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The Role of People's Oil Palm Plantations in the Economic Development of Aceh Tamiang Regency

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ABSTRACT
This study examines the role of smallholder palm oil plantations in the economic development of Aceh Tamiang. Based on Location Quotient (LQ) analysis, palm oil is a leading commodity in the region, but it struggles with labor absorption, suggesting the need for further development. The Growth Ratio Model indicates strong growth potential for the sector, and the Klassen Typology places palm oil in Aceh Tamiang in a rapidly growing sector. This highlights the importance of optimizing the subsector for regional economic growth, with recommendations for increasing labor absorption and supporting policies for further development.

Introduction

The oil palm plant *(Elaeis guineensis Jacq)* is native to West African Guinea. However, there are those who argue that oil palm plants come from South America, namely the Brazilian area because more oil palm species are found in the area compared to Africa. The history of plantations in developing countries such as Indonesia cannot be separated from the development of colonialism and capitalism. In developing countries, plantations are generally present as an extension of the development of western agrarian capitalism, which was introduced through the colonial economic system. The Indonesian nation since the beginning of the colonial period until now cannot be separated from the plantation sector, because this sector has a very important and decisive meaning in the formation of various social and economic realities of society in various regions in Indonesia. Oil palm is Indonesia's leading and main plantation commodity. A plant whose main product consists of crude palm oil *(Crude Palm Oil).* Until now, oil palm has been cultivated in the form of plantations and processing plants that produce oil and its derivative products (Fauzi, et al., 2020).

Oil palm is one of the leading plantation commodities both in the world and in Indonesia which has an important role in the plantation sub-sector to build the country's economy. Economic development can be through regional development and development by opening new plantation areas, absorbing labor, improving regional welfare, and increasing regional income which can also be a source of state foreign exchange (Rosmegawat, 2021).

Long-term economic development does not always have to be directed to the industrial sector, but can also be directed to other sectors, such as the agricultural sector and the service

sector which includes trade, transportation, communication, banking and others. Regional economic development is a process in which the local government and all components of society manage various existing resources and form a partnership pattern to create new jobs and stimulate the development of economic activities in the area. Economic development can encourage economic growth and vice versa, economic growth can facilitate the regional development process. The existence of economic growth is an indication of the success of economic development (Kurniawan, et al. 2022).

The agricultural sector is used as the main sector because it considers its potential contribution as a source of employment opportunities and also regional income. The results of the 2013 Agricultural Census show that the average income of farmers who have a main job in the plantation subsector is 30 million per year. On a macro level, the income of smallholders in one year is also higher than the income of horticultural farmers (27.4 million), forestry crop farmers (25.6 million) and breeders (24.4 million). Farmers also consider oil palm plants to be a very profitable crop because once planted, farmers can harvest for 25 years. In various regions in Indonesia, smallholder plantation businesses are the main source of income for the population.

One of the industries that absorbs a considerable amount of labor is the palm oil industry (PKS). The palm oil industry is a company that manages oil palm fruit into various kinds of 7 productions such as CPO which will be used to produce production with higher value in its use.

Table 1. Area and Production of People's Oil Palm Plantations by Province in 2020

No	Provinsi	Luas Areal (Ha)	Produksi (Ton)	Produktivitas (Kg/Ha)	Jumlah Petani (KK)
1	**ACEH**	**242.819**	**444.436**	**2.741**	**139.153**
2	SUMATERA UTARA	441.400	1.583.945	4.124	422.611
3	SUMATERA BARAT	242.342	652.421	3.727	86.997
4	RIAU	1.762.163	4.731.888	3.030	549.985
5	JAMBI	771.997	1.532.214	3.010	3.060
6	SUMATERA SELATAN	503.532	1.747.797	4.319	155.874
7	BENGKULU	213.734	770.316	4.492	269.355
8	LAMPUNG	109.339	197.639	2.200	52.309
9	BANGKA BELITUNG	73.210	158.478	3.156	81.981
10	KEPULAUAN RIAU	1.273	1.505	2.338	37.237
11	JAWA BARAT	286	362	2.069	6.186
12	BANTEN	7.185	3.235	855	6.570
13	KALIMANTAN BARAT	689.830	1.428.859	2.564	710.030
14	KALIMANTAN TENGAH	357.944	934.920	3.610	761.438
15	KALIMANTAN SELATAN	106.934	246.144	3.035	180.301
16	KALIMANTAN TIMUR	254.044	540.254	3.232	533.683
17	KALIMANTAN UTARA	37.275	67.479	2.661	86.930
18	SULAWESI TENGAH	53.981	129.784	3.484	4.447
19	SULAWESI SELATAN	30.918	88.763	4.128	40.489
20	SULAWESI TENGGARA	7.524	5.030	1.979	8.634
21	GORONTALO	4.958	4.223	1.149	20.152
22	SULAWESI BARAT	104.845	196.935	3.397	33.478
23	MALUKU	853	103	842	4.930

24	PAPUA BARAT	11.429	20.579	1.976	76.738
25	PAPUA	14.244	8.121	2.688	214.888
	INDONESIA	6.044.058	15.495.427	3.270	4.296.834

Source : Central Statistics Agency (2021)

In table 1 below, it shows the largest area of smallholder palm oil, namely Riau Province in 2020 with an area of 1,762,163 Ha, and Riau Province has the largest oil palm production in Indonesia in 2020 with a total production of 4,731,888 tons. With a productivity of 3,030 Kg/Ha, Riau Province has a total of 549,985 farmers.

The history of the palm oil industry in Indonesia is inseparable from Aceh Province. The Land of Mecca has witnessed the development of Indonesian oil palm plantations since the colonial era. In 1911, a Belgian company opened the first commercial oil palm plantation in Sei Liput, which is now part of Aceh Tamiang. This shows that Aceh's oil palm plantations are the forerunner of the development of oil palm plantations which have now spread to 38 provinces of Indonesia from west to east. Not only that, Aceh's oil palm plantations also play a role in bringing Indonesia to become the world's largest palm oil producer, as well as the world's largest producer of vegetable oil. Even though it is more than a century old, Acehnese oil palm plantations still operate to this day. At the national level, Aceh occupies the 9th position as the main palm oil center province in Indonesia. Likewise, at the provincial level, oil palm is also still the mainstay of the plantation sub-sector in this province (DPMPTSP Aceh, 2023).

Since the beginning of development until today, the development of Aceh's oil palm plantations has also contributed to economic and social aspects as well as the environment for its people. The large contribution to the Gross Regional Dimestic Product (GDP) and the large number of farming communities that depend on oil palm plantations, make the strengthening of smallholder oil palm plantations one of the concerns of the provincial government. Oil palm plantations are a tap that absorbs labor both as farmers and employees of plantation companies. The income from the oil palm plantation received by the farmers and employees will create a *multiplier effect* that becomes a locomotive that plays a role in economic growth and development at both the village and regional levels. Various empirical studies show that oil palm plantations and palm oil production contribute to the GDP of Aceh Province (DPMPTSP Aceh, 2023).

Table 1. Area and Production of Oil Palm in People's Plantations By Regency/City in 2019-2023

No	Kabupaten	Tahun									
		2019		2020		2021		2022		2023	
		Luas Areal (Ha)	Produksi (Ton)	Luas Areal (Ha)	Produksi (Ton)	Luas Areal (Ha)	Produksi (Ton)	Luas Areal (Ha)	Produksi (Ton)	Luas Areal (Ha)	Produksi (Ton)
1	Simeulue	3.719	1.527	3.719	1.112	3 734	1 112	8.370	2.030	8.371	2.477
2	Aceh Singkil	32.382	78.723	32.452	78.697	32 463	79 354	33.050	80.153	33.273	80.779
3	Aceh Selatan	11.388	25.789	11.406	25.807	11 546	26 178	11.733	26.439	11.521	26.178
4	Aceh Tenggara	2.658	4.595	2.658	4.936	2 658	4 990	4.013	7.155	4.013	7.155
5	Aceh Timur	26.307	31.534	26.357	31.415	28 453	32 953	28.510	32.468	30.944	35.521
6	Aceh Tengah	-	-	-	-	-	-	-	-	-	-

7	Aceh Barat	9.958	16.655	10.863	16.610	10 865	16 722	10.865	17.075	10.865	17.095
8	Aceh Besar	1.677	474	1.677	484	1 399	498	1.521	556	1.521	556
9	Pidie	100	23	92	26	110	38	248	144	268	152
10	Bireuen	4.139	4.022	4.130	3.946	4 126	4 079	5.746	9.469	6.035	9.500
11	Aceh Utara	18.185	48.813	18.185	48.688	18 185	61 223	18.185	54.967	18.185	62.398
12	Aceh Barat Daya	19.212	28.184	19.478	28.969	19 853	28 969	20.620	24.588	20.620	24.719
13	Gayo Lues	-	-	-	-	-	-	-	-	-	-
14	**Aceh Tamiang**	**21.169**	**43.388**	**21.956**	**44.969**	**23 105**	**46 607**	**23.382**	**49.665**	**24.759**	**53.199**
15	Nagan Raya	52.145	102.348	52.145	102.348	52 228	98 620	53.151	100.218	53.151	100.218
16	Aceh Jaya	15.664	19.497	16.030	20.859	16 180	23 237	16.504	23.237	16.684	23.354
17	Bener Meriah	1.300	240	1.300	414	1 300	375	1.300	362	1.300	402
18	Pidie Jaya	772	834	784	861	958	883	1.564	883	1.577	885
19	Banda Aceh	-	-	-	-	-	-	-	-	- -	-
20	Sabang	-	-	-	-	-	-	-	-	-	-
21	Langsa	390	839	386	810	716	1 164	716	1.190	709	1.190
22	Lhokseumawe	208	266	209	286	209	305	209	329	209	318
23	Subulussalam	18.993	33.852	18.993	33.200	19 014	29 120	19.304	28.800	19.304	28.800
Jumlah		240.365	441.603	242.819	444.436	247.102	456.426	258.992	459.727	263.311	474.985

Source : Central Statistics Agency (2019-2023)

In table 2, Aceh Tamiang continues to increase for 5 years. From 2018, the total area is 21,145 Ha and continues to increase until 2022 with a total area of 23,382 Ha with a percentage increase of 0.97%. And the amount of production from 2018 with a total production of 40,119 tons and continues to increase until 2022 with a total production of 49,665 tons with a percentage of 0.16%. Aceh Tamiang Regency has great potential in the development of palm oil commodities because it is supported by its geographical location, climatic conditions and large and fertile area.

Aceh Tamiang Regency is included in the fastest-growing region in GDP revenue in Aceh Province. From the calculation of the contribution of GDP, the subsector that plays the most role in the economic development of Aceh Tamiang Regency is the agricultural subsector. According to Aceh Tamiang data in 2020, the agricultural subsector in Aceh Tamiang Regency has the largest contribution of the total GDP of 40.54% to the total GDP. The development of plantation commodities in Aceh Tamiang Regency will of course automatically affect the income level of the people of a region and also the Gross Regional Domestic Product (GDP). The contribution of GDP from plantation crops is reliable and in reality plantation development should have a clear impact on increasing farmers' income and economic growth of the community in Aceh Tamiang Regency.

Table 2. Area and Production of People's Palm Oil in Aceh Tamiang Regency by District in 2020

No	Kecamatan	Luas Areal (Ha)	Produksi (Ton)
1	Tamiang Hulu	4.818	9.953
2	Bandar Pusaka	2.426	5.459
3	Kejuruan Muda	1.766	2.518
4	Tenggulun	7.008	6.795
5	Rantau	649	950

6	Kota Kualasimpang	10	65
7	Seruway	3.466	5.964
8	Bendahara	1.541	3.897
9	Banda Mulia	305	479
10	Karang Baru	2.520	3.146
11	Sekerak	492	2091
12	Manyak Payed	1.230	3.652
Aceh Tamiang		**21.956**	**44.969**

Source : Central Statistics Agency (2020)

In table 3 below, it can be seen that Tenggulun District is the largest area with 7,008 hectares. Production of fresh fruit bunches 6,795 tons. And Tamiang Hulu District has a total production of 9,953 tons of fresh fruit, with an area of 4,818 hectares.

In addition to contributing to macro growth, it is important to remember that the acceleration of regional economic development is an important target of the government in accordance with regional autonomy, after all, national economic growth is only possible if the regional economy grows. Developing the region into a new growth center. The development of oil palm plantations in the context of rural development is a pioneering economic activity.

Table 3. Oil Palm Plantation Area, Production and Productivity People in Aceh Tamiang Regency in 2019-2023

Tahun	Luas Areal (Ha)	Produiksi (Ton)	Produktivitas (Ton/Ha)
2019	21.169	43.388	13,8
2020	21.956	44.969	13,9
2021	23.105	46.607	14
2022	23.382	49.665	14,70
2023	24.759	53.199	15

Source : Central Statistics Agency (2019-2023)

In table 4 The area and oil palm production continue to increase every year, it can be seen from 2019 that the area was 21,169 Ha and the production was 43,388 tons, continuing to increase until 2023 with an area of 24,759 Ha and 53,199 tons of production. However, productivity is still low compared to what farmers should get, where under optimal conditions, oil palm productivity can reach 20-25 tons of FFB/Ha/Year (Khairati, 2020).

Economic growth without job opportunities can lead to unequal income distribution, resulting in worsening economic conditions, namely increasing poverty. Labor is one of the factors of production that makes a positive contribution to the regional economy (Purnama, 2017).

Table 4. Production and Labor of People's Oil Palm Plantations in Aceh Tamiang Regency in 2019-2023

Year	Production (Ton)	Workforce (KK)
2019	43.388	10.032
2020	44.969	10.152
2021	46.607	10.625
2022	49.665	10.728
2023	53.199	11.732

Source : Central Statistics Agency (2018-2022)

In table 5 Production and the number of workers continue to increase every year. It can be seen from 2019 with a production of 43,388 tons with a total workforce of 10,032 people, and in 2023 the production amount is 53,199 tons with a total workforce of 11,732 people.

The palm oil subsector plays a significant role in the economic development of Aceh Tamiang, with its vast natural resources and suitable land for cultivation. However, the potential of this subsector has not been fully optimized, warranting research to better understand its contribution to regional economic growth. Therefore, the research titled "The Role of Smallholder Palm Oil Plantations in the Economic Development of Aceh Tamiang" aims to address key issues: whether palm oil is a leading subsector in Aceh Tamiang, its growth within the agricultural sector, and its position in comparison to other agricultural commodities. The objectives of this study are to assess whether palm oil is a flagship subsector in Aceh Tamiang, analyze its growth, and determine its position in the local agricultural sector. The research is beneficial for the author as a requirement for completing a thesis in the Agribusiness program at Universitas Medan Area, while also providing valuable references for future research on the topic. Additionally, it offers insights for local government planning and decision-making regarding the development of the palm oil subsector in Aceh Tamiang.

Research Methods

3.1. Research Methods

The type of research used in this study is quantitative descriptive. A type of descriptive research is a study conducted to determine the value of independent variables, either one or more variables without making comparisons or connecting with other variables (Sugiyono, 2018).

Quantitative research can be interpreted as a method based on the philosophy of positivism, used to research on a specific population or sample. The data collection technique uses research instruments, data analysis is quantitative.

Quantitative descriptive research is a research method that aims to describe a situation objectively using numbers. This research is carried out by collecting, analyzing, and presenting quantitative data.

3.2. Research Location

The research was conducted in Aceh Tamiang Regency, Aceh Province. The location of this research was deliberately chosen (*purposive)* Considering that the area is one of the largest oil palm production producing areas in Aceh Province. In addition, the second consideration is because the location is very strategic to be researched and become a reference for researchers in the future.

3.3. Data Collection Techniques

The data used in this study is secondary data in the form of a time series from (2019-2023). The data was obtained from related agencies, which included data on production and the number of smallholder oil palm plantations in Aceh Tamiang Regency and Aceh Province. Data was obtained from several related agencies such as the Agriculture and Plantation Service and the Central Statistics Agency of Aceh Tamiang Regency and Aceh Province.

3.4. Data Analysis Techniques

Data analysis methods were used to solve the problems in this study. In this case, the author uses an analysis tool *Location Quotient (LQ)* to answer the first problem, the Growth Ratio Model Analysis to answer the second problem, and using the Analysis *Tipology Class* to answer the third question.

3.5. Variable Operational Definition

1. People's oil palm plantations are the sum of all oil palm production and the amount of labor.
2. Oil palm production is a product that is harvested from plantation businesses without going through any further processing process. In this study, the oil palm production used is smallholder plantation production. The production unit of palm oil is tons.
3. Labor is everyone who does work to produce goods and services. In this study, the number of workers used is the number of workers in smallholder oil palm plantations. The labor unit is the KK (Head of Family).
4. The *Location Quontient (LQ) analysis* is the determination of the base and non-base sectors of oil palm plantations in Aceh Tamiang Regency.
5. The Growth Ratio Model analysis is to determine the growth of oil palm in the plantation subsector in Aceh Tamiang Regency.
6. Klassen Typology *Analysis* to determine the position of oil palm in the plantation subsector in Aceh Tamiang Regency.

Results and Discussion

5.1 Research Results

The results of this study will answer the formulation of the problem, namely related to whether oil palm is a leading subsector in Aceh Tamiang Regency, and then will analyze the growth of oil palm in the agricultural subsector and analyze the position of oil palm in the agricultural subsector in Aceh Tamiang Regency. There are three methods of analysis to analyze from the formulation of the problem, namely the analysis method *Locatin Quontient,* Growth Ratio Model Analysis and Analysis *Tipology Class*. This test uses a *Microsoft Excel software.* The results of the research in this study are as follows:

5.1.1 Hasil Analisis *Location Quotient* (LQ)

The purpose of the LQ calculation is to find out the internal potential that a region has, namely which sectors are the base sectors. The criteria for calculating LQ are as follows:

1. LQ > 1: So the commodity is a leading commodity in Aceh Tamiang Regency because it is able to produce more than the number of 62 needs for these commodities in Aceh Tamiang Regency. This means that the commodity is a Basis.
2. LQ = 1: So the commodity produced is only able to meet the needs in Aceh Tamiang Regency.
3. LQ < 1: So the amount of production of these commodities cannot meet the needs in Aceh Tamiang Regency so that supply from outside is needed so that the commodity is non-base.

Table 6. Results of the Calculation of LQ of People's Palm Oil Commodities with Production Indicators for 2019-2023 (Tons)

Year	Screw (Ton)	Vs (Ton)	For (Ton)	Fri (Ton)	LQ
2019	43.388	56.724	441.603	737.493	1,28
2020	44.969	57.097	444.436	740.167	1,31
2021	46.607	57.901	456.727	750.847	1,32
2022	49.665	59.525	459.727	730.956	1,33
2023	57.214	66.386	474.895	729.336	1,32
		Average			**1,31**

Source : Data Results Processed by Researchers (Year 2025)

From Table 6, it can be seen that during the 2019-2023 period, the analysis of the LQ value of oil palm plantations in Aceh Tamiang Regency generally had an average LQ value per year of 1.31. The LQ value in 2019-2022 continues to increase despite a change in the LQ value decreasing in 2023. It can be seen that the LQ value of oil palm plantations is greater than 1 (LQ>1). This figure means that oil palm plantations from 2019-2023 are the leading commodities in Aceh Tamiang Regency. It can be concluded that the palm oil commodity is a base commodity.

Table 7. Results of the calculation of the LQ of the people's palm oil commodity with Labor Indicators for 2019-2023 (KK)

Year	Screw (KK)	Vs (KK)	For (KK)	Fri (KK)	LQ
2019	10.032	32.665	138.305	717.339	0,94
2020	10.152	33.196	139.153	720.356	0,95
2021	10.625	33.124	140.658	719.067	0,98
2022	10.728	34.043	144.871	713.554	0,91
2023	11.732	33.406	146.102	718.591	0,88
Average					**0,93**

Source : Data Results Processed by Researchers (Year 2025)

From Table 7, it can be seen that during the LQ analysis period, oil palm plantations with labor indicators showed a value of less than 1, with an average LQ value of 0.93. Based on the results of the calculation of the average LQ value, it is known that oil palm plantations in Aceh Tamiang with labor indicators are non-base sectors. With the LQ value going up and down during 2019-2023, it means that oil palm plantations are a sector that is less able to absorb labor in the Aceh Tamiang Regency area. Therefore, it is necessary to develop oil palm plantations in Aceh Tamiang Regency so that the oil palm plantation subsector can increase income and labor absorption in the Aceh Tamiang district area.

5.1.2 Results of Growth Ratio Model (MRP) Analysis

MRP analysis is carried out by comparing the growth of an activity in an area to a larger area, both on a large and small scale. In this analysis, there are two growth ratios that can be calculated, namely: the growth ratio of the study/analysis area and the growth ratio of the reference area.

Table 8. Results of Growth Ratio Model Analysis Calculation

Commodity	Aceh Tamiang	Aceh	Notasi	
			Rpis	Rpir
Oil palm	2,17	1,06	Positive	Positive

Source : Results of Data Processed by Researchers (2025)

From the table 8, of the calculation results of the Growth Ratio Model analysis above, we can see that the Rpis of Aceh Tamiang Regency has a positive value of 2.17 and the Rpir of Aceh Province also has a positive value of 1. Based on the results of the calculation of the Growth Ratio Model Analysis, the Rpis value is more than 1 or positively notated and the Rpir value is more than 1 or positively notated. Therefore, it can be interpreted that the growth of oil palm commodities in the analysis area and the reference area are both high, it is concluded that the commodity has the potential to be developed both in Aceh Tamiang Regency and in Aceh Province.

5.1.3 Results of Klassen typology analysis

To determine the position of the development of the plantation sector in Aceh Tamiang Regency, the Klassen Typology analysis tool was used. The main indicators used in this calculation are Production, growth rate and contribution of the plantation subsector of Aceh Tamiang Regency and Aceh Province. So using this data, each commodity in the plantation sector is calculated for its contribution and growth rate.

Table 9. Growth Rate of People's Oil Palm Plantations in Aceh Province and Aceh Tamiang Regency in 2019-2025 (%)

Oil palm	Year				
	2019	2020	2021	2022	2023
Aceh Tamiang	8,15	3,64	3,64	6,56	15,20
Aceh	0,34	0,64	2,77	0,66	3,30

Source : Results of Data Processed by Researchers (2025)

Based on Table 9, the percentage growth rate of oil palm plantations in Aceh Province and Aceh Tamiang Regency has the highest growth rate in 2023 in Aceh Province at 3.30% and in Aceh Tamiang Regency at 15.20% in 2023.

Table 10. Contribution to the Growth of People's Oil Palm Plantations in Aceh Province and Aceh Tamiang Regency in 2019-2025 (%)

Oil palm	Year				
	2019	2020	2021	2022	2023
Aceh Tamiang	76,5	78,8	80,5	83,4	86,2
Aceh	59,9	60,0	60,8	62,9	65,1

Source : Results of Data Processed by Researchers (2025)

Based on Table 10, it shows that the contribution of oil palm commodity plantations has the highest percentage of contribution in 2023 in Aceh Province at 65.1% and in Aceh Tamiang Regency at 86.2% in 2023.

Table 11. Comparison of Growth Rate and Contribution to Oil Palm Plantations in Aceh Province and Aceh Tamiang Regency in 2019-2025 (%)

People's Oil Palm Plantations	Average Growth Rate		Average Contribution	
	Aceh Tamiang	Aceh	Aceh Tamiang	Aceh
	7,26	1,84	81,1	61,8

Source : Results of Data Processed by Researchers (2025)

Table 11, shows the results of the calculation of the average growth rate of the oil palm commodity plantation subsector from 2019-2025 in Aceh Tamiang Regency and Aceh Province, as well as the average contribution of the oil palm commodity plantation subsector from 2019-2023 in Aceh Tamiang Regency and Aceh Province. Aceh Tamiang Regency's palm oil commodity

has a larger average growth rate compared to the average growth rate in Aceh Province, and so does Aceh Tamiang Regency's average contribution greater than the average contribution of Aceh Province.

The results of the calculation of the average growth rate of the oil palm commodity plantation subsector and the average contribution of the plantation subsector of Aceh Tamiang Regency and Aceh Province were then compared to obtain the position of the commodity using the Klassen Typology Matrix. The Klassen Typology Table consists of four quadrants, namely quadrant I advanced and growing rapidly, quadrant II advanced but depressed, quadrant III potential or still able to develop and quadrant IV lagging behind. The results of these matches can be presented in Table 5. below.

Table 12. Classification of the People's Oil Palm Plantation Sub-Sector in Economy of Aceh Tamiang Regency based on Typology Classes

Quadrant I The sub-sector is advanced and growing rapidly (Si > s and gi > g) **Aceh Tamiang Oil Palm**	**Quadrant II** Developed but depressed sub-sectors (Si < S and gi < g)
Quadrant III Potential or still growing sub-sectors (Si > S and gi < g)	**Quadrant IV** Relatively lagging subsectors (Si < S and gi < g)

Source : Results of Data Processed by Researchers (2025)

From the results of the calculation of the average growth rate and the average contribution, the palm oil commodity is in Quadrant I because the palm oil commodity of Aceh Tamiang Regency has a larger average growth rate compared to the average growth rate in Aceh Province, and likewise the average contribution of Aceh Tamiang Regency is greater than the average contribution of Aceh Province. It can be concluded that the oil palm commodity plantation subsector is a developed and growing sector.

5.2 Discussion

In more detail, through the combination of three analysis tools in this study, namely Location Quotient (LQ) analysis, Growth Ratio Model and Klassen Typology Analysis, observations will be made on each analysis so that conclusions can be drawn to determine the role of oil palm plantations in regional economic development in Aceh Tamiang district.

5.2.1 Determination of Commodity Bases

From the results *Location Quotient* namely in Table 5.1, it can be seen that during the 2029-2023 period, the analysis of the LQ value of smallholder oil palm plantations in Aceh Tamiang Regency generally has an average LQ value per year of 1.31. Thus, it can be concluded that the LQ value of smallholder oil palm plantations is greater than 1 (LQ>1). This figure means that oil

palm plantations are a leading commodity in Aceh Tamiang Regency because they are able to produce more than the amount of demand for these commodities in Aceh Tamiang Regency.

Palm oil is a leading commodity that has the potential to develop in Aceh Tamiang Regency, which means that the results of the palm oil commodity can not only meet the needs in the Aceh Tamiang Regency area, but can also be exported outside the region. This is supported by the large number of palm oil mills and the large number of oil palm plantations which are divided into national oil palm plantations, private oil palm plantations and smallholder oil palm plantations. It can be concluded that palm oil is a base commodity.

Meanwhile, based on the results of the calculation of the average LQ value with labor indicators, it is known that oil palm plantations in Aceh Tamiang Regency with labor indicators are non-base sectors. With the LQ value continuing to increase but very slowly from 2019-2023, it means that smallholder oil palm plantations are a sector that is less able to absorb labor in the Aceh Tamiang Regency area. Therefore, it is necessary to develop oil palm plantations in Aceh Tamiang Regency so that the oil palm plantation subsector can continue to increase income and labor absorption in the Aceh Tamiang regency area.

From the results of the analysis, the LQ value of smallholder oil palm plantations has an average value of 1.31. This is in line with the research conducted by Christiani et al. (2013) "The Role of Oil Palm Plantations in Regional Economic Development in Muaro Jambi Regency" which shows the results of the analysis of the LQ value of smallholder oil palm plantations more than 1 (LQ>1).

5.2.2 Oil Palm Growth in Agricultural Subsectors

The growth ratio model is an analytical tool to determine the condition of oil palm plantations so that an overview of potential economic activities in Aceh Tamiang Regency and Aceh Province can be seen After being carried out with the Oil Palm Production indicator, the growth ratio of oil palm plantations in the study area (RPis) and the growth ratio of oil palm in the reference area (RPir) were obtained.

The growth ratio model illustrates that based on production indicators, oil palm plantations showed high growth both in Aceh Tamiang Regency and in Aceh Province, during this period. Based on the results of the calculation of the Growth Ratio Model Analysis, the Rpis value is more than 1 or positively notated and the Rpir value is more than 1 or positively notated. Therefore, it can be interpreted that the growth of smallholder palm oil commodities in the analysis area and the reference area area both high, it is concluded that these commodities have the potential to be further developed both in Aceh Tamiang Regency and in Aceh Province.

This is in line with the research conducted by Christiani et al. (2013) "The Role of Oil Palm Plantations in Regional Economic Development in Muaro Jambi Regency" which shows the results of the calculation of the Growth Ratio Model Analysis, the Rpis value is more than 1 or positive notation and the Rpir value is more than 1 or positive notation.

To develop the potential of smallholder oil palm plantations, it is necessary to implement the policy set by the Aceh Tamiang Regency Government (Aceh Tamiang Regency Government) through the Agriculture Office, namely holding an Evaluation of Plantation Business Assessment

Development, especially Oil Oil. The purpose of this activity is to remind the competitiveness of Indonesian palm oil in foreign markets, especially palm oil, to further increase the awareness of oil palm entrepreneurs to protect the environment, synergize between oil palm plantation business actors in Aceh Tamiang, so that oil palm plantations in Aceh Tamiang can further develop.

5.2.3 The Position of Oil Palm in the Agricultural Sector

To determine the position of oil palm plantations in the agricultural subsector, the Klassen Typology analysis tool was used. The results of the calculation of the average growth rate and average contribution are in Quadrant I, namely the advanced and rapidly growing subsector, because the palm oil commodity of Aceh Tamiang Regency has a larger average growth rate compared to the average growth rate in Aceh Province, and the average contribution of Aceh Tamiang Regency is greater than the average contribution of Aceh Province.

It can be concluded that the plantation sub-sector of smallholder oil palm commodities is a developed sector and is growing rapidly. For this reason, it is necessary to maintain and maximize the development of the smallholder oil palm plantation subsector, so that it can continue to improve the economy of the Aceh Tamiang Regency area.

The agricultural sector plays an important role in improving the regional economy in Aceh Tamiang Regency. In improving the regional economy through agriculture, plantations play a very important role, considering that plantations, especially oil palm, are an important superior commodity in providing raw materials for industry *oleochemical* As an industrial downstream strategy to be developed, in addition to oil palm plantations have an important role in the development of the people's economy, and the development of new and renewable energy.

Conclusion

Based on the Location Quotient (LQ) analysis, palm oil is a leading commodity in Aceh Tamiang due to its higher production than the demand, making it a key commodity. However, in terms of labor absorption, the palm oil sector struggles to employ sufficient workers in the region, indicating the need for further development to improve employment rates. The analysis of the Growth Ratio Model shows positive values for both the regional and reference area, indicating that the palm oil sector has high growth potential. Additionally, the Klassen Typology analysis reveals that palm oil in Aceh Tamiang has a higher growth rate and contribution compared to the average in Aceh Province, indicating that it is a rapidly growing sector. Therefore, maximizing the potential of the palm oil subsector is crucial to enhancing the regional economy. Recommendations include encouraging palm oil farmers, especially those with larger plantations, to increase labor absorption, reducing unemployment in the area, and urging the Aceh Tamiang government to implement policies that support the palm oil sector’s development.

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