

## Government Pricing Policy and Oil Palm Smallholder Income Study on Oil Palm Farmers in East Aceh

Muhammad Haykal<sup>1\*</sup>, Iswadi Bensaadi<sup>2</sup>, Saifuddin Yunus<sup>3</sup>

<sup>1,2</sup> Accounting Department, Economics and Business Faculty, Malikussaleh University, Indonesia

<sup>3</sup> Sociology Department, Social and Political Sciences Faculty, Malikussaleh University, Indonesia

\*Corresponding author. Email: [mhaykal@unimal.ac.id](mailto:mhaykal@unimal.ac.id)

### ABSTRACT

This study examines the influence of government pricing policies in determining the selling price of fresh fruit bunches (FFB) on the income of oil palm farmers. The research was conducted on oil palm smallholders in East Aceh who were determined based on convenience sampling. There are 100 oil palm smallholder respondents appointed to represent all oil palm smallholders in East Aceh. Data was collected using a questionnaire by taking samples of oil palm farmers in 10 districts in East Aceh. The question items are formed based on the indicators of each variable. This study was tested using multiple linear regression. The results of the study prove that the price policy issued by the government in determining cooking oil has a negative effect on the income of oil palm farmers. Palm oil farmers hope that the government's role will be more equitable in formulating price policies, so that prices tend to be stable and based on developments in world CPO prices. At present the role of the government tends to be perceived by farmers as none exist, the purchase price of FFB is mostly determined by the PKS factories in accordance with the wishes of large capital owners. There needs to be strong sanctions given to palm oil mill owners (PKS) when they tend to prioritize processing their own plantation products during large harvests compared to buying produce from community-owned oil palm planters. The results of this study provide theoretical implications about the importance of the government's role in increasing the income of oil palm farmers. Palm oil farmers need to always be accompanied by the government with regulations that not only benefit farmers but can also increase the economic growth of a region in the long term.

**Keywords:** Palm Oil Farmers' Income, FFB Prices, Role of Government

### 1. INTRODUCTION

Indonesia, as the largest producer of palm oil in the world and controls nearly 27% of the world market share, is one of the prima donna of plantation crops which is a source of non-oil and gas foreign exchange for the Indonesian economy, beating soybean and canola oil. The prospect of the palm oil commodity in the world vegetable oil trade is very bright, thus encouraging the government to accelerate the development of oil palm plantation areas. The area of oil palm plantations will reach 16.38 million hectares in 2021 (SPKS, 2021). The area of oil palm plantations has increased very rapidly, especially in the western region, namely on the island of Sumatra [1]. The development of the oil palm plantation sub-sector cannot be separated from the role of government regulations which provide various incentives, especially in terms of permits and investment subsidies for the development of smallholder plantations with the PIR-Bun pattern as well as in opening new land for large private plantations [2].

However, palm oil also faces various problems/obstacles related to technology, economy, social, environment, and governance. These problems need to be addressed so as not to distort the competitiveness of Indonesian palm oil products in the world market. The basis and orientation of governance for the development of the palm oil industry above is that ISO generally refers to governance reforms originating from around 130 laws and regulations (2016 ISO Commission) which can serve as guidelines for the development of sustainable palm oil. Past experience shows that Indonesia's oil palm management policies tend to leave problems, both for low waged labour, the socio-cultural impacts of emerging conflicts around oil palm plantations, as well as environmental impacts whose management is detrimental to the wider community such as forests. fires where the effects of smog can be bad for health and disrupt economic activities [3].

The Crude Palm Oil (CPO) export moratorium policy issued by the government and several of its derivative products which took effect on 28 April 2022 was officially revoked as of 23 May 2022 (Kompas, 21 May 2022). The government revoked this policy after thousands of smallholders across Indonesia took to the streets demanding an end to the CPO export ban, many of which were considered to be very detrimental to oil palm smallholders [4]. However, this export ban has had a negative impact on the upstream palm oil sector. Oil palm farmers suffered tremendous losses due to the drop in the selling price of fresh fruit bunches (FFB), which was below production costs. The decline in the price of FFB experienced by smallholders reached below 40-70% of the price set by the Plantations Office in several palm-producing areas. Previously, the government closed the export tap due to dwindling supply and high domestic bulk cooking oil prices. When it took effect on April 28, the government stated that it would only relax the regulations if the price of bulk cooking oil reached the highest retail price (HET) at Rp 14,000 per liter or Rp 15,500 per kilogram.

In other research it was found that an increase in CPO prices will cause the real rupiah to appreciate. Therefore, Indonesia as a major CPO producer must be able to control world CPO prices in order to control the stability of the real rupiah exchange rate [5]. The government revoked the CPO export limiting policy for various reasons, including complaints from the palm oil growers' association that the ban had lowered the price of fresh fruit bunches belonging to farmers because companies had tightened the amount of purchases from outside their plantations.

Previous research on the factors that affect the income of oil palm farmers has been carried out, including: Kurniawan (2014). Andriyani (2021) and Aswan & Tanjung, (2021). These studies are more focused on variables attached to the production process, land area, experience, age, and participation of family members. This research is different from previous studies on aspects of the palm oil price policy (FFB) issued by the government and the impact of cooking oil pricing on the income of oil palm farmers. These variables are thought to contribute very strongly to the increase or decrease in the income of oil palm smallholders. Farmer groups are important for realizing individual and group welfare. The government's role in helping oil palm farmers is felt to be very low [6], increasing farmers' income must be considered by paying attention to downstream CPO derivative products [7], the government must establish a FFB price policy for all oil palm farmers [8]. Besides that, the government also needs to make a policy on the selling price of farmers to the core so that it can boost prices at the small farmer level [9].

### **1.1. Price Policy for Oil Palm Fresh Fruit Bunches**

The policy of banning the export of CPO and its derivative products raises many concerns: First, the excess supply of CPO, which has always been absorbed in the export market, is now almost impossible to absorb in the domestic market [4]. This export ban is carried out to protect the domestic market, Government Regulation Number 34 of 2009 concerning Domestic Market Obligations (DMO) is a breakthrough to overcome the problem of mineral scarcity, this is a challenge for the government as a regulatory agency to apply this policy to the palm oil industry [10].

The Ministry of Trade stipulates domestic market obligation (DMO) and domestic price obligation (DPO) policies as of January 27, 2022 as stipulated in Permendag No. 1 to 6, 2022. This policy results in a loss of cooking oil on the market, initially this policy is expected to reduce oil prices but a new problem arises, namely scarcity, so that cooking oil is hard to come by. Even if the public obtains cooking oil, it is certain that the price is high, not in accordance with the HET imposed by the government [11].

The income of farmers is significantly different where the income of plasma farmers is greater (Rp. 29.33 million/ha/year) and that of local farmers is Rp. 22.67 million/ha/year, as well as the income of farmers is significantly different due to differences in FFB prices, even though the production of plasma farmers is lower than local farmers, so the government must set a FFB price policy for all oil palm farmers [8].

**H<sub>1</sub>: The FFB price policy from the government affects the income of oil palm farmers.**

### **1.2. Final Retail Price (HET) Determination of Cooking Oil and Palm Oil Farmers' Income**

The government regulates optimizing the availability of raw materials for cooking oil and cooking oil, needs to rearrange policies and regulations for exports of crude palm oil, refined, bleached and deodorized palm olein and used cooking oil [12]. In responding to the ban on CPO exports, observers said that it would not necessarily reduce the retail price of cooking oil. This policy could overcome scarcity, and could not reduce the price of cooking oil. The governance of Indonesian palm oil is currently carried out based on the main provisions of plantation regulations, namely Law Number 39 of 2014 concerning plantations and their derivatives, Indonesian palm oil is carried out by large business actors (private and state) and farmers [3]. Oil palm plantations are one of the mainstay industrial sectors that have attracted serious attention from the government, investors (private) and

farmers (community) who are never separated from the dynamics of problems. conflict between stakeholders as described above is very pronounced. Many complaints from small farmer groups are always affected by policies issued by the government. Declining income can have a negative impact on rural socio-economic conditions. Thus, cooperation between villages and companies bridged by the government through the oil palm plasma program is expected to improve village welfare. In fact, prosperity consists of two dimensions, namely economically prosperous and socially prosperous [13].

**H1: Setting the price of cooking oil affects the income of oil palm farmers.**

## 2. METODE

### 2.1 Sampling and Data Collection

The population in this study were oil palm farmers in Aceh, the sample selection was carried out among smallholder oil palm farmers who were selected by convenience as the research sample. The minimum sample size is determined based on the approach used in previous research, namely; the number of variables is multiplied by ten (10) (Aziz et al., (2013)). This study has two variables, therefore, the minimum sample size required is 20. 100 questionnaires have been distributed to smallholder oil palm farmers in existing sub-districts in East Aceh District to ensure the minimum number of responses was met. East Aceh District (Aceh Timur Regency) was selected because this area has a large number of smallholder smallholders. The sample included smallholder oil palm smallholders who own private land as well as oil palm plantation workers. Selection The research location was purposive. The area was chosen as the research location. The research samples were all married men. The age of the respondents ranged in age from less than or equal to 35 years to more than 50 years, with average income of 20 million to 50 million per year (76%).

Research data was collected using a questionnaire. Questionnaires were distributed by researchers to smallholder oil palm smallholders from September to October 2022. Researchers also conducted focus group discussions (FGD) in interviews about the research results. Then the data from all samples are eligible for analysis.

## 3. OPERATION VARIABLES

Researchers used 5 point Likert scales to measure respondents' answers to each question item. This scale ranges from strongly disagree = 1 to strongly agree = 5. The dependent variable in this study is the income of oil palm farmers as assessed by indicators; family needs, children's education, and savings (Setyawan et al. (2020)). The independent variables of the research include the FFB price policy as measured by 5 indicators (the government needs to regulate the FFB price policy, price monitoring, price evaluation, and imposing sanctions) and oil price setting Fry is measured by 3 indicators (FFB price increase, impartial policies and DMO removal).

### 3.1 Analysis Methode

Before the results are analyzed, the researcher tests the main linearity assumptions which include; normality, multicollinearity, and heteroscedasticity. To test empirically the effect of FFB pricing policies and cooking oil pricing policies on oil palm smallholders' income, researchers used the SPSS package with multiple linear regression models and the model equations as follows:

$$Y_i = \beta_0 + \beta_1 X_{11} + \beta_2 X_{12} + \varepsilon \quad (1)$$

$\beta_0$  is a constant,  $\beta_1$  to  $\beta_2$  is the parameter coefficient of the variable derivative product diversification, the role of farmer groups, and the role of cooperatives,  $\varepsilon$  is the error term.

### 3.2 Validity And Realibility

Validity and reliability tests were used for research questionnaires. Construct validity is proven through the significance of the Pearson Correlation. A total of 15 valid questionnaires to be analyzed. Scala reliability is calculated using Cronbach's alpha. The scale used is internally consistent and reliable if Cronbach's alpha value > 0.6 (Nunally, 1975).

## 4. RESULT

### 4.1 Validity And Reliability Test

The questionnaire used was tested for validity and reliability to obtain valid and reliable estimation results. The validity and reliability tests are shown in table 3. All question items are valid, as evidenced by the high level of significance of the Pearson Correlation ( $p=0.000$ ). Cronbach's alpha value for all research variables ranges from 0.658 to 0.830 which indicates that the scale used internally is consistent and reliable (Nunally, 1975).

Table 1. Validity Test

<i>Question Indicator</i>	<i>R<sub>count</sub></i>	<i>Significance</i>	<i>r<sub>tabel</sub></i>	<i>description</i>
<i>Price Policy By Gov</i>				
<i>P1</i>	<i>0,774</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P2</i>	<i>0,735</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P3</i>	<i>0,740</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P4</i>	<i>0,644</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P5</i>	<i>0,644</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>Price Policy Cooking Oil</i>				
<i>P1</i>	<i>0,690</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P2</i>	<i>0,713</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P3</i>	<i>0,703</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>Income Farmer</i>				
<i>P1</i>	<i>0,639</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P2</i>	<i>0,594</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P3</i>	<i>0,786</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P4</i>	<i>0,740</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P5</i>	<i>0,644</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>
<i>P6</i>	<i>0,644</i>	<i>0,000</i>	<i>0,2353</i>	<i>Valid</i>

Reliability testing is carried out on question items that have validity. Unreliable data cannot be processed further because it will produce biased conclusions, the reliability test is the degree of consistency and stabilization of the data in the findings, the reliability test can be seen from the Cronbach's alpha value. To be said to be reliable, the Cronbach's alpha value must be greater than 0.6 [16].

### 4.2. Descriptive Statistics

The explanation of descriptive statistics of the research variables in table 4 revealed that several question items of all variables had an average value higher than 4 (Q1, Q2, Q7, Q8, and Q9), which indicated that the respondents answered agree (somewhat agree) for questions asked with a standard deviation higher than 0.5. Other question items had an average value higher than 3 and less than 4, with a standard deviation between 0.631 to 0.914. It indicated that the majority of respondents answered neutrally to the questions asked.

**Table 3. Statistic Descriptive of all Variables**

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Income of oil palm farmers</i>	100	2	5	4.09	.534
<i>Income of oil palm farmers</i>	100	2	5	4.39	.665
<i>Income of oil palm farmers</i>	100	2	5	3.95	.914
<i>Income of oil palm farmers</i>	100	2	5	3.21	.856
<i>Income of oil palm farmers</i>	100	2	5	3.38	.648
<i>Income of oil palm farmers</i>	100	1	5	3.32	.634
<i>Price Policy Cooking Oil</i>	100	3	5	4.33	.493
<i>Price Policy Cooking Oil</i>	100	2	5	4.23	.489
<i>Price Policy Cooking Oil</i>	100	3	5	3.94	.371
<i>Price TBS1</i>	100	3	5	4.45	.520
<i>Price TBS1</i>	100	3	5	4.28	.473
<i>Price TBS1</i>	100	2	5	4.28	.637
<i>Price TBS1</i>	100	3	5	4.33	.514
<i>Price TBS1</i>	100	2	5	4.27	.584

### 4.3. Estimation Result

The estimation results from the multiple linear regression model regarding the effect of the FFB price policy and the government's cooking oil pricing on the income of oil palm farmers are explained in table 5. The level of income is related to the maximum profit level so that it is related to efforts to achieve maximum profit, for that farmers must understand these aspects technical aspects in the economics of production. Efforts to increase production will not be profitable if the use of production inputs is not proportional to the results obtained and the capital issued by farmers [15]. Pricing policy It is recognized that the contribution of oil palm farming has become a source of income for hundreds of thousands of East Aceh farmers. From the focus group discussion it was revealed that the current income of farmers from oil palm is IDR 20 million to IDR 50 million per year. In the long term, the increase in international palm oil prices will not have a significant impact on the income of smallholders in East Aceh. Determination Thus, the H1 hypothesis is rejected (the fixing of the FFB price has no effect on increasing the income of oil palm farmers).

The One Price Cooking Oil Policy is a follow-up effort by the Government to ensure the availability of cooking oil at affordable prices. Through this policy, all cooking oil, both premium packaging and simple packaging, will be sold at a price equivalent to IDR 14,000/liter to meet the needs of households and micro and small businesses. The results of this study provide a fairly strong picture, that cooking oil pricing policies have a negative impact on the income of oil palm farmers. In another review, Economist at the Center of Economic and Law Studies (CELIOS) Bhima Yudhistira admitted that he did not agree with the steps taken by the government in an effort to provide for the people's needs for cooking oil. The negative impact is, there is a migration of consumers towards cheap cooking oil, a difficult monitoring system, scarcity of cooking oil, and inappropriate subsidies by the government (Bisnis.Com, 2022). These findings provide evidence that government policies in setting prices for both CPO and cooking oil have a negative impact on the income of oil palm smallholders.

## CONCLUSION

The research results prove that the price policy issued by the government tends to harm farmers. Through restrictions on CPO exports and fixing cooking oil prices, the selling price of palm oil at the farm level tends to decrease. This means that when there is an increase in the selling price of palm oil, at the same time production costs and additional capital costs (BPPBM) and the cost of household needs for oil palm farmers also increase, so that it does not have an impact on the income of oil palm farmers. It is recognized that the contribution of oil palm farming has become a source of income. for hundreds of thousands of East Aceh farmers that require more attention from the government.

## AUTHORS' CONTRIBUTIONS

The first author acted as coordinator to the team for other authors. Besides, there are students who assisted the research team in performing series of research sets in laboratory.

## ACKNOWLEDGMENTS

The author and co-authors would like to thank the relevant agencies in collecting data.

## REFERENCES

- [1] A. RAMADHANA, F. AHMED, and S. THONGRAK, "The Impact of Oil Palm Farming on Household Income and Expenditure in Indonesia\*," *J. Asian Financ. Econ. Bus.*, vol. 8, no. 4, pp. 539–547, 2021, doi: 10.13106/jafeb.2021.vol8.no4.0539.
- [2] C. Tjahjapriadi, "Dampak Kenaikan Harga Minyak Sawit Internasional Terhadap Pertumbuhan Ekonomi Indonesia (Suatu Model Computable General Equilibrium)," *Model Comput. Gen. Equilib.*, vol. 10, no. ii, pp. 1–14, 2011.
- [3] C. Saleh, W. H. Hardiwinata, L. I. Mindarti, and S. Zauhar, "Management of palm oil by the government of the republic of indonesia," *Utop. y Prax. Latinoam.*, vol. 25, no. Extra10, pp. 336–353, 2020, doi: 10.5281/zenodo.4155663.
- [4] R. Sari, "IMPACT OF THE POLICY ON BAN OF EXPORTS OF CPO AND ALL DERIVATIVE PRODUCTS," 2022.
- [5] H. Aprina, "Analisis Pengaruh Harga Crude Palm Oil (Cpo) Dunia Terhadap Nilai Tukar Riil Rupiah," *Bul. Ekon. Monet. dan Perbank.*, vol. 16, no. 4, pp. 315–338, 2014, doi: 10.21098/bemp.v16i4.15.
- [6] M. Haykal and S. Yunus, "Determinants of Oil Palm Farmers' Welfare in Aceh, Indonesia," *J. Contemp. Issues Bus. Gov.*, vol. 27, no. 1, pp. 1221–1229, 2021.
- [7] R. Wardianingsih and A. P. S. Wibowo, "Peluang dan Tantangan Hilirisasi Industri Kelapa Sawit Indonesia," *Bul. Apbn*, vol. 7, no. 14, pp. 14–15, 2022.
- [8] E. Wildayana, "Pendekatan Pengendalian Fluktuasi Harga Tandan Buah Segar Terhadap Pendapatan Petani Kelapa Sawit," *Habitat*, vol. 27, no. 3, pp. 103–108, 2016, doi: 10.21776/ub.habitat.2016.027.3.12.
- [9] J. Situmorang, "Analisis kebijakan harga TBS Kelapa sawit pada PIR Perkebunan Sei Besitang Sumatera Utara," *Forum Penelit. Agro Ekon.*, vol. 6, no. 2, p. 61, 2016, doi: 10.21082/fae.v6n2.1988.61-70.
- [10] R. Undang-undang, "Pemenuhan Domestic Market Obligation (DMO)," no. 48, 2018.
- [11] A. N. Bukit, U. Hasanah, K. Na'im, and E. Elyani, "Kenaikan Harga Minyak Goreng Dalam Perspektif Hukum Persaingan Usaha Dan Ekonomi," *J. Justisia J. Ilmu Hukum, Perundang-undangan dan Pranata Sos.*, vol. 7, no. 1, p. 61, 2022, doi: 10.22373/justisia.v7i1.13212.
- [12] M. Iksal, "Menteri Perdagangan Republik Indonesia Peraturan," vol. 21, no. 1, pp. 1–9, 2020.
- [13] P. Kelapa, S. Pt, and P. Tani, "Mahasiswa Fakultas Pertanian Universitas Tanjungpura Pontianak 2) Dosen Fakultas Pertanian Universitas Tanjungpura Pontianak," pp. 1–10.
- [14] Sugiyono, *Metode Penelitian Kuantitatif*. Bandung: CV. Alfabeta, 2018.
- [15] P. P., G. S., D. A., K. H., and O. B., "The palm oil global value chain: Implications for economic growth and social and environmental sustainability," *palm oil Glob. value Chain Implic. Econ. growth Soc. Environ. Sustain.*, 2017, doi: 10.17528/cifor/006405.