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The Impact of the COVID-19 on Indonesian Palm Oil Exports

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ABSTRACT

This study aims to reveal the impact of the COVID-19 pandemic (2020-2021) on Indonesian palm oil exports. Secondary data were used in the study. The data used are monthly crude palm oil production volumes, monthly crude palm oil export volumes and values, palm oil export destination countries, and monthly crude palm oil prices in the world and local markets from January 2019 to December 2021. Based on the research results, the COVID-19 pandemic has had a negative impact on Indonesian palm oil production and export volumes, and due to supply chain disruptions, labor constraints, decline in demand, and other constraints. Palm oil production and exports decreased by 2.9% and 8.5%, respectively during the COVID-19 pandemic. On the other hand, the COVID-19 pandemic positively impacted the increase in the price and export value of Indonesian palm oil. The world palm oil price increased by 26% during the COVID-19 pandemic, contributing to a 16.9% increase in Indonesia's export revenue. The Indonesian government has made various efforts to mitigate the negative impact of COVID-19 on Indonesian palm oil exports. These efforts include providing fiscal and economic stimulus, active promotion and economic diplomacy, diversifying export markets, and delaying the implementation of the mandatory B30 policy.

COVID-19'un Endonezya Palm Yağı İhracatı Üzerine Etkisi

MAKALE BİLGİSİ

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ÖZET

Bu çalışmada, COVID-19 salgınının (2020-2021) Endonezya'nın palm yağı ihracatı üzerindeki etkisini ortaya koymak amaçlanmıştır. Çalışmada ikincil veriler kullanılmıştır. Kullanılan veriler, aylık ham palm yağı üretim miktarları, aylık ham palm yağı ihracat miktarları ve değerleri, palm yağı ihracatı yapılan hedef ülkeler ve Ocak 2019 - Aralık 2021 döneminde dünya ve yerel piyasalarda aylık ham palm yağı fiyatlarıdır. Araştırma sonuçlarına göre, COVID-19 salgınının Endonezya palm yağı üretimi ve ihracat hacimleri üzerinde olumsuz bir etki yarattığı belirlenmiştir. Tedarik zincirindeki aksaklıklar, işgücü sınırlamaları, talepteki düşüş ve diğer kısıtlamalar nedeniyle COVID-19 salgını sırasında palm yağı üretimi %2.9, palm yağı ihracatı ise %8.5 oranında azalmıştır. Öte yandan, COVID-19 salgını Endonezya palm yağının fiyat ve ihracat değerindeki artışı olumlu yönde etkilemiştir. Dünya palm yağı fiyatı COVID-19 salgını sırasında %26 oranında artmış, bu da Endonezya'nın ihracat gelirinin %16.9 oranında artmasına etki etmiştir. Endonezya hükümeti, COVID-19'un Endonezya palm yağı ihracatı üzerindeki olumsuz etkisini hafifletmek için çeşitli çabalar sarf etmiştir. Bu çabalar arasında mali teşvikler ve ekonomik canlandırma sağlanması, aktif tanıtım ve ekonomik diplomasi, ihracat pazarlarının çeşitlendirilmesi ve zorunlu B30 politikasının uygulanmasının geciktirilmesi yer almaktadır.

1. Introduction

2020 is the most challenging test or crisis in world history due to the COVID-19 pandemic outbreak. COVID-19 has an impact on the health and economic crisis and a broad impact on all areas of life. COVID-19 has dealt a devastating blow to the national economy. Throughout the history of the Indonesian economy since the 2019 economic crisis, it was in 2020 that it experienced a reasonably deep economic contraction of -2.07%. Even during 2020, the Indonesian economy experienced an economic recession because it experienced an economic contraction for three consecutive quarters from the second quarter of 2020 to the end of 2020. Indonesian 2020 economic growth rate is the first negative growth since the 1998 economic crisis. This condition was influenced by the impact of the COVID-19 pandemic, which reduced the performance of domestic sectors and weakened demand both from within and outside the country (BPS, 2021a).

International trade plays an essential role in Indonesian economic activity. Apart from being a component of economic growth, export and import performance affects the Indonesian foreign exchange reserve position. In addition, international trade also plays a role in maintaining the supply of commodities needed in Indonesia. Challenges in international trade activities in 2020 have increased with the COVID-19 pandemic experienced by almost all countries in the world. The spread of the COVID-19 pandemic has forced many countries to impose restrictions such as lockdowns, travel bans, and physical distancing to ensure the health of their people. This causes the performance of exports and

imports between countries to be disrupted, especially the palm oil industry, one of Indonesian primary export commodities (BPS, 2021a).

Palm oil is a plantation commodity essential to economic occupation in Indonesia because of its capability to make vegetable oil, which is critical to the industrial sector. Indonesia has remarkable prospects to market crude palm oil and kernels domestically and abroad. Prospective markets that will absorb the marketing of crude oil (CPO) and kernel oil (PKO) are the fractionation/refining industry (especially the culinary oil business), special fats (cocoa butter substitute), margarine/shortening, oleochemicals, and body wash (BPS, 2020). Indonesia is the biggest palm oil producing and exporter country in the world (Indexmundi, 2022a, b), with an area of 15.38 million hectares and a total palm oil production of 45.58 million tons in 2022, followed by Malaysia with palm oil production of 19.20 million tons, Thailand 3.26 million tons, Colombia 1.76 million tons, and Nigeria 1.40 million tons.

Indonesian palm oil production tends to increase from 1990 to 2019. In 1990 Indonesia only produced 2.41 million tonnes of palm oil, then increased to 42.88 million tonnes in 2018. In 2019 Indonesia produced 47.12 million tons of palm oil, an increase of 9.8% from the previous year. But in 2020 Indonesian palm oil production decreased to 45.74 million tons, a decrease of 2.92% from the previous year, which was caused by the impact of the COVID-19 pandemic, which affected the performance of the oil palm plantation sector. In 2021, palm oil production again experienced a slight decline to 45.12 million tons (BPS, 2022).

Figure 1, shows the volüme and value of Indonesian palm oil exports before and after the COVID-19 pandemic. Indonesian palm oil export volume in 2020 was 27.63 million tons, down 8.5% compared to the previous year, which reached 30.21 million tons. Meanwhile, in 2021, the export volume of palm oil declined again to 27.04 million tons, a decrease of 2.1%. Although Indonesia's palm oil production and export volumes have decreased during the COVID-19 pandemic, there is an exciting phenomenon: the value of Indonesian palm oil exports has increased significantly. It is much higher than the period before the COVID-19 pandemic. This change suggests that the impact of the COVID-19 pandemic on Indonesian palm oil industry is more complex than just a decline in production or exports. Therefore, this study aims to go deeper by analyzing the impact of the COVID-19 pandemic on Indonesian palm oil exports, particularly in terms of export volume and value, as well as the factors that influence these changes.

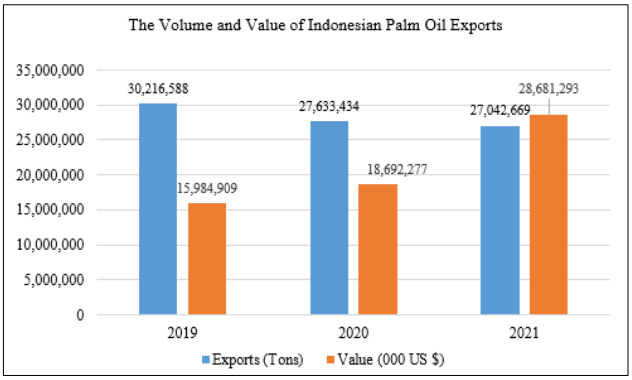

Figure 1. The volume and value of Indonesian palm oil exports before and after the COVID-19 pandemic (DGEIMA, 2023)

2. Material and Method

The data used in this study are secondary data, including monthly production data of crude palm oil, monthly volume and value of crude palm oil exports, palm oil export destination countries, monthly prices of crude palm oil on the world and domestic markets in the period January 2019 to December 2021. They were analyzed by desk work using simple descriptive analysis. Writing materials are obtained through a literature review by exploring and examining data and information obtained from various sources such as the Indonesian Central Bureau of Statistics (BPS), Director General of Estate Indonesian Ministry of Agriculture, Indonesian Ministry of Trade (Bappeti), Ministry of Industry of the Republic of Indonesia, Ministry for Economic Affairs of the Republic of Indonesia, LPEI (Indonesia Eximbank), and Indonesian Palm Oil Association (GAPKI), World Bank, Index Mundi, Market Research Report, as well as applicable information from various studies published in multiple publications, such as books, journals, reports, and electronic media.

3. Result and Discussion

The COVID-19 pandemic has caused a sharp decline in the world's trade in goods. Export and import activities no longer run normally because many countries impose restrictions such as lockdowns, travel bans, and physical distancing to ensure the health of their people. In April 2020, the WTO informed that at least 80 countries imposed restrictions and export bans due to the COVID-19 pandemic (BPS, 2021a). The Indonesian government also imposed a Large-Scale Social Restrictions (PSBB) policy at the beginning of COVID-19. It continued the transition of PSBB by implementing health protocols in public activities which directly affected almost all economic activities in Indonesia. This restriction policy impacts trade in agricultural commodities, especially palm oil. About 70% of Indonesian palm oil production is used for export, and the remaining 30% is for domestic needs (MIRI, 2021). Given the substantial impact that the export of palm oil and its derivatives has on Indonesian gross domestic product (GDP), any disturbance caused by the COVID-19 pandemic to palm oil exports will have repercussions on the general performance of the

agricultural sector's GDP, the national GDP, and the regional gross domestic product (GRDP).

Figure 2, shows that the production of Indonesian palm oil during the COVID-19 pandemic in the January-September 2020 period has decreased compared to the period before the COVID-19 pandemic. Palm oil production decreased from January to September 2020 and began to increase from October to December 2020. At the beginning of the COVID-19 pandemic in January 2020, palm oil production was only 3.65 million tons, or a decrease of 4.5% from the previous year of 3.83 million tons. Palm oil production in July 2020 was only 3.47 million tons or a decrease of 16.6% compared to the previous year of 4.17 million tons. The lowest palm oil production during the COVID-19 pandemic 2020 occurred in May, July, and August.

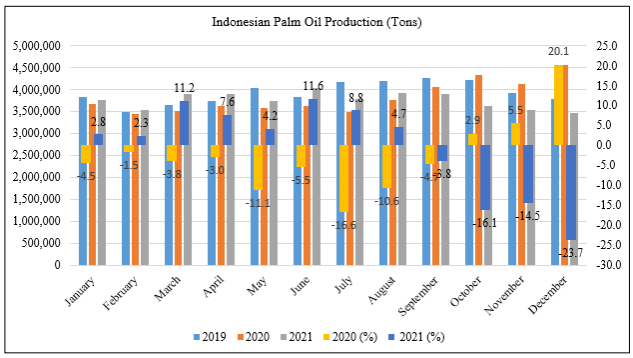

Figure 2. The monthly volume of palm oil production before and after the COVID-19 (tons) and the change (%) (BPS, 2020, 2021b)

In 2021, the monthly production of Indonesian palm oil fluctuated. In January 2021, palm oil production was 3.76 million tons, an increase of 2.8% from January 2020 at 3.65 million tons. Total palm oil production in 2021 was 45.12 million tons, down 1.3% from 2020's 45.74 million tons (Figure 2). Overall, Indonesian palm oil production was much higher in 2019.

According to the Indonesian Palm Oil Association (GAPKI), several factors caused Indonesian palm oil production to decline in 2020 and 2021. The first is terrible weather. In 2019 and 2020, the El Niño phenomenon had a negative impact on palm oil production. El Niño caused a more extended and drier dry season in several palm oil-producing regions in Indonesia, disrupting the growth of oil palm plants and causing production to decline. The second is the disruption to the supply chain due to the COVID-19 pandemic. Movement restrictions and health protocols implemented to prevent the spread of the COVID-19 virus hampered labor mobility in oil palm plantations, disrupted harvesting and processing, and affected productivity. The third is labor limitation. Labor shortages have become a severe problem during the COVID-19 pandemic. The decrease in labor mobility, both within the country and abroad, has resulted in difficulties in meeting labor needs in oil palm plantations. This has a negative impact on production efficiency and the amount of palm oil production. Fourth is the limitation of transportation facilities. Movement restrictions and the closure of several transportation routes in response to the COVID-19 pandemic have led to limited access and mobility in transporting palm oil from plantations to processing plants. Delays in the transportation of palm oil can lead to decreased production. Fifth is plant diseases. Plant diseases such as stem base rot (Ganoderma) and fusarium wilt also contributed to the decline in palm oil production in 2020. These diseases attack oil palm plants, hamper growth and productivity, and cause a decline in production (GAPKI, 2022, 2023).

Figure 3, it can be seen a comparison of the monthly export volume of Indonesian palm oil before and after the COVID-19 pandemic. At the beginning of the COVID-19 pandemic in January 2020, Indonesian palm oil export volume was only 1.80 million tons, which decreased by 32.6% compared to January 2019 of 2.67 million tons. The volume of palm oil exports fluctuated and tended to decline until the end of 2020, although it increased in April, June, and July (BPS, 2020).

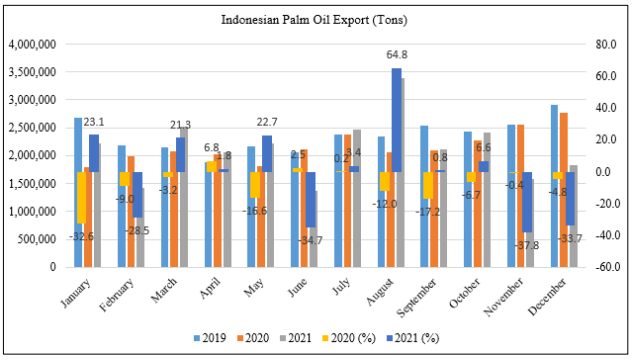

Figure 3. The monthly volume of palm oil export before and after the COVID-19 (tons) and the change (%) (BPS, 2020, 2021b)

In 2021, Indonesian monthly palm oil export volume fluctuated. In January 2021, the export volume of palm oil was 2.22 million tons, an increase of 23% from January 2020 of 1.80 million tons. The highest export volume in 2021 occurred in August at 3.92 million tons. The total export volume of palm oil in 2021 was 27.06 million tons, down 2.1% from 2020 (Figure 3).

The highest decline in Indonesian palm oil export volume occurred in China, namely 4.39 million tons in 2020, or a 24.2% decrease compared to the previous year of 5.79 million tons in 2019 (Figure 4). China is one of the largest importers of palm oil from Indonesia. The decline in exports to China is due to the decline in demand for palm oil due to the influence of the COVID-19 pandemic (GAPKI, 2021). The decline in palm oil exports to China occurred at the beginning of the first semester of the entry of COVID-19 into Indonesia (Aulya, 2022). In the middle of the semester, May 2020, China recovered from the COVID-19 pandemic and massively increased its vegetable oil imports to restore depleted stocks, thus increasing palm oil exports from Indonesia again (GAPKI, 2021). Exports to India were similar to the pre-COVID-19 period, declining only 0.2% from the previous year. Indonesian palm oil exports to the USA in 2020

decreased by 5.5% compared to the previous year due to the impact of the COVID-19 pandemic, which decreased food and beverage consumption in the USA. Lockdowns, movement restrictions, and decreased economic activity also contributed to the decline in demand for palm oil (CFR, 2023). Meanwhile, the volume of Indonesian palm oil exports to Pakistan during COVID-19 increased by 12.2% from 2.21 million tons in 2019 to 2.48 million tons in 2020 (Figure 4) (BPS, 2020). The increased volume of palm oil exports to Pakistan in 2020 was due to decreased demand for palm oil in China, so the Indonesian government shifted palm oil exports to Pakistan. Not only to Pakistan, the Indonesian government has also shifted palm oil exports to Bangladesh, the United States, Tunisia, Turkey, Egypt, Iran, Algeria, and Morocco (Ditjenbun, 2020). Palm oil exports to Spain in 2020 reached 1.13 million tons, an increase of 5.3% from the previous year.

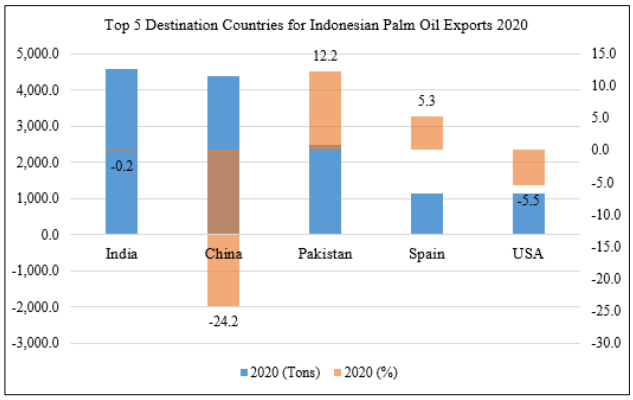

Figure 4. Five main destination countries for Indonesian palm oil exports in 2020 (BPS, 2020)

In 2021 China became the largest destination for palm oil exports from Indonesia. Palm oil exports to China in 2021 amounted to 4.70 million tons, an increase of 7.1% compared to 2020 (BPS, 2021b), displacing India, previously the leading destination country for Indonesian palm oil exports. The increasing purchasing power of the Chinese people has led to high demand for palm oil for use in the food, cosmetics, and other raw materials industries (Christina & Alison, 2022). Indonesian palm oil exports to India in 2021 amounted to 3.08 million tons, down 32.4% from the previous year (Figure 5) (BPS, 2021b). In early 2021, the Indian government imposed a policy of increasing import tariffs on crude palm oil to encourage production and protect local vegetable oil producers in India (Jadhav et al., 2020, 2021). This increased import tax made palm oil from Indonesia more expensive in the Indian market, reducing its competitiveness. In mid-2021, the Indian government again reduced the import duty rate on crude palm oil by 2.5%. The Government of India took this adjustment step to address the high price of vegetable oil and ensure the availability of vegetable oil to domestic consumers at a reasonable price. Vegetable oil import duty is one of the critical factors affecting vegetable oil prices and domestic prices in India (BPDPKS, 2021). In October 2021, the Indian government again waived import taxes on crude palm oil until March 2022 because the price of vegetable oil in India has continued to increase since 2021 (Kamath, 2022). This decision indeed increased Indonesian palm oil exports to India again. Palm oil exports to Pakistan in 2021 amounted to 2.67 million tons, an increase of 7.5% from the previous year. Palm oil exports to the USA in 2021 amounted to 1.64 million tons, an increase of 46% from the previous year. After a downturn due to the COVID-19 pandemic, the US economy began to recover in 2021. With the economic recovery, food and beverage demand increased, including palm oil products (CFR, 2023). Meanwhile, Indonesian palm oil exports to Bangladesh in 2021 amounted to 1.31 million tons, an increase of 28.5% from the previous year, so Bangladesh is the fifth largest export destination country for palm oil from Indonesia, replacing Spain, which was previously the fifth largest palm oil export destination country from Indonesia.

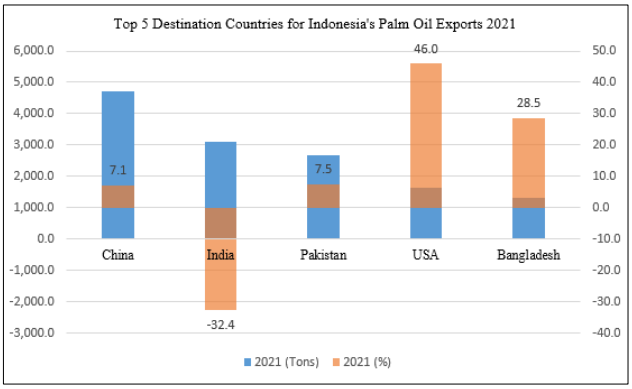

Figure 5. Five main destination countries for Indonesia's palm oil exports in 2021 (BPS, 2021b)

In contrast to the declining volume of palm oil exports, the value of palm oil exports increased during the COVID-19 pandemic. Figure 6, shows the monthly percentage increase in the value of palm oil exports before and after the COVID-19 pandemic. The value of palm oil exports only decreased at the beginning of the COVID-19 pandemic in January 2020; from February 2020 to December 2020, the value of palm oil exports continued to increase significantly (BPS, 2020). Based on Figure 6, it can be seen that the value of palm oil exports in 2020 and 2021 is much better than in 2019, although in terms of export volume in 2020 and 2021, it is lower than in 2019 (BPS, 2020, 2021b). The export value of palm oil in 2019 was US$16.03 billion; in 2020, US$18.72 billion; and in 2021, the export value of palm oil increased by 53% to US$28.72 billion (BPS, 2021b).

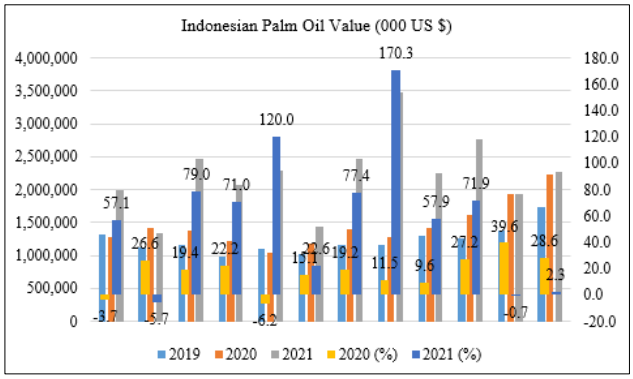

Figure 6. The monthly value of palm oil export before and after the COVID-19 (US $) and the change (%) (BPS, 2020, 2021b)

A rebound or increase in the price of Indonesian palm oil in the global market generally caused an increase in the value of palm oil exports in 2020. Previously, Indonesian palm oil prices experienced a significant decline due to issues such as the trade war between the United States and China, the increase in palm oil import tariffs by India, and negative campaigns related to palm oil in Europe (LPEI, 2021). In addition, during the COVID-19 pandemic, global demand for palm oil remained high (Astra, 2021). One of the main reasons is that palm oil is used in various consumer products such as food, cosmetics, and biofuels (Anonymous, 2021; MRR, 2021). The continued high demand from key markets such as India, China, and the European Union contributes to the rise in palm oil prices (LPEI, 2021). Another factor affecting Indonesian palm oil prices is that some significant palm oil producers have experienced reduced production required to the impact of the pandemic, such as labor reductions, travel restrictions, and supply chain disruptions (Ashaari et al., 2022); this decrease in production results in a more limited supply and pressure on prices.

Based on data from the World Bank (2022), in 2020, the average global palm oil price was 759.44 US$/mt, an increase of 26% from 2019 with an average price of 604.52 US$/mt. In 2021 the average world palm oil price increased again to 1124.16 US$/mt. Figure 7, it can be seen that the monthly price of world palm oil increased from 2019 to 2021 (World Bank, 2023). When the world palm oil price continues to rise, Indonesia will benefit because the export price of palm oil will be higher (Astra, 2022). Palm oil exports are measured in foreign currencies, such as the US dollar, so a price increase will increase revenue in that currency.

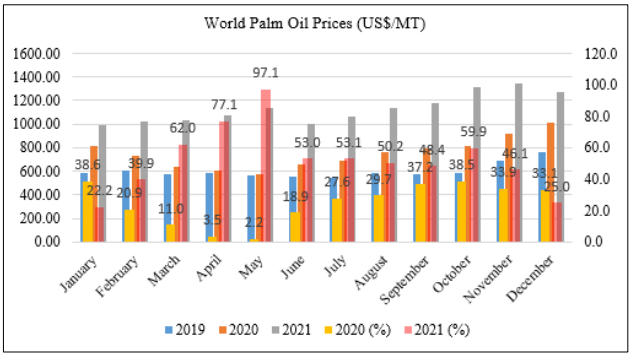

Figure 7. The monthly of world palm oil prices before and after the COVID-19 (US$/mt) and the change (%) (World Bank, 2023)

The price of Indonesian crude palm oil in the domestic market also increased during the 2020 and 2021 COVID-19 pandemic. Figure 8, shows that the monthly price of Indonesian palm oil in the domestic market fluctuates and tends to increase from January 2020 to December 2021. The increase in the domestic price of crude palm oil goes hand in hand with the increase in world palm oil prices. This is because the price of palm oil is a commodity price determined by the global market, and price changes in the international market can affect the price of domestic palm oil (BPS, 2022). If there is an increase in world palm oil prices, the domestic market also tends to experience price increases.

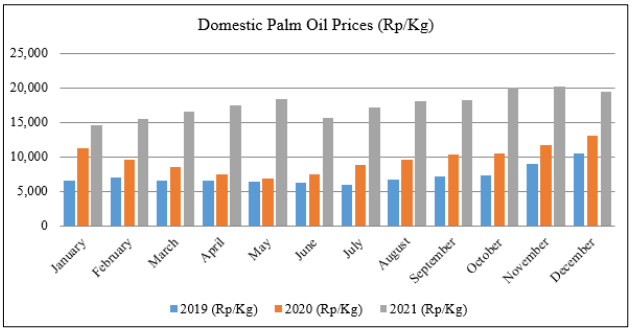

Figure 8. The monthly of domestic palm oil prices before and after the COVID-19 (Rp/kg) (Bappeti, 2023)

Based on Figure 9, it can be concluded that palm oil production and export volume grew negatively during the COVID-19 pandemic in 2020 and 2021. Meanwhile, the value and price of palm oil grew positively during the 2020 and 2021 COVID-19 pandemic periods and grew negatively before the COVID-19 pandemic in 2019.

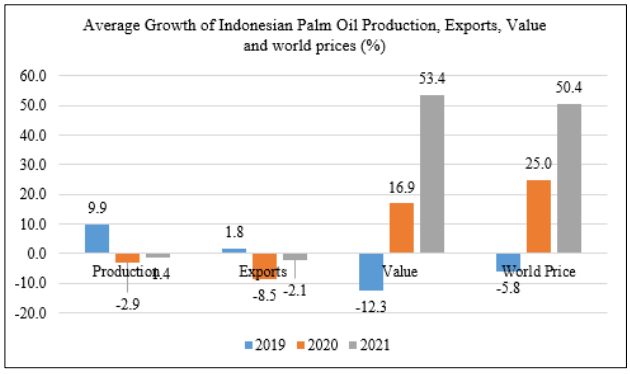

Figure 9. The average growth of Indonesian palm oil production, export, value, and world prices (%) (BPS, 2021b)

Some of the policies that the Indonesian government has carried out to overcome the negative impact of COVID-19 on Indonesian palm oil exports are:

1. Fiscal Incentives and Economic Stimulus: The Indonesian government provides fiscal incentives and economic stimulus to the palm oil sector, including export tax exemptions, import duty exemptions, and working capital credit support. These measures aim to encourage operational sustainability and improve the competitiveness of palm oil producers (Kemenkeu, 2020).
2. Enhanced Promotion and Economic Diplomacy: The Indonesian government has undertaken active promotional efforts to improve the image of Indonesian palm oil in the global market. This involves high-level visits to export destination countries, participation in international trade shows, and bilateral cooperation in the palm oil trade (MEARI, 2021).
3. Export Market Diversification: The Indonesian government is also trying to diversify palm oil export markets by identifying new countries as potential export destinations. This reduces dependence on key markets severely affected by the pandemic (Ditjenbun, 2020; LPEI, 2021).
4. Delayed Implementation of Mandatory B30 Rule: The Indonesian government has postponed the implementation of the mandatory B30 (30% biodiesel blend) policy to help palm oil producers deal with the impact of the COVID-19 pandemic. This postponement provides leeway to producers to meet domestic and foreign demand (Christina, 2020).

The Indonesian government has implemented similar policies, such as enhanced promotion and economic Diplomacy, export market diversification (KOMINFO, 2019a), and the mandatory B30 program (KOMINFO, 2019b), during the America-China trade war in 2019 and the Indonesia-EU trade war. The Indonesia-EU trade war started in 2017 when the EU imposed anti-dumping duties on Indonesian biodiesel products and banned palm oil as a biodiesel ingredient. The peak of this trade war was when the EU passed the palm oil moratorium with the Renewable Energy Directive (RED) II on March 13, 2019. The Delegated Regulation labeled palm oil as a high-risk Indirect Land Use Change (ILUC) commodity, which resulted in palm oil-based biodiesel not being included in the renewable energy category. These two trade wars caused a decline in demand, volume, and price of palm oil exports to several countries (Anonymous, 2019; Hendra, 2019; Henry, 2020).

4. Conclusion

The COVID-19 pandemic negatively and positively affected Indonesian palm oil production and exports. While production and export volumes declined due to various pandemic-related challenges, the increase in world palm oil prices resulted in higher export revenues. To sustain long-term export performance, Indonesia must balance price fluctuations with efforts to boost production, enhance supply chain efficiency, and diversify export markets. The Indonesian government's measures, including fiscal incentives, economic promotion, market diversification, and policy delays, reflect its commitment to mitigating the pandemic's negative impact on palm oil exports.

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Conflict of Interest

As the authors of this study, we declare that we do not have any conflict of interest statement.

Author Contributions

The authors declare that they have contributed equally to the article.

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