

The Study on Impact of Plantation Activities in Siak District

Riyadi Mustofa^{1*} Riati¹ Suwondo²

1.Lecturer at STIE Persada Bunda, Diponegoro Street Number 42, Suka Mulia, Sail, Pekanbaru, Riau, 28116

2.Lecturer at the Faculty of Teacher Training and Education, University of Riau
Campus Binawidya KM.12,5 Simpang Baru, Tampan, Pekanbaru, Riau, 28296

Abstract

This study aims to determine the positive impact of plantation development in Siak Regency, Riau Province, on the improvement of the welfare of farm workers (perception), the uptake of farm workers in smallholders oil palm plantations, and the contribution to regional income. Meanwhile, the purpose of this study is to analyze how much the positive impact of plantation development on: Improvement of the welfare of farm workers (perception), the uptake of labor for smallholder oil palm plantations, and contribution to regional income. Samples were taken from the community in the selected sub-district. Sampling was done by doing *purposive sampling*. The time for implementing this study, including reporting, was 4 (one) month /120 days (February-May 2018). This study used primary data and secondary data. Data analysis techniques were carried out by using three indicators; they were Manpower Uptake, Farmers' Perception, and contribution to Regional Income. The results of the study proved that (1) Farmers' perception on the existence of smallholder oil palm plantations are positive, (2) Sector of oil palm plantations, especially smallholder oil palm plantations, is able to increase the uptake of labor, (3) Smallholder oil palm plantations in the Siak District is able to contribute to regional income.

Keywords: Farmers' perception, Uptake of Labor, Contribution to the regional income.

1. Introduction

Siak Regency becomes one of the Regencies in Riau Province after the expansion of the area from Bengkalis Regency as the main district. It is in the position of 101° 30' NL to 102° 13' 59" EL and 100° 54' 21" EL to 102° 13' 59" EL. There is the Indonesia's deepest river in Siak District, the Siak River. The total area of Siak Regency is 8.556.09 km² and almost as wide as the Regency of Bengkalis. Geographically Siak Regency is bordered by Bengkalis, Rohul, Kampar and Pekanbaru City (to the west); Bengkalis and Pelalawan Regencies (to the east); Bengkalis Regency (to the north); and Kampar Regency, Pelalawan and Kota Pekanbaru (to the south).

The plantation in Siak Regency has an important position in agricultural development both at national and regional levels. From the data on land area and plantation production, it shows that the palm commodity holds the highest production value and land area when compared to other commodities from plantation land, followed by rubber. The crops developed in Siak Regency are Coconut, Palm Oil, Rubber, Coffee, Sago and others. The palm oil production centers are in Minas, Tualang and Dayun, Karet in Kerinci Kanan, Dayun and Siak Sri Indrapura, while the coconut in Sungai Apit, Bunga Raya and Tualang.

The data shows that in general the plantation area in Siak Regency continued to increase, in 2005. The plantation area was originally 114,822.18 hectare and in 2015 increased to 232,126.50 hectare. Plantation commodities that continued to increase were palm in 2005, from 93,044.68 hectare to 211,568.00 hectare. As for the rubber commodity in 2013 were at its top. It was 16,129.00 hectare in 2013 and decreased to 15,477.00 hectare in 2015. On the contrary, coconut plantation commodities continued to decline from 3,345.20 hectare in 2009 to 1,628.00 hectare in 2015. Likewise, coffee and sago continued to decline and were converted to oil palm.

The purpose of this study was to determine the positive impact of plantation development in Siak Regency, Riau Province, on the improvement of the welfare of farmers (perception), the uptake of farm workers for oil palm plantations, and its contribution to regional income. While the purpose of this study is to analyze how much the positive impact of plantation development on: Improvement of the welfare of farmers (perception), uptake of farm workers for smallholders oil palm plantations, and its contribution to regional income.

2. Literature Review

2.1 Plantation

Plantations are all activities related to cultivating certain crops on the land and / or other growing media in an appropriate ecosystem. It includes processing and marketing the products and services of the crop, with the help of science and technology, capital and management to realize the welfare of plantation businessmen as well as the community. Certain plants are annual crops and / or annual plants, because the type and purpose of management are designated as plantation crops. (Article 1 of Law No. 18 of 2004). Plantation business is a business producing plantation goods and / or services and plantation business actors are farmers, while plantation companies manages plantation business. The farmers are individual Indonesian communities who conduct the plantation business with scale that does not reach a certain scale.

2.2 Plantation Development

The direction of agricultural development policy in general refers to Article 33 of the 1945 Constitution and the 1960 Basic Agrarian Law, which mandates that natural resources be utilized to the greatest extent as possible for the prosperity of the people (communities), therefore the direction of agricultural policy as the implementation of the 1945 Constitution through a policy of management of agricultural and natural resources for the wider community is done for justice and prosperity of the people. The agricultural sector development policy in the plantation sub-sector began in 1974, and initiated by the World Bank and the Asia Development Bank (ADB) for the development of smallholder plantations.

2.3 Land Use

Land is an area on the surface of the earth with certain properties which include the biosphere, atmosphere, soil, layers of geology, hydrology, population of plants, animals and the results of past and present human activities to a certain degree. These characteristics have a significant influence on land use by humans in the present and the future (FAO, 1976). According to Bintarto (1977), land can be interpreted as land settlement. It is a place or area where people gather and live together, where they can use the local environment in order to maintain, sustain and develop their lives.

2.4 Socioeconomics

Santrock (2007) stated that, socioeconomic status works as a grouping status of people based on the similarity characteristics of work and economic education. Socio-economic status shows certain inequalities. In general, community members have (1) jobs that vary in prestige, and some individuals have greater access to higher status jobs than others; (2) different levels of education, there are some individuals who have greater access to better education than others; (3) different economic resources; and (4) the level of power to influence community institutions. Differences in the ability to control resources and participate in community rewards produce unequal opportunities.

3. Research Method

3.1 Location and Time of Research

The study was conducted in Siak Regency, Riau Province. The location was chosen based on the consideration that the area of oil palm plantations in Siak Regency in the last five years has increased. Siak Regency also has a geographic morphology with land and coastal land consisting of peatlands. Furthermore, various government programs in plantation development have been carried out and during the research conducted, it has started the replanting period.

Samples were taken from the community in the selected research sub-district. Sampling was carried out by purposive sampling so that each selected area contained samples could represent smallholder oil palm plantations from the aspects of PIR, KKPA, and self-help. While the implementation of this study spent around 4 (four) months / 120 days (February-May 2018) including arranging of the report.

3.2 Types and Data Sources

This study used primary data and secondary data. Primary data was obtained by interviewing the community of oil palm smallholders using questionnaires, while secondary data came from various related agencies and data supply agencies.

3.3 Data Analysis

Data analysis techniques were carried out with three indicators, they were: Manpower Uptake, Farmers' Perception, and contribution to Regional Income.

3.3.1 Manpower Uptake

For the analysis of manpower uptake, the amount of working days used by smallholders was used. The amount was calculated starting from the process of preparing the land to harvest. Data analysis used descriptive method by tabulating to answer the characteristics of farm workers' households, the allocation of work time of household members on oil palm and non-farm farming, income contribution.

3.3.2 Farmers' Perception

Farmers' perception were obtained through interviews and questionnaires toward oil palm farmers and several community leaders who knew or became key witnesses in oil palm cultivation. Farmers' perception was in regard to the reasons of farmers choose to do business in oil palm plantations, the use of income from farming results, and the level of welfare felt after carrying out oil palm farming.

3.3.3 Contribution to Regional Income

Subjects or compulsory levies are individuals or entities involved in the payment of the use of services or licensing from the regional government, including collectors or cutters of regional levies. Regional levies will later become

Income from Regional Income (*Pendapatan Asli Daerah / PAD*) which are included in the Regional Revenue and Expenditure Budget (Law No. 8 of 2009 concerning Regional Taxes and Regional Retribution). Furthermore, to determine the contribution of oil palm to the Regional Income of Siak Regency, this formula is used

$$PD = HK \times TPK \times 1\%$$

Notes:

PD is Regional Revenue/Income

HK is the price of oil palm fresh fruit bunches (IDR/ kg); and

TPK is the total production of palm oil (kg).

4. Result and Discussion

4.1 Plantation Development in Siak Regency

Nine Priority Agenda (*Nawa Cita*) which was formed with a priority agenda in the field of agriculture consists of the increasing of agroindustry. The increasing of agroindustry is stated in the sixth section of the *Nawa Cita* as it is stated in the masterplan of Riau Province plantation, namely "Indonesia will be able to advance and rise with other Asian nations by increasing people's productivity and competitiveness in international markets".

Table 1. The development of the smallholder oil palm plantation in *Siak* Regency for last ten years

No.	Year	TBM	TM	TTR	Total
1	2006	26,039	67,050	26	93,115
2	2007	30,259	80,012	24	110,295
3	2008	32,315	77,958	644	110,916
4	2009	33,046	79,826	644	113,516
5	2010	49,609	109,796	149	159,554
6	2011	47,138	112,992	119	160,249
7	2012	46,872	163,380	19	210,271
8	2013	30,691	180,169	129	210,988
9	2014	29,356	181,052	129	210,537
10	2015	25,026	186,239	303	211,568

Source: Masterplan of Riau Province Plantation in 2017, processed

The table above shows that commodities of oil palm plantation over the past ten years (2006-2015 period) gradually increased. In 2006, an area of 93,115 hectares consisted of Immature Plant/Seedling (*TBM*) covering an area of 26,039 hectares, Mature Plant (*TM*) covering an area of 67,050 hectares, and Old and Damaged Plants (*TTR*) covering an area of 26.0 hectares. It became 211,568 hectares in 2015 consisting of *TBM* covering an area of 25,026 hectares, *TM* covering an area of 186,239 hectares, and *TTR* covering an area of 303 hectares. The *TBM* area showed a decrease of 1.13 hectares, *TM* increased 119,189 hectares, and *TTR* increased 277.0 hectares

Table 2. Development of smallholder rubber plantations in *Siak* District for last ten years

No.	Year	TBM	TM	TTR	Total
1	2006	3,517.2	10,235.75	4,372	18,125
2	2007	2,957	11,836.75	4,308	19,102
3	2008	2,490	13,824	3,392	19,706
4	2009	2,668	9,487	3,374	15,529
5	2010	2,909	9,925	782	13,616
6	2011	2,632	10,356	863	13,851
7	2012	5,477	8,472	1,063	15,012
8	2013	5,228	9,982	919	16,129
9	2014	4,178	10,594	797	15,569
10	2015	3,178	11,252	1,047	15,477

Source: Masterplan of Riau Province Plantation in 2017, processed

The development of smallholder rubber plantations in *Siak* Regency over the past ten years has continued to decline in the area. In 2006, an originally area of 18,125 hectares became 15,477 hectares. In *TBM*, there was a decrease in 2006, an originally area of 3,517.2 to 3,178 hectares. In *TM*, there was an increase from 10,235.75 to 11,252 hectares. Next, *TTR* has decreased from 4,372 to 1,047 hectares.

Table 3. Development of smallholder coconut plantations in *Siak* District for last ten years

No.	Year	TBM	TM	TTR	Total
1	2006	561.88	2,362.42	471.50	3,395.80
2	2007	631,18	1,946.62	409.50	2,987.30
3	2008	664.18	2,025.67	418.00	3,107.85
4	2009	1,267.00	1,473.20	605.00	3,345.20
5	2010	405.00	1,096.00	147.00	1,648.00
6	2011	358.00	1,066.00	181.00	1,605.00
7	2012	506.00	1,025.00	137.00	1,668.00
8	2013	392.60	1,083,55	180.95	1,657.10
9	2014	341.50	1,134.55	180.95	1,657.00
10	2015	342.00	1,035.00	251.00	1,628.00

Source: *Masterplan of Riau Province Plantation in 2017, processed*

Furthermore, the development of smallholder coconut plantations in *Siak* Regency showed a decrease. In 2006, the original area of 3,395.80 hectares decreased to 1,628.00 hectares. Coconut plantations are spread almost throughout the district, yet most of coconut trees that were cultivated as plantation crops are in coastal areas scattered in some spots of certain areas. While, the rest of them are treated as intercropping around plantations, rice fields and settlements.

Table 4. Development of the farmers family of smallholder plantation in *Siak* District for last ten years

No.	Year	Farmer's Household		
		Oil Palm	Rubber	Coconut
1	2006	3,843	8,394	5,635
2	2007	4,605	8,394	5,635
3	2008	47,540	8,472	5,870
4	2009	47,540	8,078	5,842
5	2010	47,736	8,078	5,840
6	2011	47,943	8,217	5,690
7	2012	63,228	6,328	6,147
8	2013	63,759	7,298	6,147
9	2014	63,837	7,298	6,147
10	2015	64,326	7,186	5,584

Source: *Masterplan of Riau Province Plantation in 2017, processed*

In 2006, the number of farmer's households of oil palm, rubber, and coconut respectively were 3,843 households, 8,394 households and 5,635 households. While, the number of farmer households palm oil, rubber and coconut respectively were 64,326 households, 7,186 households, 5,584 households in 2015. The highest number of oil palm farmer households was in 2015, rubber farmers was in 2006/2007, and coconut farmers was in three years, 2012, 2013 and 2014.

4.2 Identity of Respondents

Farmers becoming respondents are the community working as farmers, farm laborers or workers associated with the cultivation of oil palm plantations in *Siak* Regency. Respondents were selected based on land typology and plantation development patterns.

Table 5. Distribution of Smallholder Oil Palm Farmers Respondents in *Siak* Regency

No.	sub-district	Land Typology	Development Pattern	Number of Respondents	Percentage
1	Siak	Peat	Self-help	5	5.56
2	Mempura	Peat	Self-help	3	3.33
3	Sungai Apit	Coastal	Self-help	12	13.33
4	Minas	Mainland	Self-help	29	32.22
5	Tualang	Mainland	Self-help	13	14.44
6	Koto Gasib	Mainland, Peat	KKPA	9	10.00
7	Kerinci Kanan	Mainland	Plasma	14	15.56
8	Lubuk Dalam	Mainland	Plasma	5	5.56
total				90	100.00

Source: *Primary Data in 2018, processed*

The table above shows that the respondents of the smallholder oil palm farmers using self-help pattern and using main land, peat, and coastal land as their typology of land were in Siak, Mempura, Sungai Apit, Minas and

Tualang Districts. Respondents of the smallholder oil palm farmers using KKPA pattern with mainland and peat as their typology of land was in the Koto Gasib District. Moreover, the respondents of smallholder oil palm farmers using Plasma pattern with the mainland as typology of land were in Kerinci Kanan and Lubuk Dalam Districts.

Table 6. Respondents Identity of Smallholder Oil Palm Farmers in *Siak* Regency

Respondent Identity	Number of Respondents	Percentage
<i>a. Gender</i>		
- Man	44	48.89
- woman	46	51.11
<i>Total</i>	90	100.00
<i>Age (years)</i>		
- Minimum	16	
- Maximum	70	
- Average	38	
<i>b. Religion</i>		
- Moslem	83	92,22
- Christian	7	7.78
<i>Total</i>	90	100.00
<i>c. Level of education</i>		
- Graduated from junior high school	16	17.78
- Graduated from high school	18	20.00
- Diploma degree	39	43,33
- Bachelor degree	17	18.89
<i>Total</i>	90	100.00
<i>d. Ethnic</i>		
- Malay	41	45,56
- <i>Minang</i>	9	10.00
- Java	32	35,56
- <i>Batak</i>	8	8.89
<i>total</i>	90	100.00
<i>e. Length of stay</i>		
- Minimum	1	
- Maximum	70	
- Average	16.8	
- modus	10	

Source: Primary Data in 2018, processed

The table above shows that the identity of respondents based on gender which is men were 44 people and women were 46 people. The number of women respondents were more easily found than men respondents. Most of male respondents were found in shops or stalls. Meanwhile, most of women respondents were found in their houses. Based on the age, the youngest respondents were 16 years-old and the oldest was 70 years old. With an average of age was 38 years, the most often appears is 35 years old. This showed that most of respondents were in the productive age as the labor.

Most of respondents are migrants from the area around *Siak* Regency and outside the Regency. They are even from outside the province. Respondents coming from outside the region consist of migrants by transmigration, wandering and following or being invited by relatives who first occupy and get a job. Therefore, the residents who work in the plantation sector are dominated by migrants compared to the local population

Table 7. Profession of smallholder oil palm farmers as respondents in *Siak* Regency

No.	Profession	Respondents	Percentage
1	Civil Servant (PNS)	7	7.78
2	Private employees	5	5.56
3	Farmer	28	31.11
4	Farm Labors	13	14.44
5	Businessman	2	2.22
6	Entrepreneur	24	26.67
7	Others	11	12,22
	<i>total</i>	90	100.00

Source: Primary Data in 2018, processed

Respondents' identity based on their profession are categorized into seven fields/jobs, namely civil servants, private employees, farmers, farm labors, Businessman, entrepreneurs, and others respectively were 7 people, 5 people, 28 people, 13 people, 2 people, 24 people, and 11 people. The most respondents' profession were as farmers of plantation recorded as 28 people, while the fewest respondents were as private employees mentioned 5 people.

Table 8. Status and family of smallholder oil palm farmers in *Siak* Regency

Status of Respondents	total	Percentage
a. Status in family		
- Married	83	92,22
- Unmarried	7	7.78
<i>Total</i>	90	100.00
b. Family Coverage		
- One Child and Family	21	23,33
- Two Children and Family	45	50.00
- Three Children and Family	17	18.89
- Bringing family at home	7	7.78

Source: Primary Data in 2018, processed

In general, respondents involved in plantation farming are directly or indirectly can be met in almost all *Siak* Regency areas. It shows that the positive impact of plantation development is able to create derivative or advanced employment in the upstream to downstream sectors.

Table 9. Types of business/job owned by smallholder oil palm plantation in *Siak* Regency

Type of Business/Land Owned	total	Percentage
a. Main Business/Job		
- Farmers	34	37.78
- Farm Labors/Workers	23	25,56
- Food Crop Farmers	4	4.44
- Sales	17	18.89
- Others	12	13,33
<i>total</i>	90	100.00
b. Side Business/Job		
- Farmers	22	24.44
- Farm Labors/Workers	14	15,56
- Food Crop Farmers	6	6.67
- Sales	10	11.11
- Others	38	42,22
<i>total</i>	90	100.00

Source: Primary Data in 2018, processed

Respondents in the plantation sector have multiple jobs as a main job and as a side job. Respondents as farm laborers/workers in the plantation sector as a main job were 25.56 percent, while those who consider it as a side job were 15.56 percent. It shows that work as a farm worker can be carried out with a relatively flexible time and can be done by everyone with a diverse level of profession. The main work as farm worker is carried out by farmers relying on their income from working in the plantation sector. Conversely, community who have other jobs will have enough time to work as farm workers. The employment is usually carried out by the community around the plantation by work from the input sector to the output.

Table 10. Area of respondent residence (m²)

Information	Plantation owner	Not a Plantation Owner
- Minimum	36	36
- Maximum	200	150
- Average	85	78
- Modus	80	120

Source: Primary Data in 2018, processed

Most of the plantation owners found at the research site came from outside *Siak* Regency, while most of those who are not plantation owners are native residents. The owner of the plantation obtains plantation land by buying, grants and allocation from the transmigration program. While, those who are not plantation owners are mostly people who sell plantation land to immigrants and become plantation labors to plantation owners.

Table 11. Area of oil palm plantation owned by respondents

Information	Area (hectares)
Minimum	1.00
Maximum	10.00
Average	2.64
Modus	2.00

Source: Primary Data in 2018, processed

Table.13. shows the average area of oil palm plantation land owned by farmers covering 2.64 hectares. The widest land cultivated by farmers is 10hectares and the narrowest is 1 hectares. Most of farmers cultivate 2 hectares land. Based on the area of oil palm plantation, it shows that the business carried out by farmers is still classified as a small-scale business and is cultivated simply except on land with plasma and KKPA pattern which is cultivated according to Good Agricultural Practices (GAP).

4.3 Production

The oil palm seeds used are generally not the superior. It also used minimal production and maintenance facilities. Therefore, the production and productivity of the plantation were far from expected. The results of Hadidkk's study. (2008 and 2010) obtained that the productivity of farmers' plantations using self-help pattern was on average of 44.0% (11 tons of TBS/Hectares/Year, for 10 years generally) from the potential gaining, it was far lower than the average productivity of oil palm farmers in the PIR pattern reached 83.8% (19.23 tons TBS/Hectares/Year, for 16 years).

Table 12. Production and Price of TBS at Survey Sites

Information	Production (kg / hectares / month)	Price (Rp. / Kg)
Minimum	1,200.00	1,280.00
Maximum	2,330.00	1,630.00
Average	1,802.32	1,415,54
Modus	1,900.00	1,300.00

Source: Primary Data in 2018, processed

The price of TBS from peatlands in coastal areas is lower than the price of TBS in the land area such as Minas and its surroundings. This shows that not only are oil palm plantation in peat and coastal areas having expensive input factors but also are having cheaper output than in the mainland. However, although the input and output prices are very significant, it does not reduce the interest and agribusiness activities of oil palm plantations. The community still considers that the presence of oil palm plantations gives new hope in improving the household economy.

4.4 Community Perception

Economic improvement in question is by comparing the socio-economic conditions of the community before and after the existence of plantations from the aspects of income, expenditure and savings. Moreover, the investment in question is a delay in current consumption to be put into productive assets for a certain period of time, the assets are oil palm plantations considered as productive assets to produce TBS and other assets.

Table 13. Community perception of the existence of the smallholders' oil palm plantation in Siak Regency

Reason	Plantation Owner	Not a Plantation Owner	total	Percentage
- Opening Jobs vacancy	8	15	23	25,56
- Opening Business Opportunities	14	9	23	25,56
- Economic improvement	14	6	20	22,22
- Investment	20	4	24	26,67
<i>total</i>	<i>56</i>	<i>34</i>	<i>90</i>	<i>100.00</i>

Source: Primary Data in 2018, processed

The table shows that respondents agreed the existence of smallholder oil palm plantations opens jobs vacancy, business opportunities, economic improvement, and investment respectively were 25.56 percent, 25.56 percent, 22.22 percent, and 26, 67 percent. Employment is not only for plantation owners, but the impact is broader for the communities who are not the owners.

Furthermore, the perception built by the community is related to the development of oil palm plantations. Attitude, according to Budiardjo, et al (1991) is a tendency to behave or think in a certain way. Likert and Osgood (1932) in Syaifuddin (2003) explain that attitude is a form of evaluation or feeling reaction, one's attitude towards an object is a feeling of support (*favorable*) or a feeling of not supporting or rejecting (*unfavorable*) on the object.

Based on the concept above, interviews were conducted with native residents in the study site on various attitudes of the population towards the existence of plantations. The presence of oil palm plantations is able to open access that has not been reached by the communities to be crowded, facilities built independently by the

community or the government have emerged, inviting outside communities to compete in seizing employment, business and investment opportunities. No less important, the presence of financial institutions also enliven the advance of an area. Community perception is divided into four categories, namely very good, good, fair, and poor as presented in table 16.

Table 14. Community Perception on Economic Welfare from Oil Palm Plantation Development

Perception	Having Plantation	Do not Have Plantation	total	Percentage
a. Very good	16	10	26	29
b. Good	26	19	45	50
c. Fair	14	3	17	19
d. Poor	0	2	2	2
total	56	34	90	100

Source: 2018 Primary Data, processed

Table.16. shows that most of respondents stated that the development of oil palm plantations can have a positive impact on the community economic welfare. The economic prosperity can be felt for all community involving directly and indirectly. Respondents thinking that the impact of oil palm plantation development was very good, good, fair, and poor respectively were 29%, 50%, 19%, and 2%.

4.5 Manpower Uptake

Oil palm plantation workers are one of the factors of production that absorb considerable costs so that some efforts are needed to improve the efficiency. Farming in the oil palm plantation sector fluctuates throughout the year due to work related to seasons, land, rainfall, and months of peak harvest and low harvest. In addition, *TBS* prices fluctuate along with market demand for CPO and PKO. Current market conditions are very influential on oil palm plantations and their derivative products. Therefore, the demand for labor is affected by several influencing factors.

Table 15. Average work day (*HOK*) of smallholders' palm oil plantation in *Siak* Regency in 2018

No.	Plantation	HOK/Hectares/Year
1	Plasma	4.02
2	KKPA	4.09
3	Self-help	3.24
	total	3.78

Source: Primary Data in 2018, processed

4.6 Contributions

According to Syahza (2011), the contribution of oil palm development will encourage economic growth and increase capital in the region. As a district that has a coastline and a passenger port, it will certainly facilitate the entry and exit of goods and people as a commodity for goods and services trading inter-island. Development of plantation commodities contributes to the region in the form of taxes. The contribution of regional income is determined by an agreement by the local government with the company buying *TBS* of oil palm farmers. Those agreement, according to Ambardi (2002) is an official but illegal fee. An official but illegal fee is regional fee are the authority of the region, yet the regulation is not in accordance with the applicable regulations. For example, it is only regulated by the decision of the regional head or the head of the service.

Table 16. Contribution of *TBS* Production to Regions

Information	Production (kg/Hectare/month)	Price (IDR/Kg)	Total Acceptance	Amount of Contribution (IDR/hectare/Month)
Minimum	1,200.00	1,280.00	1,536,000	15,360
Maximum	2,330.00	1,630.00	3,797,900	37,979
Average	1,802.32	1,415,54	2,551,250	25,513
Modus	1,900.00	1,300.00	2,470,000	24,700

Source: 2018 Primary Data, processed

The table above shows that the contribution magnitude of the smallholder oil palm plantation sector is 1% calculated based on the production of *TBS* multiplied by the price of *TBS* prevailing in *Siak* Regency which shows a maximum, minimum, and an average, Rp. 37,979/hectare/month, Rp. 15,360 /hectare/month, and Rp. 25,513/hectare/month. Based on the statistical data of the plantation, the production of smallholder oil palm *TBS* in *Siak* Regency is 3,611,853 tons/year. Thus, the average regional income from *TBS* production is Rp. 51,127,066,529/years.

5. Conclusions and Recommendations

5.1 Conclusion

Conclusions from research on farmer perceptions, manpower uptake and contribution to the region are:

- Farmers give a perception that the existence of smallholder oil palm plantations has a positive impact, can improve the welfare of plantation owners and surrounding communities by providing employment and business opportunities.
- Oil palm plantations sector, especially smallholder oil palm plantations, is able to absorb workers from within and outside the family which is on average 3.78 *HOK*/hectare/month.
- Smallholder oil palm plantations in *Siak* Regency are able to contribute to regional income of Rp. Rp. 51,127,066,529/year.

5.2 Suggestions

Suggestions of the research results for farmers and the government are:

- For farmers is expected to be able to improve plantation land productivity through the implementation of GAP to achieve optimal results and sustainability.
- For the government is expected to aid the farmers in increasing land productivity.
- Keeping *TBS* prices stable at the farmer level.

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