THE INFLUENCE OF CURRENCY, EXPORT, IMPORT ON THE MONEY SUPPLY

Humera Asad Ullah Khan

Economy and Business, University Bahaudin Mudhary Madura, Sumenep, Indonesia

*Corresponding Author: humera_khan@unibamadura.ac.id

_____

Abstract: This research aims to determine and analyze the influence of currency, This Research aims to determine and analyze the influence of export, This Research aims to determine and analyze the influence of import on the money supply in the Indonesia period of 2015 – 2021. It employs multiple regression methods to analyze time-series data between 2015 – 2021. The research results show that currency influence the money supply in Indonesia for the period of research 2015 – 2021. The research results show that exports didn't influence the money supply in Indonesia for the period of research 2015 – 2021. The research results have shown that imports didn't influence the money supply in Indonesia for the period of research 2015 – 2021. the result of Coefficient Determination Adjusted R square is 0.866 (86%) that's mean money exchange, export, import can explain money supply by 86% while the remaining 14% is influenced by variables that are not examined in this research.

Keywords: Currency, Export, and Import

_____

1. Introduction

In increasing growth in a country, several policies are implemented by the government in the hope of spurring economic growth. Economic growth that occurs in a country is expected to spur the development of money in that country. the development of money circulating in Indonesia itself certainly increases or decreases every year. If more and more money is circulating in the community, it will also affect several factors such as exchange rates, exports, and imports.

The amount of money circulating in a country has a very important role, where the amount of money in circulation is excessive it will put pressure on the exchange rate of the country's currency against foreign currencies. If there is an increase in the supply of circulating money, this will increase the price of goods in the market and also the price of foreign exchange.

Export is an activity carried out by a country by selling goods from within the country to abroad, with the hope that this activity will increase foreign exchange reserves in the country.

Import is the activity of purchasing goods from abroad carried out within a country by using the currency exchange rate in the country where the goods were purchased or in other words using the country's exchange rate. The exchange rate used is of course based on the amount of money in circulation. This is by the research conducted by (Budiantara, 2012) that the exchange rate has a positive and significant effect on the amount of money in circulation.

The money supply in a broad sense consists of money supply, demand deposits, and quasi money. It is suspected that the percentage of quasi-money consisting of time deposits, savings, and foreign exchange accounts belonging to the domestic private sector is quite large. Quasi

money in this case is a value that is not liquid. So even though the value is high, it is not enough to affect the increase in inflation in the economy (Ridhotul, 2017).

2. Literature Review

Literature Review
Exchange rate relations using the amount of money in circulation
The money supply plays an important role in the economy of a country. The excess money supply in a country's economy will put pressure on the exchange rate of its currency against foreign currencies. An increase in the supply of money or the amount of money in circulation will increase the price of goods as measured by the terms of money and will also increase the price of foreign exchange measured in domestic currency (Menhard, 2017).
Export correlation using Amount of Money spread
Export is an economic activity carried out using selling goods domestically to abroad, with the hope and purpose of carrying out such export activities to increase the country's foreign exchange.
Correlation of Imports with the Money Supply
Import is an activity carried out using purchasing goods from abroad into the country, the purchase of these goods is carried out in exchange for the currency of the cooperating country or claimed at an exchange rate. The exchange rate is of course guided by the amount of money circulating in the community. This is in sync with research(Sari et al., 2020) that imports have a positive and significant effect on the amount of money spread.
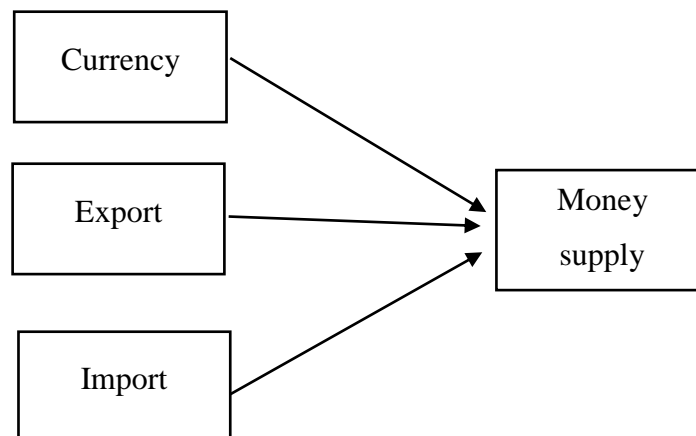

Figure 1 : Research Model the influence of Currency, Eksport, Import on the Money Supply

The hypotheses in this study are: (1) It is suspected that the exchange rate will affect the money supply in Indonesia in 2015-2021. (2) It is suspected that exports will affect Indonesia's money supply in 2015-2021. (3) It is suspected that imports will affect Indonesia's money supply in 2015-2021.

3. Method

This research is an associative quantitative research or in other words the relationship between the independent variable and the dependent variable. The object of the research is carried out in Indonesia using secondary data, where the secondary data in this study is data that has been published through the official website of the Ministry of Trade and Industry for the 2015-2020 research period.

The variables used in this study consist of (1) independent variables. Independent variables are variables that cause changes to the emergence of the dependent variable (bound), so the independent variables in this study used exchange rates, exports, and imports. (2) The dependent variable or dependent variable (Anam et al., 2021). The dependent variable is the variable that is affected or becomes the result, because of the independent variable. The dependent variable in this study, the researcher used the amount of money in circulation (Menhard, 2017).

The data collection technique used on the variables of the exchange rate, exports, imports, money supply, and inflation uses secondary data in the form of exchange rate data. The research data analysis technique in this study used two data analyzes, the first was multiple regression analysis, while the moderating variable used an interaction test. Multiple regression analysis is a mathematical model that analyzes the linear relationship between the dependent variable and more than one independent variable (Kursita, 2021), in this study the dependent variable (exchange rate, exports, and imports), and the independent (the money supply), with the regression equation as follows:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3$$

In multiple regression analysis, the classical assumption test is the conditions that must be passed, the purpose of the classical assumption test, according to (Ayu, 2019) the purpose of the classical assumption test is to test for a violation of the assumptions underlying the ordinary least square (OLS) regression model. normality, multicollinearity test, heteroscedasticity test, and autocorrelation test.

The condition that must be met in the estimation regression model is that the estimation regression model meets the normality assumption. Testing on the assumption of normality in the estimation regression model does not need to test the normality of all the variables observed in the regression model. Normality testing is sufficient for the estimated regression model residuals only (Budiantara, 2012), in testing normality the researcher uses two methods of normality, namely parametric (scatterplot and graph) and non-parametric (KolmogrovSmirnov).

The next assumption of the estimation regression model is that the estimation regression model must be free from multicollinearity problems. The BLUE OLS regression equation requires the absence of a strong correlation between the independent variables (non-multicollinearity). The existence of multicollinearity problems in the estimated regression model cannot be interpreted and the regression coefficients cannot be estimated. This is due to the large coefficient variance. A large variance will also lead to a wide confidence interval and the probability of accepting the null hypothesis on the t-test will be large. In other words, in a regression model containing multicollinearity problems, many independent variables used in the model are not significant. Although many independent variables are not significant, the value of determination ($R2$) is quite high (Azaria, 2019), in the multicollinearity test the researchers used tolerance and VIF values with the following decisions: (1) Tolerance > 0.1 and VIF < 10 (no multicollinearity). (2) Tolerance < 0.1 and VIF > 10 (multicollinearity occurs).

The third assumption is that the estimation regression model does not have heteroscedasticity problems. Generally, the estimated regression model that has heteroscedasticity problems is a regression model that uses cross-sectional data (Alawiyah, 2019), in testing heteroscedasticity the researcher uses the Spearman rank method. Autocorrelation test, the data used to prove the hypothesis is time-series data, namely a set of variable values taken at different times. The use of time-series data in research with a regression model contains several problems, including the problem of autocorrelation (Firmansyah, 2016). Testing the autocorrelation in the estimated regression equation can be done using the DW statistic. The criteria for autocorrelation testing using DW statistical values are as follows :

2nd INTERNATIONAL CONFERENCE ON BUSINESS & SOCIAL SCIENCES
Digital Transformation Business Strategy in Post Covid-19

e-ISSN 2746-5667

Tables 1. Autocorrealation criteria test

| Statistic Value	Conclusion
0<dl	Positive Autokorelation
dl≤DW≤du	No Decision
Du<DW<(4-du)	No Autokorelation
4-du≤DW≤4-dl	No Decision
DW>(4-du)	Negative Autokorelation

Sources: SPSS16

4. Result and Discussion

Classic Assumption Test

This research using two normality tests was carried out Consisting of parametric test and non-parametric test. The following are the results of the normality test :
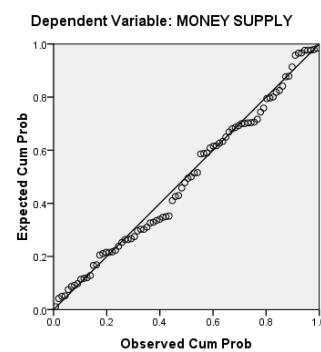
A parametric test is a test that considers the distribution of data to have a normal distribution, the normality test uses graphs or scatterplot :
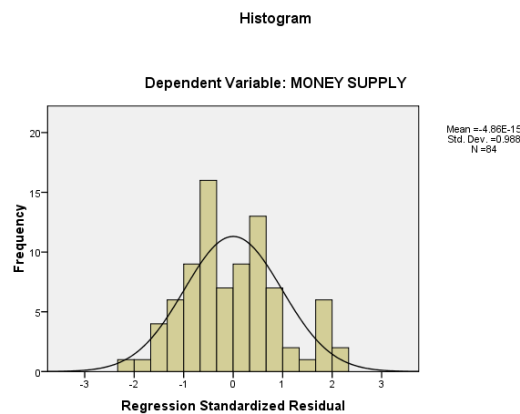
Figure 2: Normality Test Graph
Sources: SPSS 16

Based on the graph above, shows that data is normally distributed because it doesn't tilt to the right or to the left.

Figure 3: Scatterplot Graph
Sources: SPSS 16

Based on the Scatterplot above, shows that point approach the diagonal line it's means the data is normally distributed.

Multicollinearity Test

Tables 2. Multicollinearity Test

	Coliniery Statistic Tolerance	VIF
(Constant)		
Currency	.650	3.064
Export	.440	1.085
import	.126	2.062

a.Dependent Variable: Money Supply

Sources: SPSS 16

Based on the result of the Multicollinearity test known that Ttollerance Value >0.1 dan VIF $<$ 10, it's meaning based on decision there is no symptom of multicollinearity.

Heteroscedasticity Test

Heteroscedasticity in this research used Rank Spearman :

Tables 3. Heteroscedasticity Test

		Kurs	export	import	Unstrandardized residual
Kurs	Correlation Coefficient	1000	.344**	.302**	.064
	Sig. (2-tailed)	.	.000	.000	.564
	N	84	84	84	84
Export	Correlation Coefficient	.344**	1000	850**	.052
	Sig. (2-tailed)	.000	.	.000	.735
	N	84	84	84	84
Import	Correlation Coefficient	.302**	.862	1000	.041
	Sig. (2-tailed)	.000	.000	.	.655
	N	84	84	84	84
Unstandar	Correlation Coefficient	.030	.051	.O46	1000
Dized Residual	Sig. (2-tailed)	.838	.654	.623	.
	N	84	84	84	84

** Corelation is significant at the 0.01 level (2-tailed).
Sources: SPSS 16

Based on the results shown that all dependent variables are tested above 0,05 (5%) it's mean that all variable are free from heteroscedasticity.

Autocorelation Test

Tables 4. Autocorrelation Test

R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Waston
.605	.866	.850	.7691	.282

a. Predicators : (Constants). Currency, Export, Import
b. Dependent Variable : Money Supply

Sources: SPSS 16

DW Autocorrelation test shown that value of 0.282, du = 1.7199 and dl = 1.5723 so that $4 - du = 4 - 1.7199 = 2.2801$ then $1.5723 < 1.7199 < 2.2801$ there is no correlation.

Tables 5. Multiple Linier Regresion Test

	Unstandarized B	Coefficients Std. Eror	Standarized Beta	Coefficients t	Sig.
(Constants)	4.202	1.852	.	3.889	.007
Kurs	1.367	.052	.609	16.674	.000
Ekspor	-.041	.134	-.016	-.219	.811
Impor	-.025	.156	-.012	-212	.821

a.   Dependent Money Supply

Sources: SPSS 16

$$Y = 4.202 + 1.367X_1 - 0.041 X_2 - 0.025X_3$$

The Value of a = 4.202 indicates if the exchange rate, export, and import are considered constants or 0 then then the value of money supply is 4.202. the value of $b_1 = 1.367$ indicates that every 1 unit increase in the exchange rate, can increase the money supply by 1.367. The value of $b_3 = -0.025$ shown that every 1 unit increase in import can recude the money supply by = -0.025.

Tables 6. T Test Result

	Unstandarized B	Coefficients Std. Eror	Standarized Beta	Coefficients t	Sig.
Constants	4.202	1.852	.	3.889	.007
Kurs	1.367	.052	.609	16.674	.000
Ekspor	-.041	.134	-.016	-.219	.811
Impor	-.025	.156	-.012	-212	.821

a.   Dependent Variable : Money Supply

Sources: SPSS 16

The Exchange rate has count of 16.674 and signification of 0.000, while t table of 1.66523, so t count > t table (16.674 > 1.66523) then the exchange rate has a partial effect on the money supply in indonesia period 2015 – 2021. Import have a t count of -0.212 and signification of 0.821 while t table of 1.66523, so that t count < 1.66523 means that import have no partial effect on indonesia''s money supply in period 2015-2021.

Tables 7. F Test Result

	Sum of Square	df	Mean Square	F	Sig
Regression	3.127	3	1.457	136.765	.000a
Residual	.485	81	.005		
Total	3.612	84			

a. Predicators: (Constant), Kurs, Ekpor, Impor
b. Dependent Variable : Jumlah Uang Beredar

Sources: SPSS 16

Based on the result of the simultaneus f test it can be seen that F count is 136.765 with sigification 0.000, while the f table of 2. 282. It's mean that F count < F table that's mean exchange rates, export, and impot affect the mount of money supply in indonesia period 2015 – 2021.

Coefficient Determination Result
The Coefficient determination test aim to determinate the precentage of the dependent variable.

Tables 8. Coefficient Determination Result

R	R Square	Adjusted R Square	Std. Error of the Estimate
.605	.866	.850	.7691

a. Predicator : (Constats), Kurs, Ekpor, Impor
b. Dependent Variable : Jumlah Uang Beredar

Sources: SPSS 16

Based on the result of Coefficient Determination Adjusted R square is 0.866 (86%) that's mean money exchange, eksport, import can explain money supply by 86% while the remaining 14% is influence by variables that's not examinated in this research.

Discussion

a. The Influence of Currency on the Money Supply

The Currency has count of 16.674 and signification of 0.000, while t table of 1.66523, so t count > t table (16.674 > 1.66523) then the exchange rate has a partial effect on the money supply in indonesia period 2015 – 2021.

This Result in the line with the relust from (Ayu, 2019) and (Alawiyah, 2019) that shown if currency have the influence on the money supply in indonesia.

b. The Influence of Eksport on the Money Supply

Ekport has t count -0.2019 and signification 0.811 white t table 1.66523, then t count < 1.66523, so export have no partial effect on the money supply in indonesia period 2015 – 2021.

This Result in the line with the relust from (Dzakiyah, 2018) and (Azaria, 2019) that shown if export have no partial effect on the money supply in indonesia.

c. The Influence of Import on the Money Supply

Import has t count -0.212 and signification 0.811 white t table 1.66523, then t count < 1.66523, so Import have no partial effect on the money supply in indonesia period 2015 – 2021.

This Result in the line with the relust from (Ariyani, 2019) and (Anam et al., 2021) that shown if export have no partial effect on the money supply in indonesia.

5. Conclusions

Conclusion for this research are : (1) the exchange rate has a partial effect on the money supply in indonesia period 2015 – 2021. (2) export have no partial effect on the money supply in indonesia period 2015 – 2021. (3) Import have no partial effect on the money supply in indonesia period 2015 – 2021. Suggestion in this research that are useful for future reseachers it is hoped that they can add independent variable that affect the dependent variable with aim of getting better reslut. Then, dependent variable for future reseacher can use moderating variable.

References

Alawiyah, T., & Amzar, Y. V. (2019). Pengaruh inflasi dan jumlah uang beredar terhadap nilai tukar rupiah dengan pendekatan model struktural VAR. *E-Journal Perdagangan Industri Dan Moneter*, *7*(1), 51–60.

Anam, M. S., Nadila, D. L., & Iskandar, I. (2021). Pengaruh Jumlah Uang Beredar dan Kurs terhadap Harga Beras di Indonesia dengan Inflasi sebagai Variabel Intervening The Effects of Money Supply and Exchange Rate on Rice Prices in Indonesia with Inflation as Intervening Variable. *Jurnal Samudra Ekonomi & Binsis*, *12*(28). https://doi.org/10.33059/jseb.v12i2.2429

Ariyani, S. (2019). Pengaruh Jumlah Uang Beredar (JUB) dan Ekspor Tembakau Terhadap Kurs di Indonesia. *Jurnal Ekonomi Regional Unimal*, *02*(April), 15–27.

Ayu, D. (2019). Pengaruh Nilai Tukar Rupiah dan Inflasi TTerhadap Cadangan Devisa Periode Tahun 1989-2019. *Ekonomi Bisnis Dan Perbankan*, *4*.

Azaria, V. (2019). HARGA TERHADAP VOLUME EKSPOR INDONESIA KOMODITAS KELAUTAN DAN PERIKANAN. *Journal of Applied Managerial Acounting*, *3*(1), 1–8.

Budiantara, M. (2012). PENGARUH TINGKAT SUKU BUNGA, NILAI KURS, DAN INFLASI TERHADAP INDEKS HARGA SAHAM GABUNGAN DI BURSA EFEK INDONESIA PERIODE TAHUN 2005-2010. *Jurnal Sosiohumaniora*, *3*.

Dzakiyah, Z., & Puspitaningtyas, Z. (2018). PENGARUH JUMLAH NILAI EKSPOR DAN TINGKAT INFLASI TERHADAP KURS RUPIAH TAHUN 2009-2016. *E-Jurnal Manajemen*, *6*(2), 103–110.

Firmansyah. (2016). Inflasi, Nilai Tukar Rupiah, Ekspor dan Impor yang Mempengaruhi Terhadap Jumlah Uang yang Beredar di Indonesia 2010-2014. *Jurnal Wira Ekonomi Mikroskill*, *6*(April), 45–54.

Kursita. (2021). Pengaruh Inflasi Terhadap Ekspor di Provinsi Sulawesi Selatan. *Jurnal Ekonomi Dan Bisnis*, *2*(2).

Menhard. (2017). *Kurs Ekspor Impor. 2017*, 64–72.

Ridhotul, A. (2017). Pengaruh Neraca Perdagangan, Inflasi dan Jumlah Uang yang Beredar Terhadap Pertumbuhan Ekonomi di Indonesia. *Jurnal Ekonomi Dan Bisnis*, 1–8.

Sari, P., Juliyanti, M., & Rejeki, R. (2020). PENGARUH INFLASI , EKSPOR DAN IMPOR TERHADAP PDB DI. *NIAGAWAN*, *9*(1), 56–64.