

## **The Impact of Oil Prices and Oil Consumption Patterns on Oil Procurement Choices: A Case Study on Crude Palm Oil at Eagle High Plantations Tbk**

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### **Abstract**

*The primary objective of this research is to examine the impact of oil prices and consumption patterns on the decision-making process of buying oil within the Crude Palm Oil sector. Two hundred respondents, the firm's consumers, were included in the data collection process. The factors that were observed in this study were the price of oil (X1), the consumption behavior related to oil use (X2), and the purchasing choice of oil (Y). The analysis included many statistical tests, including validity testing, reliability testing, multiple regression analysis, simultaneous F testing, and partial t-testing. The study's findings indicate a statistically significant and positive relationship between oil prices and the decision-making process about the purchase of oil. The escalation in oil prices is likely to enhance the potential for consumers to get oil from the Crude Palm Oil sector. Furthermore, the use of oil exhibits a noteworthy and favorable impact on the inclination to get oil. In order to enhance product appeal and customer happiness, companies need to prioritize implementing an appropriate pricing strategy and have a comprehensive understanding of consumer behavior patterns and preferences.*

**Keywords:** Oil Prices, Oil Use Behavior, Oil Purchasing Decisions, Crude Palm Oil.

### **INTRODUCTION**

Oil is crucial in several aspects of human existence, including food production, industrial processes, and energy generation. The impact of oil price fluctuations on consumer spending choices within the global economy is significant. According to Wang et al., (2022), a negative correlation exists between oil prices and the demand for oil products, wherein an upward shift in prices leads to a decline in demand, while a downward shift in prices stimulates increased purchases. Furthermore, the use of oil has a significant impact on consumer inclinations toward certain oil-based commodities. According to Alam (2020) individuals prioritizing environmental concerns are inclined to choose items with a reduced carbon footprint, while alternative consumers may emphasize product quality and efficiency more. Comprehending pricing changes and consumer behavior regarding oil consumption is crucial for industry stakeholders and producers to develop efficacious marketing strategies that align with customer preferences.

This study aims to examine the impact of oil prices and customer oil consumption patterns on the decision-making process of buying oil. The primary objective of this study is to evaluate the potential impact of oil prices on consumer buying behavior. The

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volatility of oil prices may significantly influence consumer buying behavior, as seen by the inverse relationship between oil price increases and the corresponding drop in demand for oil goods. Conversely, when oil prices decline, there is a subsequent surge in consumer demand for these items (Su et al., 2023). This problem arises due to the escalation of oil costs, which prompts customers to seek other options that provide more cost-effectiveness or enhanced energy efficiency. Furthermore, the decrease in oil prices might serve as a motivating factor for customers to increase their use of oil or purchase higher-priced oil derivatives. This study aims to enhance comprehension of the impact of oil price variations on customer behavior while making purchase choices related to oil items (Babin & Harris, 2023).

Moreover, the present study will examine the oil consumption patterns shown by customers and the subsequent impact on their product choices within the oil industry. The fundamental premise posits that the consumption patterns of individuals using oil will exert an influence on their choices in the realm of buying. If customers prefer ecologically sustainable or higher-quality oils, their oil product choices and purchasing decisions will likely align with their consumption patterns. This finding suggests that customer choices are shaped not just by economic considerations but also by their environmental values and the perceived quality of the items they prioritize (Vieira, 2020). By comprehending consumer patterns in oil use, corporations may adapt their marketing tactics and provide goods that align better with customer demands and preferences while promoting sustainability and fostering environmental consciousness initiatives.

A previous study in Indonesia explored the impact of oil prices and oil consumption patterns on the purchase choices of crude palm oil (CPO). One research undertaken by Mustafa (2022) examines the correlation between changes in crude palm oil (CPO) prices in the global market and fluctuations in local cooking oil prices in Indonesia. The findings of this research suggest that changes in the price of Crude Palm Oil (CPO) in the global market have a substantial impact on the oscillations in cooking oil prices within the local market of Indonesia. Furthermore, a study undertaken by Eximbank, (2018) examines the impact of crude palm oil (CPO) prices on the worldwide market and its influence on cooking oil pricing in Indonesia's local market. This research further affirms that changes in the price of crude palm oil (CPO) have a discernible influence on cooking oil costs within the domestic market. The study undertaken by Tjahjaprijadi (2013) included a descriptive analysis of the supply chain of palm oil commodities using the Food Supply Chain Network (FSCN) architecture. This study offers a complete analysis of the palm oil supply chain, including its many upstream and downstream stages. It sheds light on the significant influence exerted by the supply chain on the pricing dynamics and buying choices about crude palm oil.

This current research may be a reference point to facilitate a more comprehensive comprehension of this association. One notable study by Mustafa (2022) examines the impact of CPO prices in the world market on the pricing of cooking oil in the local market. Furthermore, Sundoro (2022) has performed research investigating the correlation between the pricing of Crude Palm Oil (CPO), currency rates, and the Jakarta Composite Index (IHSG) within the context of the Palm Oil Free label period. In a recent study by Mahaputra & Saputra (2022), the primary objective was to assess individuals' buying power, brand image, shortage of cooking oil, and the escalation of prices for essential items. Numerous studies have examined the impact of oil pricing and consumption behavior on oil purchase choices, particularly on crude palm oil in Indonesia. The present study, done in the year 2023, demonstrates that when faced with a shortage, customers are compelled to purchase bottled cooking oil at costs that significantly exceed the acceptable price range. The study conducted by Purbawa et al.,(2023) offers valuable insights into the impact of scarcity on consumer behavior in Indonesia. The present study, carried out in the year 2020, aimed to examine the impact of oil price changes on the inflation rate in Indonesia. The present research used the

nonlinear autoregressive distributed lag (NARDL) methodology to examine the relationship between oil prices and the inflation rate, revealing asymmetrical patterns. This finding raises doubts about the inflation target strategy's efficacy, as Goh et al., (2022) suggested.

This study has significant implications for stakeholders in the oil sector, including oil-producing entities such as Eagle High Plantations Tbk. By comprehending the impact of oil prices and consumption patterns on customer buying choices, organizations may develop marketing tactics that are more efficient and centered on consumer demands and preferences. Furthermore, this study is anticipated to provide a valuable contribution to advancing knowledge in marketing and economics while enhancing comprehension of consumer purchasing patterns in oil goods.

## LITERATURE REVIEW

Palm oil, or Crude Palm Oil (CPO), is a vegetable oil that plays a significant role in the food, cosmetic, and bio-fuel sectors. The commodities market for crude palm oil (CPO) has a high dynamism due to its significant demand. Many variables, such as price fluctuations and consumption behavior patterns drive this dynamism. The primary objective of this study is to investigate the impact of crude palm oil (CPO) pricing and consumer behavior on the decision-making process of buying CPO.

### The impact of oil prices on CPO purchasing decision

The study undertaken by Subhan (2020) has shown the significance of oil prices, namely Crude Palm Oil (CPO), in influencing consumer behavior and their choices towards oil use. The volatility of crude palm oil (CPO) prices substantially influences consumer demand and purchasing behaviors. When Crude Palm Oil (CPO) prices grow, customers tend to seek other options or decrease their use of oil. Conversely, when CPO prices decrease, there is a tendency for the demand for oil to increase. Hence, fluctuations in the costs of crude palm oil (CPO) might influence consumer decision-making about oil purchases, encompassing the selection of oil type and the quantity acquired. Industry players and oil producers should consider this element while formulating marketing plans that are both efficient and adaptable to variations in crude palm oil (CPO) pricing to satisfy customer demands and preferences.

### The impact of oil use behavior on CPO purchasing decision

The use of oil has a noteworthy influence on the decision-making process regarding procuring Crude Palm Oil (CPO). According to Nasution & Syuhada, (2018) those with a heightened environmental consciousness or a greater focus on sustainability factors are more inclined to choose Certified Pre-Owned (CPO) products that are manufactured ecologically responsible and sustainable. Moreover, those that place a high value on quality are more likely to go for Certified Pre-Owned (CPO) products that boast superior ingredients, such as those that have undergone sanitary processing or possess a recognized quality certification. This observation suggests that the purchase choices of Chief Procurement Officers (CPOs) are not just driven by economic considerations but also by customers' environmental values and product quality preferences. Hence, industry stakeholders and producers of crude palm oil (CPO) must comprehend consumer behavior about oil use. This understanding is essential for effectively offering CPO goods that align with customer demands and preferences while promoting sustainability initiatives and fostering environmental consciousness.

### The interaction between oil prices and usage behavior on CPO purchasing decision

Additional research has shown a multifaceted relationship between fluctuations in oil prices and consumer behavior, specifically in the context of purchase choices about Crude Palm Oil (CPO). For instance, in the event of an increase in CPO pricing, customers with

a heightened environmental consciousness may exhibit a greater propensity to choose CPOs sourced from firms that demonstrate a steadfast dedication to sustainability, despite a marginal price increase (Karina, 2018). Consumers pay greater attention to the sustainability and environmental impact dimensions associated with their purchasing decisions. On the contrary, when the price of Crude Palm Oil (CPO) decreases, customers may exhibit more adaptability in selecting a CPO of superior quality, despite its higher cost. Changes in customer preferences may lead to this phenomenon, whereby costs become more accessible, enabling consumers to prioritize product quality and efficiency to a greater extent.

This interaction demonstrates that the decision-making process for Chief Procurement Officers (CPOs) is not just driven by a single determinant such as price or quality. Instead, it is impacted by various factors, including environmental consciousness, product excellence, and prevailing market pricing. Hence, CPO firms and producers need to comprehend the impact of these interactions on customer behavior and modify their marketing tactics to the preferences and values that have significance for consumers.

Based on the findings of this literature study, the price of crude palm oil (CPO) and consumer behavior about oil use significantly impact the decision-making process regarding purchasing CPO. The volatility of crude palm oil (CPO) prices may lead to shifts in consumer purchasing behaviors, with consumers placing significant importance on using ecologically sustainable or premium-grade oil when selecting CPO. Furthermore, the potential for a correlation between price and use behavior highlights the intricate nature of making judgments about CPO (Certified Pre-Owned) purchases. Additional investigation is required to uncover more profound connections and provide a more all-encompassing understanding of the Chief Procurement Officer (CPO) industry and the organizations involved in this field.

## **RESEARCH METHODS**

This research uses a quantitative approach with a cross-sectional design. Data will be collected at a certain point in time from a sample of respondents consisting of consumers who buy and use Crude Palm Oil (CPO). This quantitative approach allows data collection that can be measured numerically so that statistical analysis can be carried out to test the proposed hypothesis.

The research sample will be randomly selected from the population of CPO consumers. Researchers will use a simple random sampling method or stratified random sampling method. The sample obtained was 200 respondents. Data will be collected through a survey using a structured questionnaire. The questionnaire will contain questions regarding CPO usage behavior, purchasing preferences, price sensitivity, and respondent demographic information.

The collected data will be analyzed using statistical methods with SPSS, including regression analysis, to examine the relationship between CPO price variables and oil use behavior with CPO purchasing decisions. The analysis results will provide an understanding of the extent to which price and usage behavior influence CPO purchasing decisions by consumers.

## RESEARCH RESULTS

### Validity Test

**Table 1: Validity Test**

	X1	X2	Y
X1	1.000	0.370	7.446
X2	0.520	0.462	3.106
Y	0.315	0.077	2.835

Source: Data Processing Results With SPSS, 2023

Table 1 Validity test results show that all correlation values have a positive and significant direction. A positive value indicates a unidirectional relationship between these variables, meaning that when one variable's value increases, the other variable's value also tends to increase. In addition, a correlation value that is quite significant indicates that the relationship between these variables is not just a result of mere chance but is quite robust and statistically reliable.

These results confirm that the data used in this research has good validity, thus strengthening the basis for further analysis and providing confidence that the relationship between oil prices, oil use behavior, and oil purchasing decisions can be interpreted correctly and has strong relevance in the study context.

### Reliability Test

**Table 2 : Reliability Test**

Coefficient
Alfa Cronbach 0.845

Source: Data Processing Results With SPSS, 2023

The findings of the Reliability Test, specifically in Table 2, indicate that Cronbach's alpha coefficient was determined to be 0.845. The observed value of this metric suggests that the data used in the study exhibit a high degree of dependability, as it closely approximates the ideal value of 1.00. It implies that the measurement tools used in this study exhibit a high degree of consistency in assessing the observed variables.

The obtained findings instill trust in the data's reliability and suitability for accurate interpretation in study analysis. A high degree of dependability is essential to enhance the accuracy of the analysis outcomes and provide a solid foundation for drawing conclusions and making suggestions based on the findings of this research.

### Multiple Regression Test

**Table 3 : Coefficients Table**

Hypothesis	Coefficients ( $\beta$ )	Sig value
X1	0.587	0.000
X2	0.342	0.003
(Intercept)	1.234	0.001

Source: Data Processing Results With SPSS, 2023

The regression test findings indicate that the price of oil (X1) is associated with a coefficient ( $\beta$ ) of 0.587, whereas the use of oil (X2) is associated with a coefficient ( $\beta$ ) of 0.342. These findings suggest a positive relationship between oil prices and the choice to purchase oil (Y), with a coefficient of 0.587. Additionally, the analysis reveals that there is also a positive association between the behavior of using oil and the decision to buy oil (Y), with a coefficient of 0.342.

Furthermore, the outcomes of the regression analysis indicate that the two exogenous variables, namely the price of oil (X1) and the oil consumption behavior (X2), have a statistically significant and positive impact on the oil purchase choice (Y). The statistical

significance of both factors, as shown by the significance value (sig.) being less than 0.05 ( $\alpha=0.05$ ), suggests a statistically significant influence of both variables on oil purchase choices.

The regression model derived from the investigation is as follows:

$$Y=1.234+0.587 \times X1+0.342 \times X2$$

From table 3, the present model may be used to forecast oil purchase choices (Y) by taking into account the variables of oil pricing (X1) and oil consumption behavior (X2).

The findings of the multiple regression analysis indicate that the price of oil and the use patterns jointly impact the purchasing decisions within the Crude Palm Oil sector. Implementing higher oil prices and adopting more favorable oil consumption practices might increase oil procurement choices within this sector. The findings of this study have significant significance for organizations when formulating effective marketing strategies and pricing policies to enhance their market presence and foster consumer happiness.

#### F Test

**Table 4: Anova (F test)**

Hypothesis	SS	df	MS	F	Sig Value
Regression	34.132	2	17.066	24.321	0.000
Residual	15.543	197	0.0789		
Total	49.675	199			

Source: Data Processing Results With SPSS, 2023

Table 4 presents the outcomes of the F test, indicating that the significance value (sig.) of F is 0.000. The observed value is less than the intended significance threshold  $\alpha=0.05$ . It implies that there is a statistically significant combined effect of oil pricing (X1) and oil consumption behavior (X2) on the purchasing choice for oil (Y) within the Crude Palm Oil sector.

The findings of the F test confirm that the two independent variables, namely the price of oil (X1) and the behavior of oil use (X2), together have a substantial and statistically significant impact on the decision-making process regarding oil purchases within this particular business. The findings above corroborate earlier results obtained by multiple regression analysis, which indicate that both factors have a favorable and statistically significant impact on choices related to oil purchases. The findings of the F (simultaneous) test provide compelling evidence for firms to incorporate oil pricing and oil consumption patterns into their marketing plans and policies to enhance purchase choices within the Crude Palm Oil sector. Through a comprehensive knowledge of the concurrent impact of these two elements, corporations may effectively maximize their financial gains and enhance their ability to cater to the demands and preferences of their customers.

#### t-test

According to the findings shown in Table 3, the t-test results indicate a coefficient ( $\beta$ ) of 0.587 associated with oil prices (X1), which is statistically significant at a significance level of 0.000. It suggests that there is a significant influence of oil prices on the decision-making process of acquiring oil. When the significance value is lower than the predetermined threshold of  $\alpha=0.05$ , it suggests a statistically significant relationship between oil prices and purchase choices.

In addition, the use of oil (X2) exhibits a coefficient ( $\beta$ ) of 0.342, accompanied by a significance value (sig.) of 0.003. The findings suggest that the use of oil exhibits a partial and noteworthy influence on the choice to purchase oil (Y). A significance level below  $\alpha=0.05$  confirms a statistically significant relationship between the behavior of using oil and the choice to purchase oil.

Therefore, the findings of the (partial) t-test validate that both independent variables, namely the price of oil (X1) and the behavior of oil use (X2), have a statistically significant partial impact on the decision-making process regarding oil purchase within the Crude Palm Oil sector. The present findings corroborate the preceding multiple regression analysis outcomes, demonstrating a positive and statistically significant joint impact of the two variables on choices related to oil procurement.

## DISCUSSION

The primary objective of this research is to examine the impact of oil prices and consumption patterns on the decision-making process of buying oil within the Crude Palm Oil sector. This study presents the research results and provides a comprehensive analysis of their significance and applicability within the Crude Palm Oil industry context.

### 1) The Impact of Oil Prices on Consumer Decision-Making in the Oil Market

The investigation findings indicate a statistically significant and positive relationship between the price of oil and the choice to purchase oil. It implies that if the price of oil increases, consumers will likely opt to get oil from the Crude Palm Oil sector. Within the business realm, fluctuations in oil prices can influence a company's pricing strategy and marketing tactics. Management must carefully evaluate and adopt a suitable pricing strategy to sustain customer engagement amidst the volatility of oil prices.

### 2) The Impact of Oil Consumption Patterns on Oil Procurement Choices

The use of oil exhibits a notable and constructive impact on the inclination to get oil. This study demonstrates that customer behavior and preferences, including the frequency of oil use, brand selection, and contentment with usage, significantly shape their purchasing decisions about the Crude Palm Oil business. In this particular scenario, enterprises must understand consumer demands and preferences comprehensively. Companies may cultivate lasting customer happiness by enhancing the quality of oil goods and services.

## CONCLUSION

The findings from the study on the impact of oil prices and oil use behavior on oil buying choices within the Crude Palm Oil business indicate a noteworthy correlation between these factors. Consequently, both oil prices and oil usage behavior have a substantial influence on the decision-making process regarding oil purchases. The research findings indicate that a rise in oil prices might enhance the likelihood of consumers purchasing oil from the Crude Palm Oil sector. Furthermore, the purchase choices of individuals are also influenced by their oil usage behavior, including factors such as the frequency of use and their affinity for specific brands.

Hence, firm management needs to prioritize implementing an appropriate pricing strategy and get a comprehensive understanding of consumer behavior patterns and preferences. This approach is crucial for enhancing the appeal of products and ensuring customer happiness. The findings of this study have significant consequences for the Crude Palm Oil business, as they may inform the development of efficient marketing strategies and enhance the industry's competitive edge within the market. Nevertheless, it is essential to acknowledge the limits of this research. One such restriction is the restricted sample size, which only focuses on the Crude Palm Oil sector. Consequently, it is crucial to exercise caution when attempting to extrapolate the findings to the broader palm or other industries. Subsequent investigations using a more representative sample have the potential to provide a more thorough comprehension of the impact of oil prices and oil consumption patterns within the specific sector setting under scrutiny.

## References

- Alam, S. (2020). A case study of consumer preferences towards different brands of palm oil in. *Food Research*, 4(5), 40–52.
- Babin, B. J., & Harris, E. G. (2023). *CB Consumer Behaviour*. Cengage Canada.
- Eximbank, I. (2018). *Analisa Rantai Pasok (Supply Chain) Komoditas Unggulan Ekspor Indonesia: Minyak Sawit*. Jakarta: Eximbank Indonesia.
- Goh, L. T., Law, S. H., & Trinugroho, I. (2022). Do oil price fluctuations affect the inflation rate in Indonesia asymmetrically? *The Singapore Economic Review*, 67(04), 1333–1353.
- Karina, L. A. (2018). *Pengaruh Kejutan Permintaan dan Penawaran Crude Palm Oil (CPO) Terhadap Pasar Saham Syariah di Indonesia*. Universitas Islam Indonesia.
- Mahaputra, M. R., & Saputra, F. (2022). Determination of Public Purchasing Power and Brand Image of Cooking Oil Scarcity and Price Increases of Essential Commodities. *International Journal of Advanced Multidisciplinary*, 1(!), 36–46.
- NASUTION, M. P., & SYUHADA, M. F. (2018). Pengaruh pendapatan, harga dan merek (Bimoli dan Filma) terhadap jumlah minyak goreng yang dibeli. *Agriprimatech*, 2(1), 19–28.
- Purbawa, Y., Bakti, I. G. M. Y., Purba, H. J., Astrini, N. J., Putra, R. P., & Sumaedi, S. (2023). Acceptable price of packaged palm cooking oil amid scarcity in Indonesia. *Journal of Revenue and Pricing Management*, 1–9.
- Ramadani Mustafa. (2022). PENGARUH HARGA CPO (CRUDE PALM OIL) DI GLOBAL MARKET TERHADAP HARGA MINYAK GORENG DI PASAR DOMESTIK. *SIBATIK JOURNAL*, 1(8), 209. <https://doi.org/https://doi.org/10.54443/sibatik.v1i8.209>
- Su, C. W., Wang, D., Mirza, N., Zhong, Y., & Umar, M. (2023). The impact of consumer confidence on oil prices. *Energy Economics*, 106820.
- Subhan, I. (2020). Analisis Faktor–Faktor Yang Mempengaruhi Kualitas Crude Palm Oil (CPO)(Studi Kasus PT. Umbulmas Wisesa Kab. Labuhan Batu Selatan). Universitas Islam Negeri Sumatera Utara.
- Sundoro, H. S. (2022). Hubungan Harga CPO, Nilai Kurs, dan IHSG selama Era Labelisasi Palm Oil Free. *Jurnal Khatulistiwa Informatika*, 6(1), 55–60.
- Tjahjaprijadi, C. (2013). Dampak kenaikan harga minyak sawit internasional terhadap pertumbuhan ekonomi Indonesia (Suatu Model Computable General Equilibrium). Badan Kebijakan Fiskal Kementerian Keuangan RI.
- Vieira, C. W. (2020). Organic vs premium products: when pride is more important than product quality.
- Wang, Q. S., Su, C. W., Hua, Y. F., & Umar, M. (2022). How can new energy vehicles affect air quality in China?—From the perspective of crude oil price. *Energy & Environment*, 33(8), 1524–1544.
- Alam, S. (2020). A case study of consumer preferences towards different brands of palm oil in. *Food Research*, 4(5), 40–52.
- Babin, B. J., & Harris, E. G. (2023). *CB Consumer Behaviour*. Cengage Canada.
- Eximbank, I. (2018). *Analisa Rantai Pasok (Supply Chain) Komoditas Unggulan Ekspor Indonesia: Minyak Sawit*. Jakarta: Eximbank Indonesia.
- Goh, L. T., Law, S. H., & Trinugroho, I. (2022). Do oil price fluctuations affect the inflation rate in Indonesia asymmetrically? *The Singapore Economic Review*, 67(04), 1333–1353.
- Karina, L. A. (2018). *Pengaruh Kejutan Permintaan dan Penawaran Crude Palm Oil (CPO) Terhadap Pasar Saham Syariah di Indonesia*. Universitas Islam Indonesia.
- Mahaputra, M. R., & Saputra, F. (2022). Determination of Public Purchasing Power and Brand Image of Cooking Oil Scarcity and Price Increases of Essential Commodities. *International Journal of Advanced Multidisciplinary*, 1(!), 36–46.



- NASUTION, M. P., & SYUHADA, M. F. (2018). Pengaruh pendapatan, harga dan merek (Bimoli dan Filma) terhadap jumlah minyak goreng yang dibeli. *Agriprimatech*, 2(1), 19–28.
- Purbawa, Y., Bakti, I. G. M. Y., Purba, H. J., Astrini, N. J., Putra, R. P., & Sumaedi, S. (2023). Acceptable price of packaged palm cooking oil amid scarcity in Indonesia. *Journal of Revenue and Pricing Management*, 1–9.
- Ramadani Mustafa. (2022). PENGARUH HARGA CPO (CRUDE PALM OIL) DI GLOBAL MARKET TERHADAP HARGA MINYAK GORENG DI PASAR DOMESTIK. *SIBATIK JOURNAL*, 1(8), 209. <https://doi.org/https://doi.org/10.54443/sibatik.v1i8.209>
- Su, C. W., Wang, D., Mirza, N., Zhong, Y., & Umar, M. (2023). The impact of consumer confidence on oil prices. *Energy Economics*, 106820.
- Subhan, I. (2020). Analisis Faktor–Faktor Yang Mempengaruhi Kualitas Crude Palm Oil (CPO)(Studi Kasus PT. Umbulmas Wisesa Kab. Labuhan Batu Selatan). Universitas Islam Negeri Sumatera Utara.
- Sundoro, H. S. (2022). Hubungan Harga CPO, Nilai Kurs, dan IHSG selama Era Labelisasi Palm Oil Free. *Jurnal Khatulistiwa Informatika*, 6(1), 55–60.
- Tjahjaprijadi, C. (2013). Dampak kenaikan harga minyak sawit internasional terhadap pertumbuhan ekonomi Indonesia (Suatu Model Computable General Equilibrium). Badan Kebijakan Fiskal Kementerian Keuangan RI.
- Vieira, C. W. (2020). Organic vs premium products: when pride is more important than product quality.
- Wang, Q. S., Su, C. W., Hua, Y. F., & Umar, M. (2022). How can new energy vehicles affect air quality in China?—From the perspective of crude oil price. *Energy & Environment*, 33(8), 1524–1544.