




## ANALYSIS DETERMINANTS OF INDONESIAN PALM OIL EXPORT VOLUME TO TEN MAJOR DESTINATION COUNTRIES

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<p><b>Info Article</b></p>	<p><b>Abstract:</b> This research is entitled Analysis of Determinants of Indonesian Palm Oil Export Volume to Ten Major Destination Countries. Economic growth also varies among these countries. India's economy grew steadily with an average annual growth rate of 5.2%, which is likely to increase its demand for palm oil. China's economy, despite a slight decline in 2020 due to COVID-19, rebounded with an average annual growth of 3.9%. This study aims to analyze the determinants of Indonesia's palm oil export volume to ten major destination countries during the period 2012-2022 using a descriptive quantitative approach with panel data that combines time series data and cross-sectional data. Secondary data was obtained from various sources such as BPS, Investing.com, World Bank, and Macrotrends. The analysis method used includes panel data regression with the selection of the best model through Chow and Hausman tests, as well as classical assumption tests and goodness of fit tests. The results show that the international price of palm oil has a positive effect on export volume, while the exchange rate, economic growth of importing countries, and inflation in Indonesia have a negative effect. Overall, these economic variables have a significant effect on Indonesia's palm oil export performance. This study model indicates that the independent variables (international prices, exchange rate, economic growth, and inflation) collectively explain 94.10% of the variation in Indonesian palm oil export volume. This indicates that these economic factors exert a strong influence on the performance of Indonesian palm oil exports.</p>
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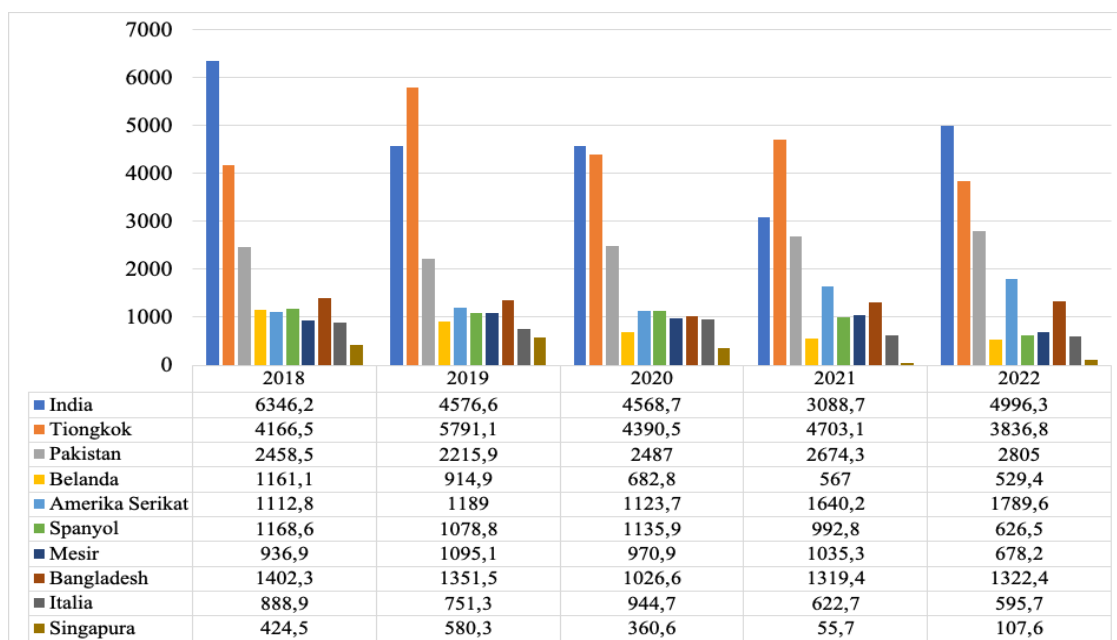
## INTRODUCTION

Each country has diverse natural potentials and systems of governance. This diversity leads to differences in their ability to meet the needs of their people. Some countries are rich in natural resources, while others rely more on the industrial or service sectors. Therefore, international cooperation becomes crucial to ensure that the needs of the people in each country are well met (Pratomo et al., 2022). Development related to housing and infrastructure is a priority (Khasanah & Khoirudin, 2020). The area of Indonesian territorial waters is one of the huge potentials to be utilized in national development (Kurnianto & Khoirudin, 2021). In efforts to achieve prosperity and welfare for its citizens, a country will strive to obtain resources that cannot be managed or produced independently. Factors such as limited natural resources, technology, or capital can be obstacles for such countries. Through international trade, countries can acquire goods and services they need but cannot produce themselves. Export and import activities in international trade provide a solution that allows countries to stabilize their domestic needs. The main goal is to increase the value of goods and services sold to other countries within one year. In other words, export, import, and other international trade activities aim to boost economic growth or GDP value in a country (Angelina et al., 2024). Additionally, the aim is to implement economic development (Fahriza et al., 2022). Given that the budget from the central government is limited, regional governments can use revenue from palm oil exports to continue financing these development activities. Economic growth is a primary measure to assess the economic strength of a country. The higher the economic growth, the greater the potential for that country to meet the needs of its people (Nasir et al., 2021). Indonesia is a country with a lot of potential in its natural resources (Widiatmoko & Khoirudin, 2021).

Indonesia is blessed with abundant natural resources from God. These natural riches provide a source of livelihood for the people to utilize and develop. One of the industrial sectors that utilize natural resources in Indonesia is the plantation industry (Yuniarti, 2010). One of the natural resources from the plantation industry in Indonesia is palm oil. According to BPS, the area or plantation area of palm oil in Indonesia was 9,144.7 hectares in 2023. The plantation sector in Indonesia can provide many benefits, such as providing employment opportunities, increasing export value, and also driving the country's economic growth (Yuniarti & Sukarniati, 2021). Palm oil provides various benefits and can support the Indonesian economy from various aspects. Palm oil is a product or export commodity of the plantation industry that can absorb many workers

and generate a significant amount of foreign exchange from the non-oil and gas sector. Indonesia is even the largest exporter of palm oil in the world. However, its presence can significantly impact people's lives (Pratomo et al., 2018). According to BPS, Indonesia's plantation and agricultural sectors have significant potential and serve as the main determinants in national economic growth. The economy of a country, especially Indonesia, heavily relies on these exports (Yuniarti, 2007). The MBR house is one of the government programs for low-income communities which is expected to help people have a decent place to live (Setiyowati & Khoirudin, 2022)

Palm oil itself is a vegetable oil derived from oil palm trees and has a high demand as it is widely used in various industrial sectors (Tiara et al., 2023). Palm oil is one of the leading plantation sector products and a crucial export commodity in Indonesia. The geographical characteristics of Indonesia are very ideal for the development of oil palm plantations. With the increasing consumption of vegetable oils worldwide, the demand for palm oil continues to rise. Moreover, palm oil has been developed into one of the types of biofuels that can help mitigate global warming (Sukarniati, 2013). With the demand increasing every year, the market prospects for palm oil are very promising. One of the main driving factors for this demand increase is the relatively cheaper price of palm oil compared to other vegetable oil competitors, such as soybean oil and canola oil. This more affordable price underlies the significant export volume of palm oil from Indonesia to other countries (Haryadi & Mandala, 2019).



Source: BPS (2024)

Figure 1. Graph of Indonesian Palm Oil Export Volume to Ten Main Destination Countries 2012-2022

From the graph, it can be seen that the volume of Indonesia's palm oil exports to the top ten destination countries shows significant variation from year to year. Two of these ten countries, namely India and China, stand out as countries with the highest demand for imported palm oil. In 2022, India became the country with the highest demand, importing as much as 4,996.3 thousand tons of palm oil from Indonesia. Agricultural cooperation between Indonesia and India has been established since the signing of the Memorandum of Understanding (MoU) on agricultural cooperation in 1992. The signing of this MoU laid the foundation for both countries to strengthen ties and cooperation in the field of agriculture, especially in the export and import of major agricultural commodities such as palm oil. With the increasing use of palm oil, reaching 7,325.1 thousand tons in 2017, India imports large amounts of palm oil to meet its needs, both for industrial purposes and household consumption. To meet these needs, India tends to import palm oil from Indonesia, making India a primary destination for Indonesia's palm oil exports. The large volume of palm oil trade between India and Indonesia makes it difficult for India to break its dependence on palm oil consumption. This is due to the relatively higher price of substitute goods and the limited supply of replacement goods compared to the palm oil supplied by Indonesia (Saut & Gultom, 2023).

Meanwhile, China is also a significant market, importing 3,836.8 thousand tons in the same year. According to data (Palm Oil Analytics, 2024) from 2019 to 2021, prominent companies such as Apical Group, Musim Mas, Wilmar, Sinar Mas, and Astra Agro Lestari are the largest exporters of palm oil from Indonesia to China. A study conducted by Huaon Information Network from 2013 to 2021 shows that 70.3% of China's palm oil usage is for food-related industries, and the remaining 29.7% is used for non-food industries. Sinar Mas companies sell premium products such as white butter, dry noodles, and instant noodles in the Chinese market. Wilmar's Chinese subsidiary, Yihai Kerry, markets the best-selling cooking oil products. Indonesian palm oil even becomes a client of Chinese state-owned enterprises such as COFCO. Palm oil is used in the non-food industry to make beauty products, oleochemical products such as glycerin, fatty acids, fatty alcohols, and biofuels. Chinese state-owned enterprises like Sinopharm and Petrochina use palm oil for the pharmaceutical industry and biofuels (Az Zahra & Jati, 2022). Pakistan is the third-largest buyer of palm oil sourced from Indonesia, with the demand for palm oil increasing to 2,805 thousand tons in 2022. Pakistan is a strategic trading partner for Indonesia outside traditional countries. Indonesia and Pakistan have

established trade cooperation through the Indonesia-Pakistan Preferential Trade Agreement (IPPTA). Both countries agreed to expand this trade cooperation by signing a Protocol Amending the Agreement, which changes several articles in the Indonesia-Pakistan Agreement (Tampubolon et al., 2022). One of the main commodities imported by Pakistan from Indonesia is palm oil. Pakistan imports palm oil from Indonesia to meet its domestic cooking oil needs.

In addition to India, China, and Pakistan, other countries are also major destinations for Indonesia's palm oil exports. These countries include the Netherlands, the United States, Spain, Egypt, Bangladesh, Italy, Singapore, and others. Indonesia, as a supplier of palm oil to export markets in various regions of the world, makes this product or commodity one of the national export mainstays. The United States is one of the primary target countries for Indonesia's palm oil exports, with an export volume of 1,789.6 thousand tons in 2022, followed by Bangladesh in second place with an export volume of 1,322.4 thousand tons in 2022. European countries such as the Netherlands, Spain, and Italy are also significant export markets for Indonesia's palm oil, with export volumes of 529.4 thousand tons, 626.5 thousand tons, and 595.7 thousand tons, respectively, in 2022. Additionally, Egypt in the Middle East is also one of the main targets for Indonesia's palm oil exports, with an export volume of 678.2 thousand tons in 2022. Although geographically close, the export volume of Indonesia's palm oil to Singapore is relatively small compared to other countries, at only 107.6 thousand tons. These figures indicate that Indonesian palm oil products have a large market share in various countries worldwide, in Asia, America, Europe, and the Middle East. This reflects Indonesia's position as a leading manager and exporter of palm oil in the global market (Salsabila et al., 2023). Behind the increase in palm oil export demand, several economic variables influence it. The analyzed variables that can affect the increase in export demand include International Prices, the Exchange Rate of the top ten destination countries against the rupiah, Economic Growth, and Inflation. (Khoirudin & Nasir, 2021). This service aims to provide knowledge to MSME actors about the importance of business development and marketing strategies.

The average international price of palm oil in the top ten target countries from 2018 to 2022, measured in US dollars per ton. Generally, the price of palm oil in these countries shows an upward trend over this period, with the most significant increase occurring in 2021 and 2022, reaching its highest level in 2022. In 2018, the highest recorded palm oil price was in India at \$3,561.5, followed by China and Pakistan at \$2,637.6 and \$1,445.7,

respectively. The lowest price was in Singapore at \$240.1, followed by Italy and Egypt at \$544.8 and \$577.7. By 2022, the highest price was again in India at \$5,320.6, followed by China and Pakistan at \$3,991.1 and \$3,129.4. The lowest price remained in Singapore at \$146, followed by Italy and Spain at \$659.2 and \$667.6. Palm oil prices are influenced by various factors, including supply, global demand, prices of other vegetable oils like rapeseed and soybean oil, and changes in the US dollar's value compared to the currencies of palm oil-importing countries. High global demand and limited supply typically drive up prices, as do increases in the prices of other vegetable oils and currency exchange rate fluctuations affecting export competitiveness. Currency exchange rates against the rupiah fluctuated from 2018 to 2022. The Indian rupee, Pakistani rupee, and Bangladeshi taka showed a declining trend against the rupiah, indicating a strengthening rupiah. Conversely, the Chinese yuan, Euro (Netherlands, Spain, Italy), US dollar, Egyptian pound, and Singapore dollar showed an upward trend against the rupiah, indicating a weakening rupiah.

Economic growth also varied among these countries. India's economy grew steadily with an average annual growth rate of 5.2%, likely increasing its palm oil demand. China's economy, despite a slight dip in 2020 due to COVID-19, rebounded with a 3.9% average annual growth. Pakistan showed economic fluctuations with an average growth rate of 2.7%. Other countries like the Netherlands (1.7%), the US (1.4%), Spain (0.7%), Egypt (5.1%), Bangladesh (5.5%), Italy (1.4%), and Singapore (3.1%) showed varying degrees of economic stability and growth, impacting their palm oil demand differently. Inflation rates also varied. India had a declining inflation trend with a 4.4% average, indicating relative economic stability. China, the Netherlands, the US, Spain, Italy, and Singapore experienced rising inflation, indicating economic growth and moderate inflationary pressure. Pakistan and Egypt faced fluctuating and high inflation rates, suggesting economic instability. Bangladesh had a declining inflation trend, indicating stable economic conditions. This study expands on previous research by including data up to 2022 and covering ten key countries (Indonesia, India, China, Pakistan, the Netherlands, the US, Spain, Egypt, Bangladesh, Italy, and Singapore), providing a more current and comprehensive analysis. It examines a broader range of variables, including international prices, exchange rates, economic growth, and inflation, offering a holistic understanding of the determinants of Indonesia's palm oil export volumes.

## METHOD

The method section at least contains the type of method used or the type of approach used, selection of the population and sample or object of research, data collection techniques, and analysis tools and software used. This study uses secondary data that includes panel data, which is a combination of time series data (2012-2022) and cross-sectional data from the ten main destination countries for Indonesia's palm oil exports. Secondary data sources are obtained from sites such as Bps.id, id.investing.com, worldbank.org, and macro trends.net. The approach used in this study is descriptive quantitative. This method analyzes data by describing the data obtained without making general conclusions. The main focus of the quantitative method is to test the hypotheses that have been previously formulated using statistical or quantitative data. The variables measured in this study consist of one dependent variable (Export Volume) and four independent variables (International Price, Exchange Rate, Economic Growth, and Inflation). The dependent variable is the variable influenced by the independent variables. This study uses panel data regression analysis with CEM, FEM, and REM approaches. Microsoft Excel is used for data processing, while Stata 17 is used for regression analysis.

$$VE_{it} = \beta_0 + \beta_1 HI_{it} + \beta_2 NT_{it} + \beta_3 PE_{it} + \beta_4 Inf_{it} + \varepsilon_{it}$$

VE : Export Volume

HI : International Price

NT : Exchange Rate

PE : Economic Growth

Inf : Inflation

$\beta_{0,1,2,3,4}$  : Coefficients

I : Ten countries (India, Tiongkok, Pakistan, Belanda, Amerika Serikat, Spanyol, Mesir, Bangladesh, Italia dan Singapura)

T : Time period (2012-2022)

$\varepsilon$  : Combined time series and cross-section error

## RESULTS AND DISCUSSION

### Determining the Regression Model

In this study, to determine the most appropriate regression estimation method, three main approaches are used: the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM), as follows:

Table 1  
Regression Model

Variable	CEM		FEM		REM	
	Coefficient	Probability	Coefficient	Probability	Coefficient	Probability
HI	0.9807067	0.000***	0.9388369	0.000***	0.9807067	0.000***
NT	-0.0720934	0.000***	0.0633614	0.676	-0.0720934	0.000***
PE	-0.1246175	0.015**	-0.146005	0.019**	-0.1246175	0.013**
Inf	-0.1197252	0.000***	-0.1391387	0.000***	-0.1197252	0.000***

Source : data processing results

Based on the table, the results of the tests for the three regression estimation models are as follows; Common Effect Model (CEM) All variables significantly affect export volume. International prices, exchange rates, and inflation are significant with a value of 0.000, while economic growth is significant with a value of 0.015. The coefficients show that an increase of 1 USD in international prices increases export volume by 0.9807067 tons, a 1-rupiah increase in the exchange rate decreases export volume by 0.0720934 tons, a 1% increase in economic growth decreases export volume by 0.1246175 tons, and a 1% increase in inflation decreases export volume by 0.1197252 tons.

Fixed Effect Model (FEM) Three variables significantly affect export volume: international prices and inflation (0.000 significance) and economic growth (0.019 significance). The exchange rate is not significant (0.676 significance). The coefficients show that an increase of 1 USD in international prices increases export volume by 0.9388369 tons, a 1% increase in economic growth decreases export volume by 0.146005 tons, and a 1% increase in inflation decreases export volume by 0.1391387 tons. Random Effect Model (REM) All variables significantly affect export volume. International prices, exchange rates, and inflation are significant with a value of 0.000, while economic growth is significant with a value of 0.013. The coefficients are similar to those in the CEM: a 1 USD increase in international prices increases export volume by 0.9807067 tons, a 1-rupiah increase in the exchange rate decreases export volume by 0.0720934 tons, a 1% increase in economic growth decreases export volume by 0.1246175 tons, and a 1% increase in inflation decreases export volume by 0.1197252 tons.

Table 2

Chow Test Results

F (10,66) = 190,81
Prob > F = 0.4897

Source : Data processing results

In the Chow test, a decision must be made based on the probability value. If the probability is greater than 0.05, the appropriate model to use is the Common Effect Model (CEM). If the probability is less than 0.05, the appropriate model to use is the Fixed Effect Model (FEM). Based on the variable testing using the Chow test, it can be seen that the probability is greater than 0.05, indicating acceptance of H0. Therefore, the most suitable model to use is the Common Effect Model (CEM).

Table 3  
Hausman Test Results

Chi2 (4) = 7,56
Prob > Chi2 = 0.1093

Source : data processing results (2024)

In the Hausman test, a decision is made based on the probability value. If the probability is greater than 0.05, the appropriate model to use is the Random Effect Model (REM), and if the probability is less than 0.05, the appropriate model to use is the Fixed Effect Model (FEM). Based on the variable testing using the Hausman test, it can be seen that the probability is greater than 0.05, or accepting Ho, so the most appropriate model to use is the Random Effect Model (REM).

Table 3  
LM (Lagrange Multiplier) Test Results

Chi2 (10) = 156.51
Prob > Chi2 = 0.0000

Source : data processing results (2024)

In the LM (Lagrange Multiplier) test there is a decision that needs to be made which depends on the amount of probability. If the probability is greater than 0.05, the right model to use is the Common Effect Model and if the probability is smaller than 0.05, the right model to use is the Random Effect Model. Based on variable testing using the LM (Lagrange Multiplier) test, it can be seen that the probability <0.05 or rejects Ho so that the most appropriate model to use is the Random Effect Model (REM). After going through the Chow, Hausman and LM test processes in panel data regression analysis, the conclusion that can be drawn is that the more optimal model to use in this study is the Random Effect Model (REM) analysis.

Table 4  
F Test (Simultaneous Significance)

Variabel	Prob > chi2	Wald chi2(4)
HI	0,000	3999.51

NT	0,000	
PE	0,002	
Inf	0,000	

Source : Data processing results

Referring to the simultaneous significance test results in the table, it can be seen that all independent variables affect the dependent variable. The probability value for the international price, exchange rate, and inflation variables is 0.000, while that for economic growth is 0.002, all of which are smaller than 0.05. Therefore, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted, indicating that all independent variables simultaneously affect the volume of palm oil exports to the ten main destination countries.

Table 5

T Test (Partial Significance)

Variabel	P >  z	Coefficient	Keterangan
HI	0,000	0,9807067	Signifikan
NT	0,000	-0,0720934	Signifikan
PE	0,002	-0,1246175	Signifikan
Inf	0,000	-0,1197252	Signifikan

Source : Data processing results

The T test (partial significance) above shows the following results:

- a. The International Price (HI) variable has a probability value of 0.000 and a coefficient of 0.987067. This indicates that International Price (HI) has a positive and significant effect on export volume. In other words, if the international price increases by 1 US\$, the export volume will increase by 0.987067 tons.
- b. The Exchange Rate (NT) variable has a probability value of 0.000 and a coefficient of -0.0720934. This indicates that the exchange rate (NT) has a negative and significant effect on export volume. That is, if the exchange rate increases by 1 Rupiah, the export volume will decrease by 0.0720934 tons.
- c. The economic growth variable (PE) has a probability value of 0.002 and a coefficient of -0.1246175. This indicates that economic growth has a negative and significant impact on export volume. In other words, an increase in economic growth by 1% will lead to a decrease in export volume by 0.1246175 tons.

- d. The inflation variable has a probability value of 0.000 and a coefficient of -0.1197252. This indicates that inflation has a negative and significant effect on export volume. That is, if inflation increases by 1%, the export volume will decrease by 0.1197252 tons.

Table 6

R<sup>2</sup> Test (Coefficient of Determination)

Obs	R-square
90	0,9410

Source : data processing results (2024)

The Coefficient of Determination R<sup>2</sup> is a measure that states how much the capacity of the model is in explaining variations or fluctuations in the dependent variable. The R<sup>2</sup> Coefficient of Determination value closest to 1 indicates that the independent variables in the model are almost completely able to provide the information needed to predict variability in the dependent variable. Based on the Random Effect Model (REM), the R<sup>2</sup> value for the coefficient of determination of the model is 0.9410, which means that all independent variables can explain the dependent variable by 94.10%, while the rest is explained by other variables outside the model used.

## Discussion

The findings indicate that International Prices have a significant positive impact on the Export Volume of Indonesian palm oil to its top ten destination countries. This result contradicts the hypotheses and rejects existing theories. This situation occurs because when the international price of palm oil rises, some importing countries maintain stable or even increased purchasing power despite the price hike. In such scenarios, demand for palm oil remains high, prompting exporting countries to increase their exports to capitalize on higher profit opportunities. Notably, countries like India, China, and Pakistan exhibit relatively stable demand for Indonesian palm oil exports. Additionally, strong dependency on palm oil in some importing countries plays a crucial role. Lack of adequate alternatives or simultaneous increases in alternative prices can sustain high demand even with rising prices. Higher international prices incentivize producers to boost production and export volumes to capture greater revenues and capitalize on profitable market opportunities. This can lead to increased output, enhanced export volumes, and potentially greater competitiveness of domestic products in international

markets. Thus, despite price increases, factors like these sustain or amplify demand for Indonesian palm oil exports.

This finding aligns with a study by (Tiara et al., 2023), which concluded that an increase in global palm oil prices significantly and positively impacts palm oil export products. Therefore, an increase in global palm oil prices will drive growth in palm oil export products. The study also states that the higher the price of palm oil exports, the higher the quality and value, resulting in increased export product value. Another study by (Ewaldo, 2015) similarly found that international prices have a significant and positive impact on the value of Indonesian palm oil exports.

The findings suggest that Exchange Rates have a significant negative impact on Indonesian palm oil export volumes to its top ten destination countries. This finding supports the formulated hypotheses and aligns with existing theories. According to Dornbusch and Fischer (1987), an appreciation or strengthening of the Rupiah exchange rate against the currencies of major importing countries makes Indonesian palm oil more expensive for foreign buyers. Consequently, this can reduce demand for Indonesian palm oil exports as foreign buyers need to spend more in their currencies to purchase Indonesian palm oil. Studies by (Hamzah & Santoso, 2020) and (Purnamasari et al., 2023) similarly find that exchange rate fluctuations negatively affect palm oil exports. These findings underscore the sensitivity of export volumes to currency movements and their implications for international competitiveness.

The findings indicate that Economic Growth has a significant negative impact on Indonesian palm oil export volumes to its top ten destination countries. This finding contradicts the formulated hypotheses and rejects existing theories. This could be attributed to higher economic growth in importing countries leading to increased domestic consumption due to higher purchasing power. This focus on domestic consumption and investment may reduce the incentive to seek export opportunities in international markets. Additionally, rapidly growing economies may diversify their economies and reduce dependence on imported palm oil, opting for alternatives or domestic production, thereby reducing imports from Indonesia. Furthermore, higher economic growth can lead to domestic inflation, affecting the price competitiveness of Indonesian palm oil in foreign markets. Protectionist policies in rapidly growing economies could further diminish Indonesia's palm oil competitiveness through higher import tariffs or subsidies for local vegetable oil producers. These findings are consistent with studies by (Nurjanah & Bhakti, 2020), which highlight the complex interactions

between economic growth and palm oil exports, indicating potential shifts in consumption patterns and economic policies affecting export volumes.

The findings indicate that Inflation has a significant negative impact on Indonesian palm oil export volumes to its top ten destination countries. This finding supports the formulated hypotheses and aligns with existing theories. According to economic theory (McEachern, 2000), inflation tends to depreciate the domestic currency, making imported products more expensive for countries experiencing currency depreciation. This reduces the competitiveness of Indonesian palm oil in global markets as the product becomes pricier for foreign buyers. Studies by (Ramadhana et al., 2023) and (Purnamasari et al., 2023) corroborate these findings, demonstrating the adverse impact of inflation on palm oil exports. They highlight that increases in inflation typically lead to decreases in palm oil export volumes, reflecting the sensitivity of export volumes to economic conditions and price competitiveness in global markets.

## CONCLUSION

Based on the findings obtained, important conclusions can be drawn regarding the influence of economic variables on the export volume of Indonesian palm oil to its top ten destination countries:

- a. International palm oil prices have a significant and positive impact on the export volume of Indonesian palm oil. An increase of \$1 in international prices leads to a 0.987067% increase in export volume. This reveals that higher global palm oil prices stimulate the export of palm oil products, supported by stable purchasing power and the dependency of importing countries on palm oil. Exchange rates significantly affect
- b. Indonesian palm oil export volumes negatively. A 1 rupiah increase in the exchange rate decreases export volume by 0.0720934%. This aligns with theories suggesting that an appreciation of the exchange rate makes Indonesian palm oil more expensive for foreign buyers, thereby reducing export demand.
- c. Economic growth in destination countries has a negative and significant impact on Indonesian palm oil export volumes. A 1% increase in economic growth reduces export volume by 0.1246175%. This finding indicates that increased economic growth in importing countries often leads to higher domestic consumption and economic diversification, reducing dependence on palm oil imports.
- d. Inflation negatively and significantly affects Indonesian palm oil export volumes. A 1% increase in inflation decreases export volume by 0.1197252%. This is consistent

with theories suggesting that inflation tends to depreciate the domestic currency, making imported products more expensive for foreign countries and thereby reducing demand for Indonesian palm oil exports.

- e. Overall, this study model indicates that the independent variables (international prices, exchange rate, economic growth, and inflation) collectively explain 94.10% of the variation in Indonesian palm oil export volume. This indicates that these economic factors exert a strong influence on the performance of Indonesian palm oil exports.

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