ECONOMIC RESILIENCE OF “OIL PALM VILLAGE” VERSUS “NON-OIL PALM VILLAGE”

By
PASPI-Monitor

RESUME

At the macro level, the palm oil industry’s contribution has been empirically proven to the Indonesian economy as a source of foreign exchange, poverty alleviation and economic growth. This contribution can also be seen in the central areas of oil palm, as indicated by the growth of new economic centers. Meanwhile, there is no empirical evidence showing the palm oil industry’s contribution at the village level, even though oil palm plantations are located in villages. On the other hand, the Indonesian Government, through the Ministry of Village, Development of Disadvantaged Regions, and Transmigration, has a village development indicator known as the Developing Village Index (Indeks Desa Membangun/IDM). One of the indicators in the index is Village Economic Resilience. By using and statistically processing the data on these indicators, it can be seen that the Oil Palm Villages are more advanced economically than the Non-Oil Palm Villages. Even though it has grown, there is still an opportunity for economic progress in both Oil Palm and Non-Oil Palm Villages are still likely to increase.
INTRODUCTION

Various studies have revealed the palm oil industry’s contribution at the macroeconomic level. The palm oil industry contributes significantly to the country’s exports, foreign exchange, trade balance, economic growth, and regional economic development (Susila, 2004; World Bank, 2011; Sipayung, 2012, 2018; PASPI, 2014; Kasrino, 2015; PASPI Monitor, 2021).

In the context of Indonesian development, the development of oil palm plantations is carried out in rural areas, remote areas, underdeveloped areas, and degraded land. Starting with the opening of access roads and the development of corporate oil palm plantations, then attracting the entry of smallholder oil palm plantations and the development of service businesses that serve them in such a way that ultimately creates new centers of economic growth in rural areas based on oil palm plantations (PASPI, 2014). On this basis, so-called Palm Oil Villages are villages whose main commodity is oil palm.

Of course, not all people in rural areas cultivate palm oil (Oil Palm Villages). Some rural communities also choose to cultivate other commodities such as food or plantation crops other than oil palm (this village is called Non-Oil Palm Village). In this regard, comparing “Oil Palm Villages” with “Non-Oil Palm Villages” is interesting.

The acceleration of rural development has received serious attention from the government. Regarding the village development, the Indonesian Government has indicators, as stated in the Ministry of Village, Development of Disadvantaged Regions, and Transmigration Regulation No. 2/2016 concerning the Developing Village Index (Indeks Desa Membangun/IDM). The index has 12 indicators of rural economic resilience in Indonesia.

It is interesting to discuss whether the significant contribution of the palm oil industry at the macroeconomic level, as mentioned above, also occurs at the micro level, such as village economic resilience. Is the economic resilience of the Oil Palm Villages better than the economic resilience of the Non-Oil Palm Villages?

This paper compares of economic resilience growth of Oil Palm Villages and Non-Oil Palm Villages. The data used in this study is Economic Resilience Index data from 262 oil palm villages and 262 non-oil palm villages in Indonesia’s Top-8 palm oil center provinces in 2016 and 2021. The statistical method to test the significant differences related to the economic resilience of Oil Palm Villages and Non-Oil Palm Villages uses the DID (Difference in Difference) Binary Logistics Regression model.

OIL PALM-DRIVEN RURAL DEVELOPMENT

Developing oil palm plantations in Indonesia is part of the oil palm-driven rural development. Initially, they were built in degraded land, areas that are socially, economically, and ecologically degraded, isolated, underdeveloped, poor, marginal, and remote. It started with a pilot project assisted by the World Bank, which became known as the Nucleus Estate and Smallholders/NES Project (Perkebunan Inti Rakyat/PIR). Since 1980, the implementation of NES models has been developed into various patterns such as Local NES (PIR Lokal), Special NES (PIR Khusus), Trans NES (PIR Trans), and PIR KPPA (PASPI, 2014). Along with the growth of oil palm plantations on degraded lands, they underwent social, economic, and ecological restoration, which later developed into a new center of economic growth in rural areas.

The development of oil palm plantations, which involves a combination of government, private, and community investments focused on specific areas, adopts the Big-Push Strategy theory (PASPI, 2015). The theory was developed by economist Paul Rosenstein-Rodan in 1943, which stated that rural development would be significantly successful if it was carried out with a big push, namely with large and mass investments for the size of the regional economy.

The growth and development of oil palm plantations create benefits economically, socially, and ecologically for the village community, both as smallholders and workers on oil palm plantation corporations. In addition, oil palm plantations also attract...
the activities of related economic sectors, which create more comprehensive benefits and are enjoyed by the community in the villages.

Increased economic activity in rural areas, both in the oil palm plantation sector and non-oil palm plantation sector, impacts the regional economy. The PASPI study (2014) reveals that in addition to having a larger economy, oil palm center districts in North Sumatra, Riau, South Sumatra, and Central Kalimantan have a faster economic growth rate than non-oil palm centers. Kasryno's study (2015) also shows the same phenomenon, that several oil palm center provinces in Indonesia, such as North Sumatra, Riau, Jambi, South Sumatra, and Kalimantan (West, Central, and East) have relatively higher GRDP growth rates compared to provinces with relatively low oil palm plantation areas, such as Aceh, West Sumatra, Bengkulu, Lampung, South Kalimantan, and Sulawesi.

In addition to the GRDP, poverty reduction in oil palm center provinces such as Sumatra and Kalimantan are also faster than in non-oil palm production centers. The contribution of oil palm plantations to reducing poverty in rural and urban areas has also been revealed by researchers (Susila, 2004; Susila and Munadi, 2008; World Growth, 2011; PASPI, 2014; Kasryno, 2015; Edwards, 2019). This study also states that poverty alleviation in oil palm centers in rural areas is relatively faster than in non-oil palm centers.

The studies from Budidarsono et al. (2013) and Apresian et al. (2020) revealed that the expansion of oil palm plantations in Riau Province, the main center province for Indonesian palm oil, also has a significant influence on economic performance, as indicated by relatively high GRDP growth. Meanwhile, Syahza's research (2013) reveals that the developing oil palm plantations can reduce urban and district economic inequality.

Regional income increases government revenue through taxes from oil palm plantation activities (Sandker et al., 2007). Areas with oil palm plantations increase the availability of electricity facilities, use of fuel for modern cooking, and build markets, health clinics, schools, places of worship, and other public facilities that support economic activities in the area.

**ECONOMIC RESILIENCE OF "OIL PALM VILLAGES" VS "NON-OIL PALM VILLAGES"**

In general, Law 12/1992 protects the freedom of rural communities to choose cultivated commodities. In addition to the climate/soil suitability factor, the village community chose oil palm as an economic activity because the price was higher and more profitable than other commodities such as rubber and rice, thus potentially increasing the smallholder's income (Susila, 2004; Feintrenie et al., 2010; Rist et al., 2010; Adebo et al., 2015; Euler et al., 2016; Kubitza et al., 2018).

Another factor influencing the adoption of oil palm, apart from the higher price of palm oil (FFB/CPO), is the high return on land and labor in oil palm cultivation (Rist et al., 2010; Euler et al., 2016; Edwards, 2019). The adoption of oil palm among independent smallholders is also due to their close access to palm oil mills in surrounding locations (PASPI, 2014; Euler et al., 2016; Gatto et al., 2017).

Indonesian Government, through Law Number 6 of 2014 concerning Villages and Regulation of the Minister of Villages for Development of Disadvantaged Regions and Transmigration No. 2 of 2016 concerning the Index of Developing Villages, stipulates 12 indicators of village economic resilience in Indonesia. The twelve indicators referred to include: (1) Types of community's economic activity; (2) Population access to trade centers (shops, permanent and semi-permanent markets); (3) The trading sector in settlements (stall and minimarkets); (4) The business of food stalls, restaurants, hotels, and inns; (5) Post office and logistics services; (6) General banking institutions (government and private); (7) Rural Credit Banks (Bank Prekreditan Rakyat); (8) Population access to credit; (9) Community-based economic institutions (cooperatives); (11) Public transportation modes (public transportation, regular routes and operating hours of public transportation); and (12) Quality of village roads. The indicators reflect
Indonesia’s Village Economic Resilience Index (Indeks Ketahanan Ekonomi/IKE).

The increase in the economic progress of Palm Oil Villages occurs both at the national level and in each province in Indonesia’s Top-8 oil palm plantation centers in Indonesia. The village’s economic progress is reflected in the Economic Resilience Index (Indeks Ketahanan Ekonomi/IKE). At the national level, Palm Oil Village’s Economic Resilience Index increased from 0.41 in 2016 to 0.58 in 2021 (Figure 1).

Figure 1. Economic Resilience Index of Oil Palm Villages and Non-Oil Villages in the Indonesia’s Top-8 Palm Oil Centre

In 2016, the oil palm center provinces with the highest levels of economic progress in Oil Palm Villages were Jambi (0.49) and Riau (0.48). Jambi is still consistent as an oil palm center province with the highest level of economic progress in Palm Oil Village in 2021 with a value of 0.66. Meanwhile, Riau was replaced by East Kalimantan as an oil palm center province with the second highest level of economic progress in Oil Palm Village with a value of 0.64.

From the growth rate, the level of economic progress in Palm Oil Villages at the national level reached 40.64 percent during the 2016–2021 period. The rate of increase in economic progress in Palm Oil Villages in West Kalimantan is the largest at 76.3 percent, with the rate of increasing from 0.34 to 0.59 percent. Meanwhile, North Sumatra became the province with the lowest economic growth of 18.95 percent, with an increase in economic progress from 0.44 to 0.53 in that period.

When compared to the average value of economic progress between Oil Palm and Non-Oil Villages, it shows that the economic progress of Oil Palm Villages is higher than Non-Oil Villages in the period 2016–2021.

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In 2016, the economic progress in Oil Palm Village was 0.41, while Non-Oil Palm Village was 0.40. The level of economic progress of the village groups increases in 2021, namely Oil Palm Village by 0.58 and Non-Oil Palm Village by 0.53.

Based on the data analysis above, it can be concluded that the level of economic progress in Oil Palm Villages is higher than that of Non-Oil Palm Villages. The presence of oil palm plantations and related activities is able to drive economic progress in the village concerned.

Statistically, the economic progress of Palm Oil Villages was higher and more significant (P < 0.01) compared to Non-Oil Palm Villages. This means that the adoption of oil palm plantations in Palm Oil Villages can achieve higher economic progress compared to the economic progress achieved by Non-Oil Palm Villages.

The results of this study confirm the results of previous studies. The development of oil palm plantations in villages creates a multiplier effect to encourage the growth of other economic sectors such as the trade sector, financial institutions, as well as logistics and transportation services (Rifin, 2011; PASPI, 2014; Syahza et al., 2021). The economic sectors formed in the Palm Oil Villages are divided by dimensions (trade, distribution access, credit access, and economic institutions) that make up the composite IKE value (Kemendesa PDTT, 2021).

The results of this study are also in line with the results of previous studies at the village level (Budiharsono et al., 2013; Santika et al., 2019), which found that villages with oil palm plantations (Oil Palm Villages) enjoyed improvements in economic aspects compared to villages without oil palm plantation (Non-Oil Palm Villages). The community enjoys greater economic benefits in villages that have oil palm plantations and are market-oriented (commercial).

Various studies (PASPI, 2014; Euler et al., 2016; Qaim et al., 2020; Apresian et al., 2020; Chrisendo et al., 2021) show that the income of oil palm smallholders is higher than other farmers. The PASPI study (2014) shows that the income ratio of smallholders is higher than that income of non-oil palm smallholders. On average, the income of oil palm smallholders is not only higher but also grows faster.

The proportion of increased income received by smallholders will continue to increase along with the age of their oil palm plantations (Budidarsono et al., 2013). After five years of oil palm cultivation, smallholders in Riau enjoy a 200-300 percent increase in income. Then their income continues to increase to 400-1,300 percent after 5-10 years of oil palm cultivation and continues to grow to 2,200-25,000 percent.

Figure 2. Economic Resilience Index of Oil Palm Villages and Non-Oil Palm Villages in Aggregate
after the age of oil palm plantations more than 10 years.

In addition to the higher income received, smallholders also get a stable income because it is obtained regularly every month from the sale of Fresh Fruit Bunches (FFB) (Balde et al., 2019; Apriean et al., 2020). Another indicator that proves their income is higher and sustainable is shown by the ability of oil palm smallholders to pay debts and loans (production cost debt) faster than their due date (Susila, 2004; Feintrenie et al., 2009; Rist et al., 2010).

Increasing the smallholder's income will increase their purchasing power, which is used to fulfill primary, secondary, and tertiary needs (Syahza et al., 2013). One of the primary needs is nutritious food products for smallholders and their families. Increasing the smallholder's income in Riau's villages can increase the number of households able to meet basic food needs, by regularly consuming rice compared to conditions before cultivating oil palm, so that can only able to consume corn and cassava (Apriean et al., 2020). The increase in smallholder’s income is also used to meet secondary fullfill that are durable goods (Syahza et al., 2013; Edwards, 2019), such as houses, vehicles (cars/motorcycles), televisions, and communication tools (mobile phones).

The increase in income is also felt not only by smallholders and their families but also by non-oil palm farmers in oil palm plantation villages through economic spillovers (PASPI, 2014; Gatto et al., 2017). One of the economic spillovers resulting from investment in oil palm plantations can be enjoyed by rural communities who do not participate directly in oil palm plantations, namely through the job creation (Dib et al., 2018).

In addition to the economic sector, which was developed based on the villagers themselves, oil palm plantation companies through the Corporate Social Responsibility (CSR) program also initiated the development of economic sectors outside of oil palm cultivation. The CSR program to improve the welfare of rural communities through local economic empowerment. The CSR program of oil palm plantation companies in question is the development of SMEs engaged in the trade and transportation sector (PASPI, 2014; Pambudi et al., 2018) as well as non-oil palm agricultural cultivation such as food crops/rice and horticulture (Baihaqi et al., 2020), fisheries (Pasaribu, 2015) and animal husbandry by implementing integration (Winarso and Basuno, 2013).

The development of the economic sector in the villages is driven by oil palm plantations can create economic benefits such as increased income and purchasing power of rural communities. Even the study of Dib et al. (2018) revealed that this condition was able to help reduce income inequality among non-oil palm farmers belonging to the poor community in rural Jambi. In line with this study, Syahza's study (2013) also reveals that the development of oil palm plantations can reduce income inequality between rural community groups.

Oil palm plantations also not only contribute to increasing community income but also increase village income compared to before cultivating oil palm or when they were still dependent on rubber or timber plantations (Apriean et al., 2020). The study by Santika et al. (2019) also mentions that the development of oil palm plantations in oil palm villages (market-oriented) enjoys improvements in financial aspects and fulfills basic needs compared to villages without oil palm plantations. This is also confirmed by Edwards's (2019) research, which found that villages that adopted oil palm tended to have better financial performance.

Opportunities to increase economic resilience in Oil Palm and Non-Oil Palm Villages are also available in the future. The achievement of the Economic Resilience Index in 2021 is still worth 0.58 (Palm Village) and 0.53 (Non-Palm Oil Village). This indicates that increasing economic resilience is still possible for both Oil Palm Villages and Non-Oil Palm Villages. The potential for economic progress in Oil Palm Villages, which is still open for improvement, is still around 42 percent, while in Non-Oil Palm Villages it is even greater at 47 percent. Improvements to the twelve indicators of economic resilience need to be carried out in the future, both in Oil Palm Villages and Non-Palm Villages, so that village economic resilience is closer to ideal economic resilience.
CONCLUSION

Oil palm-driven rural development has progressed from year to year. Even the existence of oil palm plantations makes Oil Palm Village more economically advanced compared to Non-Oil Palm Villages. The economic resilience achieved by Palm Oil Villages has reached 58 percent of the ideal condition of economic resilience targeted by the Indonesian Government (in this case, the Ministry of Village, Development of Disadvantaged Regions, and Transmigration). Meanwhile, the economic resilience that occurred in Non-Oil Palm Villages only reached 53 percent of the target. The potential to increase the progress of economic resilience is still wide open in both Oil Palm Villages (42 percent) and Non-Palm Oil Villages (47 percent). Therefore, it is necessary to improve the quality and quantity of the twelve village economic resilience indicators that have been targeted by the government in the future.

REFERENCES


