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DETERMINANTS OF INDONESIAN COFFEE EXPORTS TO THE TOP FIVE DESTINATION COUNTRIES

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Abstract

Coffee is one of Indonesia's leading plantation commodities, playing a vital role in international trade and contributing significantly to national foreign exchange earnings. Although Indonesia is among the world's largest coffee producers, with production reaching approximately 760 thousand tons in 2023, its export performance remains suboptimal, with only about 36% of total production exported. This indicates a gap between production capacity and export realization, as well as reflecting stagnation in coffee export growth over the past few decades. This study aims to analyze the effects of international coffee prices, import tariffs, the exchange rate of the Indonesian rupiah against the United States dollar, and the real Gross Domestic Product (GDP) of destination countries on Indonesia's coffee exports to five major destination countries, namely the United States, Japan, Germany, Italy, and Malaysia, during the 2003–2024 period. This research employs a quantitative approach using panel data analysis and the Random Effect Model (REM) estimation method, selected based on the Chow test and Hausman test. The results indicate that the GDP of destination countries has a positive and significant effect on Indonesia's coffee exports, while the exchange rate has a negative and significant effect. Meanwhile, international coffee prices and import tariffs do not have a significant effect on Indonesia's coffee exports.

Keywords: Coffee Exports, Import Tariffs, Exchange Rate, GDP, International Prices, Panel Data, Random Effect Model.

INTRODUCTION

International trade has increased interdependence among countries. The existence of economic integration within a free trade area is one example of such interconnectedness. The ASEAN Economic Community (AEC) represents an agreement among ASEAN member states to establish a free trade region aimed at enhancing regional economic competitiveness and actively participating in the global economy. To achieve this objective, tariffs have been reduced to 0–5%, quantitative restrictions have been eliminated, and non-tariff barriers have been minimized in accordance with the Common Effective Preferential Tariff (CEPT) scheme (Fiscal Policy Agency, 2016). With the implementation of the AEC, the flows of goods, services, capital, investment, and skilled labor have become more liberalized and less restricted.

Coffee is one of Indonesia's leading commodities, contributing significantly to foreign exchange earnings and serving as the primary livelihood for more than two million farmers across various regions (Rahardian & Nurrochmat, 2021). Indonesia is among the major producers and exporters of plantation commodities such as palm oil, coffee, and rubber. It ranks as the fourth-largest coffee producer globally, following Brazil, Vietnam, and Colombia. According to FAO (2023), Indonesia's coffee production reached approximately 760 thousand tons in 2023, dominated by robusta varieties primarily cultivated in Sumatra and Sulawesi. This high level of production reflects Indonesia's substantial potential in the global coffee market.

Over the past two decades, Indonesia's coffee export volume has demonstrated its strategic role in non-oil and gas exports. However, data from the Central Bureau of Statistics (BPS) indicate that only around 36% of total national coffee production—approximately 276 thousand tons in 2023—is exported, while the remainder is largely consumed domestically and has limited impact on the global market (BPS, 2023). This trend highlights the importance of increasing export volumes as part of efforts to diversify foreign exchange earnings and stimulate overall agricultural sector growth (Rahardian & Nurrochmat, 2021). Although coffee's contribution to Indonesia's Gross Domestic Product (GDP) is smaller compared to the manufacturing sector, it remains significant for agriculture and plantation-based regions. In 2024, the agriculture, forestry, and fisheries sector—including coffee—contributed nearly USD 9 billion, with coffee playing a key role among leading plantation commodities (BPS, 2024; FAO, 2023). Nevertheless, compared to commodities such as rubber and timber, which exhibit relatively stable growth, coffee exports tend to grow more slowly due to global price fluctuations, quality challenges, and international standardization requirements (Simatupang et al., 2019; Putra et al., 2022). These constraints indicate that coffee requires greater policy attention to fully realize its export potential.

The shift in Indonesia's export structure shows that non-oil and gas exports have increasingly become the primary source of foreign exchange, particularly in response to volatility in global oil and gas prices (BPS, 2024). In this context, coffee plays a strategic role, as Indonesia ranks as the fourth-largest coffee producer in the world, with production reaching approximately 760 thousand tons in 2023 (FAO, 2023). However, coffee exports have not yet fully matched their production potential, making it essential to optimize export performance to support national economic growth (Ramadhana et

al., 2019). Strengthening coffee exports requires integrated policy support, including improving production quality, enhancing compliance with global standards, and intensifying promotion in key export markets (Putra et al., 2022).

Coffee holds a strategic position not only as a source of foreign exchange but also as a driver of regional economic development and farmer empowerment. Non-oil and gas commodities play a crucial role as pillars of Indonesia's economy through export diversification, reducing dependence on the oil and gas sector. Based on the theory of comparative advantage, Indonesia has a strategic position in global trade due to its abundant natural resources. In addition to directly contributing to foreign exchange reserves, commodities such as coffee generate significant multiplier effects by absorbing labor in both agricultural and processing sectors. Therefore, strengthening non-oil and gas exports is not only essential for maintaining trade balance stability but also serves as a driver of inclusive and sustainable economic growth (Krugman et al., 2018).

Based on cumulative export volume from 2003 to 2024, the United States ranks first with 1,310,306.1 tons (15.54% of Indonesia's total coffee exports), followed by Japan with 881,217 tons (10.45%), Italy with 615,724.2 tons (7.30%), Malaysia with 535,457.4 tons (6.35%), and Germany with 305,884.1 tons (3.63%).

The dominance of these five countries reflects consistently strong demand for Indonesian coffee over the long term. These countries not only represent long-standing trading partners but also demonstrate stable demand patterns. Their dominance underscores the importance of maintaining trade relationships and understanding market characteristics, including taste preferences, sustainability regulations, price sensitivity, and strict quality standards. Therefore, these five countries are selected as the focus of this study due to their significant contribution to Indonesia's total coffee exports over the past two decades, as well as their representation of the complexities of the global market.

On the other hand, macroeconomic conditions in destination countries, such as GDP growth, also influence coffee demand. When the GDP of major importing countries—such as the United States, Japan, Italy, Germany, and Malaysia—slows down, demand for consumption commodities like coffee tends to decline. Given this complexity, it is important to examine the extent to which import tariffs, exchange rates, destination-country GDP, and global coffee prices affect Indonesia's coffee exports, particularly to the five main destination countries during the 2003–2024 period.

In the context of international trade, Indonesia's coffee export performance is influenced by macroeconomic conditions in destination countries, particularly national income or GDP. According to the Gravity Model of Trade, trade volume between two countries is positively related to the economic size (GDP) of trading partners, reflecting aggregate consumer purchasing power (Anderson & van Wincoop, 2003). In this study, real GDP is used to measure market demand, as it is adjusted for inflation and thus better reflects actual purchasing power for coffee consumption (Feenstra & Taylor, 2017).

In addition to demand factors, supply-side aspects influenced by price competitiveness are equally important. The exchange rate plays a key role in determining the price competitiveness of Indonesian coffee in the global market. A

depreciation of the domestic currency (Rupiah) against trading partners' currencies can enhance export competitiveness, while appreciation tends to reduce it (Krugman et al., 2018).

Therefore, exchange rate fluctuations are a crucial factor in explaining the success of Indonesian coffee penetration into the five main destination markets. In addition to GDP and exchange rates, import tariffs imposed by destination countries also play an important role in determining competitiveness. Research by Zafar (2025) finds that lower import tariffs in importing countries increase the likelihood of higher export volumes. In the context of Indonesian coffee, tariff policies in major destination countries such as the United States, Japan, Italy, Germany, and Malaysia serve as key determinants that can either support or hinder export growth.

Although Indonesia is the fourth-largest coffee producer globally, with production reaching 760 thousand tons in 2023 (FAO, 2023), only about 36% of this output is exported, while the remainder is consumed domestically or does not enter the global market. This indicates a significant gap in optimizing export potential and suggests that high production capacity has not been matched by export performance. Despite having strong comparative advantages and diverse coffee varieties across regions, Indonesia has not fully maximized its export potential (Zuhdi et al., 2021; Ramadhana et al., 2024).

The selection of coffee as the focus of this study is based not only on its position as a leading non-oil export commodity with high comparative advantage but also on the relatively stagnant growth of coffee exports over the past two decades. Compared to other non-oil commodities such as rubber and timber, coffee export growth has been relatively slower. This highlights a gap between production capacity and export realization, making coffee a strategic commodity that requires further investigation to identify the determinants of its export performance.

This study aims to identify the factors influencing Indonesia's coffee export tariffs and to analyze export volume trends in recent years. Unlike previous studies, this research focuses on the five largest destination countries for Indonesian coffee exports: the United States, Malaysia, Italy, Japan, and Germany. The objective is to determine the factors influencing Indonesia's coffee exports in the international market and to provide policy recommendations for sustainably increasing export volumes.

RESEARCH METHOD

International trade has increased interdependence among countries. The existence of economic integration within a free trade area is one example of such interconnectedness. The ASEAN Economic Community (AEC) represents an agreement among ASEAN member states to establish a free trade region aimed at enhancing regional economic competitiveness and actively participating in the global economy. To achieve this objective, tariffs have been reduced to 0–5%, quantitative restrictions have been eliminated, and non-tariff barriers have been minimized in accordance with the Common Effective Preferential Tariff (CEPT) scheme (Fiscal Policy Agency, 2016). With the implementation of the AEC, the flows of goods, services, capital, investment, and skilled labor have become more liberalized and less restricted.

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Over the past two decades, Indonesia's coffee export volume has demonstrated its strategic role in non-oil and gas exports. However, data from the Central Bureau of Statistics (BPS) indicate that only around 36% of total national coffee production—approximately 276 thousand tons in 2023—is exported, while the remainder is largely consumed domestically and has limited impact on the global market (BPS, 2023). This trend highlights the importance of increasing export volumes as part of efforts to diversify foreign exchange earnings and stimulate overall agricultural sector growth (Rahardian & Nurrochmat, 2021). Although coffee's contribution to Indonesia's Gross Domestic Product (GDP) is smaller compared to the manufacturing sector, it remains significant for agriculture and plantation-based regions. In 2024, the agriculture, forestry, and fisheries sector—including coffee—contributed nearly USD 9 billion, with coffee playing a key role among leading plantation commodities (BPS, 2024; FAO, 2023). Nevertheless, compared to commodities such as rubber and timber, which exhibit relatively stable growth, coffee exports tend to grow more slowly due to global price fluctuations, quality challenges, and international standardization requirements (Simatupang et al., 2019; Putra et al., 2022). These constraints indicate that coffee requires greater policy attention to fully realize its export potential.

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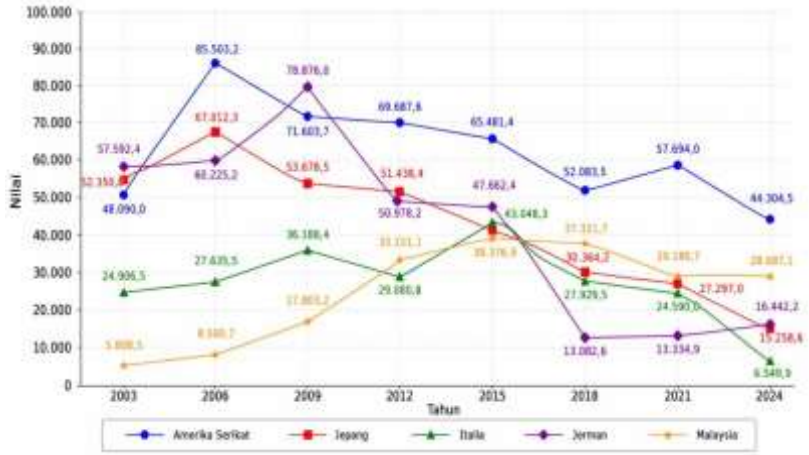
RESULTS AND DISCUSSION

Description of Research Variable Data

Indonesia's Coffee Export Volume (Y)

Figure 1. The Five Largest Destination Countries for Indonesia's Coffee Exports, 2003–2024



Source: Central Bureau of Statistics (2025)

Based on the graph of Indonesia's coffee export volume to the five main destination countries namely the United States, Japan, Italy, Germany, and Malaysia during the 2003–2024 period, it can be observed that Indonesia's coffee export performance exhibits considerable fluctuations across years and destination countries.

The highest export volume shown in the graph occurred in 2008 for Germany. In that year, Indonesia's coffee exports to Germany increased sharply compared to previous years. The high export volume during this period can be associated with rising demand for coffee in the European market, where Germany serves as one of the largest centers for coffee trade and processing in the region. In addition, prior to the full impact of the global financial crisis at the end of 2008, international trade activities remained relatively strong, leading to increased demand for imported commodities, including coffee.

Conversely, the lowest export volume in the graph is observed for Malaysia during the early years of the observation period, around 2003–2004. The relatively low export volume during this period may be attributed to limited demand for Indonesian coffee in the Malaysian market compared to other destination countries such as the United States and European nations. Furthermore, factors such as market distance, trade structure, and competition from other coffee-producing countries in the Asian region may also have contributed to the lower export volume to Malaysia.

Overall, the fluctuations in Indonesia's coffee exports throughout the study period are influenced by various economic factors, including changes in demand in destination countries, global economic conditions, movements in international coffee prices, and exchange rate dynamics. Countries such as the United States and Germany tend to exhibit higher export volumes, as they are major markets for global coffee consumption and distribution. Meanwhile, other countries such as Japan, Italy, and Malaysia show more fluctuating export volumes in response to changes in domestic demand and international trade conditions.

Import Tariffs on Coffee in Destination Countries (X1)

Figure 2. Coffee Import Tariffs in Destination Countries

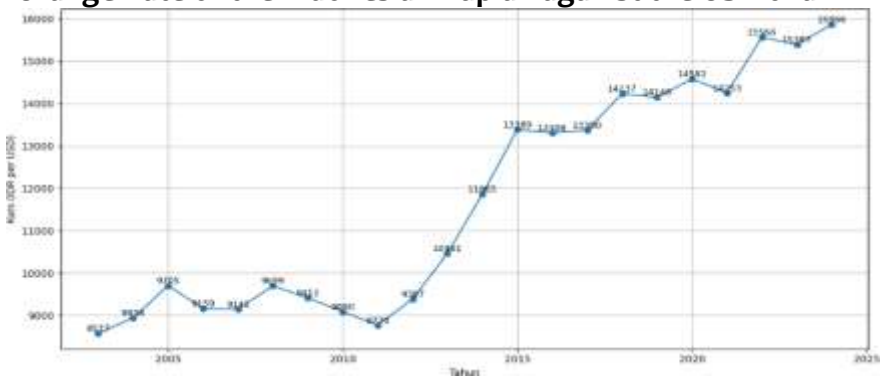
Source: World Bank (2025)

The variation in coffee import tariffs across destination countries is influenced by each country's trade policy structure. Developed countries generally impose relatively low tariffs on raw materials such as unprocessed coffee beans, while applying higher tariffs on processed products (tariff escalation), which may affect Indonesia's export downstreaming strategy. Furthermore, as members of the World Trade Organization, destination countries are bound by their committed bound tariffs, yet they retain flexibility in setting applied tariffs that are actually enforced. These differences may create uncertainty in entry costs for exporters.

In addition, the existence of regional or bilateral trade agreements can reduce or even eliminate import tariffs on Indonesian coffee, thereby enhancing its competitiveness relative to competing countries such as Brazil and Vietnam. However, during periods of economic crisis or increasing protectionist tendencies, destination countries may adjust their trade policies, potentially affecting export stability. Although coffee trade is also influenced by non-tariff barriers, this study focuses on import tariffs as a quantitative variable that can be consistently measured across countries and over time.

Exchange Rate of the Indonesian Rupiah against the US Dollar (X2)

Figure 3. Exchange Rate of the Indonesian Rupiah against the US Dollar



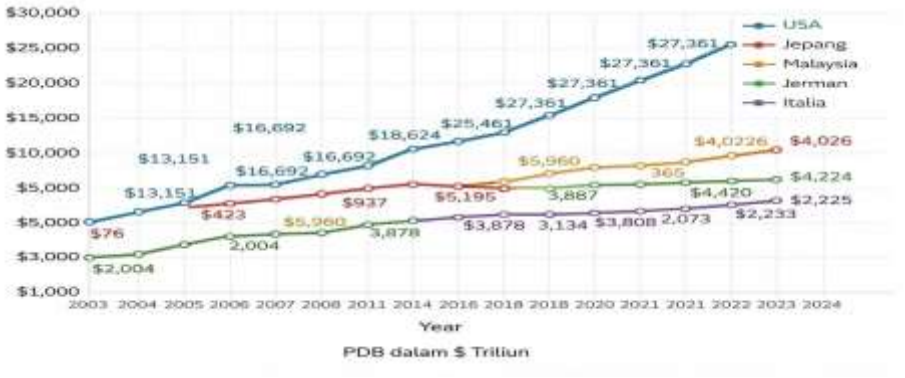
Source: World Bank (2025)

The exchange rate of the Indonesian rupiah during the study period exhibits considerable volatility, influenced by various macroeconomic factors such as trade balance conditions, foreign capital flows, interest rate policies, political stability, and global economic dynamics. Periods of global financial crises, external shocks, and uncertainties in international financial markets often trigger sharp depreciation of the rupiah. This condition may have a dual impact on coffee exports: on the one hand, it enhances price competitiveness, while on the other hand, it may increase the cost of production inputs that still rely on imports.

Thus, the exchange rate variable not only reflects changes in currency value but also represents macroeconomic stability and external risks faced by the export sector. In this study, the exchange rate is assumed to have a significant effect on Indonesia's coffee exports, with a hypothesized negative relationship between the exchange rate (IDR/USD) and export value in foreign currency, where an increase in the exchange rate (depreciation) is expected to stimulate export growth, ceteris paribus.

Real Gross Domestic Product (GDP) of Destination Countries (X3)

Figure 4. Real Gross Domestic Product (GDP) of Destination Countries



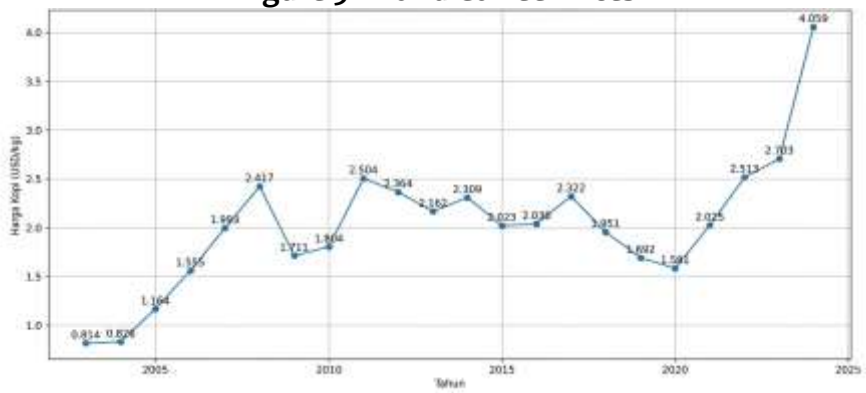
Source: World Bank (2025)

Based on the import demand function approach and economic growth theory, an increase in the real GDP of destination countries leads to higher income levels and greater domestic economic activity. This rise in income stimulates increased consumption, including demand for consumer goods and primary commodities such as coffee. Therefore, the higher the real GDP of a country, the greater its potential demand for imported coffee. Accordingly, this variable is hypothesized to have a positive effect on Indonesia's coffee exports.

Economic growth in destination countries is not always stable and may be influenced by business cycles, global crises, changes in fiscal and monetary policies, and the dynamics of international trade. During periods of economic expansion, coffee demand tends to increase alongside rising household consumption and the growth of service sectors such as the food and beverage industry. Conversely, during periods of slowdown or recession, purchasing power declines, potentially suppressing imports. Therefore, the real GDP of destination countries serves as an important indicator in explaining variations in the demand for Indonesia's coffee exports during the study period.

World Coffee Prices (X4)

Figure 5. World Coffee Prices



Source: World Bank (2025)

An increase in global coffee prices can enhance revenue and provide stronger incentives for Indonesian exporters to expand export supply due to higher potential profits. However, from the demand side, excessively high prices may suppress import volumes in destination countries due to reduced purchasing power or substitution with

alternative products. Thus, the effect of world coffee prices on exports can be bidirectional, depending on demand elasticity and the market structure in destination countries. Global price fluctuations, influenced by supply imbalances, climate change, and international economic conditions, also play an important role in determining export stability.

Overall, the variables of import tariffs, exchange rates, real GDP of destination countries, and world coffee prices interact in explaining the dynamics of Indonesia's coffee exports. Export volume, as the dependent variable, is influenced by trade policy factors, domestic and external macroeconomic conditions, and developments in global commodity markets. The conceptual and empirical descriptions of these variables provide the foundation for subsequent quantitative analysis to statistically examine both partial and simultaneous effects on Indonesia's coffee export performance to major destination countries during the study period.

Results of Data Analysis

Descriptive Statistical Analysis

Table 1. Results of Descriptive Statistical Test

Statistic	Export Volume (Y)	Import Tariff (X1)	Exchange Rate (X2)	GDP (X3)	International Price (X4)
Mean	40,375.95	3.4	11,742	5.77	1.9
Median	37,449.20	3.0	11,163	3.69	2.0
Maximum	89,600.90	17.9	15,866	29.2	4.0
Minimum	5,808.50	1.5	8,577	76.5	0.8
Std. Dev.	19,299.25	1.7	2,600	6.76	8.2
Observations	110	110	110	110	110

Source: Processed data using EViews, 2025

Descriptive Statistics Interpretation

1. The export volume variable has a minimum value of 5,808.50 tons, observed in 2003, and a maximum value of 89,600.90 tons in 2008 for one of the destination countries. The mean export volume is 40,375.95 tons, with a median of 37,649.20 tons. The standard deviation is 19,299.25 tons, indicating a relatively high level of variation in export volumes during the study period.
2. The import tariff variable has a minimum value of 1.5% in 2013 (Japan) and a maximum value of 17.9% in 2019 (United States). The mean tariff is 3.4%, with a median of 3.0%. The standard deviation of 1.7% indicates relatively low variation, suggesting that tariff changes during the study period were not substantial.
3. The exchange rate variable has a minimum value of IDR 8,577/USD in 2003 and a maximum value of IDR 15,866/USD in 2024. The mean exchange rate is IDR 11,742/USD, with a median of IDR 11,163/USD. The standard deviation of IDR 2,600/USD indicates considerable variation, reflecting exchange rate fluctuations during the study period.
4. The GDP variable has a minimum value of USD 76.5 billion in 2003 and a maximum value of USD 29.2 trillion in 2024. The mean GDP is USD 5.77 trillion, with a median of USD 3.69 trillion. The standard deviation of USD 6.76 trillion indicates a wide dispersion, suggesting significant differences in GDP values across the study period.

5. The international price variable has a minimum value of USD 0.8/kg in 2003 and a maximum value of USD 4/kg in 2024. The mean international price is USD 1.9/kg, with a median of USD 2/kg. The standard deviation of USD 8.2/kg indicates some variation in prices, although not as large as in several other variables.

Results of Panel Data Regression Model Selection

Model selection was conducted using the Chow test, Hausman test, and Lagrange Multiplier test. The first step involved the Chow test to choose between the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

(1) Chow Test

Table 2. Chow Test Results

Effects Test	Statistic	d.f	Prob.
Cross-section F	10,691686	(4,101)	0,0000
Cross-section Chi-square	38,837881	4	0,0000

Source: Processed data using EViews, 2026

Based on the Chow test results, the Cross-section F probability value is 0.0000, which is less than the 0.05 significance level. Therefore, H_0 is rejected, indicating that the Fixed Effect Model is more appropriate than the Common Effect Model. This suggests differences in characteristics across Indonesia's coffee export destination countries

(2) Hausman Test

Table 3. Hausman Test Results

Test Summary	Chi-sq. Statistic	Chi-sq. d.f.	Prob.
Cross-section random	0,000000	4	1,0000

Source: Processed data using EViews, 2026

The Hausman test results show a probability value of 1.0000, which is greater than the 5% significance level (0.05). Thus, H_0 is accepted, indicating that the Random Effect Model is more appropriate than the Fixed Effect Model. This implies that differences across countries are random and uncorrelated with the independent variables.

Panel Data Regression Analysis

Table 4. Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9,559620	1,817310	5,26	0,0000
Tarif Impor (X1)	0,001966	0,021184	0,09	0,9262
LN Kurs (X2)	-0,716650	0,187329	-3,82	0,0002
LN PDB (X3)	0,263433	0,027776	9,48	0,0000
Harga (X4)	3,04E-05	5,12E-05	0,59	0,5548

Source: Processed data using EViews, 2026

The estimated regression equation is:

Y = 9.559 + 0.001 TARIF + (−0.716) LNEXRATE + 0.263 LNGDP + 3.035 PRICE

Interpretation:

1. The constant value of 9.559 indicates that when all independent variables are held constant, Indonesia's coffee export volume is estimated at 9.559 tons.
2. Import tariffs have a positive coefficient (0.001966) but are not statistically significant (p = 0.9262), indicating no significant effect on export volume.
3. The exchange rate (LN) has a negative and significant effect (p = 0.0002), meaning that a 1% increase in the exchange rate reduces export volume.
4. Destination country GDP (LN) has a positive and significant effect (p = 0.0000), indicating that higher GDP increases export volume.
5. International coffee prices have a positive but insignificant effect (p = 0.5548), suggesting that global price fluctuations do not significantly influence export volume.

Classical Assumption Tests

(1) Multicollinearity Test

Table 5. Multicollinearity Test Results (Correlation Matrix)

CORRELATION				
	Tarif Impor	LN Kurs	LN PDB	Harga
TARIF IMPOR	1,000000	-0,029822	-0,169951	-0,224551
LN KURS	-0,029822	1,000000	0,112271	0,513876
LN PDB	-0,169951	0,112271	1,000000	0,124489
PRICE	-0,224551	0,513876	0,124489	1,000000

Source: Processed data using EViews, 2026

Based on the correlation matrix among independent variables, all correlation coefficients are below 0.80. This indicates that there are no strong relationships among the independent variables. Therefore, it can be concluded that multicollinearity is not present in the regression model, and each independent variable is able to explain its effect on the dependent variable independently.

(2) Heteroskedasticity Test

Tabel 6. Hasil Uji Heteroskedastisitas

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	-0,568034	0,399246	-1,422767	0,1578
Tarif Impor	-0,001159	0,004021	0,288249	0,7737
LNKurs	0,065314	0,035055	1,863172	0,0652
LNPDB	0,000572	0,010118	0,056572	0,9550
Harga	3,54E-06	9,65E-06	0,366487	0,7147

Source: Processed data using EViews, 2026

Based on the heteroskedasticity test using the squared residual regression method ($RESID^2$), all independent variables have probability values greater than 0.05. This indicates that there is no significant effect of the independent variables on the squared residuals. Therefore, it can be concluded that heteroskedasticity is not present in the regression model, and the residuals are homoskedastic.

(3) Hypothesis Testing

(1) Coefficient of Determination (R^2)

Table 7. Coefficient of Determination (R^2)

R-square	0,417655
Adjusted R-squared	0,395470
S.E of regression	0,429361
F-statistic	18,82637
Prob(F-statistic)	0,000000
Mean dependent var	9,473621
S.D. dependent var	0,552222
Sum squared resid	19,35681
Durbin-Watson stat	0,676158

Source: Processed data using EViews, 2026

The R^2 value of 0.41 (41%) indicates that the independent variables—import tariffs, exchange rate, destination country GDP, and international prices—explain 41% of the variation in export volume, while the remaining 59% is explained by other variables not included in the model

(2) Simultaneous Test (F-test)

Table 8. Simultaneous Test Results

R-square	0,417655
Adjusted R-squared	0,395470
S.E of regression	0,429361
F-statistic	18,82637
Prob(F-statistic)	0,000000
Mean dependent var	9,473621
S.D. dependent var	0,552222
Sum squared resid	19,35681
Durbin-Watson stat	0,676158

Sumber : Olahan Data Eviews, 2026

Source: Processed data using EViews, 2026

Based on the F-test results, the F-statistic is 18.82637 with a probability value of 0.0000, which is less than 0.05. Therefore, H_0 is rejected and H_1 is accepted. This result indicates that all independent variables jointly explain variations in Indonesia's coffee exports during the study period

(3) Partial Test (t-test)

Table 9. t-test Results

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	9,559620	1,817310	5,260314	0,0000
Tarif Impor	0,001966	0,021184	0,092793	0,9262
LNKurs	-0,716650	0,187329	-3,825630	0,0002
LNPDB	0,263433	0,027776	9,484112	0,0000
Harga	3,04E-05	5,12E-05	0,592557	0,5548

Source: Processed data using EViews, 2026

Based on the t-test results, the conclusions are as follows:

1. Effect of Import Tariffs on Export Volume

The probability value of 0.9262 (> 0.05) indicates that import tariffs do not have a significant partial effect on Indonesia's coffee export volume. Although the coefficient is positive, it is statistically insignificant. This may be due to relatively low or stable tariffs, inelastic demand for coffee, and the dominance of non-tariff factors such as quality standards and market preferences.

2. Effect of Exchange Rate on Export Volume

   The probability value of 0.0002 (< 0.05) indicates that the exchange rate has a negative and significant effect on Indonesia's coffee export volume.

3. Effect of Destination Country GDP on Export Volume

   The probability value of 0.0000 (< 0.05) indicates that real GDP of destination countries has a positive and significant effect on export volume. This suggests that higher income levels and economic growth in destination countries increase demand for Indonesian coffee.

4. Effect of International Coffee Prices on Export Volume

   The probability value of 0.5548 (> 0.05) indicates that international coffee prices do not have a significant effect on export volume. Although the coefficient is positive, it is not statistically significant. This may be explained by long-term trading contracts, relatively stable demand, and the greater importance of product specifications and supply stability over price fluctuations.

   Macroeconomic factors in destination countries particularly GDP and exchange rate movements are the main determinants of Indonesia's coffee exports. In contrast, import tariff policies and global coffee prices are not statistically significant during the study period.

Discussion

The results of this study indicate that import tariffs do not have a significant effect on Indonesia's coffee export volume. Although the tariff coefficient is positive, its statistical effect is weak and unable to strongly explain variations in export performance. This suggests that Indonesia's coffee exports are relatively insensitive to changes in import tariffs imposed by destination countries. This finding contrasts with international trade theory, which generally predicts that higher tariffs reduce exports; however, in this case, other factors appear to play a more dominant role.

The insignificant effect of import tariffs can be explained by the nature of coffee as a commodity with relatively inelastic demand. Importing countries continue to require coffee for both consumption and industrial purposes, making demand less responsive to tariff-induced price changes. In addition, Indonesia's comparative advantage and distinctive coffee quality such as its specialty Arabica and high-quality Robusta help sustain international demand. Factors such as preferential tariffs and trade agreements may also reduce the actual tariff burden faced by exporters.

In contrast, the exchange rate variable is found to have a negative and significant effect on Indonesia's coffee export volume. A depreciation of the Indonesian rupiah makes Indonesian coffee more price-competitive in the global market, thereby increasing export demand. Conversely, an appreciation of the rupiah makes exports relatively more expensive and reduces competitiveness. This finding aligns with

international trade theory, which highlights exchange rates as a key determinant of export performance through price competitiveness.

Furthermore, the GDP of destination countries has a positive and significant effect on Indonesia's coffee export volume. This indicates that higher economic growth in importing countries leads to greater demand for coffee. As income levels rise, consumption lifestyle-related commodities such as coffee also increases. This result is consistent with the Gravity Model of Trade, which states that larger economies tend to engage in greater trade due to stronger purchasing power.

Meanwhile, international coffee prices are found to have no significant effect on Indonesia's export volume. This suggests that global price fluctuations are not the primary determinant of export performance. Indonesia tends to act as a price taker in the global coffee market, meaning price changes do not necessarily translate into changes in export volume. Additionally, coffee trade is often governed by long-term contracts and influenced by non-price factors such as product quality, standards, and supply stability. Therefore, Indonesia's coffee export performance is more strongly driven by structural factors and global demand conditions rather than price movements alone.

CONCLUSION

Hasil penelitian menunjukkan bahwa berdasarkan pembahasan pada bab sebelumnya dapat disimpulkan sebagai berikut.

1. Berdasarkan hasil uji simultan (uji F), diperoleh bahwa variabel tarif impor, kurs, GDP negara tujuan, dan harga kopi dunia secara bersama-sama berpengaruh signifikan terhadap volume ekspor kopi Indonesia**.** Hal ini menunjukkan bahwa kombinasi faktor kebijakan perdagangan, kondisi makroekonomi negara tujuan, nilai tukar, serta harga internasional secara kolektif mampu menjelaskan perubahan volume ekspor kopi Indonesia selama periode penelitian. Dengan demikian, model penelitian yang digunakan telah mampu menjelaskan variasi volume ekspor kopi Indonesia secara keseluruhan.
2. Berdasarkan hasil uji parsial (uji t), dapat disimpulkan bahwa Kurs berpengaruh negatif dan signifikan terhadap volume ekspor kopi Indonesia. Depresiasi rupiah meningkatkan daya saing ekspor sehingga mendorong kenaikan volume ekspor. GDP negara tujuan berpengaruh positif dan signifikan terhadap volume ekspor kopi Indonesia. Semakin tinggi tingkat pendapatan negara tujuan, maka permintaan terhadap kopi Indonesia semakin meningkat. Tarif impor tidak berpengaruh signifikan terhadap volume ekspor kopi Indonesia. Harga kopi dunia tidak berpengaruh signifikan terhadap volume ekspor kopi Indonesia.

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