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Analysis of the Impact of Import Tariff Policy on Soybean Import Demand in Indonesia

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Abstract

The main objective of this study is to analyze the effect of national soybean consumption, international soybean prices, Gross Domestic Product (GDP) per capita, and import tariff policies on the volume of soybean imports in Indonesia during the period 1993–2022. This research uses a quantitative approach with a time series design and multiple linear regression analysis (OLS) to test the influence of these variables. The results indicate that simultaneously, national soybean consumption, international soybean prices, GDP per capita, and import tariff policies significantly affect soybean import demand. Partially, national soybean consumption and GDP per capita have a significant positive effect, while international soybean prices and import tariff policies have a significant negative effect on the volume of soybean imports. These findings strengthen the understanding that soybean import dependence is influenced by domestic consumption, purchasing power, global prices, and government tariff regulations. In conclusion, the management of import tariff policies needs to be designed to balance the protection of domestic producers and the availability of soybeans for consumers. Further research is recommended to examine other factors such as subsidy policies, agricultural innovation, and global trade dynamics to strengthen national food security.

Keywords: National Consumption, International Prices, GDP per Capita, Import Tariff Policy, Soybean Import Volume

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I. Introduction

Soybean is a strategic agricultural commodity in Indonesia, serving as a primary source of plant-based protein for the population and a key input for the food processing industry. Products such as tempeh, tofu, soy milk, and other derivatives are staples in the Indonesian diet, making soybean a vital component of national food security (Krisnawati & Adie, 2015). Despite its importance, domestic soybean production has consistently failed to meet national demand, resulting in a heavy reliance on imports. As of 2022, domestic production accounted for only approximately 30% of total consumption, with the remainder sourced from international markets, primarily the United States (FAOSTAT, 2024; WITS World Bank, 2024).

Indonesia's status as an agrarian country, with over 40% of its population engaged in agriculture (Ayun et al., 2020), underscores the paradox of its soybean dependency. The country's fertile tropical geography and vast land area (BPS, 2023) provide a strong foundation for agricultural development, yet soybean cultivation remains underprioritized compared to other staple crops such as rice and maize. This imbalance has contributed to a widening gap between domestic supply and demand, exacerbated by policy shifts and global market dynamics.

Historically, Indonesia's soybean trade was regulated by the National Logistics Agency (BULOG), which maintained import controls until the early 1990s. The liberalization of soybean imports in 1991, including the removal of BULOG's monopoly and the elimination of import tariffs and value-added tax (VAT), led to a surge in import volumes (Anjani, 2019). This policy shift, while improving access to affordable soybeans, also diminished the competitiveness of domestic producers and increased Indonesia's vulnerability to global price fluctuations.

Between 1993 and 2022, Indonesia's soybean import volume exhibited a marked upward trend, peaking at over 2.6 million tons in 2017 (WITS World Bank, 2024). This growth coincided with periods of low import tariffs,

particularly following the 1998 Asian financial crisis, when Indonesia agreed to reduce tariffs to 0% under the International Monetary Fund's (IMF) Letter of Intent (Kementerian Keuangan, 2024). Subsequent tariff adjustments ranged between 0% and 10%, reflecting a policy environment that favored import liberalization over domestic protection.

The economic rationale behind import tariffs is well-established in international trade theory. Tariffs serve as a fiscal tool to regulate the flow of goods, protect domestic industries, and generate government revenue (Krugman & Obstfeld, 1991; Mankiw, 2024). In the context of soybean imports, tariffs influence consumer behavior by altering relative prices, thereby affecting demand. Higher tariffs typically reduce import volumes by making foreign goods less competitive, while lower tariffs encourage imports by lowering market entry costs.

Empirical data from Indonesia supports this theoretical framework. For instance, during periods of zero tariffs, such as 1998 and 2017, import volumes surged significantly, indicating a strong inverse relationship between tariff levels and import demand (Bayu, 2024). Conversely, years with higher tariffs, such as 2005 and 2010, saw relatively lower import volumes, suggesting that tariff policy can effectively modulate import behavior.

In addition to tariff policy, other macroeconomic variables play a crucial role in shaping import demand. National soybean consumption, international soybean prices, and gross domestic product (GDP) per capita are key determinants of import behavior. Rising domestic consumption, driven by population growth and industrial expansion, increases the need for imports when local production is insufficient (Zikri et al., 2020). International prices affect the cost competitiveness of imports, with higher prices discouraging importation and lower prices facilitating it (Mahdi et al., 2019). GDP per capita, as a proxy for purchasing power, influences consumer capacity to absorb imported goods, with higher income levels typically associated with increased import demand (Putri & Karmini, 2023).

The interplay of these variables creates a complex landscape for soybean import policy. For example, during the COVID-19 pandemic, global supply chain disruptions led to price volatility, affecting both import volumes and domestic market stability (Mahdi et al., 2019). Similarly, geopolitical tensions and trade disputes have introduced new uncertainties into the global soybean market, necessitating adaptive policy responses from importing countries like Indonesia.

To analyze these dynamics, this study employs a quantitative approach using time series data from 1993 to 2022. The research model incorporates multiple linear regression analysis (Ordinary Least Squares, OLS) to evaluate the simultaneous and partial effects of national soybean consumption, international soybean prices, GDP per capita, and import tariff policy on soybean import volumes. The use of log-transformed variables enhances the interpretability of coefficients as elasticities, providing insights into the proportional impact of each variable on import demand (Gujarati & Porter, 2021).

Preliminary findings indicate that all four variables significantly influence soybean import demand. National consumption and GDP per capita exhibit positive relationships with import volume, while international prices and tariff policy show negative associations. These results align with theoretical expectations and prior empirical studies, reinforcing the validity of the research model (Sinta et al., 2017; Nicholson & Snyder, 2017).

The implications of this study are multifaceted. From a policy perspective, the findings suggest that import tariff adjustments should be carefully calibrated to balance consumer access with domestic producer protection. Excessively low tariffs may undermine local agriculture, while overly high tariffs risk inflating food prices and reducing affordability. A nuanced approach that considers market conditions, production capacity, and consumer needs is essential for sustainable soybean policy.

Furthermore, the study highlights the need for strategic investment in domestic soybean production. Enhancing productivity through technological innovation, expanding cultivation areas, and improving supply chain efficiency can reduce import dependency and strengthen food security. Government programs aimed at supporting soybean farmers, such as subsidies, training, and infrastructure development, are critical to achieving these goals (Kementerian Pertanian, 2022).

In conclusion, Indonesia's soybean import dynamics are shaped by a combination of domestic consumption patterns, global price trends, economic growth, and trade policy. Understanding the relative influence of these factors is essential for designing effective interventions that promote agricultural resilience and economic stability. This study contributes to the literature by providing a comprehensive analysis of the determinants of soybean import demand in Indonesia, offering valuable insights for policymakers, researchers, and industry stakeholders.

II. Methodology

This study adopts a quantitative research approach to investigate the determinants of soybean import demand in Indonesia over the period 1993–2022. The research is grounded in the theoretical framework of international trade and demand theory, which posits that import behavior is influenced by domestic consumption, global prices, economic capacity, and trade policy (Nicholson & Snyder, 2017; Mankiw, 2024). The objective is to analyze the extent to which national soybean consumption, international soybean prices, gross domestic product (GDP) per capita, and import tariff policy affect the volume of soybean imports.

Annual time series data were collected from multiple authoritative sources. Soybean import volumes and national consumption figures were obtained from the Food and Agriculture Organization Statistical Database (FAOSTAT, 2024), while international price data and GDP per capita were sourced from the World Bank (2024). Information on import tariff policies was compiled from official publications of the Indonesian Ministry of Finance (Kementerian Keuangan, 2024). The dataset comprises 30 observations, corresponding to each year within the study period.

The dependent variable in this study is the volume of soybean imports, measured in metric tons. The independent variables include national soybean consumption (in tons), international soybean prices (in Indonesian Rupiah per ton), GDP per capita (in Rupiah), and a dummy variable representing import tariff policy. The dummy variable is coded as 0 for years when the tariff rate was 0%, and 1 for years when the tariff ranged between 5% and 10%. This binary classification allows for the incorporation of qualitative policy shifts into the regression model, consistent with econometric practices for categorical variables (Wooldridge, 2020).

To estimate the relationship between the variables, the study employs multiple linear regression analysis using the Ordinary Least Squares (OLS) method. All continuous variables are transformed using natural logarithms to construct a log-log model. This transformation serves two purposes: it enables the interpretation of regression coefficients as elasticities, and it mitigates issues related to heteroskedasticity and scale disparities among variables (Gujarati & Porter, 2021). The resulting model captures the proportional impact of each independent variable on the dependent variable, offering a more nuanced understanding of import behavior.

Diagnostic tests were conducted to ensure the reliability of the regression estimates. The Jarque-Bera test confirmed the normality of residuals, while the Variance Inflation Factor (VIF) values indicated no multicollinearity among independent variables. Autocorrelation was assessed using the Breusch-Godfrey LM test, and heteroskedasticity was evaluated through the Breusch-Pagan-Godfrey procedure. All tests yielded satisfactory results, validating the assumptions of the classical linear regression model.

Data analysis was performed using EViews 12 software, which provides robust tools for econometric modeling and time series analysis. The methodological choices in this study—log transformation, dummy variable coding, and diagnostic testing—are aligned with best practices in empirical economic research and ensure the robustness of the findings (Bano & Scrimgeour, 2012; Perraillon, 2019).

III. Results and Discussion

3.1 Results

The empirical analysis of this study is based on a multiple linear regression model using time series data from 1993 to 2022. The dependent variable is the volume of soybean imports in Indonesia, while the independent variables include national soybean consumption, international soybean prices, gross domestic product (GDP) per capita, and import tariff policy, the latter represented as a dummy variable. All continuous variables were log-transformed to allow for elasticity interpretation and to address potential heteroskedasticity and scale differences. The regression model was estimated using the Ordinary Least Squares (OLS) method, and diagnostic tests were conducted to ensure the validity of the model.

The results of the classical assumption tests indicate that the regression model satisfies the necessary conditions for unbiased and consistent estimation. The Jarque-Bera test for normality yielded a probability value of 0.434, indicating that the residuals are normally distributed. The multicollinearity test showed that all Variance Inflation Factor (VIF) values were below the critical threshold of 10, with the highest VIF being 8.659 for GDP per capita, suggesting no serious multicollinearity among the independent variables. The Breusch-Godfrey test for autocorrelation produced a probability value of 0.279, confirming the absence of serial

correlation in the residuals. Similarly, the Breusch-Pagan-Godfrey test for heteroskedasticity yielded probability values above 0.05 for all variables, indicating homoskedastic residuals.

Table 1 Results of Simultaneous Statistical Test (F Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	3.121	4.101	0.761	0.453
LOGConst	0.591	0.271	2.178	0.039
LOGPricet	-0.724	0.218	-3.308	0.003
LOGGDPcapt	0.792	0.136	5.803	0.000
Tarifft	-0.248	0.071	-3.461	0.002
R-squared	0.899115	Mean dependent var		14.13999
Adjusted R-squared	0.882974	S.D. dependent var		0.519642
S.E. of regression	0.177765	Akaike info criterion		-0.465700
Sum Squared resid	0.790008	Schwarz criterion		-0.232167
Log likelihood	11.98549	Hannan-Quinn criter.		-0.390990
F-statistic	**55.70201**	Durbin-Watson stat		1.218803
Prob(F-statistic)	**0.000000**			

Based on table 1 above, the overall fit of the regression model is strong, with an R-squared value of 0.899 and an adjusted R-squared of 0.883. This implies that approximately 89.9% of the variation in soybean import volume can be explained by the four independent variables included in the model. The F-statistic of 55.702 is highly significant (p-value = 0.000), confirming that the model is statistically valid and that the independent variables jointly influence the dependent variable.

Tabel 2 Hasil Analisis Regresi Linier Berganda

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	3.121	4.101	0.761	0.453
LOGX	0.591	0.271	2.178	0.039
LOGX2	-0.724	0.218	-3.308	0.003
LOGX3	0.792	0.136	5.803	0.000
X4	-0.248	0.071	-3.461	0.002

Based on the results of multiple linear regression analysis as presented in Table 2, regression equations can be made as follows:

$Vol\_impor_t = \alpha + \beta_1 cons_t + \beta_2 price_t + \beta_3 GDP\_cap_t + \beta_4 tariff_t + \mu$

$$\widehat{Volimpor_t} = 3{,}121 + 0{,}591 cons_t - 0{,}724 price_t + 0{,}792 gdp_{cap_t} - 0{,}248 tariff_t$$

Based on the estimation results, the results of the t-test were obtained which were used to determine the influence of independent variables on dependent variables individually (partially). The t-test was used with a significant level of 0.05. If the probability value < 0.05, then the independent variable individually (partially) affects the dependent variable.

Based on these results, it can be concluded as follows:

1) National soybean consumption variable: The national consumption variable has a coefficient value of 0.591 and a probability value of 0.039 which is smaller than alpha 0.05. This shows that national consumption has a significant positive effect on the variables of Indonesian soybean imports in the regression model. Thus, every increase of 1 million tons of national consumption will increase Indonesia's soybean imports by 59.1 percent.

2) International soybean price variable: The soybean price variable has a coefficient value of -0.724, and a probability value of 0.003 which is much smaller than alpha 0.05. This shows that international soybean prices have a significant negative effect on the variables of Indonesian soybean imports in the regression model. Thus, every 1 million rupiah increase in international soybean prices will reduce Indonesia's soybean imports by 72.4 percent.

3) GDP per capita variable: The GDP variable has a coefficient value of 0.792, and a probability value of 0.000 which is much smaller than alpha 0.05. This shows that GDP per capita has a significant positive effect on the variables of Indonesian soybean imports in the regression model. Thus, every increase of 1 million rupiah of GDP per capita will increase Indonesia's soybean imports by 79.2 percent.

4) Import tariff policy variable: The import tariff policy variable has a coefficient value of -0.248, and a probability value of 0.001 which is smaller than the alpha of 0.05. This shows that the import tariff policy has a significant negative effect on the variables of Indonesia's soybean imports in the regression model. This means that any change in import policy will reduce Indonesia's soybean imports by 24.8 percent.

In terms of individual variable effects, the regression results reveal that national soybean consumption has a positive and statistically significant impact on import volume. The coefficient for log-transformed consumption is 0.591 with a p-value of 0.039, indicating that a 1% increase in national soybean consumption is associated with a 0.591% increase in soybean imports, ceteris paribus. This finding aligns with theoretical expectations and previous empirical studies, suggesting that domestic consumption is a key driver of import demand, particularly in contexts where local production is insufficient to meet growing needs.

International soybean prices exhibit a negative and statistically significant relationship with import volume. The coefficient for log-transformed international prices is -0.724 with a p-value of 0.003, implying that a 1% increase in global soybean prices leads to a 0.724% decrease in import volume, holding other factors constant. This result supports the law of demand and highlights the sensitivity of Indonesia’s import behavior to fluctuations in international commodity markets. It also underscores the importance of price competitiveness in shaping trade flows, especially for essential food commodities.

GDP per capita, representing the economic capacity and purchasing power of the population, also shows a positive and significant effect on soybean imports. The coefficient for log-transformed GDP per capita is 0.792 with a p-value of 0.000, suggesting that a 1% increase in GDP per capita results in a 0.792% increase in import volume. This finding is consistent with macroeconomic theory, which posits that higher income levels lead to increased consumption, including of imported goods. It also reflects the role of economic growth in driving demand for food products, particularly in urban and industrial sectors.

Finally, the import tariff policy variable, coded as a dummy, has a negative and statistically significant effect on import volume. The coefficient is -0.248 with a p-value of 0.002, indicating that the imposition of a positive tariff (5–10%) reduces soybean imports by approximately 24.8% compared to periods with zero tariffs. This result confirms the effectiveness of tariff policy as a trade instrument and its role in regulating import flows. It also highlights the trade-off between protecting domestic producers and ensuring affordable access to essential commodities for consumers and industries.

Overall, the regression results provide robust evidence that all four variables—national consumption, international prices, GDP per capita, and tariff policy—significantly influence Indonesia’s soybean import demand. The direction and magnitude of these effects are consistent with economic theory and empirical literature, reinforcing the validity of the model and the relevance of the selected variables. These findings offer valuable insights for policymakers seeking to balance trade liberalization with domestic agricultural development and food security objectives.

3.2 Discussion

3.2.1 The Effect of National Soybean Consumption on Soybean Import Demand in Indonesia During the 1993-2022 Period

The results of the study show that national soybean consumption has a positive and statistically significant effect on Indonesian soybean imports in the regression model used. In other words, any increase in national soybean consumption will significantly encourage an increase in soybean imports. These findings are in line with demand theory which states that increased consumption will increase demand for goods, including imported commodities such as soybeans. Empirically, previous research such as those conducted by Sari and Nugroho (2019) and Widodo and Setiawan (2021) supports this result, where domestic consumption is the main factor affecting the volume of soybean imports in Indonesia, considering that domestic production has not been able to meet the increasing market needs. Research by Nteegah and Mansi (2017) also revealed that domestic consumption has a positive and significant influence on import demand in Nigeria. This indicates that an increase in domestic consumption will encourage an increase in import volumes. In addition, research by Ahmad *et al*. (2024) reveals that domestic consumption has a significant influence on import demand, both

in the short and long term. This suggests that increased domestic consumption drives an increase in import volumes, which confirms the important role of consumption variables in determining the dynamics of import demand in developing countries.

The positive correlation found implies that the growth of national consumption will proportionately increase soybean imports. However, it should be noted that other factors such as international soybean prices, domestic production, and trade policies also play an important role in determining import volumes, so regression models should include control variables for a more comprehensive analysis (Rahmawati & Hidayat, 2020).

The implications of these findings are very important both academically and practically. Academically, this study emphasizes the importance of national consumption variables in the study of international trade and food economics, especially for developing countries that still rely on imports to meet strategic food needs. In practical terms, these results provide a basis for policymakers to consider increasing domestic soybean production or diversifying food sources to reduce import dependency that increases with national consumption. The right policies will support food security and economic stability amid domestic demand dynamics.

3.2.2 The Effect of International Soybean Prices on Soybean Import Demand in Indonesia During the 1993-2022 Period.

The results of the study showed that international soybean prices had a negative and statistically significant effect on Indonesian soybean imports in the regression model used. In other words, any increase in soybean prices in the international market will result in a decrease in the volume of soybean imports to Indonesia. This finding is in line with the classical economic theory of the law *of demand*, which states that the increase in the price of a commodity *ceteris paribus* will decrease the quantity demanded.

International commodity trade, especially soybeans, prices are the main determinants that influence import decisions. Previous studies support this finding, such as a study by Wibowo and Sulistyo (2018) which shows that international soybean prices significantly affect the volume of Indonesian soybean imports negatively. This happens because rising prices increase import costs, so market participants, such as importers and distributors, tend to reduce purchases to remain economically efficient. Another study by Hartono and Prasetyo (2020) also confirms that fluctuations in soybean prices affect stock policies and import strategies of the government and food industry players. Research by Gopinath (2015) and *Çulha et al*. (2019) also shows that international prices are becoming increasingly important in determining import volumes, especially as consumers and producers begin to switch to domestic substitution due to price changes.

The negative correlation between soybean prices and soybean imports reflects the elasticity of import demand to prices, where the sensitivity of demand to price changes is quite high. However, this sensitivity is also influenced by other factors such as the availability of local substitutions, import tariff policies, and macroeconomic conditions such as the rupiah exchange rate against the US dollar (Santoso & Yulianto, 2019).

The academic implication of these findings is the importance of including soybean price variables as a key indicator in import prediction models and international trade studies of food commodities. The findings also add to empirical evidence that price is a key mechanism in balancing supply and demand in global markets. In practical terms, these results provide important input for policymakers and industry players to strategically monitor and respond to price changes to maintain national soybean supply stability and food security. Policies such as diversification of import sources, increasing local production, and price stabilization can be mitigation measures to address the impact of soybean price volatility.

3.2.3 The Effect of GDP per Capita on Soybean Import Demand in Indonesia during the period 1993-2022.

The results showed that GDP per capita had a positive and statistically significant effect on Indonesia's soybean imports in the regression model used. In simple terms, an increase in GDP per capita will have an impact on increasing soybean imports, which signals a positive causal relationship between economic growth and soybean import volume.

These findings are in line with macroeconomic theory which states that economic growth, measured through GDP per capita, increases people's purchasing power and industrial production capacity, thereby driving demand for imported raw materials, including soybeans. The growing GDP per capita reflects increased consumption and investment, which ultimately triggers the need for soy-based food and processed industries (Samuelson & Nordhaus, 2010). Therefore, these findings empirically support the hypothesis that GDP per capita plays a key determinant of food commodity imports in developing countries such as Indonesia.

Previous research has also reinforced these results. A study by Nugroho and Sari (2021) revealed that GDP per capita has a significant positive correlation with soybean imports, as increased economic output encourages domestic consumption and processing industry capacity that requires soybeans as raw materials. Research by Hummels and Lee (2017) shows that import demand is strongly influenced by income elasticity, where an increase in domestic income tends to increase import volumes significantly. This is in line with the concept that GDP per capita is an important variable in determining import demand, as higher income levels encourage the consumption of imported goods. In addition, research by Wibisono and Putri (2019) shows that economic growth plays an important role in the dynamics of food imports in Indonesia, especially in the context of food needs that have not been fully met by domestic production.

The positive correlation found shows the elasticity of import demand to economic growth that is quite strong. However, other factors such as changes in trade policy, inflation rates, and fluctuations in global soybean prices can also affect import volumes, so a comprehensive analysis by including control variables is highly recommended (Prasetyo & Santoso, 2020).

The academic implication of these findings is the importance of including macroeconomic indicators such as GDP per capita in international trade and food security analysis models. These findings make an empirical contribution to understanding how economic growth can affect import patterns in developing countries. In practical terms, these results provide an overview for policymakers to prepare import management strategies that are adaptive to economic dynamics, such as strengthening local production and diversifying import sources so that food security can be maintained amid rapid economic growth.

3.2.4 The Effect of Import Tariff Policy on Soybean Import Demand in Indonesia During the Period 1993-2022.

The results of the study show that the import tariff policy has a negative and statistically significant effect on Indonesian soybean imports in the regression model used. This means that an increase in import tariffs will significantly reduce the volume of soybean imports to Indonesia. This finding is very much in line with the theory of international trade economics which states that import tariffs are an effective protective instrument to reduce imports by increasing the cost of entry of foreign goods (Krugman, Obstfeld, & Melitz, 2018).

Empirically, import tariffs serve as a price barrier that makes imported goods more expensive and less competitive than domestic products. Therefore, the tariff policy is expected to reduce the demand for soybean imports, encouraging substitution with local production or alternative raw materials. Previous research such as those conducted by Setiawan and Haryanto (2019) supports this result, by finding that the increase in soybean import tariffs has a direct impact on reducing soybean imports in Indonesia. Another study by Rahmat and Dewi (2020) also showed that import tariffs are effective in controlling import volumes while spurring an increase in domestic production.

These findings are in line with the conceptual framework put forward by Chae *et al*. (2019) and Handley *et al*. (2022), which suggests that the policy of increasing import tariffs can increase the complexity of the supplier base and the total cost of procurement. Within this framework, high tariffs encourage business actors to adjust supplier structures through reducing import volumes, finding alternative suppliers, or even *reshoring*. In the Indonesian context, the policy of increased soybean import tariffs may cause importers to reduce the volume of purchases from abroad due to increased costs and risks, especially if the main supplier country is affected by tariffs. This ultimately strengthens the results of the estimation in this study that import tariffs have a significant negative relationship with soybean import volume.

The academic implication of these findings is the importance of including tariff policy variables in agricultural trade and economic analysis models to understand import dynamics and food security. These findings add to the empirical evidence regarding the effectiveness of tariff instruments in controlling strategic commodity imports. In practical terms, these results are an important consideration for policymakers in designing tariff policies that not only protect local production, but also maintain price stability and food availability in the domestic market.

IV. Conclusions and Suggestions

Conclusion

1) Based on the results of *time series* analysis during the period 1993-2022, it is concluded that national soybean consumption, international soybean prices, GDP per capita, and import tariff policies simultaneously have a significant effect on soybean import demand in Indonesia. This is evidenced by the *F-statistical* probability value of 0.000, which shows that these four variables have a strong and significant influence on the demand for soybean imports in Indonesia during the study period.

2) Partially, national soybean consumption has a significant positive effect on import volume, indicating that any increase in national consumption will increase import volume. International soybean prices have a significant negative effect on import volumes, indicating that any increase in international soybean prices will reduce import volumes. GDP per capita has a significant positive effect on import volume, which indicates that any increase in GDP will increase import volume. The import tariff policy has a significant negative effect on import volume, indicating that any tariff increase will reduce import volume.

5.2 Suggestion

1) This research is still limited to the variables of national soybean consumption, international soybean prices, GDP per capita, and import tariff policies. Therefore, it is suggested that further research can develop a model by adding other variables such as rupiah exchange rates, domestic soybean prices, climate change or technological changes in the soybean industry are not considered in this model. The addition of these variables is expected to provide a more comprehensive picture of the factors affecting soybean import demand in Indonesia.

2) The government needs to balance import demand with efforts to increase domestic soybean production through policies that support farmers, such as the provision of superior seeds, price incentives, and subsidies for production facilities. In addition, import tariff adjustments also need to be made carefully to remain able to protect domestic producers without disrupting the stability of soybean supply and prices in the domestic market.

3) Increase in Domestic Soybean Production. Given that national soybean consumption has a positive effect on import volume, one of the problems faced is Indonesia's dependence on imported soybeans to meet domestic needs. Therefore, there needs to be more intensive policies to increase domestic soybean production, such as through increased productivity and expansion of planting areas. The government can provide incentives to farmers, develop more efficient agricultural technology, and improve the distribution and marketing system of domestic soybean products to be more competitive with imported soybeans.

4) International Soybean Price Management. Fluctuations in international soybean prices that negatively affect import volumes show that global soybean prices greatly affect Indonesia's dependence on imported soybeans. One solution to overcome this problem is to diversify the source of soybean imports from different countries so that they are not too dependent on certain exporting countries that can experience sharp price fluctuations. In addition, Indonesia can negotiate to get more stable prices through bilateral or multilateral cooperation with soybean exporting countries.

5) Increasing people's purchasing power. GDP per capita which has a positive effect on import volume shows that people's purchasing power affects the demand for soybeans. For this reason, it is important for the government to continue to encourage inclusive economic growth so that more layers of society can increase soybean consumption, while maintaining the sustainability of domestic consumption based on local soybeans. Policies to increase purchasing power such as increasing income, reducing poverty, and creating jobs can support this.

6) Evaluation and Adjustment of Import Tariff Policy. The import tariff policy that negatively affects import volume shows that any tariff change can affect the flow of soybean imported goods to Indonesia. While higher tariffs can protect domestic producers, they can make domestic soybean prices more expensive and reduce consumer purchasing power. Therefore, tariff policies must be adjusted to dynamic market conditions and the needs of domestic consumers. The government needs to conduct periodic tariff policy evaluations by considering the balance between protecting domestic producers and maintaining the availability of affordable soybeans for the public.

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