

THE EFFECT OF EXCHANGE RATES, EXPORTS AND IMPORTS ON ECONOMIC GROWTH IN INDONESIA

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Abstract

The country's economic growth can be seen from the price of gross domestic product (GDP). Gross domestic product can be used as one of the benchmarks in fostering economic improvement from various sectors indirectly. Economic growth is stimulated through various factors, including import prices as well as changes in the price of the rupiah or the exchange rate of the rupiah. This study aims to determine the impact of exchange rates, exports and imports on economic improvement in Indonesia. This research technique uses a quantitative approach. The records received in this observation are secondary records received from the World Bank in the form of time collection from 1989 to 2018. Data evaluation is carried out through more than one regression evaluation with the help of time series tools. The results of the study reveals that the exchange rate and import variables have a major effect on economic growth. Meanwhile, the export variable has a negative impact on economic growth.

Keywords: *Exchange Rates, Exports, Imports, Economic Growth*

1. INTRODUCTION

It's possible that certain countries throughout the world have heard of globalization, which simply refers to the fact that practically all nations on the planet have open trade. Countries that participate in international trade are, at their core, nations that possess a diverse assortment of natural resources. As a result, this may create opportunities for countries all over the world to work together or engage in international trade. The act of purchasing and selling goods or services between businesses located in various nations is known as international trade. This type of endeavor is one of the industries that has the potential to boost the economy of the country. It's possible that the individuals, businesses, or governments involved in this trade are all the same. The movement of goods both to and from other countries is an essential part of international trade (Mansfield et al., 2002; Yarbrough & Yarbrough, 2014). The rules generally produce returns, particularly with regard to the export and import activities of each country.

This includes the growth and number of commercial goods manufacturers, improvements to infrastructure, growth in the number of schools, quarterly manufacturing growth, and growing capital goods manufacturing, where this concept is more about the cost of increasing finance. Economic growth is an increase in the manufacture of products and supply in a country (Cahya & Maula, 2021). Each nation must make a rapid improvement in its economic situation one of its top priorities in order to boost both the level of living and the general welfare of its population. The economic development of each nation is

significantly impacted by the economic relations that exist between the nations that comprise the world.

This circumstance leads an increasingly open global economy to favor international competitiveness as a decisive factor. The advantage of opening the global economy can be demonstrated in a country's balance of payments (Thirlwall, 2012). There are fundamental factors that determine economic growth, including an increase in general GDP output and population expansion. It is possible to raise the country's overall GDP output if the country benefits from specialization activities. When there is a vast market that must be owned to facilitate production, specializations might be found. The exchange rate is the quantity of domestic currency required to purchase a unit of foreign currency. The exchange rate between these two countries is based on an evaluation of the content of their respective product and service markets (Burstein & Gopinath, 2014; Gabaix & Maggiori, 2015).

Due to the usage of foreign currency, exchange rate risk (exchange rate) in foreign investments is more complex (Yermack, 2015). Foreign investors who invest will repay the capital in the currency of their home nation. Thus, this will affect the rupiah depreciation, reducing the company's profitability. When the rupiah exchange rate depreciates relative to the U.S. dollar, the price of imported items rises naturally owing to the usage of imported raw materials, which raises manufacturing costs and reduces corporate profits, hence reducing investor interest (Mandeij, 2020; Purwono et al., 2018; Suidarma et al., 2018).

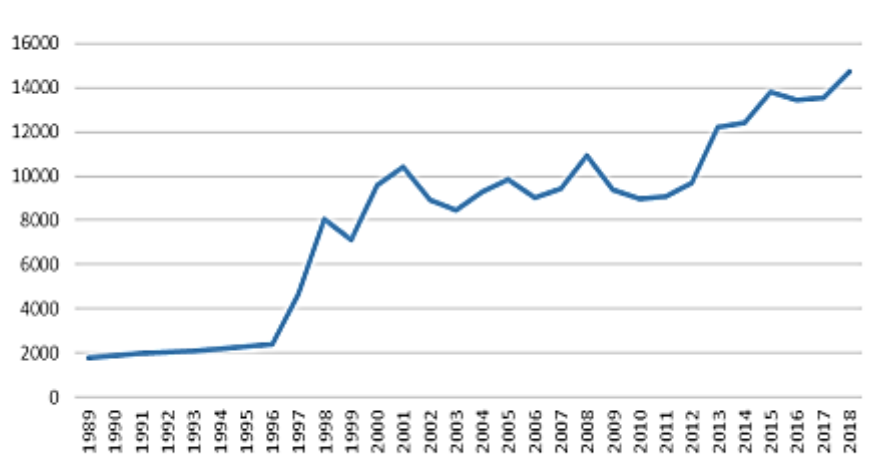
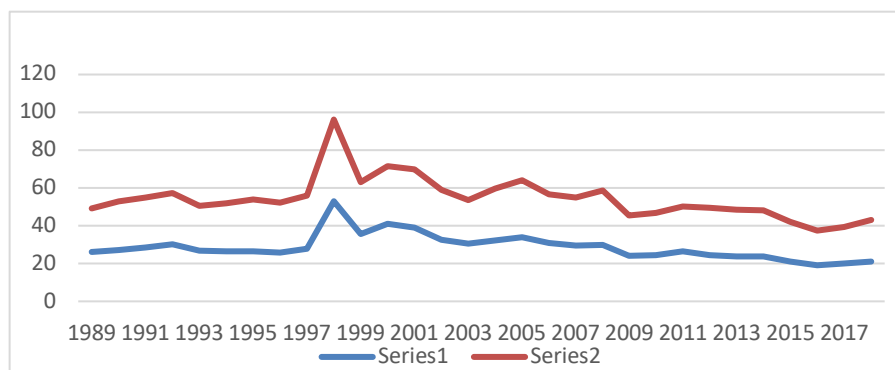


Figure 1 Graph of the Rupiah Exchange Rate on US Dollar (1989-2018)

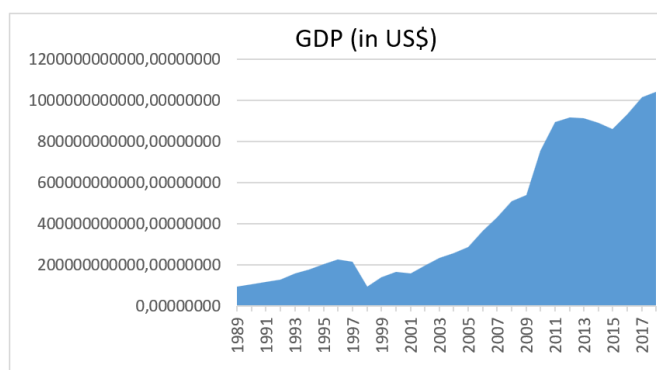
In the figure above, the dollar's exchange rate with the Indonesian rupiah rose from 1997 to 2001, but declined in 1999. Due to the monetary crisis that triggered hyperinflation in Indonesia, the rupiah's value increased relative to the US dollar. Then again, the value of the rupiah compared to the dollar has increased in recent years. Consequently, the rise or fall of the currency impacts Indonesian investment (Setiawanta et al., 2020; Stern, 2003).



Source: (BPS, 2015; World Bank, 2019)

Figure 2 Exports & Import from 1989 to 2018

Export is an attempt to promote products owned through specific means to foreign locations in line with allowed legislation using receiving currency and foreign language communication (Doole & Lowe, 2012). Meanwhile, imports are purchases or imports of foreign goods into the domestic economy ((Luo & Tung, 2007). The analysis of economic growth is essential for determining the economic expansion that can be derived from gross domestic product (GDP). The increase in gross domestic product (GDP) and per capita profit can rise in tandem (Diener et al., 2013; Waggoner & Ausubel, 2002). Meanwhile, Indonesian GDP since 1998 can be seen as below.



Source: (BPS, 2015; World Bank, 2019)

Figure 3 Indonesia's Gross Domestic Product from 1989 to 2018

Economists generally use the gross domestic product and the gross domestic product per capita as a measure of progress and prosperity. It is considered that countries with a high GDP per capita have greater levels of happiness. According to Sukirno in (Ismanto et al., 2019), Gross Domestic Product (GDP) is the price of goods and services produced in an economy, or the value generated within a particular time period. From 1989 to 2018, the GDP graph exhibited inconsistency. Consequently, a currency crisis will result in a drop in GDP, followed by an upswing.

In general, current crisis altered the order of human life, the economy, and society. The sector of foreign trade exchange (exports & imports), Gross Domestic Product (GDP) will simultaneously influence the per capita income of the people as an indicator of their degree

of welfare (Goestjahjanti, n.d.). If this income distribution begins to become unbalanced, it is possible for the population to develop social friction, which threatens a nation's stability and security. Furthermore, Indonesia, whose population grows every year but whose GDP is adjusted and even reduced, will lead in an even distribution of income, indicating that those who were already poor will become even worse.

2. LITERATURE REVIEW

Almost every country in the world now has an open economy, as some countries have experienced globalization. Sukirno (2011) defines economic growth as an increase in product manufacture and supply to the country, including growth in the number of manufacturing business goods, infrastructure improvements, growth in the number of schools, quarterly manufacturing growth, and growing capital goods manufacturing in actual financial activity. The GDP of a country reflects how far the whole economy has grown. When the cost of GDP is high, the state's financial situation is also strong. The ideal concept of rising finance costs will be determined by comparing the cost of GDP to meet the in-capita in different other countries. As a corollary, every country must prioritize developing its economy as soon as possible in order to raise people's living standards and welfare (Jisi, 2011; Kwon, 2005)

Economic growth is a phenomenon that occurs at a changing economic level. The economy's growth rate is determined using constant prices and a comparison with national income (Sukirno, 2011). Indicators of GRDP development can be used to determine the level of economic growth in a certain region. Since it is usually assessed per capita over a lengthy period of time, economic growth is seen as a rise in total expenditure. Further to that, economic growth affects the country's economic situation and will continue to improve over time. This can be used to characterize a dynamically developing economy. In the long run, economic expansion is a financial issue.

As a matter of fact, in order to determine the degree to which the financial situation has improved, it is necessary to make a comparison to the profits that have been generated throughout the nation and which are measured over the year, primarily based solely on steady prices. The use of a dime during the stage of financial activity allows for the most straightforward modification of the cost-benefit ratio that a nation has accumulated. In addition, economic growth can be considered as a means of rising output that, over the long term, remains stable relative to per capita levels. An expansion of the economy may be connected to a growth in output that is proportional to the increase in the capita. Even so, it is vital to pay attention to the output as well as the population as a whole.

The output per capita is the total output divided by the population's consumption. In addition, one-third of the concept of financial improvement includes a long-term perspective. Capacity building is dictated or made possible by technology advancements or changes, institutional and ideological elements of the existing situation (Fukuda-Parr & Lopes, 2013). Hence, the capability of a financial process is said to have increased if the level of financial activity is more than it was previously (Tyas, 2022). In other words, new trends emerge while the production of goods and services accelerates during the next 12 months. To assess whether a financial system is experiencing an increase in demand, it is necessary to examine the actual changes that have occurred in the system from year to year. The primary challenge is

to raise the well-being of the community uniformly, as the aim of high economic growth cannot be achieved.

Due to this reason, the rate of economic expansion should be accompanied by an equal distribution of income, so that the effects of growth are felt at all societal levels. Accordingly, the objective of improvement is no longer to prevent excessive monetary price spikes, but rather to produce extremely satisfactory monetary expansion while preserving a concentrate on income distribution and eradicating poverty and unemployment. High economic growth and high satisfaction might signify a spike in commercial business and monetary activity, which in turn can present numerous opportunities for labor-intensive market conditions. Thus, high economic growth and high pleasure can be attained by increasing employment and decreasing the cost of unemployment.

The increase in length of participation, the pressure of hard work, and the low unemployment rate are a reflection of the people's ability to capitalize on excessive economic expansion and experience a portion of the income level (Aaronson et al., 2019). Indeed, it is crucial to minimize unemployment to an absolute minimum. Consequently, the government must enact policies that would encourage regions that are capable of absorbing a variety of workers. The objective of pro-negative economic regulation is to reduce poverty. The limited diversity of negative communities is a need indicator that can also indicate a rise in community welfare. Thereby, various norms and guidelines for different agencies must be enforced at all levels of society, either directly or indirectly.

In this instance, the objective of improvement is not always to increase wealth, but also to make it feasible for the community to have access to health care, clean water, etc. To discover these facts, we must recognize that economic growth is not always about betterment, but must also be extremely rewarding (Friedman, 2017). Therefore, we must be able to harness all the capabilities offered by the Indonesian people, including human capital, hard labor, and technological expertise. Due to an increase in wealth, economic expansion can also be viewed as an increase in product production and supply. A rise in income is not necessarily correlated with population expansion, but it can be measured by an increase in productivity, the number of developing technologies, and advances in the social sphere. In addition, economic growth can be regarded as a method for transforming a country's financial structure to a more prosperous one within a given time frame.

In essence, this growth in financial resources is evidenced by the rise in production capacity resulting from increasing revenue in all regions. Bank Indonesia defines payment stability as the recording of financial transactions between Indonesian and non-Indonesian citizens within a given time frame. The stability of state bills is said to be a surplus if there is an additional budget and investment compared to the duties paid to us, and a deficit if imports are greater than exports (Friedman, 2017). In this regard, the stability of the surplus or deficit can impact the economic development of Indonesia.

3. RESEARCH METHOD

This research approach uses quantitative methodologies. This study gathered secondary data from the World Bank in the form of a time series spanning 30 years, from 1989 to 2018. Multiple regression analyses were employed in the examination of the data. This study

employs Eviews software. This study's variables are X1: Exchange Rate, X2: Export, X3: Imports, and Y: Economic Growth.

Using time series data from the Bureau of Labor Statistics, the World Bank, and other sources with a time series from 1989 to 2018, this analysis employs secondary statistics. Multiple regressions utilizing the normal continuous square, classical assumption test, and statistical test are utilized in the research methodology.

4. RESULT AND DISCUSSION

From the results of calculations with more than one linear regression model used to calculate the value of the influence between the independent variables, especially Exchange Rates (X1), Exports (X2) and Imports (X3), on the dependent variable, namely Economic Growth (Y). Calculation of the regression coefficient using Eviews obtained the regression model is as follows:

Table 1 Multiple Regression Results

Dependent Variable: LOG(Y)
Method: Least Squares
Date: 12/11/20 Time: 20:11
Samples: 1 30
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistics	Prob.
LOG(EXCHANGE				
RATES)	0.857030	0.059088	14.50441	0.0000
EXPORT	-0.125273	0.015344	-8.164373	0.0000
IMPORT	0.085168	0.023660	3.599629	0.0013
C	20.35262	0.631044	32.25231	0.0000
R-squared	0.933363	Mean dependent var	26.47685	
Adjusted R-squared	0.925675	SD dependent var	0.827257	
SE of regression	0.225532	Akaike info criterion	-0.017139	
Sum squared resid	1.322488	Schwarz criterion	0.169687	
Likelihood logs	4.257088	Hannan-Quinn Criter.	0.042628	
F-statistics	121.3920	Durbin-Watson stat	1.336854	
Prob(F-statistic)	0.000000			

Regression equation based on the above table calculation:

$$Y = C + X1 + X2 + X3 + \sum$$

$$Y = 20.35262 + 0.857030 X1 - 0.125273 X2 + 0.085168 X3 + \sum$$

Based on the aforementioned regression equation, the size of the independent variable's contribution to the dependent variable can be determined, as described below.

- 1) The exchange rate variable has a regression coefficient of 0.857030, which means that every rise in the exchange rate variable increases economic growth by 0.857030.
- 2) The export variable's regression coefficient is - 0.125273, indicating that every increase in one export variable reduces economic growth by 0.125273.

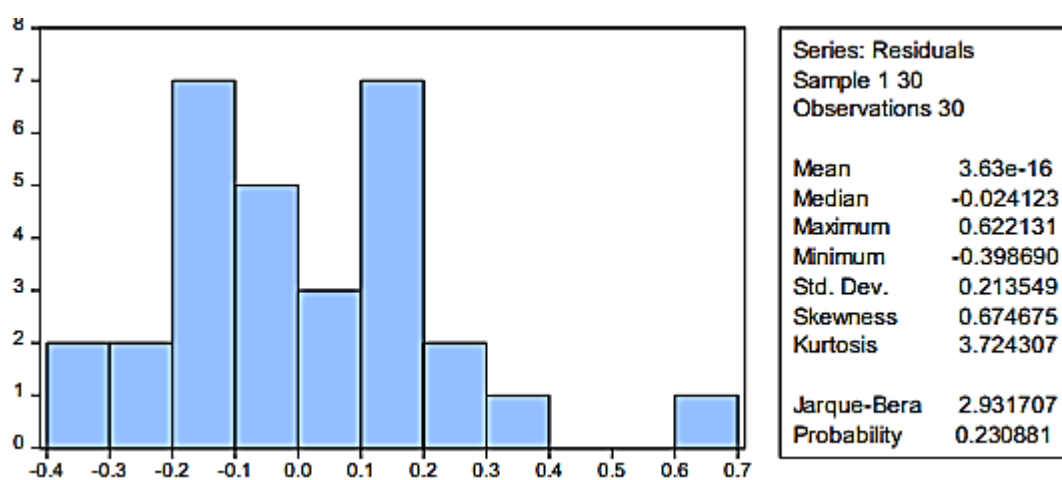
- 3) The import variable's regression coefficient is 0.085168, which means that every increase in one import variable increases economic growth by 0.085168.

As a result, the outcomes of the exchange rate variable and the import variable have a positive influence on the growth of the economy in Indonesia, whereas the results of the export variable have a negative influence on the growth of the economy in Indonesia.

1. Classic assumption test

a. Normality test

Table 2 Multiple Regression Results with Normality Test



The residuals are normally distributed, as shown in the fallow jarque 2.931707, with a probability of 0.230881, because the Jarque probability value is $< \alpha$ (5%), with a probability of 0.230881. It has been discovered that the multiple regression model is normally distributed and passes the normality test based on its estimation.

b. Heteroscedasticity test

Table 3 Multiple Regression Results using Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistics	0.034319	Prob. F(3,26)	0.9913
Obs*R-squared	0.118328	Prob. Chi-Square(3)	0.9896
Scaled explained SS	0.121064	Prob. Chi-Square(3)	0.9892

As from outcomes above on the existing data that the OBS Square value 0.118328, with a probability of 0.9896, where the probability value is greater than α (5%) and it can be said that there is no heteroscedasticity. From the estimation of the multiple regression model, it can be said that it has passed the Heteroscedasticity Test.

c. Multicollinearity test

Table 4 Multiple Regression Results of Multicollinearity Test

Variance Inflation Factors
Date: 12/11/20 Time: 20:16
Samples: 1 30
Included observations: 30

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
LOG(EXCHANGE RATES)	0.003491	159.8321	1.067515
EXPORT	0.000235	121.0378	6.420475
IMPORT	0.000560	226.4095	6.496043
C	0.398216	234.8670	NA

Based on the information presented above, the VIF found that the exchange rate variable, the export variable, and the import variable all centered at a value of less than 10, which indicates that the prediction model does not contain any multicollinearity. When the centered results of the exchange rate variable, the export variable, and the import variable all have a value that is less than 10, with 1.067515 being the value for the exchange rate variable, 6.420475 being the value for the export variable, and 6.496043 being the value for the import variable, this indicates that all three variables have a value that is less than 10. It is possible to conclude, based on the estimation of the multiple regression model, that the Multicollinearity Test was successfully completed by the model.

d. Autocorrelation test

Table 5 Multiple Regression Results of Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistics	1.996553	Prob. F(2,24)	0.1577
Obs*R-squared	4.279382	Prob. Chi-Square(2)	0.1177

It is clear from the estimate model's autocorrelation results that there is no autocorrelation. Due to the fact that the Durbin Watson Stat is 1.769104, which is between 1.54 and 2.90, there is no autocorrelation in the estimated model. According to the estimation of the multiple regression model, the Autocorrelation Test has been succeeded.

2. Statistics Test

a. Coefficient of Determination Test

Due to the fact that coefficient of determination 0,92 (92%), hence indicates that all of the independent variables contribute 92 percent to the overall explanation of the dependent variable, with the remaining 0.8 percent of the explanation coming from variables that are not included in the research model.

b. F Uji test

a) Goodness of fit

Based on the results of the statistical f test, which showed a difference of 121.3920 and had a probability value of 0.0, the f test was determined to be statistically significant at a level of alpha () 1%. Therefore, it is possible to affirm that the regression model has satisfied the requirements for the goodness of fit (feasibility of the model).

b) Simultan

Since the results of the test for goodness of fit indicate that f is significant, it can also be concluded that the independent variables affect the dependent variable simultaneously.

5. CONCLUSION

Basically, economic improvement seeks to remove poverty, unemployment, as well as social inequality, so as to establish a prosperous, wealthy and affluent society. However, to reach this affluence, focus must be made to using high economic growth, equitable progress, and a strong and active state life, or what is designated by the development trilogy in the New Order era. Economic development cannot be separated from the development trilogy, whereas only with economic development and the correct policies for economic growth can we attain equity and prosperity. Several conclusions can be taken from the outcomes of research on the 1989-2018 time series data in Indonesia by utilizing multiple regression.

The results revealed that the exchange rate and import indicators had a positive effect on economic growth. Conversely, the export variable has a negative impact on economic growth. To tackle this issue, the government has taken different initiatives to stimulate export activity. Several short-term actions have been implemented to improve the business environment through integrated OSS licensing services, tax incentives, and professional development. Increase in short-term exports, notably the selection of primary export goods, streamlining procedures to decrease costs and time, as well as economic diplomacy and boosting market access. In addition, the administration will devote attention to infrastructural and human resources development in the medium and long term.

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