

PALM OIL INDUSTRY: INDONESIA'S ECONOMIC-COVID LOCOMOTIVE DURING THE PANDEMIC AND NEW NORMAL

By
Research Team PASPI

RESUME

Oil palm plantations as the spearhead of the palm oil industry, have proven to be an inclusive economic locomotive. The development of oil palm plantations results in a multiplier effect or creates greater benefits both in the form of output, income, added value and the creation of employment opportunities, not only in oil palm plantations but also in the national economy as a whole. Rifin's research results (2011) revealed that an increase in palm oil production in oil palm plantations will produce a multiplier effect (output, income, labor and value added) in ten rural sectors outside of oil palm plantations (rural non-farm economy).

Other evidence can also be demonstrated that the existence of oil palm plantations in remote areas will produce an impact and encourage the birth of new sectors so that it transforms remote and backward areas into new economic centers as an agropolitan (new cities of agriculture). According to the Kementerian Transmigrasi dan Tenaga Kerja (2014), by 2013 at least 50 rural and disadvantaged regions were developed into new growth areas whose basis is CPO production. This statement is also confirmed by the World Growth (2011) study, which says that oil palm plantations in Indonesia are an important part of rural development.

The existence of the palm oil industry as the locomotive of the Indonesian economy during the Covid-19 pandemic was also maintained. This is because the palm oil industry naturally has high immunity such as being located in remote areas, implement natural physical distancing and producing products that are needed during the pandemic so that industrial operations from the upstream to downstream sectors continue to operating. So no layoffs in oil palm plantation, palm oil production remains stable and relatively good export performance. Cumulative exports value of palm oil and its derivatives have contributed to foreign exchange exports in January-May 2020 reached USD 7 billion. The value export of palm oil product able contributed to Indonesia's trade balance surplus in the first quarter of 2020.

Looking ahead in the New Normal era, it is estimated that an increase in demand for palm oil is used as raw material for downstream products such as biosurfactant products and sources of vitamins and healthy food. The palm oil industry has also prepared itself to remain productive in meeting the demands of the downstream industry while still implementing the health protocol. Oil palm plantation companies have also begin implementing the Oil Palm 4.0 technology package in plantation operations and PKS to improve efficiency, productivity while minimizing interaction between employees as a form of adaptation to Covid-19.

Thus, the large role of the palm oil industry as an economic locomotive in the Covid-19 pandemic and economic recovery in the New Normal era is expected to be able to turn the wheels of the rural and regional economy through the resulting multiplier effect, so able to save the national economic amid the potential of global economic recession due to outbreaks Covid-19.

INTRODUCTION

It is commonly believed that the palm oil industry is exclusively beneficial to the producers and not to the Indonesian economy as a whole (inclusive). Although the palm oil industry has succeeded in making Indonesia the world's largest producer of CPO, as well as the world's largest vegetable oil producer, there are many questions regarding the contribution of the palm oil industry to the economy and to national economic development.

By using a more comprehensive paradigm, we can understand that the palm oil industry, especially at the level of oil palm plantations, are contributes greatly to the development of regional and national economies. So it can be said that oil palm plantations are an inclusive economic sector. Oil palm plantations are also having a role as an economic locomotive because they are able to push and pull other economic sectors. With these two roles, oil palm plantations are able to contribute to driving the village, district, provincial and national economy.

Similarly, in the current Covid-19 pandemic, the contribution of oil palm plantations and palm oil industry to the national economy are not stopping. On the contrary, the palm oil industry is increasingly showing its "fangs" in contributing to the national economy.

This paper aims to showing information about the contribution of oil palm plantations in the regional and national economy both historically and in the Covid-19 pandemic and the New Normal era. It is expected that information based on valid data and facts will be able to answer questions, so there are more misconceptions about the contribution of the palm oil industry to the economy.

OIL PALM PLANTATION'S AS A INCLUSIVE ECONOMIC LOCOMOTIVE

Oil palm plantations as the sperahead of the palm oil industry, are usually located in remote, marginal and isolated area. The location vcharacteristics were considered suitable by the Indonesian Government

especially in 1980s by making oil palm plantations as a part of agricultural development and regional development through a transmigration program, has been aimed at opening and building new economic growth centers in rural areas.

The development of oil palm plantations by state-owned enterprises (BUMNs) and/or private companies, arre a pioneering economic activity in the context of rural development. The state and private companies must open the area with access roads and bridge, farm roads, build employee housing, educational and health facilities, social.

Oil palm plantation companies also develop plasma plantation by involving local communities as a plasma farmers from the companies as a nucleus in PIR collaboration or other form of partnership. The development of new nucleus-plasma plantations has attracted investments from local farmers who are not part of the nucleus-plasma scheme to jointly grow oil palms on their land and these plantations are categorized as individual smallholder farmer's plantations. The number of individual smallholder has estates grown rapidly in many places and, therefore, the areas of people's plantations are larger than that of the nucleus-plasma plantations (PIR).

The growth of oil palm plantation is also able to encourage the development of other economic sectors. The people working in oil palm plantations are also consumers of food and non-food products produced by urban and rural communities. Based on public expenditure data (BPS, 2016), the value of transactions between the people on the oil palm plantations and the rural communities amounted to Rp 92 trillion per year, meanwhile transactions with the urban communities reached Rp 336 trillion per year. So the total transactions between the people on the oil palm plantations and in the communities outside the oil palm estates nationally reach Rp 428 trillion per year.

This means that the economic benefits created by the growth of oil palm plantations are not only enjoyed by community actors/working on oil palm plantations, but are also enjoyed by people who work outside oil palm plantations in rural and

urban areas. This condition shows that oil palm plantations are inclusive economic sectors because the economic benefits are felt by all parties, not only those who are directly involved in oil palm plantations (companies, company workers and farmers).

To further prove that oil palm plantations as part of the palm oil industry are inclusive, it can be seen by the multiplier effect indicator generated from the analysis of the 2008 Indonesian Input-Output table (Table 1).

Table 3.1: Multiplier index of oil palm plantations

Multiplier index	Oil palm plantations
Output	1.71
Income	1.79
Labor	2.64
Added value	1.59

Source: Table I-O, Statistics Indonesia, (2008)

The multiplier indexes of output, income, labor and added value of oil palm plantations are each greater than one. This means the multiplier impact of oil palm plantations is greater than the average multiplier impact of all national economic sectors. It also means that the development of oil palm plantations triggered by increased consumption, investment and exports will create greater benefits in terms of output, income, added value and employment creation, not only on oil palm plantations but also in the economy as a whole.

Rifin's research results (2011) revealed that an increase in palm oil production in oil palm plantations will produce a multiplier effect (output, income, labor and value added) in ten rural sectors outside of oil palm plantations (rural non-farm economy). The ten sectors are (1) financial services; (2) other services; (3) trade, restaurants and hotels; (4) chemical industry, fertilizer and pesticides; (5) oil, gas and mining; (6) transportation; (7) infrastructure; (8) food

industry; (9) machinery and electricity; and (10) other sectors.

If an increase in palm oil exports directly leads to increased revenues for oil palm plantations, it also increases the income (through indirect effects and induced consumption effects) of some sectors of the national economy, especially in 10 major economic sectors. Similarly, through the same mechanism, the creation of new employment opportunities does not only occur in oil palm plantations, but also in those sectors of the national economy.

Other evidence that shows oil palm plantations as an inclusive economic locomotive is the development of remote and quiet areas, underdeveloped due to oil palm plantations becoming new economic centers as an agropolitan. According to the Kementerian Transmigrasi dan Tenaga Kerja (2014), by 2013 at least 50 rural and disadvantaged regions were developed into new growth areas whose basis is CPO production. A list of new centers of economic growth in the regions due to oil palm development can be seen in Table 2.

Table 2. List of New Centers of Economic Growth Based on Oil Palm

Provinces	New Centers of Economic Growth Based on Oil Palm
North Sumateran	Stabat, Belarang, Sei Rampah, Limapuluh, Perdagangan, Rantau Prapat, Aek Kanopan, Aek Nabara, Kota Pinang, Sosa, Sibuhuan, Panyabungan and others
Riau	Pasir Pengaraian, Bangkinang, Siak Sri Indrapura, Rengat, Tembilahan, Bengkalis, Bagan Siapi-api, Teluk Kuantan, Dumai, Pekanbaru and others
South Sumateran	Sungai Lilin, Tugumulyo, Pematang Panggang, Bayung Lencir, Musi Rawas, Peninjauan, Muara Enim, Lahat
Jambi	Sarolangun, Sungai Bahar, Sengeti, Kuala Tungkal and others
Central Kalimantan	Sampit, Kuala Pembuang, Pangkalan Bun, Kasongan and others
East Kalimantan	Sangatta, Tenggarong, Tana Pase, Tanjung Redeb, Nunukan, Sendawar and others
South Kalimantan	Batulicin, Kotabaru, Pelaihari and others
Sulawesi	Mamuju, Donggala, Bungku, Luwu, Pasangkayu, and others

Thus, oil palm plantations in rural areas do not exploit rural resources but instead, through the development of the plantations, attract substantial new investment into isolated rural areas in such a way as to transform underdeveloped areas into new growth centers. This statement is also confirmed by the World Growth (2011) study, which says that oil palm plantations in Indonesia are an important part of rural development. The results of the PASPI study (2014) showed that the growth of palm oil production had a positive and significant effect on the growth of the GRDP of the palm oil center.

OIL PALM PLANTATION'S IMMUNITY MAKES COVID-ECONOMIC LOCOMOTIVE CONTINUOUSLY

Since March 2020, the Covid-19 outbreak has been declared as a pandemic because its spread has been increasingly widespread in almost all countries and until now the number of world cases continues to increase. Beside to causing hundreds thousands of deaths, Covid-19 and lockdown policies in order to reduce the transmission of the spread of the virus also have an impact on the stopping of economic activity temporarily. This condition cause economic growth in some countries to slow down. Some countries experiencing negative economic growth in the first quarter (q-to-q) in 2020 include (OECD, 2020): China (-9.8

percent), France (-5.8 percent), Spain (-5.2 percent), Italy (-4.7 percent), Germany (-1.4 percent), South Korea (-1.4 percent), the United States (-1.2 percent), and Japan (-0.6 percent).

The Covid-19 epidemic also had an impact on Indonesia's economic growth. According to BPS data (2020), Indonesia's economy in the first quarter of 2020 grew by 2.97 (YoY), where the Indonesian economy also slowed when compared to the first quarter of 2019 which was 5.07 percent. Meanwhile, the Indonesian economy in the first quarter of 2020 also experienced a contraction toward quarter IV-2019 (q-to-q) of 2.41 percent. Indonesia's slowing economic growth occurred in most business fields.

Among the many economic and industrial sectors affected by the decline in economic activity such as the cessation of production activities in the current pandemic period, but until now the impact has not been felt by the palm oil industry. In fact, the role of the palm oil industry as the locomotive of Indonesia's economy still exists amid the threat of the Covid-19 outbreak.

This is because the palm oil industry has the immunity and resilience to survive amid the Covid-19 pandemic. Oil palm plantations as the spearhead of the palm oil industry are quite advantageous because of its location in remote areas far from the city center. In addition, low man-land and man-space ratio

and the solid automation show that the pattern of work in oil palm plantations that have been spaced with minimum human interaction or have implemented natural physical distancing so it can minimize the virus transmission and have implemented a health protocol appeal.

The input that used in oil palm plantations are also mostly from local input, meaning that it is not affected by the import market which is experiencing obstacles due to a pandemic. Oil palm plantations in remote areas are also contribute to the independence of the rural or regional economy due to the symbiosis of mutualism between oil palm plantation communities and rural communities that produce food, horticultural and livestock needs.

The palm oil industry also produces food products such as cooking oil, margarine, biscuits etc. as well as hygiene products (personal care) such as soap, detergents, hand sanitizers to biodesinfectants, where these products are needed by people in the current pandemic. This condition has implications that the

palm oil industry from upstream to downstream are an industry that is not included in the economic sector that is lockdown due to Covid-19. Its means that as long as the sun is still shining on the earth so that oil palm plants can still produce oil and other biomass products, the wheels of the economy of the palm industry will continue to spin.

The implication of the high immunity of the palm oil industry is that operational at both upstream to downstream levels are still running normally and there are no layoffs for workers in the palm oil plantation companies or downstream industries.

Indonesia's palm oil production that is still stable. Based on GAPKI data (2020), palm oil production (CPO + PKO) increased from 3.81 million tons in January 2020 to 4.04 million tons in April 2020. Although in February and March, the production decreased to 3.61 million tons and 3.58 million tons respectively, but the declining in palm oil production is normal and occurs every year (Figure 1).

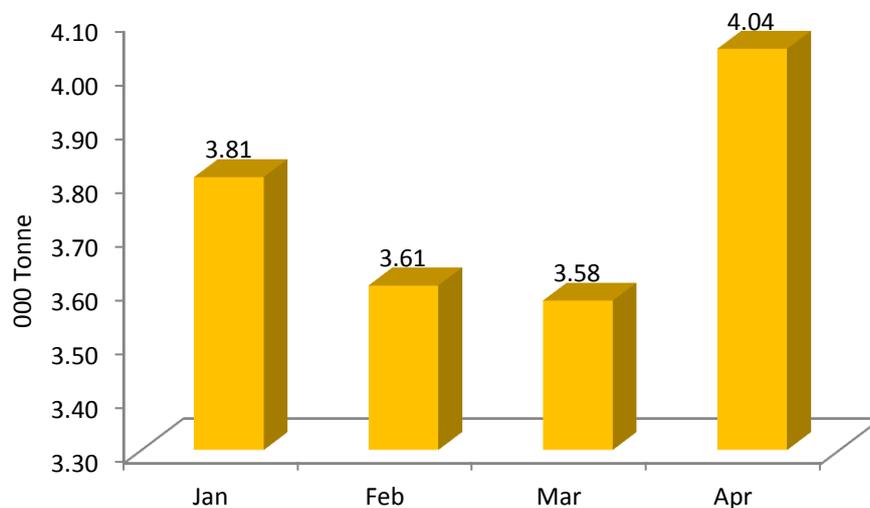


Figure 1. Palm Oil (CPO+PKO) Production in Januari-April 2020 (Source: GAPKI, 2020)

The Indonesian export performance of palm oil and derivative products also showed a fairly good performance in the early quarter of 2020 (Figure 2). In terms of volume, exports of palm oil and its derivatives have increased from 2.39 million tons to 2.65 million tons. The export value of palm oil and its derivatives also showed an increase from USD 1.69 billion to USD 1.82

billion during the January-March 2020 period. However, the export value decreased to USD 1.64 billion in April 2020. One of the factors that affecting the decline in export values was due to CPO prices (Rotterdam CIF) that decreased from USD 831 per ton to USD 562 per ton in the January-April 2020 period (MPOB, 2020).

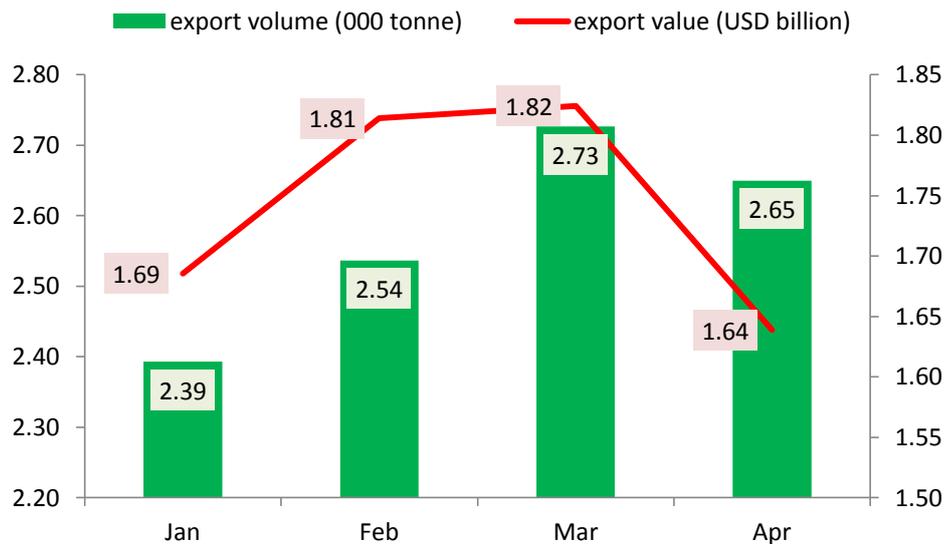


Figure 2. Value and Volume Export of Palm Oil and Its Derivatives Januari-April 2020 (Source: BPS, 2020)

Despite the decline in the exports value during this period, but cumulative exports value of palm oil and its derivatives have contributed to foreign exchange exports reached USD 7 billion. Palm oil exports also contributed to Indonesia's trade balance surplus of USD 2.62 billion in quarter I-2020. Indonesia's trade balance surplus in that period was due to the non-oil and gas trade balance surplus, where share of exports of palm products to Indonesia's total exports of non-oil and gas products contributed 17.7 percent. This shows that exports of palm products contributed enough to Indonesia's trade balance surplus in the January-April 2020 period.

THE POTENTIAL OF THE PALM OIL INDUSTRY FOR ECONOMIC RECOVERY IN THE NEW NORMAL PERIOD

During the pandemic and entering the New Normal era, surfactant/personal care products such as soap, hand wash, detergent, hand sanitizer and biodesinfectant are urgently needed by people throughout the world as mitigation efforts to prevent the transmission of the Covid-19 virus. Several world Market Intelligence agencies also predicted that will be an increase in surfactant and biosurfactant markets in the world during this pandemic. This shows that demand for palm oil and its biomaterilas

used as input of biosurfactant/personal care products is also expected to increase.

Beside oleochemical or biosurfactant product, palm oil also have biggest source of Vitamin A, Vitamin E and food product which has high nutrition. New research fro Prof. Sri Rahardjo, Professor of the Department of Food Technology and Agricultural Products, Gadjah Mada University (UGM), conducted Virgin Red Palm Oil (VRPO) containing 42 percent palmitic acid (saturated fatty acids) which functions to maintain and protect the health of the lungs (Raharjo, 2020). Palmitic acid intake plays a role in expediting the gas exchange process in Covid-19 patients who suffer from breathing difficulties. This is because palmitic acid is the main component about 60% phospholipid compound that lines the inner walls of the alveoli of the lungs. This phospholipid acts as a surfactant that can help facilitate the exchange of gases (oxygen and carbon dioxide) from the alveoli cavity to blood vessels or vice versa.

This shows that on the demand side, the palm oil industry will face a bright market potential for a variety of downstream products that needed in the New Normal period. To meet the potential market demand for both the domestic and the global market which is expected to increase, it is also necessary to prepare the upstream sector to produce enough palm oil to meet the demand of the downstream industry. Palm oil production in the upstream sector

can be ensured to continue, but in order to remain productive but safe from Covid-19, plantation companies and farmers also continue to implement health protocols such as social/physical distancing, minimize physical contact, maintain distance and maintain personal hygiene frequently by washing hands and maintaining personal cleanliness.

The existence of the Covid-19 outbreak also encouraged producers, especially oil palm plantation companies, to use the Palm 4.0 technology innovation. The Palm 4.0 technology package is utilizing technologies such as Big Data, Artificial Intelligence (AI), Internet of Things (IoT) and sensors for plantation operations and PKS so that its management can be integrated digitally and in real time. The use of Oil Palm 4.0 technology packaged not only aims to increase productivity and efficiency, but also can implement the Covid-19 health protocol. This is because the use of technology will maximize automation and minimize interaction between workers. Palm oil plantation companies that are known to have used Palm Oil 4.0 technology (Agrovaria, 2019) are PT. Astra Agro Lestari Tbk with its digital application system namely DINDA (Daily Indicator of Astra Agro), MELLI (Mills Excellence Indicator), AMANDA (Astra Foreman Application), AMANTA (Astra One Foreman Application) and TIKA (TBS Astra Calculator).

CONCLUSION

Oil palm plantations as the spearhead of the palm oil industry, have proven to be an inclusive economic locomotive. The development of oil palm plantations results in a multiplier effect or creates greater benefits both in the form of output, income, added value and the creation of employment opportunities, not only in oil palm plantations but also in the national economy as a whole. Other evidence can also be demonstrated that the existence of oil palm plantations in remote areas will produce an impact and encourage the birth of new sectors so that it transforms remote and backward areas into new economic centers as an agropolitan (new cities of agriculture).

The existence of the palm oil industry as the locomotive of the Indonesian economy during the Covid-19 pandemic was also maintained. This is because the palm oil industry naturally has high immunity such as being located in remote areas, implement natural physical distancing and producing products that are needed during the pandemic so that industrial operations from the upstream to downstream sectors continue to operating. So no layoffs in oil palm plantation, palm oil production remains stable and relatively good export performance. Indonesia's export of palm oil products even contributed to Indonesia's trade balance surplus in the first quarter of 2020.

Looking ahead in the New Normal era, it is estimated that an increase in demand for palm oil is used as raw material for downstream products such as biosurfactant products and sources of vitamins and healthy food. The palm oil industry has also prepared itself to remain productive in meeting the demands of the downstream industry while still implementing the health protocol. Oil palm plantation companies have also begin implementing the Oil Palm 4.0 technology package in plantation operations and PKS to improve efficiency, productivity while minimizing interaction between employees as a form of adaptation to Covid-19.

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