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# The Oil Palm Smallholders Corporation Model Based On Local Specifications In Jambi Province Toward Sustainability

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**Abstract.** The rapid expansion of oil palm plantation areas promoted poverty because of job creation and community welfare. However, oil palm still has substantial socioeconomic and sustainability implications, so an agricultural institution must support the palm oil business. The existing oil palm smallholder institutional is more pragmatic based on needs or meets the requirements to get assistance or facilitation from outside parties. The research objective is to create a model of integration and sustainability of institutional governance based on local specifications of the area. The research uses primary and secondary data sources. Based on the field institutional cooperation of smallholders involving cooperatives, smallholder groups in a corporation, and palm oil mills, supported by regulatory providers. The local government is responsible for establishing, developing, and institutional strengthening smallholders and financial funding support. In addition, it is also necessary to enter input with a Joint partnership program based on a Written Agreement that regulates the rights and obligations of each party, the partnership period, and other binding provisions, including the guarantee of the farmer's Fruit Fresh Bunch (FFB) price. Institutions implemented following their functions and objectives based on local, and regional specifications to realize the sustainability of independent oil palm smallholders.

**Keywords.** Oil Palm, Smallholders, Corporation Model, Institutional



## 1. Introduction

The oil palm commodity has become an important crop globally, significantly contributing to household income and generating employment [1]–[3]. The palm oil trade improves and promotes the livelihoods of local communities by improving their incomes and achieving several sustainable development goals (SDG)[4]. Furthermore, promoting palm oil has boosted smallholder incomes and economic development [5]–[8]. The derivative product of oil palm is vegetable oil, namely palm oil, with increasing global demand because of the rapid population and revenue growth ([2], [9]). According to [10], it will need 25 millions ton of palm oil production to fulfill the demand.

One of Indonesia's national income and important sources is oil palm. Since 2009, Indonesia has been the world's largest palm oil producer [11], [12]. Based on production and land area, Indonesia has become the leading commodity as an oil palm producer. In addition, the oil palm plantation cultivated almost 40% by smallholders and medium-sized households [13]. Oil palm commodities are more valuable than other traditional crops, increasing household living standards [14].

Oil palm cultivation contributes to job creation and farmers' welfare. Hence, independent smallholders working on palm oil still face a wide range of crucial issues related to the legality of land. On the other hand, smallholders can manage minimum good agricultural practices, access funds and information about current prices, and use quality facilities for agricultural production. The existing farmer institutions are more pragmatic and meet the requirements to get assistance or facilitation from outside parties. However, the institutional formation has not been based on the concept or model of integration and sustainability of institutional governance based on the local specifications of the area. Since it still has substantial socioeconomic and sustainability implications, the root of the problem is the weak bargaining position of smallholders, both due to the lack of solid farmer institutions. This condition must be followed up immediately because it will result in 210 thousand oil palm farming families in Jambi Province. It happens especially in the Bajubang District of Batanghari District and Muara Papalik District of West Tanjung Jabung Regency [15]. Therefore, institutional strengthening of independent smallholder smallholders requires the attention and support of the government and other business actors based on the local specifications in the area to achieve sustainable plantations.

Indonesian Sustainable Palm Oil (ISPO) standards are mandatory for private and government but voluntary for smallholders plantation [16]. Many previous studies to achieve sustainability of oil palm plantation management through the process by implementing one of the good agricultural practices to achieve continuous production.[17]–[24]. But the institutional existence of independent smallholders based on local specifications of each region in support of the implementation of sustainable agricultural practices still needs to be emphasized again. This is because there are still many independent smallholders who have not joined a single family of both farmers and cooperative groups. Referring to the Regulation of the Minister of Agriculture No. 38/2020, Smallholders are farmers who have a land area of less than 25 hectares [25]. However, generally, independent smallholders only control less than 4 hectares of land. With conditions of the land area of less than 4 hectares, the scale of efforts to carry out good agriculture practices is still experiencing obstacles, especially in terms of management and finances to qualify as a condition of Indonesia Certification Palm Oil (ISPO). This research creates a corporate model of institutional governance integration and sustainability based on local, and regional specifications.

## 2. Method

Batanghari Regency and Tanjung Jabung Barat district were chosen deliberately. The selection of the two regions is considered that the district is one of the largest producers of palm oil in Jambi province. Another consideration is because, in Batanghari Regency, smallholders in Pompa Air Village have been certified, as well as in Tanjung Jabung Barat Regency, the oil palm independent smallholder in Pompa Air Village has also been certified. The selection of respondents is made randomly simply with the goal that each unit or population of farmers has an equal opportunity to be selected as respondents under certain other conditions. [26]. Focus Discussion group (FGD) held to collect information from the expert consists of the stakeholders like the government and the company also the farmer group leader and cooperation.

Independent smallholders who were sampled by the study were farmers whose plants ranged in age from 10 to 20 years old. This is done to obtain heterogeneity of the group of farmer's respondents. The institutional aspects become a concern in this research and mapping the picture of existing institutional conditions in

research areas that are ready to support the smallholder's palm oil farming activities and can still be activated to encourage good agricultural practices.

### 3. Result And Discussion

Jambi Province is a palm oil-producing area in Indonesia. In the last five years, it has fluctuated. The location of the mature plant (TM) experiences an average growth of 3.83% annually. As a result, production growth in Jambi Province has an average increase of 4.04% annually [25]. Tanjung Jabung Barat Regency is the regency with the second-largest oil palm area in Jambi Province with 96,384 ha or 19.03% of the total area in Jambi Province. Palm oil production is 249,035 tons or 21.80% of the total production in Jambi Province. The regency has fourteen sub-districts, one of which is the Muara Papalik Subdistrict. It has an area of 10,558 ha or 10.95% of the total area in the Tanjung Jabung Barat Regency, and the production is 30,948 tons or 12.42% of the total production in the Tanjung Jabung Barat Regency. Palm oil productivity of 3,191 Tons / Ha or 9.89% in Tanjung Jabung Barat Regency.

Furthermore, the highest palm oil productivity in Batanghari Regency was achieved by Bajubang District, which amounted to 3,989 kg / Ha. Pompa Air Village has the highest land area and production compared to other villages in Bajubang Subdistrict, where Pompa Air Village is a village that has received an ISPO certificate. The production of fresh fruit bunches (FFB) in Pompa Air Village was 27.32% of the total FFB production in Bajubang District, with a crop area of 264 ha [26]

#### 3.1. Overview of Oil Palm Cultivation in Muara Papalik Sub District

Tanjung Jabung Barat Regency is the district with the second largest area of oil palm in Jambi Province, with an area of 96,384 ha or 19.03% of the total area in Jambi Province. Palm oil production is 249,033 tons or 21.80% of the total production in Jambi Province. Palm oil productivity is 3,225 tons/ha or 11.81% of total productivity in Jambi Province. Tanjung Jabung Barat Regency has fourteen sub-districts, one of which is Muara Papalik District. Muara Papalik district has the fourth largest area in Tanjung Jabung Barat Regency.

Muara Papalik district has an area of 10,558 ha or 10.95% of the total area in Tanjung Jabung Barat Regency. Palm oil production is 30,948 tons or 12.42% of the total production in the Tanjung Jabung Barat Regency. Palm oil productivity of 3,191 tons/ha or 9.89% of total productivity in Tanjung Jabung Barat Regency. Muara Papalik district is a sub-district that has an area of producing crops (TM) and the largest palm oil production in the third rank in Tanjung Jabung Barat Regency. The producing plant (TM) of Muara Papalik Subdistrict has a smaller land area than Tungkal Ulu District, but the productivity of Muara Papalik Subdistrict is higher.

Muara Papalik subdistrict is an ex-transmigration area of Merlung. Merlung transmigration began in 1990. People from Java Island who follow the transmigration program get an area of 2.5 ha, which is divided into home yard land and plantation land. The land of the house yard is 0.5 Ha and the area of 2 Ha, which is used as an oil palm plantation in collaboration with PT. IIS (Inti Indosawit Subur), which is a subsidiary of an Asian Agri plantation company to build PIR-Plasma. Independent patterned palm oil smallholders are natives of Muara Papalik Subdistrict. Previously smallholders did rubber farming business, but over time, smallholders saw the success of oil palm smallholders in transmigration areas with palm oil cultivation. In 2005 smallholders replaced rubber plants with palm oil plants. Smallholders in the research area form a farming group. This aims to facilitate smallholders and help in land clearing, planting holes, and salting. Oil palm planting is carried out jointly by smallholders who are members of the farmer group.

##### 3.1.1 Farm Land Area

Land area is one of the factors that greatly affect production. The land area can affect the increase in production. Smallholders who have a high land area will get high production if the land is managed properly, and vice versa if the land area is narrow, it will get low production. In this study, the land managed by sample smallholders was his land.

**Table 1 .** Distribution of Respondent Based on Land Area Owned in Research Area

No	Land Area (Ha)	Frequency	Percentage (%)
1	2 – 3	12	40,00
2	4 – 5	11	36,67
3	6 – 7	5	16,67
4	8 – 9	1	3,33
5	10 – 11	1	3,33
<b>Total</b>		<b>30</b>	<b>100</b>

Table 1 shows that the number of smallholders working on palm oil based on the highest average land area in the range of 2 - 3 Ha is as much as 40 percent. Land area, when viewed from the angle of increasing production, the more land that smallholders strive for, the higher the production and income that smallholders will receive. In addition, the more land owned, the greater the cost incurred by smallholders

### 3.1.2 Characteristics of Oil Palm

The economic characteristics of oil palm age in the research area aged 15 years began in the planting year 2005. Superior quality seeds become one of the important things in determining the success of the palm oil farming business. The use of superior quality seeds is expected to be able to provide high production. The type of seedlings used by oil palm smallholders of economic age mostly uses the type of seeds D x P Sriwijaya, and some use other types of seeds obtained from the source of the seeds of the palm oil research center (PPKS) Medan, which is subsidized seed assistance from the Jambi Provincial Plantation Office and the West Tanjung Jabung Regency Plantation Office. Seedlings D x P Sriwijaya is a type of Tenera from the cross between Dura and Pisifera. The type of seedlings used by oil palm smallholders after the economic age is Marihat type seeds because it is a recommendation for the use of seedlings given by the company. Marihat seedlings are a type of Tenera. The distance for planting oil palm in the research area is 8 x 9 Meters. The palm oil planting distance still applies to the planting distance recommended by the Local Plantation and Entrepreneurship Office.

### 3.1.3 Maintenance

Plant care is done with the aim that the plant can grow well and be able to provide good production as well. Treatment of oil palm plants is carried out after young plants are planted in the plant, which is the first time smallholders do fertilization on plants after the age of 3 weeks to 1 month of planting. This fertilization aims to stimulate growth as well as to get maximum crop yields. The provision of fertilizer in the location of the study was made twice in one year. Fertilizers used by smallholders in the research area include Phonska, SP-36, Urea, KCL, and Dolomite.

Treatment or spraying is the process of killing weeds or plant disruptors. Weeds are plants whose presence is not desirable on agricultural land because it can reduce the production to be achieved, and there can be a process of scrambling nutrients in the process of fertilizing oil palm plants takes place. In the research area, the treatment is carried out twice in one year. Herbicides used by smallholders are Round-Up and Gramaxon.

Pruning is done to stimulate oil palm plants to flower quickly and bear fruit. In the oil palm economic age at the time of harvesting is done pruning, but trimming the remnants of the smelter that are not cleaned is done twice a year. In oil palms after the economic age, pruning is done the same as in economic-age plants. It's just that because the plants are old, then pruning is done once a year because the plant is high and the work is difficult. The use of fertilizer in oil palm cultivation is as much as two times per year, with the use of oil palm fertilizer of 3,550 Kg. Pruning on palm oil is done two times per year; spraying is carried out two times per year, on the use of Round-Up and Gramaxon in oil palm farming of 38 Liters / Ha / Year.

### 3.1.4 Harvesting

The production obtained by smallholders is the result of palm oil farming activities in the form of fresh fruit bunches (FFB). Harvesting bunches of fresh fruit carried out by respondents in the research area is twice in one month. The harvesting of fresh fruit bunches (FFB) is carried out if there are already characteristics that fresh fruit bunches (FFB) are ready to be harvested in the form of the color of fresh fruit bunches are reddish, or there are fruits that have fallen from the bunch as many as 3-6 pieces or called *brondolan*.

Harvesting is done by pruning the pellets that are under bunches of fresh fruit which aims to make it easier for smallholders when cutting bunches of fruit from the stem. After pruning, the smelt is done, then the cutting of fresh fruit bunches (FFB) from palm oil stems. Bunches of fresh fruit that have been harvested are then collected in one place to then be transported to the place of sale of fresh fruit bunch.

### 3.2 Overview of Oil Palm Cultivation in Bajubang District

Bajubang District is one of the centers of palm oil production in the Batanghari Regency. Palm oil farming in Bajubang District consists of ISPO-certified palm oil farming that applies the principle of sustainable palm oil. ISPO certification was formed in 2011, but oil palm smallholders in Bajubang District signed up for certification in 2017 and obtained official certification in 2018.

Pompa Air Village is the only village that has KUD (Village Unit Cooperative) whose members are ISPO certified, namely KUD Mutiara Bumi. Kud Mutiara Bumi has a total of 144 members and nine farming groups, but only three farming groups are already ISPO certified. The number of smallholders who have been certified ISPO is only 75 smallholders, or only 44.12% of the total oil palm smallholders in the research area (170 smallholders). The low number of ISPO-certified smallholders is due to the obligation of oil palm smallholders to apply the principles and criteria that exist in ISPO certification and the insufficient budget to finance all smallholders in the process of obtaining certification. The picture of palm oil farming in the research area includes land area, crop age, use of fertilizers, pesticides, labor, agricultural tools, production, and prices.

#### 3.2.1 Farm Land Area

Land area is one of the main factors of production in oil palm farming. According to [27], the more land that is cultivated, the higher the production and income per unit area. Smallholders who have large land will produce high if managed properly, and vice versa, smallholders who have narrow land, will produce a little more if not managed properly. Oil palm land cultivated owned themselves.

The location of oil palm plantation plantations of ISPO-certified KUD Mutiara Bumi members is still in the Water Pump Village area. The following wide distribution of oil palm farmland based on the area of land owned by smallholders in the research area can be seen in Table 2.

**Table 2.** Distribution of Respondent Smallholders Based on Land Area Owned in The Research Area

Land Area (Ha)	Frequency	Percentage (%)
1 – 2	11	44,00
2 – 3	8	32,00
3 – 4	3	12,00
4 – 5	2	8,00
5 – 6	1	4,00
<b>Total</b>	<b>25</b>	<b>100</b>

Based on Table 2 above shows that the area of oil palm land cultivated by smallholders quite varied from 1 to 6 hectares. Most of the respondents had a land area of 1 to 2 hectares with a percentage of 44%. The highest land area owned by respondent smallholders is 6 hectares, and the lowest land area is 1 hectare. Based on the largest amount of land area, which is 1-2 Ha, illustrates that the amount of land owned by smallholders is not too large. This explains that with the amount of land owned, smallholders must be able to maximize land use on the farm so as not to rule out the possibility that productivity obtained by smallholders can increase.

#### 3.2.2 Age of Oil Palm

The age of oil palm achieves production optimally with average plant life of 15 years. The reference to determining the age limit of 15 years is based because at the age of 15 years will be achieved peak production, and in the first three years, the fruit will be referred to as sand fruit or young palm fruit [28]. The age of palm oil plants at the research site ranges from 10-15 years and can be seen in Table 3.

**Table 3.** Distribution of Respondent Based on Plant Age

Plants Age (Year)	Frequency	Percentage (%)
10	9	36,00
11	2	8,00
12	4	16,00
13	8	32,00
14	1	4,00
15	1	4,00
<b>Jumlah</b>	<b>25</b>	<b>100</b>

Based on Table 3, it can be seen that on average most palm oil crops in the research area are ten years old. The results showed that palm oil plants in the research area are still in productive life to produce optimal production. If the plant is still in a productive period and accompanied by proper cultivation activities, then optimal production will be achieved.

### 3.2.3 Maintenance

Fertilizer is a nutrient needed by plants that can support optimal growth and development for palm oil. Fertilizers used by oil palm smallholders in the research area consist of NPK fertilizer, urea fertilizer, TSP fertilizer, KCl fertilizer, dolomite fertilizer, and organic fertilizer. The highest use of fertilizer used by smallholders is NPK fertilizer which is 329.47 Kg / Ha / Year, and the fertilizer that is least used by smallholders is dolomite fertilizer which is only 16 Kg / Ha / Year. Palm oil farming in the research area has implemented the element of timely fertilization due to regular fertilization times. The exact element of fertilization dose has been applied where the average use of fertilizer is still classified as close to the norm recommended by the Directorate General of Estate, Slightly not exceeding the ISPO norm. Based on [29], The determination of the type, dose, and time of fertilization is determined by the internal and external factors of the plant. The development of the recommendation system involves three domains of knowledge of palm oil fertilization, namely soil, crop, and climate domains. Calculation of nutritional needs is based on the deficit between the supplier element and the nutrient-busting element in the palm oil agroecosystem.

### 3.2.4 Harvesting

Tools used in palm oil harvesting activities in the research area include sickle, chisel, axes, took, angkong, gancu, and machetes. Harvesting is done 24 times a year. The average crop production in the field is obtained by the average farmer's production based on the age of the oil palm, which is 25,315 Kg / Ha / Year and 24,234 Kg / Ha / Year for the age of oil palm 10 and 11 years. For oil palm of 12 and 13 years, the average production is 20,316 Kg / Ha / Year and 24,033 Kg / Ha / Year. Mature oil palm of 14 and 15 years average planter production of 24,000 Kg/Ha/Year and 22,000 Kg/Ha/Year. The amount of product produced is greatly affected by the number of plants and care carried out every month, such as fertilizer, weed eradication, and pruning of smelter

Smallholders are independent. Although the smallholders have ISPO certification, they still face problems strengthening the Institution's sustainability in the future. The long-term goal of corporate farming development is to realize an independent, competitive, and sustainable agricultural business through corporate land management. The approach in its development is rural development based on agribusiness by utilizing the opportunities of resources and institutions of the community optimal.

### 3.3 Farmer Characteristic Aspects

Old agricultural labor has become a trend in many places, including Indonesia. Households with a mainly young workforce have lower land-use efficiency than households where delivery is primarily done by the elderly [30].

Age can affect the ability and way of thinking of small farmers. It can happen as productive small farmers have physical and mental skills to result in higher [31]. The age level of smallholder farmers will affect the number of hours worked, saving on the costs incurred in the use of labor. Older smallholders will find it harder to take new things and make decisions.

In contrast, young farmers are more dynamic and have the opportunity to gain new experiences. This new experience can be applied to their cultivation activities. Thus the age factor can determine the productivity of the mature oil palm because smallholders do not only rely on physical abilities and employ a lot of labor outside the family that will be a burden in their farming business. The results of the study showed the social condition of smallholders in the category of productive age.

The age of the labor force in agriculture has become an issue for various parties, and the conclusions obtained vary [32], [33] Some indicators raised such as the age of labor in agriculture, how to intensify the local workforce Availability in agricultural activities, socializing technological changes have a positive impact on production in agriculture [34]. If production is better, it is expected to result in the sustainability of oil palm cultivation by implementing good agricultural practices. The results of the study in Table 4 showed that for the village of Pompa Air, the most smallholders were 24% in the age range of 59-65 years. In contrast, oil palm smallholders in the village of Dusun Mudo are in the age category of 35-50 years of 33.33%.

Furthermore, for the next social aspect of education, the management of oil palm plantations is also influenced by education indicators. Education can have an impact on how smallholders are creative and their ability to accept various innovations. In this case, education is a form of formal education passed by independent smallholders. Some literature agrees that education significantly affects technological innovation in agriculture [35], [36]. Therefore, formal education becomes important for farmers in the process of adoption of sustainable agricultural technology.

The statement of how important education is that extension services should include more smallholder, farmers are encouraged to improvise the practice of oil palm farming and improve their alternative livelihood assets [37]. The level of education of smallholders in the field of research varies from basic to undergraduate level. Most smallholders have an education at the elementary level of 68% in Pompa Air village and 66.67 Dusun Mudo

**Table 4.** Distribution of Farmer Samples By Age Group in Research Areas

Age Group (Year)	Oil Palm Smallholders Pompa Air		Oil Palm Smallholders Dusun Mudo	
	Amount of Farmer	Percentage (%)	Amount of Farmer	Percentage (%)
	29 – 34	1	4,00	2
35 – 40	1	4,00	10	33,33
41 – 46	3	12,00	5	16,67
47 – 52	5	20,00	5	16,67
53 – 58	5	20,00	4	13,33
59 – 65	6	24,00	3	10,00
66 – 71	4	16,00	1	3,33
<b>Total</b>	<b>25</b>	<b>100</b>	<b>30</b>	<b>100</b>

Limitations of education level will affect the way of thinking, accepting, or rejecting new things. The higher the level of education of smallholders, the wiser it will be to manage their farming, affecting agriculture production, quality, and quantity. The results showed that the level of education of smallholders in the research area is still relatively low

The Distribution of Smallholder Education levels is shown in table 5 below.

**Table 5.** Distribution of Farmer Samples By Education Group in Research Areas

Education.Level	Oil Palm Smallholders Pompa Air		Oil Palm Smallholders Dusun Mudo	
	Amount Of Smallholders	Percentage (%)	Amount Of Smallholders	Percentage (%)
	Primary	17	68,00	20
Junior	5	20,00	7	23,33
Senior	2	8,00	2	6,67
Bachelor	1	4,00	1	3,33
Total	25	100	30	100

The number of family members in a smallholder household is related to income. This is related to consumption and other spending, especially in the use of labor. The number of family members will help in cultivation activities for agricultural production activities and vice versa. In addition, the number of family members also describes the economic burden that each family carries on the welfare of family members. Therefore, the number of family members is intended by the number of dependents in one family home.

**Table 6.** Distribution of Farmer Samples By Family Member Amount Level

Family Member Amount	Oil Palm Smallholders (Pompa Air)		Oil Palm Smallholders (Dusun Mudo)	
	Amount Of Smallholders	Percentage (%)	Amount Of Smallholders	Percentage (%)
	2	7	28,00	7
3	12	48,00	15	51,43
4	4	16,00	6	17,14
5	2	8,00	2	5,72
Total	25	100	30	100

According to Table 6, the number of farming family members in the area varies from 2 to 5 people. However, most of the sample smallholders have a family of 3 people. For example, in Pompa air oil palm smallholders, 12 smallholders, or 48%, have a family of 3 people, and Dusun Mudo, 15 smallholders, or 51.43%, have a family of 3 people. The number of family members is very influential in managing an economic activity, especially in economic activities in cultivation. However, oil palm farming is the head of the family, so the workforce is outside the family.

One of the factors that help determine the sustainability of the farming business is how long the experience is owned by smallholders. Business experience will be very helpful in decision-making and other considerations such as production processes, marketing decisions, and governance in palm oil farming. The longer the farming business is owned, the smallholders will be more skilled in managing their farming business. The experience of farming, in this case, is seen from the first time farmers worked on oil palm plantations expressed in units of the year. The distribution of sample smallholders based on palm oil farming experience is shown in Table 7

**Table 7.** Distribution of Farmer Samples By The Farming Experience

Farming Experience (Year)	Oil Palm Smallholders(Pompa Air)		Oil Palm Smallholders( Dusun Mudo)	
	Amount of Farmer	Percentage (%)	Amount of Farmer	Percentage (%)
10	10	40,00	7	23,33
11	4	16,00	4	13,33
12	4	16,00	4	13,33
13	5	20,00	9	30,00
14	1	4,00	3	10,00
15	1	4,00	3	10,00
Total	25	100	30	100

The length of business experience of oil palm smallholders in The Village of Dusun Mudo is higher than that of oil palm smallholders in Pompa Air village. This condition is related to the age of crops that are halted as a form of motivating smallholders in the management of sustainable agricultural practices. The experience of farming in Pompa Air village is dominated in the span of 10 years. On the other hand, in the establishment of oil palm smallholders in the village of Dusun Mudo 30% of respondents experienced 13 years. Longer farm experience is likely to affect the decision-making process of farmers in terms of allocating production resources in achieving agricultural sustainability.

The farming experience of Pompa Air smallholders is higher than that of Dusun Mudo, related to the age of the crop owned to motivate and carry out sustainable agricultural practices. Experience in farming in Pompa Air palm oil smallholders has the most significant percentage with ten years of farming experience. In contrast, the palm oil smallholders in Dusun Mudo have farming experience with the largest share of 30% with 13 years of farming experience. It shows that smallholders are experienced enough in farming palm oil. Based on the study results, the length of farming experience also indicates the age of oil palm crops on each farm. Long farming experience will affect smallholders' decision-making in allocating factors that will impact the sustainability of cultivation related to good agricultural practices.

### 3.4 Existing Conditions Of Oil Palm Institutional

Institutional is the rules of the game. It is necessary to write formally and be enforced by government officials or not registered officially. Norms and convenience, order and prevailing values, and informal practices in the family, and society, provide shade and constituency of individuals & members of the community; institutional predictable, essentially stable can be applied to repetitive situations. Institutional smallholders in the countryside contribute to the acceleration of the socio-economic development of smallholders; accessibility to agricultural information; accessibility to capital, infrastructure, and markets; and adoption of agricultural innovations.

Institutional as rules and rights that expressly give shade (independence) and sanctions against individuals and groups in the form of their choice; In an institutional economy, joint efforts, which can change institutional arrangements, can also change a set of individual decisions. In neoclassical economics, price and income changes can change that set of options.

Institutional analysis in agriculture aims to obtain a description of an agricultural socioeconomic phenomenon. It relates to the relationship between two or more actors of socioeconomic interaction, including the dynamics of rules that apply mutually to the interaction actors, accompanied by an analysis of the final results obtained from the exchange that occurred. An institutional critique can be in various regions and circumstances within certain limits. Still, in many ways, locality aspects and specific problems should always be emphasized, given the excellent opportunity for variation per locality and situation. [38].

Jambi Province is a palm oil-producing region in Indonesia. In the last five years, it has fluctuated. The mature plants (TM) location experienced an average growth of 3.83% per year. Production growth in Jambi Province has increased by an average of 4.04% annually. Tanjung Jabung Barat Regency is the district with the second-largest oil palm area in Jambi Province, with 96,384 ha or 19.03% of the total area in Jambi Province. Palm oil production amounted to 249,035 tons or 21.80% of the total production in Jambi Province. This district has fourteen subdistricts, one of which is the Muara Papalik Subdistrict. It has an area of 10,558 ha or 10.95% of the total area in the Tanjung Jabung Barat Regency, and its production is 30,948 tons or 12.42% of the total production in Tanjung Jabung Barat Regency. Palm oil productivity of 3,191 Tons / Ha or 9.89% in West Tanjung Jabung Regency.

Furthermore, the highest palm oil productivity in Batanghari Regency was achieved by Bajubang Regency, which amounted to 3,989 kg / Ha. Pompa Air Village has the highest land area and production compared to other villages in Bajubang Subdistrict, whereas Water Pump Village is a village that has received an ISPO certificate. The production of fresh fruit bunches (FFB) in Pompa Air Village amounted to 27.32% of total FFB production in Bajubang District, with a harvest area of 264 ha (Batanghari Regency Plantation and Livestock Office, 2018). This study involved self-help smallholders working on oil palm plantations with ISPO (Indonesian Sustainable Palm Oil) certification ownership. Although these self-help smallholders have ISPO certification, they still face the problem of strengthening the sustainability of the Institution in the future.

The Bajubang sub-district is one of the central areas of palm oil production in the Batanghari Regency. Palm oil farming in the Bajubang sub-district consists of ISPO-certified palm oil farming that applies the principle of sustainable palm. ISPO certification was established in 2011, but oil palm smallholders in Bajubang Sub-district signed up for certification in 2017 and obtained official certification in 2018.

The number of smallholders who have been ISPO certified is only 75 smallholders or only 44.12% of the total oil palm smallholders in the research area (170 smallholders). The low number of ISPO-certified smallholders is due to the obligation of oil palm smallholders to apply the principles and criteria contained in ISPO certification and the insufficient budget to finance all smallholders in the Institution to have the certification.

On the other hand, In the village of Dusun, Mudo Pekebun, who received ISPO certification, joined a combined group of smallholders named Gapoktan Catur Manunggal consisting of 7 smallholders. This group of peasants is spread over several hamlets. Namely the Integrated Farmer Group of Sungai Tungkal, Integrated Batu Batedeng, Kruing Mas, Sialang Bulan, Sukses, Sungai Melai, Rengit River. Of the seven farming groups, a new startup has been carried out to obtain ISPO certification with a total land selection of 216.1253 hectares. The most dominant farming group members participating in this process are the Sungai Tungkal smallholders and the Sukses farming group.

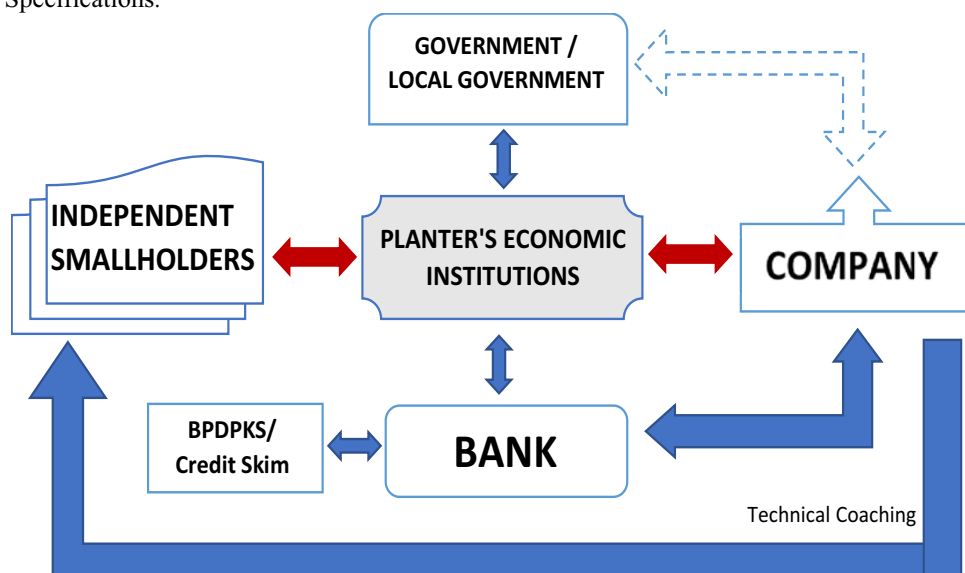
### *3.5 Independence Smallholders Palm Oil Corporate Model Based On Local Specifications Towards Sustainability*

According to [39], rural development must be done with an approach following its nature and characteristics. Rural development must follow four significant efforts, each other is interrelated and is the primary strategy of rural development, namely: First, empowering the economy of rural communities; Second, improving the quality of rural human resources to have adequate foundations to increase and strengthen productivity and competitiveness; Third, the construction of infrastructure in the countryside; and fourth, building rural institutions both formal and non-formal.

Institutions in the countryside are formed from several groups of smallholders and can further be developed into cooperatives. However, the problem with Independence smallholders of oil palm is the lack of land that does not meet the scale of the business. Therefore, one of the strategies to strengthen institutions in the village is to conduct corporate farming activities.

Corporate farming is a form of economic cooperation from smallholders with an agribusiness orientation through the consolidation of scattered land management. However, corporate farming still ensures land ownership for each smallholder, so business efficiency, quality standardization, and effectiveness and efficiency of resource utilization management can be achieved [40].

Corporate farming is a strategic step to compete in today's modern and global marketplace. And it is an attempt to combine the forces of individual smallholders to form a group with a shared vision of progress. The farming or corporate farming group is an effort for smallholders. By incorporating these forces, productivity synergies can stably meet the market's needs in number, quality, and sustainability. Figure 1 shows the Independence Smallholders Palm Oil Corporate Model Based on Local Specifications.



**Figure 1.** The Independence Smallholders Oil Palm Corporate Model Based On Local Specifications

Based on the condition of local specifications, although both sub-districts get ISPO certification, the institutional constraints in the two places have differences, especially in terms of bargaining position related to the price received by smallholders. According to [41], it is necessary to do good agricultural practices following the norms needed to ensure the sustainability of oil palm farming. Compactness is also an issue that should be a concern, smallholders often still sell FFB to collectors to get a higher price. Moreover, the agreement with the factory is still being implemented inconsistently. Oil Palm Plantation Fund Management Agency /BPDPKS. The bank is still moving on its own. Even if all smallholders unite and commit together, they will undoubtedly have a better bargaining position; with the company or factory.

The village of Dusun Mudo still needs institutional strengthening. It is happening because no cooperative swings smallholders definitively in Dusun Mudo. The peasant group still joins the combined groups of smallholders, Gapoktan Catur Manunggal. Smallholders received an ISPO certificate on July 23, 2020. However, some smallholders use seedlings that have not been certified and use the rest of the

planting. There is still a lack of development by smallholders and the incomprehension of smallholders in implementing good plantation governance.

Based on this condition, it is necessary to restore the role of plantation extensionists who have been stagnant related to the governance of oil palm plantations. In addition, the village of Dusun Mudo still requires the following to strengthen institutions in one corporation towards an independent institution in the following way.

1. Improved strengthening from the institutional side of existing farming groups both in terms of data, information, and strengthening coordination.
2. Cooperate with the association to extend smallholders to the local community and apply a win-win solution for all parties.
3. Reviewing the Institution's contract with the factories (evaluation)
4. Coordination with stakeholders ranging from the bottom level to higher levels
5. Actively conduct governance training and technical guidance on good agricultural practices and best management practices (BMP) through cooperation with PKS and local governments and academics
6. Increased capacity and capability of smallholders in using certified seeds. Increase the capacity and capability of smallholders in implementing good agricultural practices. Increased access to funding for the management of farming businesses, especially the machines Acceleration of the establishment and institutional strengthening of smallholders. Increased Agricultural Extension in Palm Oil Production Center Area

The condition of Mutiara Bumi cooperative in Pompa water village is better than Farmer Group Ridge /GAPOKTAN Catur Manunggal. The bargaining power position of smallholders in terms of the price of FFB received is higher than in the village of Dusun Mudo, at the same time. Even the price that the smallholder receives is almost the same as the price of the reference FFB from the Jambi Provincial Plantation Office. The role of cooperative administrators who actively bridge members and meet the needs of members following a strong Joint commitment is also one of the indicators of the success of Mutiara Bumi Cooperative in improving its bargaining power position with the factory. The cooperative also plans to increase the number of smallholders entering the criteria for ISPO certification next year. Furthermore, cooperatives are pretty active in fostering smallholders outside of certification to obtain certification and follow the process that has been established with the functional role of the Provincial and District Plantation Office.

Local governments and cooperatives also need to advocate for smallholders to accept the ISPO system by the market. Likewise, stakeholder support issued the Governor/Regent's Regulation on the Sustainable Palm Oil Plantation Regional Action Plan in Jambi Province. Therefore, it is expected that ISPO institutions involve stakeholders/communities. In addition, it is also actively carrying out the construction/supervision of certification implementation to be more effective.

Thus smallholders should indeed institute in one definitive container. It is in line with research [42] that in the network to group or join institutions some parties or figures are "honest, trustworthy, have no personal interest as role models/motivators for the institutional implementation of independent smallholder smallholders. Support (rules/ policies, funding, and coaching) of central and local governments that support the institutional strengthening of independent smallholder smallholders. Support from the palm oil industry/factory to partner with independent smallholder institutions. The managerial capacity of management/manager for institutional governance. The condition of local specifications of the smallholder's area will greatly determine the success and sustainability of the Institution. Commitment and awareness for the benefit of the Institution urgently need to be grown and understood.

#### **4. Conclusion**

The institutionality of smallholder palm oil found in the research area varies. On the one hand, it is still a combined peasant group and has not formed a mutual trust and commitment between members, especially agreements in terms of FFB distribution. But, on the other hand, cooperatives play an essential

role in facilitating smallholders to acquire knowledge of Good Agricultural Practices (GAP), not only using attributing FFB to factories but also related to the procurement of inputs and maintenance activities of oil palm plantations.

The corporation model of smallholder palm oil based on local specifications is one way to create a competitive and independent oil palm smallholder institution with a good bargaining position, especially in implementing an independent oil palm farming business toward sustainability

## 5. References

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