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Determinants of Indonesia's Coffee Export Value: Production, International Prices, and Exchange Rate

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Abstract

This study examines the determinants of Indonesia's coffee export value by assessing the effects of coffee production, international coffee prices, and the rupiah/US dollar exchange rate. Using monthly secondary data from 2021 to 2025 obtained from Statistics Indonesia, Bank Indonesia, and the International Coffee Organization, this study applies an Error Correction Model (ECM) to distinguish short-run dynamics from long-run equilibrium relationships. The results show that, in the long run, international coffee prices and the rupiah/US dollar exchange rate have positive and significant effects on Indonesia's coffee export value, while coffee production shows a positive but statistically insignificant effect at the 5 percent level. In the short run, exchange rate movements have a significant negative effect, whereas changes in production and international coffee prices are not significant. The negative and significant error correction term confirms the existence of a valid adjustment mechanism toward long-run equilibrium. These findings indicate that Indonesia's coffee export performance is shaped not only by production capacity but also by global price incentives, exchange rate movements, and market adjustment processes. Policy efforts should therefore prioritize product quality, certification, downstream processing, market diversification, logistics efficiency, and exchange rate stability to strengthen the competitiveness and sustainability of Indonesian coffee exports.

Keywords: coffee exports; coffee production; international coffee prices; exchange rate; Error Correction Model.

Abstrak

Penelitian ini bertujuan menganalisis determinan nilai ekspor kopi Indonesia dengan menguji pengaruh produksi kopi, harga kopi internasional, dan nilai tukar rupiah terhadap dolar AS. Penelitian menggunakan data sekunder bulanan periode 2021–2025 yang bersumber dari Badan Pusat Statistik, Bank Indonesia, dan International Coffee Organization. Metode analisis yang digunakan adalah Error Correction Model (ECM) untuk membedakan dinamika jangka pendek dan hubungan keseimbangan jangka panjang. Hasil penelitian menunjukkan bahwa dalam jangka panjang harga kopi internasional dan nilai tukar rupiah/USD berpengaruh positif dan signifikan terhadap nilai ekspor kopi Indonesia, sedangkan produksi kopi memiliki arah positif tetapi tidak signifikan. Dalam jangka pendek, perubahan nilai tukar berpengaruh negatif dan signifikan, sementara perubahan produksi dan harga kopi internasional tidak berpengaruh signifikan. Koefisien error correction term yang negatif dan signifikan mengonfirmasi adanya mekanisme penyesuaian menuju keseimbangan jangka panjang. Temuan ini menunjukkan bahwa kinerja

ekspor kopi Indonesia tidak hanya ditentukan oleh kapasitas produksi, tetapi juga oleh insentif harga global, pergerakan nilai tukar, dan proses penyesuaian pasar. Oleh karena itu, strategi peningkatan ekspor perlu diarahkan pada penguatan kualitas produk, sertifikasi, hilirisasi, diversifikasi pasar, efisiensi logistik, dan stabilitas nilai tukar agar daya saing kopi Indonesia meningkat secara berkelanjutan.

Kata kunci: ekspor kopi; produksi kopi; harga kopi internasional; nilai tukar; Error Correction Model.

INTRODUCTION

Indonesia is one of the countries with natural conditions that are very supportive for agriculture and plantations, including in the cultivation of coffee plants. In addition to gas and oil, coffee is one of Indonesia's export commodities that is quite important as a foreign exchange earner. Export is one way to market Indonesian coffee to the international market and increase income country. Exports of a particular commodity from one country to another which is a combination of domestic supply and demand, known as excess *supply*. Exports arise from excess domestic supply over demand and provide opportunities to access foreign markets, increase national income, and generate trade balance surpluses; consistent with the comparative advantage theory introduced by David Ricardo in *On the Principles of Political Economy and Taxation* (1817) and reaffirmed by modern empirical evidence such as Costinot and Donaldson (2012), countries gain from international trade by specializing in goods they can produce relatively more efficiently than others.

Original Indonesian coffee has various varieties, qualities, and flavors. Indonesia has been recognized by the world because of its superior coffee. All varieties of Indonesian coffee have different flavors because they are influenced by the region where the coffee is grown. Indonesia's tropical climate, vast territory, and many high mountains and areas that have high water availability is Indonesia's advantage for growing coffee.

Currently, Indonesia is trying to increase exports in all categories, including the quantity and type of goods and services. According to Bonaraja (2021), exports will encourage and motivate business actors to carry out their best activities and compete in the international market by implementing new technologies that are efficient, high-quality, and competitive. Porter's theory of national competitiveness is based on the fundamental idea that classical economic theory explaining economic competitiveness is insufficient or even inaccurate (Porter, 1990; Olilingo, 2024). According to Porter (1990), a country has a competitive advantage if its businesses are able to compete. Competitiveness in a country is determined by the ability of the industry to innovate and improve its capabilities.

Table 1. Amount Production Coffee, Price Coffee International, Kurs and Coffee Export Value in Indonesia Year 2021- 2026

Year	Amount Production Coffee (Ton)	Coffee Price International (Rp/Kg)	IDR /USD	Indonesian Coffee Export Value (Juta USD)
2021	786,19	63.933	14.269	848,28
2022	774,96	54.511	15.731	1.137,94
2023	758,72	59.643	15.416	915,63
2024	813,34	80.084	15.855	1.623,53
2026	789,30	116.002	16.730	2.498,94

Source : BPS, Bank Indonesia, International Coffee Organization 2026.

Based on Table 1, coffee production in Indonesia fluctuated during the period 2021–2026. Coffee production decreased from 786,191 tons in 2021 to 774,962 tons in 2022, representing a decline of approximately 1.43%, and further declined to 758,725 tons in 2023, or by 2.10%. However, coffee production increased significantly to 813,345 tons in 2024, equivalent to a growth of 7.20%, before declining again by 2.95% to 789,308 tons in 2026. In contrast, the value of Indonesian coffee exports increased from USD 849 million in 2021

to USD 1,138 million in 2022, reflecting an increase of 34.04%, before declining by 19.51% to USD 916 million in 2023. Subsequently, export value rose sharply to USD 1,624 million in 2024 and further increased to USD 2,499 million in 2026, representing annual growth rates of 77.29% and 53.88%, respectively. This phenomenon indicates that changes in production do not always correspond to changes in export value.

International coffee prices also experienced considerable fluctuations. In 2022, international coffee prices declined from Rp63,933/kg to Rp54,511/kg, representing a decrease of 14.74%, while coffee export value increased by 34.04%. Conversely, in 2023, international coffee prices increased by 9.41% to Rp59,643/kg, but export value declined by 19.51% to USD 916 million. During 2024, international coffee prices rose substantially to Rp80,084/kg, equivalent to an increase of 34.27%, accompanied by a 77.29% increase in export value. Furthermore, in 2026, international coffee prices surged to Rp116,002/kg, representing an increase of 44.85%, while export value increased by 53.88%. These conditions indicate that the relationship between international coffee prices and export value is dynamic and may be influenced by other factors.

Similarly, the rupiah exchange rate against the US dollar depreciated from IDR 14,269 per USD in 2021 to IDR 15,731 per USD in 2022, indicating a depreciation of 10.25%. In 2023, the exchange rate appreciated slightly by 2.00% to IDR 15,416 per USD, before depreciating again to IDR 15,855 per USD in 2024 and further to IDR 16,730 per USD in 2026, representing increases of 2.85% and 5.52%, respectively. According to Salvatore (2019), depreciation of the domestic currency tends to increase export competitiveness because domestic products become relatively cheaper for foreign buyers. Nevertheless, fluctuations in the exchange rate are not always accompanied by similar movements in export value, indicating that the relationship between the two variables is not always straightforward.

Several previous studies have investigated the determinants of export performance. Rahmawati and Muljaningsih (2022) found that production volume had no significant effect on Indonesian robusta coffee exports to Japan. Harahap and Nurhasanah (2024) reported that international coffee prices positively affected the value of Indonesian coffee exports, whereas the exchange rate had no significant effect in the long run. In addition, Yani et al. (2023) showed that international coffee prices and the rupiah exchange rate significantly influenced Indonesian coffee exports. Meanwhile, Lubis & Rahmani (2023) found that exchange rates and international coffee prices affected coffee export value through inflation as an intervening variable. Although previous studies have examined the determinants of coffee exports, their findings remain inconsistent. Therefore, there is still a research gap regarding the dynamic relationship between coffee production, international coffee prices, exchange rates, and Indonesian coffee export value.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Export

Quoted from Imsar et al. (2022) "Export is an effort to sell commodities that we have to other countries or foreign countries in accordance with government regulations with the expectation of payment in foreign currency, as well as communicate in language foreign". Export is one of the sources of foreign exchange for countries with open economies, because exporters can work widely in various places and countries that allow for increasing the amount of production. The results obtained from export activities are the value of money in the form of foreign currency, which is also one of the sources of income for a country.

Production

Production is the process of producing or creating goods or services using resources such as labor, raw materials, technology and capital. According to (Ahman & Rohmana, 2016) Production is activity change input to output. Production volume is the amount or quantity of goods/services produced by a company or industry in a certain period of time. Production aims to meet consumer needs and

create added value for the company or industry.

International Price

According to (Rosyidi, 2017) Price is level evaluation, which on certain level goods/services the can exchanged with object other what even its shape. International prices is price a goods/services which applicable in the market international. Prices can determine the high or low level of exports carried out by exporting countries, this is because price changes in the global market affect the ability to compete in exports. As the law supply, the higher the price the greater the quantity goods Which offered.

Exchange Rate

Quoted from (Zahroh et al., 2019) "Exchange Rate is the price of foreign currency in domestic currency units, which is a comparison between the currencies of two countries". Exchange rates are divided into two, namely *real exchange rates* and nominal exchange rates. Mark swap *rill* is mark swap Which Where perpetrator economy can exchange its goods/services with goods/services from other countries. Meanwhile, the nominal exchange rate is the exchange rate of goods/services by comparing the prices of two countries' currencies.

Conceptual Framework

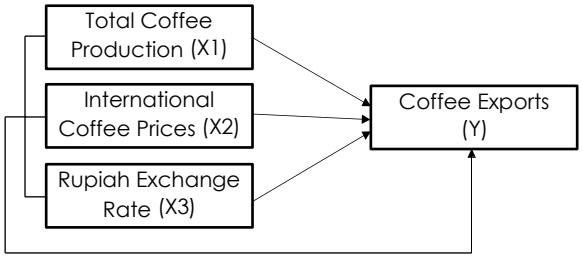

Figure 1. Conceptual Framework

Hypothesis

Based on the conceptual framework above, the research hypothesis can be stated as follows:

H 1 : It is suspected that Partial Amount of Coffee Production, International Coffee Prices and Rupiah Exchange Rate in the Short and Long Term Affect the Value of Coffee Exports in Indonesia.

H 2 : It is suspected that the amount of coffee production, international coffee prices and the rupiah exchange rate in the short and long term simultaneously affect the value of coffee exports in Indonesia.

RESEARCH METHODOLOGY

Type study this including in study quantitative descriptive data using secondary data obtained from the Agency Statistics Center (www.bps.go.id), Bank Indonesia (www.bi.go.id) And *International Coffee Organization* (www.ico.org) published in 2021-2025. Population which is used in study this is monthly report on year 2021-2025 so that the number of samples studied is 5 x 12 = 60 samples. The data analysis method used in this study is the *Error Correction Model* (ECM) analysis method with the help of *eviews* 10 software. Bahmani-Oskooee and Harvey (2021) emphasized that ECM provides a robust framework for investigating the dynamic effects of macroeconomic variables and distinguishing between temporary and permanent changes in economic relationships.

The ECM regression model used in this study is as follows:

Short Term Equation

$$DY_t = \beta_0 + \beta_1 D(X_{1t}) + \beta_2 D(X_{2t}) + \beta_3 D(X_{3t}) + ECT(-1) + e$$

Long Run Equation

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

Information :

Y : Export Value

b_0 : Constant

$b_{1,2,3}$: Independent Variable Coefficients

X1 : Production Quantity

X2 : International Price Coffe

X3 : Rupiah Exchange Rate

ECT : *Error Correction Term*

t : Time Period

e : Error Term

RESULTS

Stationarity Test Results

Stationarity test is used to check whether a *time series* has stationary properties or not. If the time series is not stationary, the stationary test can help overcome the problem by performing transformation or differentiation. If the data used is stationary, *Ordinary Least Squares regression can be performed*. At this stage, it is carried out through the unit root *test*.

Table 2. Stationarity Test Results

Variables	Level		
	t-stat	Prob	Decision
LogY	-1.537769	0.5077	Non Stationary
LogX1	-4.749058	0.0003	Stationary
LogX2	-2.769844	0.0688	Non Stationary
LogX3	-1.170990	0.46813	Non Stationary
Variables	**First Difference**		
	t-stat	**Prob**	**Decision**
LogY	-8.009059	0.0000	Stationary
LogX1	-5.700734	0.0000	Stationary
LogX2	-7.899983	0.0000	Stationary
LogX3	-7.442924	0.0000	Stationary

Source: data processed with *eviews* 10 (2026).

Based on table 2 above, the test results show that most of the research variables are not stationary at the level level, but become stationary after the first difference is made. Thus, these variables are eligible to be continued at the cointegration test stage. If the results of the cointegration test show a long-term relationship between variables, then the Error Correction Model (ECM) model can be used to analyze the short-term and long-term relationships.

Cointegration Test Results

The cointegration test is a statistical test used to determine whether the time series being analyzed have the same level of integration, so that they can be considered to have a stable relationship in the long run.

Table 3. Cointegration Test Results

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistics	-3.738431	0.0037

Source: data processed with *eviews* 10 (2026).

Based on table 3. above, it can be seen that the probability value of *the Augmented Dickey-Fuller test statistic* 0.0037 is smaller than 0.05 at the level. It can be concluded that the variables observed in this study are cointegrated at the same level.

Classical Assumption Test

Normality Test Results

The normality test is a test used to test whether the independent variable or dependent variable is normally distributed or not. To find out whether the data is normally distributed or not, it is described through mark probability Jargue Berra (JB). If the value probability > a (0.05) then the data is said to be normal. If probability < a (0.05) then data it is said abnormal .

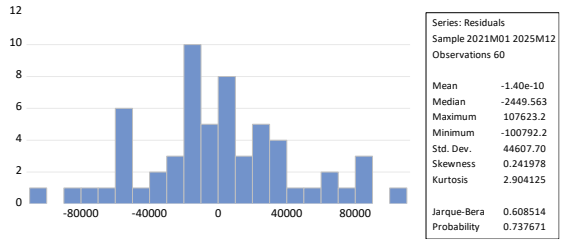

Figure 2. Normality Test

Source: data processed with *eviews* 10 (2026)

Based on Figure 4.1 above, the results of the normality test can be seen in the Jargue-Berra Probability value. (JB). There is a probability value of 0.720668, this value is greater than 0.05. It can be concluded that in this study the regression data used is normally distributed.

Multicollinearity Test Results

Multicollinearity testing aims to detect whether there is any perfect relationship between variable free one with variable free other in a model regression linear multiple. Where model regression which good for used is when all independent variables are independent or not related to each other. There are a number of indicators that can be used to detect

multicollinearity, including if the variance inflation factor (VIF) > 10, there is Multicollinearity between variables free. If VIF < 10, No there is Multicollinearity between variable free.

Table 4 Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	13.41888	32722.47	ON
LogX1	0.001149	5.912205	1.025116
LogX2	0.117448	6480.828	1.195525
LogX3	0.906334	38733.51	1.195528

Source: data processed with *eviews* 10 (2026)

Based on table 4 above, the results of the multicollinearity test can be seen from the centered VIF value. These results indicate that all independent variables (LogProduction, LogPrice, LogExchange) have a Centered VIF value <10. It can be concluded that this study is free from multicollinearity or does not occur multicollinearity.

Heteroscedasticity Test Results

Heteroscedasticity testing aims to test whether there are similarities or differences in variance from the residuals of one observation to another. The test used to determine the presence or absence of heteroscedasticity in this study is the Breusch-Pagan test. In this test, the null hypothesis indicates that the model used does not have heteroscedasticity interference.

Table 5. Heteroscedasticity Test Results

F-statistic	1.403852	Prob. F(3,56)	0.2512
Obs*R-squared	4.196760	Prob. Chi-Square(3)	0.2410
Scaled explained SS	2.751863	Prob. Chi-Square(3)	0.4315

Source: data processed with *eviews* 10 (2026)

Based on table 5 above, the results of the heteroscedasticity test can be seen in the value of the Chi-Square Prob. There is a Chi-Square Prob value of 0.2410, this value is greater than 0.05, so it can be concluded that the data used in this study does not have a heteroscedasticity problem.

Autocorrelation Test Results

Test autocorrelation aims to know there is or whether there is a correlation deviation Which happen between residual on One observation with observation others in the regression model. The autocorrelation test according to Danang Sunyoto (2016) is one of the measures in determining whether or not there is an autocorrelation problem using the Durbin-Watson (DW) test.

Table 6. Autocorrelation Test Results

Mean dependent var	5.012550
S.D. dependent var	0.219214
Akaike Info Criterion	-0.802593
Schwarz criterion	-0.662970
Hannan-Quinn criter.	-0.747978
Durbin-Watson stat	0.954209

Source: data processed with *eviews* 10 (2026).

Based on table 6 above, the results of the autocorrelation test can be seen from the Durbin-Watson (DW) value. There is a Durbin-Watson DW value of 0.954209. If the DW value is between -2 and +2 (-2<DW<+2), it can be concluded that there is no autocorrelation in this study.

***Error Correction Model* (ECM)**

Table 7. Short-Term and Long-Run Equation Results

Variabel	Coeficin	t-Statistics	Prob.
Long-Run Analysis			
C	-15.08050	-6.055935	0.0000
LogX1	0.050877	1.714554	0.0925
LogX2	0.628816	2.369027	0.0217
LogX3	2.766073	10.51266	0.0000
F-statistic	19.74363	Prob(F-statistic)	0.000000

Variabel	Coeficin	t-Statistics	Prob.
Adjusted R-squared	0.487985	R-squared	0.514019
Short-Term Analysis			
C	-0.791645	17.90842	0.0000
D(LogX1)	0.037124	0.542497	0.9247
D(LogX2)	-1.097653	-1.019541	0.3128
D(LogX3)	-5.383156	-3.998679	0.0002
ECT(-1)	-2.829505	-4.68104	0.0000
F-statistic	9.234196	Prob(F-statistic)	0.000009
Adjusted R-squared	0.362194	R-squared	0.406181

Source: data processed with *eviews* 10 (2026).

Before modeling using ECM, long-term regression formula was obtained using Ordinary Least Square (OLS) to get a long-term estimation as can be seen in Table 7, to determine the error or residual in the long-term formula. Following this, the ECM model is formed using the residue or error value from the long-term regression formula, resulting in the short-term formula estimate. This is to test whether Error Correction Term (ECT) is negative and significant.

In the ECM test shown in Table 7, ECT had a probability value of 0.00 which was smaller than the significance level with the ECT coefficient also negative. Therefore, the ECM model is valid and shows significant short- and long-term relationships. The adjusted R-squared in the short term of 0.3621 can be interpreted as an independent variable in the model that explains the dependent variable of 36.21% while in the long term the dependent variable can be explained by an independent variable of 0.4879 or by 48.79%.

DISCUSSION

Simultaneous Tests

Simultaneous tests were used to determine whether coffee production, international coffee prices, and the Rupiah/USD exchange rate together affect Indonesia's coffee exports. In the long-term model, the F-statistical value is 19.7436 with a probability of 0.00. Since the probability is less than 0.01, H0 is rejected. This means that coffee production, international coffee prices, and exchange rates simultaneously have a significant effect on Indonesia's coffee exports in the long term.

Economically, the long-term simultaneous results show that Indonesia's coffee exports are determined not only by domestic production capacity, but also by price incentives in the global market and macroeconomic conditions in the form of exchange rates. The combination of these three factors shapes the competitiveness of Indonesian coffee exports. Production determines the availability of supply, international prices determine market incentives, while exchange rates determine price competitiveness and exporter acceptance.

In the short-term model, the F-statistical value is 9.2342 with a probability of 0.00. Because the probability is less than 0.01, simultaneous changes in production, changes in international prices, changes in exchange rates, and ECT(-1) have a significant effect on changes in Indonesian coffee exports. These results show that although only partially significant exchange rates in the short term, the model variables together are still able to explain the dynamics of changes in coffee exports.

Partial Test

The Effect of Coffee Production on Indonesian Coffee Exports

In the long term, coffee production has a positive coefficient of 0.0509 with a t-statistic of 1.7146 and a probability of 0.0925. Because the probability is greater than 0.05, coffee production does not have a significant effect on Indonesian coffee exports. Indications that the increase in production is not strong enough to directly boost exports as part of the production is still absorbed by domestic consumption, processing industries,

and trade stocks. In addition, coffee exports are also influenced by the quality of coffee beans, certification, export standards, and supply chain readiness.

In the short term, the change in coffee production has a coefficient of 0.0371 with a t-statistic of 0.5425 and a probability of 0.9247. The probability value is far above 0.05, so changes in coffee production do not have a significant effect on Indonesia's coffee exports in the short term. These findings show that coffee production did not directly enter the export market in the same period. There is a gap between harvesting, drying, quality sorting, processing, contract fulfillment, document management, and delivery. Thus, coffee production plays a more role as a determining factor in export capacity in the long term than an export driver in the current period.

These findings are in line with Askia, Asnawi, Murtala, and Sari (2025) who show that coffee production is not significant in the short term to Indonesia's coffee bean exports. Structurally, Nalurita, Asmarantaka, and Jahroh (2014) also emphasized that strengthening Indonesia's coffee agribusiness requires improving quality, infrastructure, and development strategies so that production excellence can turn into export competitiveness.

The Effect of International Coffee Prices on Indonesian Coffee Exports

In the long term, international coffee prices have a positive coefficient of 0.6288 with a t-statistic of 2.3690 and a probability of 0.0217. Because the probability is less than 0.05, international coffee prices have a positive and significant effect on Indonesian coffee exports. An increase in international coffee prices by 1 percent will increase Indonesia's coffee exports by around 0.6288 percent, ceteris paribus. This positive direction is in line with the theory of export supply, which is that when world prices increase, exporters get a greater incentive to distribute coffee to international markets.

In the short term, the change in international coffee prices shows a negative coefficient of -1.0977 with a t-statistic of -1.0195 and a probability of 0.3128. Because the probability is greater than 0.05, changes in international coffee prices do not have a significant effect on Indonesian coffee exports in the short term. An insignificant negative coefficient shows that world price fluctuations in one period are not strong enough to directly change the realization of exports. This can happen because coffee export contracts are usually agreed in advance, while exporters tend to wait for certainty of price trends before increasing or decreasing export volumes.

The long-term results of this study are supported by Lubis and Rahmani (2023) who found that international coffee prices have a positive and significant effect on the value of Indonesian coffee exports. Manalu, Harianto, Suharno, and Hartoyo (2020) also show that the demand for Indonesian coffee beans in the international market is influenced by price, quality, and market objectives. Thus, the increase in world prices can be an export opportunity, but the response is still limited by quality, contract structure, and competition with other producing countries such as Vietnam and Brazil.

The Effect of the Rupiah Exchange Rate/USD on Indonesian Coffee Exports

In the long term, the exchange rate of the Rupiah against the US Dollar has a positive coefficient of 2.7661 with a t-statistic of 10.5127 and a probability of 0.0000. Because the probability is less than 0.05, the exchange rate has a positive and very significant effect on Indonesia's coffee exports at a real level of 1 percent. Economically, the depreciation of the Rupiah by 1 percent is related to the increase in Indonesian coffee exports by around 2.7661 percent, ceteris paribus. An elasticity value greater than one indicates that Indonesia's coffee exports are highly responsive to exchange rate changes in the long run. When the rupiah weakens against the US dollar, the price of Indonesian coffee denominated in dollars becomes relatively cheaper for importers, while the exporters' receipts in rupiah increases. This condition enlarges export incentives and increases the competitiveness of Indonesian coffee in the global market. Therefore, the exchange rate is the most dominant variable compared to international production and prices in the long-term model.

In the short term, the exchange rate change has a negative coefficient of -5.3832 with a t-statistic of -3.9987 and a probability of 0.0002. Because the probability is less than 0.05, exchange rate changes have a negative and significant effect on Indonesia's coffee exports in the short term. This negative sign shows that the sudden weakening of the Rupiah can suppress exports in the current period because it causes price uncertainty, contract risks, increased import input costs, and caution of business actors. In the trade literature, this pattern is often described as the short-term adjustment effect or the J-curve effect, which is the depreciation benefit on exports only seen after business actors and trade contracts adjust.

The findings on the importance of the exchange rate were strengthened by Lubis and Rahmani (2023), who concluded that the Rupiah exchange rate has an effect on the value of Indonesian coffee exports and together with international prices has a significant effect simultaneously. Fortunika, Harianto, and Suharno (2021) also show that the position of Indonesian coffee in the German market is determined by demand sensitivity to prices and competition with major exporting countries, so that exchange rate changes that affect prices relatively have important implications for the competitiveness of Indonesian coffee.

CONCLUSION

The results show that in the long term, international coffee prices and the Rupiah/USD exchange rate have a significant effect on Indonesian coffee exports, while coffee production has a positive but insignificant direction at the level of 5 percent. In the short term, only the exchange rate has a significant effect, while coffee production and international coffee prices have not had a direct impact. This shows that Indonesia's coffee exports require an adjustment process, so that changes in production factors and world prices are not directly reflected in export realization.

Economically, coffee production remains an important factor in supporting export capacity, but increased production needs to be followed by improved quality, standardization, certification, and supply chain efficiency. International coffee prices are an important signal for exporters in the long run, but export responses are still constrained by trade contracts and supply availability. Meanwhile, the depreciation of the rupiah can increase export competitiveness in the long term, but in the short term it can create uncertainty and suppress exports.

A negative and significant ECT(-1) coefficient indicates that the ECM model is valid and that there is an adjustment mechanism from short-term imbalance to long-term equilibrium. The value of the determination coefficient shows that the long-term model is able to explain 51.40 percent of the variation in Indonesia's coffee exports, while the short-term model explains 40.62 percent of the variation in export changes. Thus, Indonesia's coffee export strategy needs to be focused on improving quality and competitiveness, market diversification, logistics efficiency, and exchange rate stability so that coffee exports can increase sustainably.

Suggestion

Based on the conclusions from the research results and discussions that have been conducted above, the suggestions that the author can provide are as follows:

1. Coffee producers not only focus on increasing production but also on improving coffee quality through superior seedlings, sustainable cultivation, post-harvest handling, certification, and downstream processing to enhance export competitiveness.
2. International coffee prices have a positive and significant long-run effect on coffee export value. Therefore, exporters and the government should strengthen market intelligence, diversify export destinations, and increase value-added coffee products to maximize the benefits of favorable global price movements.
3. The exchange rate was identified as the most influential variable affecting coffee export value in both the short run and the long run. Therefore, maintaining exchange rate stability should remain a priority for Bank Indonesia and the Government. In addition, financial instruments such as foreign

exchange hedging should be promoted to help exporters mitigate exchange rate risks.

4. Future research is recommended to incorporate additional explanatory variables that may influence Indonesia's coffee export performance, such as global coffee demand, logistics performance, transportation costs, climate change, export tariffs, trade agreements, and coffee quality indicators. Extending the observation period and employing alternative econometric approaches, including Autoregressive Distributed Lag (ARDL), Vector Error Correction Model (VECM), or panel data analysis, would also improve the robustness and generalizability of future empirical findings.

REFERENCES

Ahman, E., & Rohmana, Y. (2016). *Teori ekonomi mikro* (Edisi ke-3). Rizqi Press.

Askia, D., Asnawi, Murtala, & Sari, C. P. M. (2025). Pengaruh produksi, harga dan nilai tukar rupiah terhadap ekspor biji kopi di Indonesia. *Jurnal Ekonomi Pertanian Unimal, 8*(1). https://doi.org/10.29103/jepu.v8i1.23023

Bonaraja, P. 2021. *International Economics* . Medan. Kita Menulis Foundation.

Badan Pusat Statistik. (2026). *Data produksi kopi dan nilai ekspor kopi Indonesia*. https://www.bps.go.id

Bahmani-Oskooee, M., & Harvey, H. (2022). The U.S.-Canadian trade and exchange rate uncertainty: Asymmetric evidence from commodity trade. *The World Economy, 45*(3), 841–866. https://doi.org/10.1111/twec.13206

Bank Indonesia. (2026). *Data kurs rupiah terhadap dolar Amerika Serikat*. https://www.bi.go.id

Costinot, A., & Donaldson, D. (2012). Ricardo's theory of comparative advantage: Old idea, new evidence. *American Economic Review, 102*(3), 453–458. https://doi.org/10.1257/aer.102.3.453

Fortunika, S. O., Harianto, H., & Suharno, S. (2021). Posisi kopi robusta Indonesia di pasar Jerman menggunakan metode Linear Approximate Almost Ideal Demand System. *Jurnal Agribisnis Indonesia,* 9(1), 29–42. https://doi.org/10.29244/jai.2021.9.1.29-42

Harahap, R., & Nurhasanah. (2024). Pengaruh harga kopi internasional dan nilai tukar rupiah terhadap nilai ekspor kopi di Indonesia. *Jurnal Visi Ekonomi Akuntansi dan Manajemen,* 6(2), 52–60.

Imsar, I., Tambunan, K., Silviani, R., & Harahap, M. I. (2022). The effect of export, Islamic mutual fund, and labor force on economic growth in Indonesia. *At-Tijaroh: Jurnal Ilmu Manajemen dan Bisnis Islam, 8*(1), 104–114. https://doi.org/10.24952/tijaroh.v8i1.4580

International Coffee Organization. (2026). *Historical data on the global coffee trade*. https://www.ico.org

Lubis, R. A., & Rahmani, N. A. B. (2023). Pengaruh nilai tukar rupiah, harga kopi internasional terhadap nilai ekspor kopi Indonesia dengan inflasi sebagai variabel intervening periode 2002–2021. *Jurnal Ekonomi Pendidikan dan Kewirausahaan, 11*(2), 135–152. https://doi.org/10.26740/jepk.v11n2.p135-152

Manalu, D. S. T., Harianto, H., Suharno, S., & Hartoyo, S. (2020). Permintaan kopi biji Indonesia di pasar internasional. *Agriekonomika,* 9(1), 114–126. https://doi.org/10.21107/agriekonomika.v9i1.7346

Nalurita, S., Asmarantaka, R. W., & Jahroh, S. (2014). Analisis daya saing dan strategi pengembangan agribisnis kopi Indonesia. *Jurnal Agribisnis Indonesia,* 2(1), 63–74. https://doi.org/10.29244/jai.2014.2.1.63-74

Olilingo, F. Z., Umar, N. A., & Santoso, I. R. (2024). Analysis of export competitiveness of main commodities of North Sulawesi Province. *Jurnal Ekonomi dan Studi Pembangunan, 16*(2).

Porter, M. E. (1990). *The competitive advantage of nations*. Free Press.

Purba, B. (2021). *Ekonomi internasional*. Yayasan Kita Menulis.

Rahmawati, M., & Muljaningsih, S. (2022). Analisis jumlah produksi, luas area, harga dan kurs terhadap ekspor kopi robusta Indonesia ke Jepang. *Journal of Economics Development Issues, 5*(2), 109–118. https://doi.org/10.33005/jedi.v5i2.148

Ricardo, D. (1817). *On the principles of political economy and taxation*. John Murray.

Rosyidi, S. (2017). *Pengantar teori ekonomi: Pendekatan kepada teori ekonomi mikro dan makro*. PT RajaGrafindo Persada.

Salvatore, D. (2019). *International economics* (13th ed.). Wiley.

Sunyoto, D. (2016). *Metodologi penelitian akuntansi*. Refika Aditama.

Yani, D. A., Nasution, J., & Armayani, R. R. (2023). Pengaruh PDB, harga kopi internasional dan nilai tukar rupiah terhadap ekspor kopi Indonesia dalam perspektif Islam. *Ad-Deenar: Jurnal Ekonomi dan Bisnis Islam, 7*(1),

291–306. https://doi.org/10.30868/ad.v7i01.5005

Zahroh, F., Zainuri, Z., & Purtomo, R. (2019). Pengaruh volatilitas nilai tukar terhadap volume perdagangan internasional di ASEAN-3. *E-Journal Ekonomi Bisnis dan Akuntansi,* 6(1), 28. https://doi.org/10.19184/ejeba.v6i1.11071ri