The Effect of Exchange Rate and Money Supply on Exports in Indonesia

Nusriona[1*], Manat Rahim[1], Wa Ode Rachmasari Ariani[1]

[1]Halu Oleo University, Indonesia

Corresponding Author, Email: nusrionabandala@gmail.com

Abstract

This study aims to analyze the influence of the USD/IDR exchange rate and the money supply (M2) on Indonesia's total exports. The method used is multiple linear regression in the form of monthly data from 2019–2024, sourced from Bank Indonesia and the Central Statistics Agency (BPS). Multiple linear regression tests were conducted to identify the influence of exchange rates and money supply on exports in Indonesia. The results of the study show that partially the USD/IDR exchange rate variable has a positive but insignificant effect on Indonesian exports, and the variable money supply has a positive and significant effect on Indonesian exports. Meanwhile, the exchange rate variables and the money supply together have a significant positive effect on Indonesia's exports.

Keywords: Exchange Rate, Exports, Money Supply.

INTRODUCTION

The economic development of a country is closely related to international trade activities, which are realized through exports and imports. Exports, as a shipment of goods or services abroad, play a vital role in increasing foreign exchange reserves, expanding the domestic market, and fundamentally strengthening the stability and performance of the national economy. In the context of global trade, several macroeconomic factors directly affect the competitiveness of export products, one of which is the exchange rate (foreign exchange). Exchange rate stability is very important because its fluctuations can change the relative price of goods in international markets, which in turn impacts export volumes. In addition to the exchange rate, the dynamics of monetary policy, especially related to the money supply (JUB), also affect the production capacity and liquidity needed to support export activities.

One of the most influential theoretical foundations in understanding the relationship between exports and exchange rates is the Marshall-Lerner Theory. The Marshall-Lerner theory assumes that an exchange rate devaluation or depreciation will only improve the trade balance if the sum of the elasticity of export and import demand in absolute exceeds one (> 1). This means that currency depreciation makes export prices cheaper and imports more expensive, so if the demand response is large enough, exports will increase and imports decrease, which ultimately improves the trade balance in the long run. This theory relates to the J Curve, which illustrates that after depreciation, the trade balance initially deteriorates due to a delay in short-term contract adjustments. But over time, exports increased, and imports decreased, so the trade balance improved and formed a pattern like the letter "J" (Wijaya, 2021).

However, what is happening now is inversely proportional to Marshall-Lerner's theory; the rupiah exchange rate against the US dollar in December 2023 weakened, touching a value of IDR 15,416.00, lower than December 2022, which was IDR 15,731.00. In line with that, the value of Indonesia's exports decreased significantly in December 2023, namely IDR 345,182,739,200.00, lower than the previous year. In 2022, the export value was IDR374,125,653,700.00.

In addition to the exchange rate, the money supply also plays an important role in international trade, especially in export activities, because if the money supply is sufficient or stable, it can encourage or facilitate domestic economic activities, including the production of goods to be exported. This makes it easier for the production sector to obtain capital and operate more efficiently so that exports can increase. The amount of money in circulation in M1 is the currency (coins and banknotes) in circulation, while the amount of money in circulation in M2 is M1, quasi-money, and securities (deposits and bonds). The variable data of the money supply used in this study is the amount of money supply in a broad sense, or M2, which includes M1, quasi-money, and securities.

Theoretically, the most influential in understanding the relationship between the money supply and exports is the Money Quantity Theory

developed by Irving Fisher (Rahardja & Manurung, 2019), Explain that the price level of goods and services has a proportional relationship with the amount of money in circulation. In the context of a country's economy, exports play a very important and strategic role. With increased exports, domestic producers will experience a surge in demand for money as a means of transaction, which will ultimately have a positive impact on overall economic growth. As a result, a stable circulation of money is required to support such transaction activities, which ultimately leads to an increase in the amount of money circulating in the economy (Samosir, 2016).

However, what happened was the opposite, the amount of money supply in December 2023 amounted to IDR 8,826,531,000.00, higher than the previous year, namely December 2022, amounting to IDR 8,528,022,310.00, while the export value in December 2023 was IDR 8,528,022,310.00 while the value of exports in December 2023 was a total of IDR 8,528,022,310.00 while the value of exports in December 2023 was a total of IDR 8,528,022,310.00 while the value of exports in December 2023 was a total of IDR 8,528,022,310.00. IDR 345,182,739,200.00 is lower than the previous year in 2022, with an export value of IDR 374,125,653,700.00.

Data on exports, exchange rates and money supply in the last 6 (six) years from December 2019 - December 2024, as follows:

Table 1. Export Data, Exchange Rate, Money Supply in December (IDR)

Year	Export	Exchange Rate	Money Supply
2019	200.574.700.800,00	13.901,00	6.136.552.000,00
2020	233.291.058.000,00	14.105,00	6.900.049.490,00
2021	374.125.653.700,00	14.269,00	7.870.452.850,00
2022	374.125.653.700,00	15.731,00	8.528.022.310,00
2023	345.182.739.200,00	15.416,00	8.826.531.000,00
2024	379.183.146.800,00	16.162,00	9.210.815.720,00

Source: Central Statistics Agency and Bank Indonesia

Table 1 shows that exports have fluctuated, which reflects the dynamics of international trade and exports have experienced an upward trend from Rp 200,574,700,800.00 in December 2019 to Rp 379,183,146,800.00 in December 2024. In line with that, the exchange rate also experienced an upward trend from IDR 13,901.00 in December 2019 to IDR 16,162.00. The money supply also experienced an upward trend from IDR 6,136,552,000.00 in December 2019 to IDR 9,210,815,720.00 in December 2024. This

variation indicates a possible relationship between the exchange rate, the money supply, and exports that is in line with the assumptions in the theory of comparative advantage and the theory of money quantity.

The research conducted by Sitorus et al. (2023), This study uses the theory of comparative advantage. The results of this study show that the exchange rate has a positive effect on exports. Furthermore, in a study conducted by Fuad Anshari et al. (2017), the study uses the theory of the Mundell-Fleming Model. The results of this study show that the exchange rate has a negative and insignificant effect on Indonesia's exports.

The research conducted by Suryono (2016), This research uses the monetarist theory. The results of this study show that the amount of money supply has a positive and significant effect on the value of exports. Furthermore, in the research conducted by Menhard (2018), this study uses the Mundell-Fleming Model theory. The results of this study show that the variable amount of money supply does not affect exports.

Although various studies have been conducted on the relationship between exchange rates, money supply, and exports in Indonesia, there are still research gaps that need to be addressed. The majority of the results of previous studies show inconsistencies in empirical findings, where the exchange rate and the money supply do not have a significant impact on exports. Therefore, further research is needed to obtain evidence showing a significant influence of these variables on exports.

Based on this phenomenon, it is very important to conduct a comprehensive analysis of the influence of the exchange rate and the money supply on the smooth running of export activities that can create a more advanced economy. This analysis will use monthly data for the 2019-2024 period, covering the period during and after the COVID-19 pandemic. Based on the discussion of the background of the problem in this study, the author chose the title The Influence of Exchange Rates and Money Supply on Exports in Indonesia.

METHODS

Multiple linear regression analysis is a regression method that assumes that the values of the independent variable and the dependent variable are either the average value or the expected value of the dependent variable for each combination of the values of the independent variable (Gujarati & Porter, 2015). The

number of independent variables studied is more than one is said to be multiple linear regression. The analysis tool used in this study is multiple linear regression analysis, the calculation of which uses the help of the EViews program 13. This analysis will estimate all the independent variables (X).

In this study, the multiple linear regression model is changed in the form of natural logarithms, so that the parameters can be interpreted as elasticity. In this study, a natural logarithm (Ln) was used on the dependent variable Y, namely exports, as well as on the independent variables X_1 (exchange rate) and X_2 (money supply). The use of natural logarithms aims to reduce data fluctuations that are too large so that the analysis becomes more stable. If the results of the initial estimation using the Ordinary Least Squares (OLS) method in multiple linear regression show a symptom of autocorrelation, then this indicates a violation of one of the classical assumptions. Thus, the regression results cannot be declared to meet the BLUE (Best Linear Unbiased Estimator) criteria. If such violations occur, it is necessary to improve the model

by applying the ARMA method, especially using the first-order autoregressive approach or AR(1), to overcome autocorrelation and ensure the validity and reliability of the estimation model (Gujarati & Porter, 2015). According to the needs of the research, the above regression model is modified based on the variables to be studied as follows:

LnY= Ln_X1 + Ln_X2 + Yt-1

LnY= X = Exports (trillion rupiah)

Ln_X1= USD/IDR = Exchange rate (Rupiah)

Ln_X2= M^2 = Amount of Money Supply (trillion rupiah)

Yt-1= The current export value is affected by the previous month's export value

Based on the selected analysis method, namely multiple linear regression, a classical assumption test is required, which includes a normality test, a multicollinearity test, a heteroscedasticity test, an autocorrelation test, the determination coefficient (R), a partial test, and a simultaneous test.

RESULTS AND DISCUSSION
Output after AR treatment (1)

Dependent Variable: LN_Y
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 06/29/25   Time: 18:52
Sample: 2019M01 2024M12
Included observations: 72
Convergence achieved after 11 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-13.41983	4.618477	-2.905683	0.0050
LN_X1	1.029080	0.559584	1.839008	0.0703
LN_X2	1.227034	0.310184	3.955825	0.0002
AR(1)	0.699581	0.088854	7.873378	0.0000
SIGMASQ	0.009134	0.001468	6.224189	0.0000

R-squared	0.876249	Mean dependent var	10.22542
Adjusted R-squared	0.868860	S.D. dependent var	0.273592
S.E. of regression	0.099076	Akaike info criterion	-1.709598
Sum squared resid	0.657682	Schwarz criterion	-1.551496
Log likelihood	66.54553	Hannan-Quinn criter.	-1.646657
F-statistic	118.6019	Durbin-Watson stat	2.044028
Prob(F-statistic)	0.000000		

Inverted AR Roots	.70

Source: Processed with EViews 13, 2025

After carrying out AR (1) treatment, it is necessary to carry out a classical assumption test to find out whether the results of the AR (1) treatment have experienced BLUE (best linear unbiased estimator).

Classic assumption test

Number	Test Type	Testing Criteria	Results	Information
1	Normality Test	P-Value > 0,05	P-Value = 0,793263	Data is normally distributed because of the value p-value 0,793263 meaning > 0,05
2	Multicollinearity Test	VIF < 10	1. Exchange Rate = 1.436504 2. Money supply = 1.511534 3. AR (1) = 1,160039 4. SIGMASQ = 1,108377	1. Value VIF exchange rate 1.436504 < 10 It means that there is no multicholinearity 2. Value VIF money supply 1.511534 ‚10 It means that there is no multicholinearity 3. Value VIF AR (1) 1,160039 < 10 It means that there is no multicholinearity Value VIF SIGMASQ 1,108377 < 10 It means that there is no multicholinearity
3	Heteroscedasticity Test	*Obs*R-squared* > 0,05	*Obs*R-squared* = 0,484470	Value *Obs*R-squared* as big as 0,484470 > 0,05 or the degree of belief 5%
4	Autocorrelation Test	and after AR treatment (1) the DW value is between 1,8 and 2,2	1,6751 < 2,044028 < 2,3249 and value DW =2,044028	1,6751 < 2,044028 < 2,3249 (No positive or negative autocorrelation symptoms) and DW value 2,044028 being dropped off 1,8 and 2,2 meaning treatment AR (1) Successfully eliminates autocorrelation symptoms

Source: Processed with EViews 13, 2025

Based on the table above, the regression model obtained is as follows:

LnY= -13,41983 + 1,029080 LN_X1 + 1,227034 LN_X2 + 0,699581 Yt-1

Based on the results of the classical assumption test that has been carried out, no violations of the classical assumption test were found. Therefore, statistical analysis and hypothesis testing can be resumed. Before conducting further analysis, a test of the goodness of the model was first carried out as indicated by the value of the determination coefficient (R^2). Based on the results of the estimate shown in Table 1.2, it is known that the Adjusted R-Squared value is 0.868860. This means that the contribution of independent variables in the regression model to the dependent variables is 86.88%. Meanwhile, the remaining 13.12% was influenced by other factors outside the model that were not included in this regression equation.

The findings are strengthened by the results of statistical testing using the F test, which shows that simultaneously or together, the exchange rate variable (X_1) and the money supply (X_2) have a significant effect on the export variable (Y). This can be proven by the probability resulting from the F test, which is 0.000000, which is clearly smaller than the significance level used, which is alpha 0.05. Thus, it can be concluded that the two independent variables, namely the exchange rate and the money supply, together contribute significantly to changes in the dependent variable, i.e., exports.

Based on the results of statistical tests conducted through regression analysis using the t-test (partial), it can be interpreted as follows. First, the constant value in the export regression model (Y) of -13.41983 indicates that when the exchange rate variable (X_1) and the money supply (X_2) are assumed to be constant or unchanged, then the export value is at -13.41%. This negative value indicates that without the influence of these two independent variables, exports are in a very low or even negative position.

Furthermore, the regression coefficient on the exchange rate variable (X_1) was recorded at 1.029080 with a probability value of 0.0703. This means that any increase in the exchange rate of 1% will be followed by an increase in export value of 1.02%. The probability value is >0.05, which indicates that the exchange rate variable has a positive but insignificant effect on Indonesian exports. However, even though the probability value is above the significance level of 5%, it is still significant at the significance level of 10%.

Meanwhile, the money supply variable (X_2) has a regression coefficient of 1.227034 with a probability value of 0.0002. This means that any increase in the money supply by 1% will encourage an increase in exports by 1.22%. With a probability value far below alpha 0.05, it can be concluded that the variable money supply has a positive and significant effect on Indonesia's exports.

The AR coefficient (1) in the ARMA model shows a coefficient value of 0.699581, which means that the current export value is influenced by the export value in the previous month of 69%. This suggests that there is a strong short-term relationship between current exports and past exports.

Finally, the value of SIGMASQ as the variance of the error term was recorded at 0.009134 with a probability value of 0.0000. A probability value much smaller than 0.05 indicates that the model has a very low error variance, which means that this model can explain the export variables in Indonesia well and does not contain autocorrelation problems in the residuals.

The Influence of Exchange Rates on Exports

Based on the results of the hypothesis test, the exchange rate has a positive but insignificant effect on exports in Indonesia and has a coefficient of 1.029080 and a probability (p-value) of 0.0703. The value of the positive coefficient of 1.029080 shows that the exchange rate variable (X_1) increases by 1%, then the export variable (Y) will also increase by 1.02%, assuming ceteris paribus. The meaning of a positive coefficient is that when the currency exchange rate depreciates (the rupiah weakens against the US dollar), exports will also increase. However, the probability value is >0.05, which is 0.0703. This means that statistically, the exchange rate has an insignificant effect on Indonesian exports at the significance level of 5%, but is still significant at the significance level of 10% with 90% confidence. Because the results are not significant at a significance level of 5%, the depreciation of the currency exchange rate (the rupiah weakens against the US dollar) is not always accompanied by or not always consistent with the increase in exports.

The reason why the exchange rate has a positive but insignificant effect on Indonesian exports is due to several factors. First, the response of exports to exchange rate changes is not always immediate, but it takes a lag time for the impact to be seen, so in the short term, the effect is not significant. Second, the demand for Indonesian exports is not elastic enough to prices, so even though prices are lower in the international market due to currency depreciation, demand from abroad has not increased significantly. Third, exports are also greatly influenced by other factors such as global economic conditions, commodity prices, trade policies, and the competitiveness of Indonesian products. The dominance of these factors can cause the influence of the exchange rate to be insignificant. In addition, exchange rate instability or high volatility can actually create uncertainty for exporters, so they do not necessarily increase export volumes. Finally, in practice, many international trade contracts are carried out on a long-term basis at a predetermined price, so changes in the short-term exchange rate do not directly affect the value of exports in real terms.

These results are in line with the research conducted by Palumpun et al. (2023) entitled Analysis of the Influence of World Gross Domestic Product and Exchange Rate on Industrial Sector Exports in Indonesia for the 2007-2021 Period, The results of this study show that the exchange rate has a positive but insignificant effect on Industrial Sector Exports in Indonesia. Similar research was conducted by Erawan & Setiawina (2015) entitled The Influence of the United States Dollar Exchange Rate, Production, and Inflation on Indonesian Corn Exports in 1981-2015. The results of this study show that the United States dollar exchange rate has a positive but not significant effect on Indonesian corn exports.

If it is associated with the Marshall-Lerner theory, this result is in line with that theory. The Marshall-Lerner theory assumes that an exchange rate devaluation or depreciation will only improve the trade balance if the sum of the elasticity of export and import demand in absolute exceeds one (> 1). This means that currency depreciation makes export prices cheaper and imports more expensive, so if the demand response is large enough, exports will increase and imports decrease, which ultimately improves the trade balance in the long run. This theory relates to the J Curve, which illustrates that after the depreciation of the exchange rate, the trade balance initially deteriorates due to delays in short-term contract adjustments. But over time, exports increased, and imports declined, so the trade balance improved and formed a pattern like the letter "J".
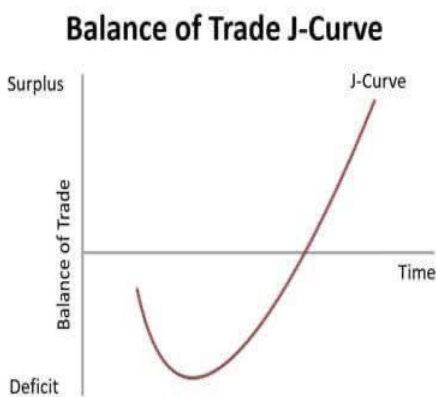

Figure 1. J Curve

Figure 1 depicts the J Curve, which shows the response of a country's trade balance to the depreciation or devaluation of the exchange rate. At the beginning of the depreciation, the trade balance actually declined and entered the deficit zone. This is

due to the increase in import prices in domestic currencies, while export volumes have not increased due to delays in trade contract adjustments and market responses that have not changed immediately. As time went by, exports began to increase as the prices of domestic goods became more competitive in the international market, and at the same time, imports began to decline as they became more expensive for domestic consumers. As a result, the trade balance gradually improved and finally showed significant improvement until it could reach a surplus. This pattern of change forms a curve resembling the letter "J", which reflects that despite the negative initial effects of depreciation, in the medium to long term, the impact becomes positive on the trade balance.

The Effect of Money Supply on Exports

Based on the results of the analysis and hypothesis testing that have been carried out, it is found that the variable money supply has a positive and significant influence on exports in Indonesia. This can be seen from the value of the positive coefficient of 1.227034, which means that if the variable amount of money supply (X_2) increases by 1%, then the export variable (Y) will also increase by 1.22%, assuming ceteris paribus.

In other words, if the amount of money circulating in the economy increases, then the value of Indonesia's exports also increases. The positive coefficient indicates a one-way relationship between the money supply and the value of exports. This means that the growth of the money supply in the country can encourage economic activity, especially in the production sector of goods and services that can then be exported abroad. The high level of liquidity causes exporters to increase production capacity, increase investment, and expand the reach of the export market.

From the aspect of alpha significance > 0.05, the probability value at the significance level is 5%. This indicates that the relationship between the money supply and exports does not occur by chance, but is clearly and consistently observed in the data. In addition, the probability value (p-value) of 0.0002, which is much smaller than the significance limit of 0.05, further corroborates the conclusion that the influence of the money supply on exports is statistically significant.

The main reason why the money supply has a positive and significant effect on Indonesia's exports. This is because an increase in the money supply,

especially in the form of business loans or financing from financial institutions, can provide a strong boost to the production capabilities and investment capacity of exporters. When liquidity in the economy is available in sufficient quantities, companies have a greater opportunity to scale up their production, optimize operational efficiency, and finance various related needs. with export activities, such as raw material procurement, product processing, distribution of goods, and logistics to the international market. Furthermore, the growth of the money supply can also be an indicator that economic activity is taking place actively and stably. This condition is ultimately able to create a healthy business atmosphere and support the expansion of international trade. Therefore, the significant linkage between the money supply and exports shows that monetary policy instruments, especially in terms of controlling and managing the money supply in society, have a strategic role in encouraging sustainable improvement of national export performance.

The results of this study are in line with the research conducted by (Febiana et al., 2024) entitled Analysis of the Influence of Inflation, Exchange Rates, Interest Rates, and the Amount of Money Supply on the Value of Exports in Indonesia in 2020-2023, The results of this study show that the money supply has a positive and significant effect on exports in Indonesia. A similar study was conducted by Samosir (2016) entitled The Effect of Net Exports and Foreign Exchange Reserves on the Money Supply in Indonesia in 1991-2009. The results of this study show that net exports have a positive and significant effect on the money supply.

If the results of this study are attributed to the theory of the quantity of money introduced by the famous economist Irving Fisher, this theory is expressed in the equation $MV = PT$, where M is the amount of money supply, V is the speed of money circulation, P is the general price level, and T is the real transaction volume or output. When the money supply (M) increases, for the equation to remain balanced, the right side of the equation (PT) must also increase. This increase can occur through an increase in P (price), T (output), or both. If the economic condition of a country still has a production capacity that has not been fully utilized (output gap), then the increase in M will encourage an increase in T, which is an increase in the production of goods and services. When output

increases, the availability of goods for domestic and international markets also increases, thus opening up greater export opportunities. On the other hand, the increase in money supply also increases liquidity in the financial system, making it easier for exporters to obtain capital for the production and distribution of goods to the international market. Therefore, through the relationship path in the formula $MV = PT$, it can be concluded that an increase in the money supply (M), assuming that V is constant, or constant, will encourage an increase in output (T), and this increase in output will enlarge the export capacity of a country.

In the context of the Indonesian economy, if the money supply increases, it can provide a boost to the business and industrial sectors because economic actors, especially exporters, will gain greater access to funds and liquidity. The availability of these funds allows them to increase the production capacity of the goods and services produced, so that these products can be marketed not only domestically, but also abroad in the form of exports. Thus, the larger the money supply, the greater the potential for an increase in exports that can occur.

Therefore, the findings of the hypothesis testing results in this study not only prove clearly and empirically that the money supply has a significant effect on exports in Indonesia, but also at the same time strengthen and support the validity of the money quantity theory in the context of an open economy. This conclusion provides the basis for thinking that careful and targeted management of the money supply can be one of the effective economic policy instruments or strategies to improve Indonesia's national export performance in the future.

CONCLUSION

Based on the explanation related to the research on the Influence of Exchange Rates and Money Supply on Exports in Indonesia, the conclusions that can be drawn from this study are as follows:

1. The exchange rate partially has a positive but not significant effect on exports in Indonesia. This means that the increase in the exchange rate can affect the increase in exports in Indonesia, but not continuously or inconsistently.
2. The money supply partially has a positive and significant effect on exports in Indonesia. This means that the money supply has an important role in increasing exports in Indonesia, where the

increase in the money supply will have a real impact on exports in Indonesia.

3. The variable exchange rate and the amount of money supply together have a significant effect on exports in Indonesia. Therefore, the increase in both boosts the value of exports through the exchange rate of the rupiah against the United States dollar which is stable from the exchange rate and the adequacy of transactions and production for export activities from the money supply. This shows that the exchange rate and the amount of money supply play an important role in exports in Indonesia.

REFERENCES

Adhista, M. (2022). Analysis of Exports, Imports, and Total Money Supply (M2) Against Rupiah Exchange Rate Mira Adhista Analysis of Exports, Imports, and Total Money Supply (M2) Against Value Exchange Rupiah. *Growth: Scientific Journal of Development Economics*, *1*(2), 73–92.

Avedish, D., Wibowo, F. T., & Azmi, N. U. (2025). The Role of the Rupiah Exchange Rate and Foreign Exchange Fluctuations on Indonesia's *Economic Resilience*. *3*(1), 223–235.

Chandra, E. K., & Wahyuningsih, D. (2021). Analysis of the Influence of Interest Rates, Money Supply and Exchange Rates on Inflation in Indonesia for the 2011-2019 Period. *Bulletin of Development Economics*, *2*(1), 37–54.

Darsono, & Rahman, R. E. (2018). *Foreign Exchange Market: Theory and Practice*. PT RajaGrafindo.

Erawan, I. Nyoman Bisma Iswara, and Nyoman Djinar Setiawina. (2015). The Effect of the United States Dollar Exchange Rate, Production, and Inflation on Indonesian Corn Exports in 1981-2015. *E-Journal EP Unud*, 10(3), 1127–56.

Febiana, Y. F., Wahyu, W., Tias, N., Amna, D. F., Sayyid, U. I. N., Rahmatullah, A., Sayyid, U. I. N., Rahmatullah, A., Sayyid, U. I. N., Rahmatullah, A., Sayyid, U. I. N., Rahmatullah, A., Sayyid, U. I. N., & Rahmatullah, A. (2024). *Analysis of the Influence of Inflation, Exchange Rate, Interest Rate, and Money Supply on the Value of Exports in Indonesia in 2020-2023*. *07*(02).

Fordatkosu, S., Kumaat, R. J., & Mandeij, D. (2021). Analysis of the Influence of Exports, Imports, and Money Supply (M2) in Indonesia on the Rupiah/US$ Dollar Exchange Rate (2000-2019). *Scientific Periodic Journal of Efficiency*, *21*(7), 127–137.

Fuad Anshari, M., El Khilla, A., & Rissa Permata, I. (2017). Analysis of the Influence of Inflation and Exchange Rates on Exports in Asean Countries 5 Periods of 2012-2016. *Info Artha*, *1*(2), 121–128.

Gujarati, D. N., & Porter, D. C. (2015). *Fundamentals of Econometrics* (5th Edition). Salemba Empat.

Halim, M. A. (2018). *Macroeconomic Theory* (3rd Edition). Media Discourse Partners.

Hard. (2018). The Effect of Exchange Rates, Exports, and Imports on the Money Supply in Indonesia with Inflation as a Moderating Variable 2011-2017. *Journal of Bilncia*, *2*(1), 64–72.

Irawan, A., & Gurning, R. V. M. (2023). The Effect of Exchange Rates and Inflation on Crude Palm Oil (CPO) Export Volume During the Pandemic. *Journal of Accounting, Economics and Business Management*, *11*(1), 106-113.

Khamidah, W., & Sugiharti, R. (2022). Factors Affecting the Rupiah Exchange Rate Against the US Dollar, Euro and Pound Sterling. *Ecoplan*, *5*(1), 40–52.

Manihuruk, F. E., Silfani, D., Feby, Y., & Marbun, J. (2024). Analysis of the Influence of Exports, Imports, and Jub in Indonesia on the Rupiah/USD Exchange Rate. *Journal of Economic Research*, *3*(2), 118–129.

Miftahul Janah, Wulan Rahmawati, Fariza Novdwikaputri, M. Ghiffari Marshal, Cep Jandi Anwar, and Indra Suhendra. (2023). Export Response Due to Exchange Rate Shocks and Money Supply in Indonesia. *EKONOMIKA45: Scientific Journal of Management, Business Economics, Entrepreneurship* 11(1), 549–60.

Ministry of Finance. (2024). *Indonesia's Trade Balance Throughout 2023 Remains in Surplus Amid Increasing Global Economic Risks*. https://fiskal.kemenkeu.go.id/publikasi/siaran-pers-detil/554

Palumpun, M. P., Oldy Rontisulu, T., & Mandeij, D. (2023). Analisis Pengaruh Produk Domestik Bruto Dunia Dan Tingkat Kurs Terhadap Ekspor Sektor Industri Di Indonesia 2007-2021. *Jurnal Berkala Ilmiah Efisiensi*, *23*(9), 73–84.

Rahardja, P., & Manurung, M. (2019). *Pengantar Ilmu*

Ekonomi (mikroekonomi & makroekonomi) (edisi 4). Salemba Empat.

Samosir, D. M. (2016). The Effect of Net Exports and Foreign Exchange Reserves on the Amount of Money in Circulation in Indonesia 1991-2009. *Journal of Development Economics*, 10 (1), 1–11.

Sari, A. C., Mukhlis, I., & Utomo, S. H. (2022). Analysis of the Impact of the Covid-19 Pandemic on Exports and Indonesian Economic Growth in 2021. *Jurnal Economina*, 1(4), 908–920.

Sari, S. P., & Nurjannah, S. (2023). Analysis of the Effect of Exchange Rates, Money Supply, and the BI Rate on Inflation in Indonesia and Its Impact on Public Purchasing Power. *AKTIVA: Journal of Accountancy and Management*, 1(1), 21–29.

Silalahi, S. M., Aulia, J., Tobing, P. Y., & Hasanah, I. (2024). The Effect of Exchange Rates, Money Supply, and Inflation on Exports in Indonesia Using an Error Correction Model Approach for the Period 2013–2022. *MANTAP: Journal of Management Accounting, Tax and Production*, 2(1), 33–43.

Sitorus, C. D., Purba, M. L., & Purba, E. F. (2023). The Effect of the Rupiah Exchange Rate, Inflation, and Interest Rates on Indonesian Shrimp Exports. *KAFEBIS Journal*, 1(1), 21–27.

Suryono, A. (2019). The Effect of Exchange Rates and Money Supply on Indonesian Exports from 2009 to 2018. *Economic Forum*, 21(2), 109–118.

Ulya, U. (2024). The Effect of Money Supply (M2), BI RATE, Foreign Exchange and Export Reserves on the Exchange Rate of the Rupiah Currency Against the US Dollar [Ar-Raniry State Islamic University Banda Aceh].

Warjiyo, P., & Juhro, S. (2016). *Central Bank Policy: Theory and Practice*. PT RajaGrafindo.

Wijaya, E. (2021). Analysis of Indonesia's Bilateral Trade with the Marshall Lerner Condition Approach and the J Curve Phenomenon. *Journal of Development Economic Dynamics*, *3*(3), 187–201