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The Influence of Total Export in Indonesia in the 2015 – 2019 Period

Al Bina

Departement Of Economic Post Graduate, Universitas Negeri Medan
Jl. William Iskandar Ps. V, Deli serdang, Sumatera Utara, Indonesia
Email: albinakisaran@gmail.com

ABSTRACT

This study aims to analyze the effect of exchange rates and inflation on exports in Indonesia, data used time series in 2015.1 to 2019.12 using Ordinary Least Square regression analysis (OLS) and adhered to the E-Views program. The results showed that simultaneous variable exchange rates and inflation had a significant effect on exports in Indonesia. While partially variable exchange rate has a positive and significant effect on exports in Indonesia, while variable inflation has a negative and significant effect on exports in Indonesia.

Keywords : Total Export, inflation,

INTRODUCTION

In the era of globalization of international trade into a race in economic activity, this becomes important for economic growth, especially in developing countries. One indicator of economic activity is that international trade is used to maintain the continuity of national development. This means that every country can no longer close itself to other countries. Therefore, economic openness to international trade becomes the main choice for every country. The economic success of a country can not be separated from the improved performance of macroeconomic indicators, including export and import functions (Sadono,2015).

According to (Ginting, 2013) Economic development in international trade is increasing due to the interconnectedness of relations between countries in the flow of trade in goods and money and capital between countries. Exports and imports are major activities in international trade. Exports are goods and services produced in the country in other words domestic production which is then sold abroad (Mankiw, 2006). Exports are carried out to increase foreign exchange and trade balance so that the role of exports is very important in encouraging economic growth by increasing export effectiveness (Pratiwi, 2018).

(Anshari, 2017) There are several factors that affect trade balance instability, including the exchange rate. Each country has its own unit of currency so that the money in its development is not only used as a medium of exchange but becomes one of the commodities that can be traded and speculated so that the problem arises the problem of exchange rates. The existence of currency differences resulted in the movement of international trade to not run effectively.

In theory, the rise and fall of the exchange rate will affect exports and import, if the exchange rate depreciates it will affect the price of domestic goods to be relatively cheaper to foreign goods so as to encourage exports. That is, if the value of the dollar exchange rate strengthens, the volume of exports will also increase. This is due to the value of domestic currencies relative to foreign currencies that decrease. Results of studies conducted (Ginting, 2013) t also stated that the exchange rate negatively affects exports in Indonesia, this shows that the importance of exchange rate policy to trigger an increase in exports.

Export growth is not only influenced by exchange rates, but inflation also contributes to exports as it is associated by (Syahrul, 2020). High inflation will increase the price of domestic goods, rising inflation will make it difficult for domestic products to compete in the international market resulting in slowing export growth. (Anshari, 2017) also stated that rising inflation would weaken the trade balance and boost competitiveness, leading to a decline in exports.

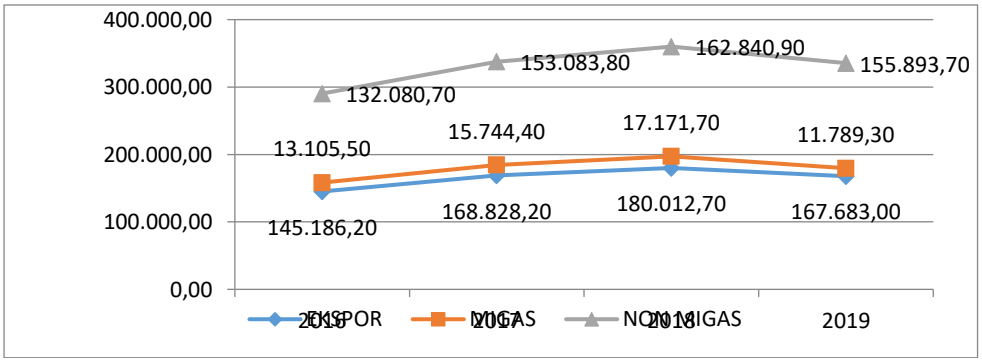

Figure 1. *Development of Export Value*
Source: BPS, Processed Data Center And Information System, Ministry Of Trade, 2020

Based on data published by the Central Bureau of Statistics on Indonesia's export development in 2016 to 2018 in graph 1.continues to increase but decrease in 2019 both in terms of oil and gas and non-oil and gas. However, what still dominates Indonesia's exports for the past five years is the non-oil and gas sector. The value of Indonesia's exports in December 2018 fell by 4.89% to US$ 14.18 billion compared to the previous month, while January-Desembaer in 2017 rose by 6.65%. In 2019 from the overall export value of Indonesia as much as 92.97 percent or 155,893.7 million US dollars is the export of non-oil and gas commodities and 7.03 percent or 11,789.3 million US dollars is the export of oil and gas commodities with a total export value of 167,863.0 million US dollars.But the figure fell sharply by 6.94 percent compared to 2018 of 180.01 billion US dollars. Not only that the exchange rate also experienced a volatile movement in January - December 2015 almost touched Rp 14,000 more until 2018 touched Rp.15,227 but in 2019 the rupiah exchange rate also decreased again to Rp 14,929 per USD and December experienced an appreciation of Rp 13,901 USD. The development of exports, exchange rates and inflation does not occur due to national economic affect only but this is also an external effect due to the trade war between China and the United States which resulted in the affected exchange rate, inflation and slowing exports in several countries including Indonesia.

Changes in exchange rates and inflation can change the relative price of a product to be more expensive or cheaper. Exchange rates and inflation become a reference as a tool to increase competitiveness, especially encouraging exports. Based on the above description, this study aims to study the development of Indonesian exports and examine the influence of exchange rates and inflation on exports in Indonesia based on data from the period 2015-2019.

2 THEORICAL FRAMEWORK

Export

Export is the outflow of goods or services produced by a country that is sold outside the country in other words the international market. Export occurs when domestic production is sufficiently fulfilled or domestic production can compete in the international market in terms of price and quality of products (Purba et al, 2020).

Exports carried out by a country are qualified by several factors, including the ability of a Country in producing exported goods, such as quality, price, taste of foreign residents, exchange rates, public income, transportation costs and government policies on international trade (Ashari, 2020).

Exchange rates

Exchange rates are a factor that determines the dynamics of international trade. The size of export volume is largely determined by the magnitude of the exchange rate, because in international trade activities using foreign currency in every transaction (Pratiwi, 2018).

In macroeconomic theory, the correlation between exchange rates and international trade volume uses Fleming is Mundel model. Mundel Fleming's model assumptions suggest that fixed price levels indicate the cause of economic fluctuations in the short term (Mankiw, 2003). Appreciation or depreciation of the value of the currency will result in changes in

exports and imports. If the exchange rate appreciates, there will be an increase in imports and decreased exports, conversely if it depreciates then the volume of exports will increase.

Inflation

Inflation is the increase in the prices of goods in general occurs continuously in a certain period caused by an increase in liquidity of the money supply in an economy. Price increases not only occur there is one type of goods, but price increases that include the group of consumer goods of the community whose gift will affect the increase in the price of other goods.

According to (Ashari, 2020) Inflation will have an adverse effect on trade, especially exports. Rising prices cause goods produced by a country to be unable to compete in the international market, so exports will decrease and imports increase because the prices of imported goods are relatively bad. The decline in exports will be followed by imports will cause instability in the flow of foreign currencies in each transaction.

METHODS

The scope of observations made in this study is rupiah exchange rate data, inflation and export data in Indonesia using time series data in the period 2015.1 - 2019.12. This research is limited by skunder time series data in the form of monthly report data that has been compiled and published by related parties, namely Bank Indonesia, the Central Statistics Agency and the Ministry of Trade. Data is also obtained from books and other research results related to the investigation carried out.

The analysis method used in the study was Ordinary Least Square (OLS) regression. There is a research instrument consisting of classical assumption testing, which consists of a normality test, a hesetroskedasticity test, a multicollinearity test so that it is expected that regression results will be free from bias. The model used in this study shows below:

$$Y = c + b_1X_1 + b_2X_2 + e \quad \text{.....(1)}$$

Information :

Y	= Exsport
c	= Constants
X_1	= Exchange Rates
X_2	= Inflation
b_1 , b_2	= Independent variable coefficients of exchange rates, inflation
e	= Standard error (residual)

RESULTS AND DISCUSSION

The results of the regression analysis estimate are presented in table 1. The analytical model used in this study qualifies in the classical assumption test: (1) meets the basic assumptions of residual normality, (2) there is no homocedastisity, and (3) there is no multicollinearity between independent variables.

Tabel 1. Estimation Regression Linear

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1650.876	4447.85	-0.37116	0.7119

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Exchange Rates	1.121204	0.323862	3.461978	0.001
Inflation	-742.7799	555.3376	-1.33753	0.1864
R-squared	0.19445	Mean dependent var		13534.61
Adjusted R-squared	0.166186	S.D. dependent var		1475.533
S.E. of regression	1347.36	Akaike info criterion		17.29839
Sum squared resid	1.03E+08	Schwarz criterion		17.40311
Log likelihood	-515.9516	Hannan-Quinn criter.		17.33935
F-statistic	6.879574	Durbin-Watson stat		1.249216
Prob(F-statistic)	0.002107			

Source : Author's compilation

Based on table 1, the regression equation obtained is as foll0ws :

$$Exsport = -1650.876 + 1.121204\ X_1 - 742.7799\ X_2 + e$$

1. Based on the variable regression test, the exchange rate has a coefficiency value of 1.121204 with a probability value of 0.001 which is less than α = 0.05. This points out that variable exchange rates had a positive and significant effect on exports in Indonesia during the research period of 2015.1 - 2019.12. This means that if the rupiah exchange rate depreciates by 1 percent, then exports will increase by 1.121204 percent.
2. Based on the regression test, the inflation variable has a coefficient value of -742.7799 with a probability value of 0.1864 greater than α = 0.05. This shows that statistically has a negative and insignificant influence on exports in Indonesia during the research period of 2015.1 - 2019.12.

Classic Assumption Test

Normality Test

Normality tests are used to test whether in regression models, independent variables and dependent variables are distributed or not. This test is done by looking at Jarque Bera results and probability. The assumption of normality can be fulfilled if the Sig value of > 0.05. Based on the estimated J-B statistics are 2.502502 and the probability value is 0.286147 > α = 0.05. So it can be concluded that the data used is distributed normally.

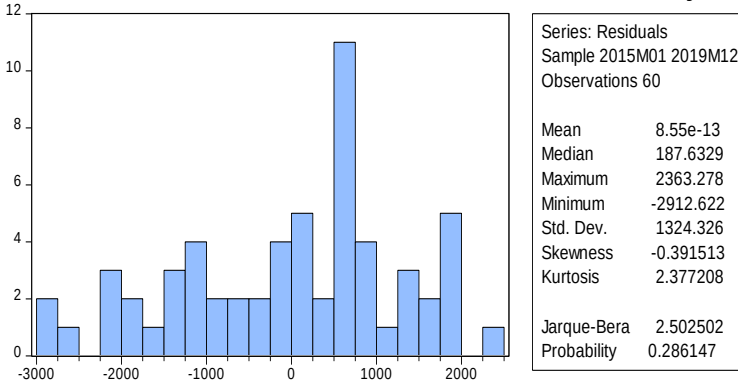

Figure 2. Normality Test

Heteroskedasticity Test

Based on the results of heteroskedatisity tests with Glejser testing shows the probability of

Chi-Squere resulting in 0.9203 greater than α = 0.05, so it can be concluded that there is no problem of heteroskedastisity in the regression model.

Table 2. Esimation Results of Heteroskedasticity Test

Heteroskedasticity Test: Glejser

F-statistic	0.079075	Prob. F(2,57)	0.9241
Obs*R-squared	0.166014	Prob. Chi-Square(2)	0.9203
Scaled explained SS	0.140674	Prob. Chi-Square(2)	0.9321

Source : Author's compilation

Multikolinieritas Test

Based on the results of the multicolinarity test on table 3 showed that there is no high correlation value between free variables not exceeding 0.8. Concluded that there is no multicollinearity between variable exchange rates and inflation.

Table 3. Estimate Results of Multicollinearity Test

	Exchange Rate	Inflation
Exchange Rate	1.000000	0.001637
Inflation	0.001637	1.000000

Source : Author's compilation

DISCUSSION

The first findings in this analysis show that exchange rate estimates have a significant positive effect on exports in the country. The hypothesis in this study is acceptable, because the findings have a conformity with the theory put forward by Mankiw's book that if the exchange rate weakens in the value of the domestic currency, it will lead to an increase in exports. Indonesia adheres to a floating exchange rate system, in this system depreciation or appreciation of currency values will result in changes in exports and imports. If the exchange rate depreciates (domestic currency) relative to foreign currency decreases, then the volume of exports will increase.

Research on exchange rates is interesting and widely conducted by economists, such as research on the trade effect of exchange rates and their volatility: Chile and New Zealeand, the research yields on a small open economy exchange rate fluctuations affecting the trade balance (Huchet-Bourdon and korinek,2012). (A Y.V H, Tor, 2016) It is stated that changes in the exchange rate have a significant effect on Indonesia's exports. However, it is different from the findings (Ginting, 2013) which resulted in the exchange rate having a significant negative effect on exports in Indonesia.

The second finding shows that inflation had a negative and insignificant effect on exports in Indonesia during the observation period. This can happen because the inflation rate in each country is different, so the high and low inflation in Indonesia does not affect the purchasing power of foreign people.

The estimation results explain that the R-Squared value of 0.19445 which means that the change in Indonesia's total exports can be explained by a regression model of 19.94%, while the remaining 80.06% is explained by other variables that are not included in this study. Simultaneously, the exchange rate and inflation affect exports in Indonesia as seen in

the Prob (F-satistics) of 0.002107 which is less than α = 0.05.

The results of the t-statistics test show that the exchange rate variable has an influence on the export variable with a t-statistical value of 3.461978 greater than the t-table of 2.00247, this means that the exchange rate affects exports in Indonesia, while for the inflation variable of -133753 smaller than the t-table of -133753. This means that variable inflation has no influence on exports in Indonesia.

IMPLICATION

Export is an international trade activity that will increase economic growth, so exports are an important concern, especially in increasing economic growth. Total exports in 2015 – 2018 had an increasing trend, especially in the non-oil and gas sector. The increase in exports occurs in relation to how the exchange rate and inflation of a country.

Rupiah exchange rate fluctuations throughout the observation period. This is due to the imbalance between the demand and supply of currencies. Changes in the exchange rate will affect the balance sheet of trades which include exports and imports. Theoretically, weakening the exchange rate will reduce total exports because when the rupiah exchange rate weakens, the price of domestic goods will be more expensive compared to foreign goods so that exports will decrease and people will switch to foreign goods, imports will increase.

The results of the study found that inflation has a negative relationship with exports, generally when inflation occurs, commodity prices will increase. The increase is due to the fact that the production factor used costs production so that there is an increase in prices, this will make the commodity unable to compete in the global market. However, the findings are not significant, which means that rising domestic inflation does not affect total exports in Indonesia.

CONCLUSIONS

Through regression analysis testing, it is known that exchange rate variables have a positive and significant effect on exports in Indonesia during the 2015.1-2019.12 research period, while inflation variables have a negative and insignificant effect on exports. Indonesia during the research period 2015.1 – 2019.12. This shows that the high and low inflation rate will not affect Indonesia's exports. Simultaneously, the exchange rate and inflation have a significant effect on exports in Indonesia.

Based on the results of this study, it is requested that the government be able to maintain exchange rate stability through appropriate policies to maintain and increase Indonesia's exports in export destination countries. In addition, the government is expected to be able to maintain the price of domestic goods so that domestic trade continues to run well.

REFERENCES

Badan Pusat Statistik. (2020) Nilai Ekspor Migas-NonMigas. BPS Indonesia.

A Y.V H, Tor, A. O. . (2016). Pengaruh Tingkat Kurs Terhadap Ekspor Di Provinsi Sulawesi Utara. 16(03), 690–698.

Ginting, A. M. (2013). Pengaruh Nilai Tukar Terhadap Ekspor Indonesia. 7(1), 1–18.https://doi.org/10.30908/bilp.v7i1.96

Huchet_Bourdon, m. and J. Korinek. (2012). Trade effect of Exchange Rate Their Volatility:

chile and New Zeland. *OECD Trade policy Papers* No. 136.

Mankiw, G.N. (2003). Macroeconomics 5th Edition. New York: *Worth Publishers*.

Muhammad Fuad Anshari, Adib El Khilla, I. R. P. (2017). Analisis Pengaruh Inflasi Dan Kurs Terhadap Ekspor Di Negara Asean 5 Periode Tahun 2012-2016. *Jurnal Info Arta*, *1*(2), 121–128.http://jurnal.pknstan.ac.id/index.php/JIA/article/view/130/118

Pratiwi, A. A. (2018). Analisis Pengaruh Kurs Dollar As, Pdb Dan Inflasi Terhadap Ekspor Indonesia Tahun 2006.I-2015.*Iv*.

Purba, M. A. B., Rahmadhana, M. F., & Nasir, M. (2020). The Influence Of Export, Government Expenditure, And Labor Force To Economic Growth In North Sumatera. *Unicees 2018*, 628–633. Https://Doi.Org/10.5220/0009510206280633

Sukirno, Sadono. (2012). Makroekonomi Teori Pengantar. Raja Grafindo Persada (Rajawali Pers)

Syahrul, Ramadhani Ashari, Eka Sudarusman, T. U. P. (2020). Pengaruh PDRB, Nilai Tukar, Dan Inflasi Terhadap Nilai Ekspor Di Yogyakarta Tahun 2015-2019. *Cakrawangsa Bisnis*, *1*(1), 9–16.