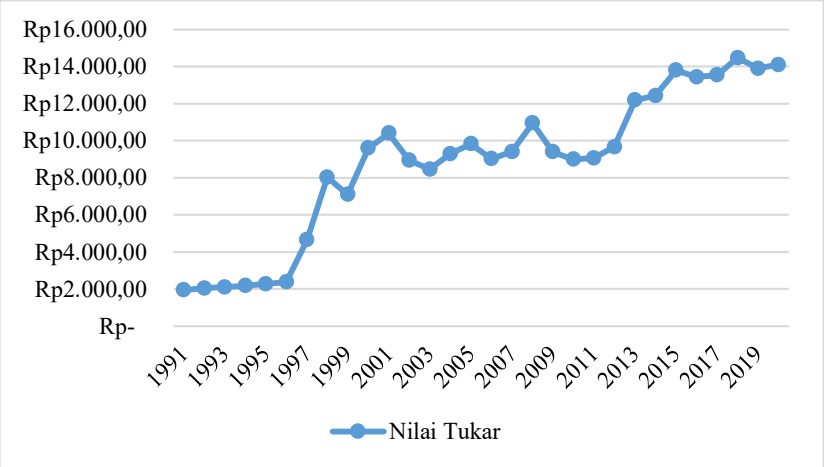
Chart 1. Indonesia's Export and Import Value 1991 - 2020



Source: Ministry of Commerce, 2021

Money as a means of payment for international trade raises the need for cross-border payment instruments which creates differences in currency values between countries. Exchange rate movements carry two precisions, first when the rupiah depreciates, it has a positive effect on export demand, thereby increasing the trade balance. Second, comparatively, Indonesian products are more competitive than competing countries which will increase the country's economic growth.

Chart 2. Rupiah to Dollar Exchange Rate 1991 - 2020



Source: Ministry of Commerce, 2021

According to research Prawira et al. (2019), the export variable has a significant positive effect on economic growth, and imports have a significant negative effect on economic growth.

However, according to research Astuti & Ayuningtyas (2018), long-term Future import variables do not have a significant negative impact on economic growth.
Based on the background written by the author and also the phenomena described above. Therefore, in accordance with the descriptions above, the researcher wants to develop and conduct research with the title: "The Effect of International Trade and the Rupiah Exchange Rate on Indonesia's Economic Growth".

MATERIALS AND METHOD

The data analysis technique used is multiple linear regression model. The model is used for linear regression testing that uses more than one independent variable in the study and to determine the influence and relationship of the independent variables in the study which are explained through the variables of exports, imports, and the exchange rate on economic growth (the dependent variable). From this explanation can determine the regression equation as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Economic Growth

β_0 = Constant
$\beta_1, \beta_2, \beta_3$ = Coefficient
X_1 = Export
X_2 = Import
X_3 = Exchange rate
ε = *Error Term*

The data collection technique used in this study by the author is non-participant observation, which is an observation in which the researcher does not participate directly in the activity or process being observed. To support the needs of the data in this study, researchers collected data using methods, such as:

Documentation

Data collection using documentation techniques is carried out by making copies of the Economic Growth, Export, Import, and Exchange Rate data into Microsoft Excel 2019, so that it can be processed easily in the Eviews 10 software program.

Literature Review

In conducting this research, researchers collect data and information which will then be used as references or research guidelines, such as researching, reading and reviewing various literatures or references in the form of scientific journals, books, websites and sources containing related topics. with the research being carried out.

RESULTS AND DISCUSSION

Classic Assumption Test

Table 1. Normality Test

Jarque-Bera	1.020702
Probability	0.600285

If seen in the table above, it is explained that the value of *Jarque-Bera* of 1.020702 and the probability value of 0.60285, this proves that both values are greater than 0.05(α), so it can be concluded that the residuals are normally distributed, which means that the classical assumptions about normality have been met.

Table 2. Autocorrelation Test

Prob. F(2,24)	0.0027
Prob. *Chi-Square*(2)	0.0029

From the results of the autocorrelation test, it can be explained that the Prob value. F(2.24) is 0.0027, this proves that the value of Prob. F count less than 0.05(α), so based on

the hypothesis test, H_0 accepted, which means there is an autocorrelation. In order to avoid multicollinearity, it can be corrected using Logarithms (Log).

Table 3. Autocorrelation Tet with Logarithms

Prob. F(2,24)	0.1390
Prob. *Chi-Square*(2)	0.1028

From the results of the autocorrelation test using Logarithms (Log), it can be explained that the Prob value. F(2.24) is 0.1390, this proves that the value of Prob. F count greater than 0.05(α), so based on the hypothesis test, H_0 accepted, which means there is no autocorrelation.

Table 4. Heteroscedasticity Test

Prob. F(3,26)	0.1483
Prob. *Chi-Square*(3)	0.1398
Prob. *Chi-Square*(3)	0.2191

If seen in the table above, it is explained that the value of Prob. F(3.26) is 0.1483, this proves that the value of Prob. F count greater than 0.05(α), so based on the hypothesis test,H_0 accepted, which means there is no heteroscedasticity.

Table 5. Multicollinearity Test

Variabel	*Centered* VIF
C	NA
EKSPOR	20.87927
IMPOR	15.12427
KURS	3.044441

Based on the table above, it can be explained that the value of Centered VIF (Variance Inflation Factor) on the Export and Import variables has a value greater than 10 and the Exchange rate variable has a value of 3.044441, then the variable has a value less than 10. So it can be said that In this study, there is still multicollinearity. In order to avoid multicollinearity, it can be corrected using First Difference (d).

Table 6. Multicollinearity Test with First Difference

Variabel	*Centered* VIF
C	NA
D(EKSPOR)	2.952403

D(IMPOR)	2.973492
D(KURS)	1.038076

From the results of the multicollinearity test using First Difference (d), it can be explained that the results of Centered VIF (Variance Inflation Factor) on the Export, Import and Exchange rate variables have a value less than 10. With the largest value of 2.952403 on the Export variable and the smallest of 1.038076 on the exchange rate variable. So it can be concluded that this research is free from multicollinearity.

Table 7. Linearity Test

	Value	df	*Probability*
t-*statistic*	3.448325	25	0.0020
F-*statistic*	11.89094	(1,25)	0.0020
Likelihood ratio	11.67271	1	0.0006

Based on the table above, it can be explained that the value of F-statistic (1.25) and t-statistic is 0.0020, this proves that the value of F-statistic and t-statistic is less than 0.05(α),so it can be said that this study does not meet the assumption of linearity. Therefore, in order to fulfill the linearity test, it can be corrected using First Difference (d).

Table 8. Linearity Test with First Difference

	Value	df	*Probability*
t-*statistic*	0.127272	24	0.8998
F-*statistic*	0.016198	(1,24)	0.8998
Likelihood ratio	0.019566	1	0.8888

From the results of the linearity test using First Difference (d), it can be explained that the value of F-statistic (1.24) and t-statistic is 0.8998, this proves that the value of F-statistic and t-statistic is greater than 0.05 (α). So it can be concluded that this research has fulfilled the assumption of linearity.

Hypothesis Testing and Analysis

Table 9. Multiple Linear Regression Model Results

Dependent Variable: PDB
Method: *Least Squares*

Variabel	*Coefficient*	Std. *Error*	t-*Statistic*	Prob.
C	-4041180.	866939.3	-4.661433	0.0001
EKSPOR	-39.97102	28.32750	-1.411032	0.1701
IMPOR	79.00587	22.90975	3.448570	0.0019

KURS	712.3655	154.9725	4.596722	0.0001
R-squared	0.876660		*Mean dependent var*	5313540.
Adjusted R-squared	0.862429		*S.D. dependent var*	5229022.
S.E. of regression	1939476.		*Akaike info criterion*	31.91730
Sum squared resid	9.78E+13		*Schwarz criterion*	32.10413
Log likelihood	-474.7595		*Hannan-Quinn criter*	31.97707
F-statistic	61.59987		*Durbin-Watson stat*	0.687555
Prob(F-statistic)	0.000000			

The results of the regression analysis show that the export variable has no significant and negative effect on economic growth with a value of 0.1701. This shows that there is no unidirectional relationship between exports and economic growth, that is, if exports increase, economic growth also increases.

For the import variable, based on the table above, the import variable has a significant and positive effect on economic growth with a value of 0.0019. This shows that there is an inverse relationship between imports and economic growth, that is, if imports increase, economic growth will decrease.

Meanwhile, the exchange rate variable shows that the variable has a significant and positive effect on economic growth with a significance value of 0.0001. This shows that there is an inverse relationship between the exchange rate and economic growth, that is, if the exchange rate increases, economic growth will decrease.

As a country that implements a free market system, Indonesia's economic growth is strongly influenced by the performance of international trade, this is evident in the regression analysis which shows that the percentage of the influence of the variables of exports, imports, and the exchange rate is very large, namely 87.66%, the remaining 12.34% which is the influence of other variables not examined

Exports will reduce the demand for domestic goods and services, the low demand for domestic goods and services will result in a decrease in domestic productivity, of course this will result in a decrease in available job opportunities. The fewer human resources that produce, the less the amount of output produced. The decrease in the amount of output in the form of goods and services causes the economic growth of a country to decrease and vice versa if it increases.

On the other hand, imports will reduce domestic demand. Declining public demand will reduce the level of domestic productivity and reduce the number of available job opportunities. This decrease will cause a decrease in the amount of output produced in the country. This decrease in the amount of output in the form of goods and services will cause a country's economic growth to decline.

In addition, international trade activities are largely determined by the exchange rate of the country concerned. For example, if the exchange rate increases (depreciates), the price of export goods from Indonesia will be relatively cheaper in the US, so that exports will tend

to increase. On the other hand, the price of goods from the US is relatively expensive so that imports will tend to decline. Thus, a decrease in the value of the exchange rate itself will tend to affect the trade performance and economic growth of a country.

Thus, international activities and events will affect the domestic economy, through the influence of currency exchange rates on imports, exports, and ultimately public demand, productivity levels, number of employment opportunities, and the amount of output produced by a country. The higher the amount of output produced by a country in a certain period will result in the country's economic growth will increase, and vice versa.

CONCLUSION

Based on the results of the research and discussion that have been stated above, it can be concluded that exports have no negative and insignificant effect on economic growth in Indonesia, imports have a positive and significant effect on economic growth in Indonesia, and the exchange rate has a positive and significant effect on economic growth. in Indonesia.

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