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Increasing Participation of Independent oil Palm Smallholders in Farmer Group Institution

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ABSTRACT

Farmer groups play an important role in the palm oil industry in terms of access to capital, production facilities, marketing, market information, and learning vehicles. However, the participation of independent smallholders in institutions, especially farmer groups, is still very limited because of the limited knowledge and awareness of farmers about the important role of these institutions. The aim of this research is to formulate an increase in the participation of independent oil palm smallholders in farmer groups in the Sambas Regency, West Kalimantan. The research used a combination of qualitative and quantitative methods with a SWOT-AHP analysis of 33 experts and ordinary informants from the government, farmer group officials, companies, wholesalers, and farmers. The results show that institutional capacity building was selected as a strategic priority for increasing farmer participation. Three efforts must be made to increase institutional capacity: compiling institutional norms/rules, holding regular meetings, and compiling group administration books.

Keywords: farmer group institution, participation, oil palm smallholder

INTRODUCTION

Oil palm plantations are the most significant agricultural sub-sector in energy absorption, where 16.2 million Indonesians depend on the palm oil industry for their livelihoods directly or indirectly (BPDP 2018). The area covered by palm oil plantations in Indonesia has increased in recent years. In 2021, around 14.6 million hectares of Indonesian land were planted with oil palm, 6.08 million hectares of which were smallholder plantations (41.51%), and produced 46.2 million tons of fresh fruit bunches (FFB); this figure increased compared to 2017, which only had a total planting area of 12.38 million hectares with a total of 5.69 (45.96) million hectares of smallholder plantations (BPS 2022; Ruml *et al*. 2022; Shigetomi *et al*. 2020).

Independent oil palm farmers are among the actors who play an essential role as suppliers of FFB in the oil palm supply chain (Raharja *et al*. 2020). However, independent oil palm smallholders are also considered the most vulnerable actors to problems that occur in the oil palm plantation industry (Jelsma *et al*. 2019; Najmi *et al*. 2019). In the process of managing palm oil plantations, independent smallholders have not fully implemented good agricultural practices (Papilo *et al*. 2020), and the limited knowledge and resources owned by farmers are also an obstacle in running palm oil farming (Leopita *et al*. 2017; Schoneveld *et al*. 2019).

One of the causes of these problems is the lack of farmers' participation in institutions such as village unit cooperatives (KUD) and farmer groups (Hutabarat 2017). Several factors affect farmers' high and low involvement in institutions, including gender, age, education level, and the main type of livelihood (Andry *et al*. 2020). Meanwhile, institutions play a vital role in independent oil palm smallholders, such as access to capital, production inputs, and product marketing (Raharja *et al*. 2020), improving farmers' bargaining position and market information, and as a vehicle to improve farmers' skills and knowledge (Batubara and Iskandar 2018; Nurliza 2018).

Literature related to the institutional role of independent oil palm smallholders in sustainable agriculture principles is limited. Conventional research only describes the forms of institutional activities without further identifying the underlying factors that influence these activities to increase farmers' participation in institutions and form a process of relationships entirely derived from the institutional function. It is necessary to formulate a strategic model to increase the involvement of independent oil palm smallholders in institutions and overcome the problems independent oil palm

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smallholders face. The strategy is formulated through a participatory approach in the decision-making, implementation, benefit-taking, and evaluation stages (Cohen and Uphoff 1980). Therefore, this study aims to increase the participation of independent oil palm smallholders in farmer groups in the Sambas Regency, West Kalimantan.

METHODS

This research employed a mixed method because it provides comprehensive, valid, reliable, and objective data information. The study was conducted in Sambas Regency, West Kalimantan, which is the center of the population of independent oil palm farmers who have a knowledge and skill gap in managing their plantations (Nurliza and Fauyan 2021). Open-structured questionnaires were distributed to participants. The population was independent oil palm farmer groups in Subah and Sajingan Besar districts, as many as 172 farmer groups (Disbunnak 2022) with a purposive sampling technique of 33 respondents (15 farmer group administrators, 15 farmer members, extension workers, companies, collectors) with a minimum of 5 years of participation in farmer groups and managing privately owned plantations.

This study included three stages. Firstly, we identify the characteristics of the responses, which include age, length of education, length of participation in the farmer group, monthly income, main job, and the number of dependents in a quantitative descriptive manner.

Secondly, the characteristics of the participation of independent oil palm smallholders in farmer groups must be identified, including internal factors (strengths and weaknesses) and external factors (opportunities and threats). The identification of internal factors includes strengths, namely the initiative to attend planning meetings and management formation/election meetings, the initiative to donate energy and cash for the smooth running of activities, the increase in members' income and assets, the existence of social programs such as road construction, health, and education for children, and being active in providing criticism and suggestions during evaluation meetings. Weak factors include low participation in proposing activity funds, low involvement in planning the needs and flow of activity implementation, lack of personal benefits received by members, absence of written rules and norms, low managerial skills and technology application, and low member direct participation in evaluation. Opportunity factors included administrative licensing from the government, replanting assistance from the government, and counseling and training from the private sector. The threat factors were the absence of counseling from the government, the lack of aid for production facilities from the government, and fluctuating FFB prices. The SWOT analysis measurement scale uses weights (0.0 = not important and 1.0 = very important), ratings (1 = institutional performance is decreasing compared to competitors, 2 = institutional performance is the same as competitors, 3 = institutional performance is better than competitors, and >4 = institutional performance is excellent compared to competitors), and a score that is a product of weight and rating to choose the SO priority, WO, ST, or WT.

Thirdly, efforts to increase the participation of independent oil palm smallholders in farmer groups should be prioritized with the Analytical Hierarchy Process/AHP using Expert Choice 11 software. The measurement scale uses nine pairwise comparison scales (1 = equally important, 3 = slightly more important, 5 = more important, 7 = very important, 9 = absolutely more important, 2,4,6,8 = the middle value of two adjacent values).

RESULTS AND DISCUSSION

Characteristics of independent oil palm farmers and farmer groups

The characteristics of independent oil palm farmers included age, education length, participation in farmer groups, monthly income, main job, and number of dependents, as shown in Table 1. The respondents were dominated by the age of 30-45 years, most respondents were at the equivalent level of high school education, most members had participated in farmer groups for more than 9 years, and members of farmer groups generally earned an income of IDR 1,000,000-3,000,000 per month with their primary job as farmers/growers. Most farmers provide for four to six people in their households.

The age range of administrators and members of oil palm farmer groups in Sambas District is dominated by age classified in the productive category (Tauer 2017), and productive age shows a person's ability to receive information. Adopt and improve skills and work optimally (Methamontri *et al*. 2022). At the level of education, most have a high school education/equivalent, and higher levels of education generally tend to show a better understanding of acting, sharing, and absorbing knowledge (Chandre and Dixit 2015). The duration of farmer participation is related to the level of farmer participation in farmer groups; the longer farmers participate in farmer groups, the more experience they

Table 1 Characteristics of independent oil palm smallholders

Parameter	Percentage (%)
Age	
<30	3
30–45	51
46–55	36
56–65	9
Length of education	
<6	6
6 (elementary school)	15
9 (junior high school)	21
12 (senior high school)	48
>12	9
Participation in farmer groups	
4–6	15
7–9	33
>9	42
Monthly income (IDR)	
1,000,000–3,000,000	57
>3,000,000–5,000,000	33
>5,000,000	9
Main jobs	
Farmers/growers	76
Government agencies	9
Construction workers	3
Entrepreneurial	6
Private employees	6
Number of dependents	
1–3	21
4–6	76
7–10	3

must increase the intensity of their involvement in each activity.

Characteristics of IFAS (Internal Strategic Factors Analysis Summary) and EFAS (External Strategic Factors Analysis Summary) of independent smallholders in farmer groups

The identification of internal factors (strengths and weaknesses) and external factors (opportunities and threats) of independent farmer groups was conducted through interviews with respondents using a questionnaire on research variables from the participation theory of Cohen and Uphoff (1980). Strength, weakness, opportunity, and threat factors were determined by examining the percentage of respondents' answers to the participation indicators. Indicators that obtain a value of ≤ 50% are categorized as weaknesses, while values of > 50% are classified as strengths, opportunity, and threat factors. Figure 1 shows that members of farmer groups can participate in four stages: decision-making, implementation, benefit-taking, and evaluation. The strength of the decision-making stage is that members of the independent oil palm farmer group have the initiative to attend the members' meeting, which is held once a year, actively providing input and suggestions to determine the programs to be implemented. Members also actively provide suggestions and responses during the election of new management, which is held every three years. This routine meeting was initiated by farmer groups and agricultural extension workers who were always present at regular meetings. Involvement in this farmer group allows members to attend meetings to obtain information about the group's activities. The participation of farmers in the planning process is essential for collecting aspirations that the planned program is beneficial to all members. It aligns with previous research on farmer group participation, which stated the importance of farmer group involvement in various aspects (Utari 2022).

The weakness of farmer groups that can be seen from this stage is that members are less involved in several activities, such as determining the location and budget of activities and determining the details of needs and the flow of implementation of activities. In addition, farmer groups do not have written rules and norms, so members feel that they are not obligated to involve themselves in every group activity.

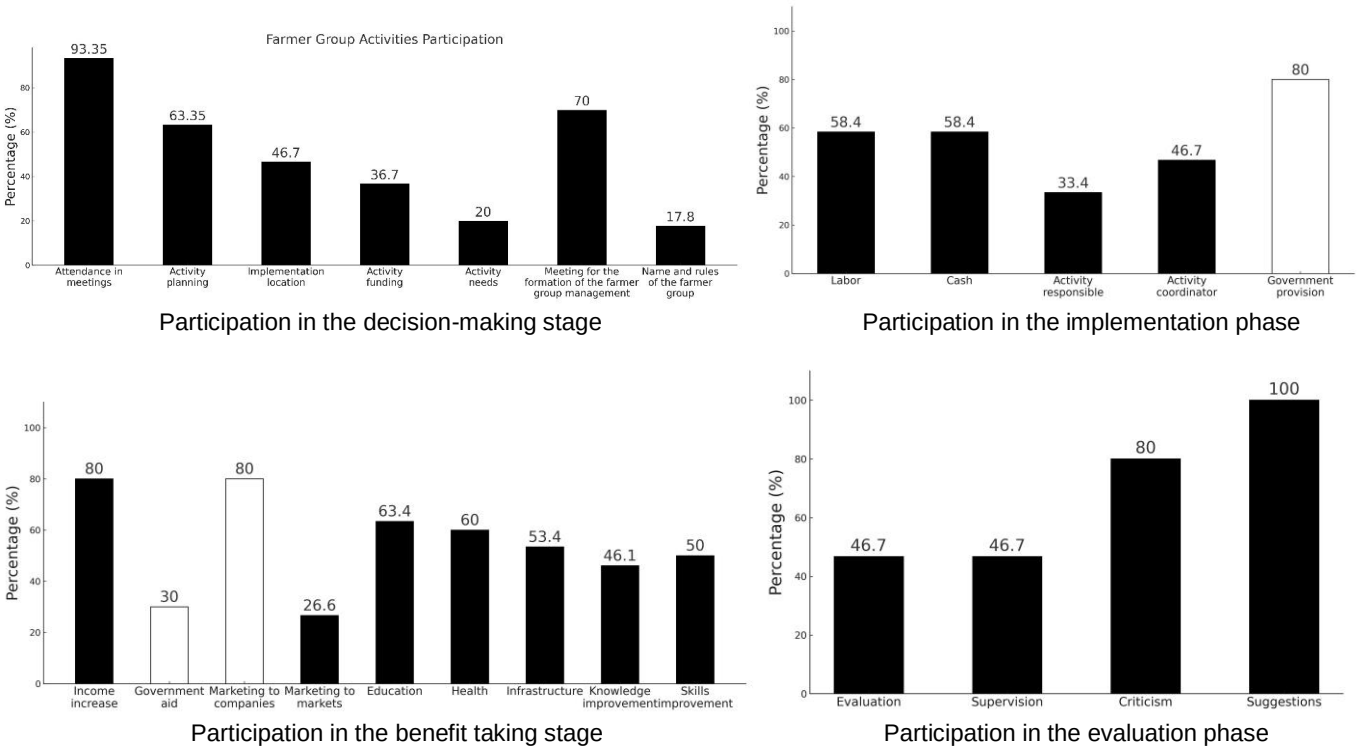

Figure 1 Internal and external factors in the decision-making, implementation, utilization, and evaluation stages. (■) internal factor and (□) external factor.

The strength of the farmer group can be seen from the implementation stage, namely that members have the initiative to donate energy and cash to support the implementation of activities. Cash donations are collected every time the harvest arrives, and the funds will be used to buy materials and equipment used during activities such as road construction, compost production, joint sale of FFB products, and social activities such as religious and national.

The weakness of farmer groups at this stage is that the involvement of members as the person in charge and coordinator of activities is relatively low. It is because members think that those responsible for each activity and who direct or organize the course of each activity are group administrators, not members. At this stage, the group could encourage the activeness of its members through the government's role in providing permits and helping with replanting programs, which can undoubtedly foster members' motivation for the importance of participating in the group.

In addition to the roles of the government that have been mentioned, several vital roles are not accepted by the group or its members, which is a threat to the farmer group itself, including the absence of counseling from government agencies specifically aimed at oil palm farmer groups and the lack of assistance for production facilities, such as subsidized fertilizers and pesticides, agricultural tools and machinery, and capital support.

Four participation indicators are strengths at this stage of taking benefits: an increase in income or assets felt by members and social benefits in the form of education, health, and infrastructure. Members of independent oil palm farmer groups in Sambas Regency experienced increased assets after joining the farmer group. Assets here are not only in the form of money but can also be in the form of ease of obtaining labor, ease of obtaining credit, and production facilities that impact increasing palm oil production.

The weakness of the group that can be seen from the stage of taking benefits is the absence of an increase in knowledge and skills after joining the farmer group, which is the non-optimal role of the farmer group as a learning vehicle, and the absence of guidance and direction in managing the plantation from both the management and the government. The opportunity to take advantage of this stage is that members are not constrained in marketing their FFB products because the management of joint farmers group (*gapoktan*) and farmers group (*poktan*) is looking for information on FFB storage companies that offer high selling prices. There are private companies that provide counseling and training to farmer groups.

The benefits is inseparable from the threat of competitors, namely collector traders. Some farmers switch to marketing their FFB to collectors because the payment system is considered faster, and the collectors are willing to lend capital to farmers on the condition that they must sell the proceeds to collectors. This reciprocal relationship results in farmers' dependence on collectors and, in the end, farmers are no longer involved in farmer groups, even though the marketing of FFB with the group is one of the group's work programs whose benefits also return to the members of the group.

The strength of the group assessed from participation in the evaluation stage is that members are more active in participating indirectly, namely by providing criticism and suggestions rather than indirect participation. The oil palm farmer group in Sambas District generally only holds a member meeting once a year; in the evaluation meeting, farmers only give suggestions and criticisms of the activities that have been carried out.

The weakness of farmer groups at this stage is that farmers do not participate in supervising the course of their activities because they have other types of busy ness. Farmers are also not involved in assessing the activities carried out because they feel they are the same as previous activities.

Identifying the internal factors resulted in five indicators of strength and six indicators of weakness. From the IFAS matrix analysis results, the strength factor obtained a total score of 1.16, whereas the weakness factor obtained a total score of 1.22. It shows that the weakness factor is singled out as a reference for strategy formulation because the total score obtained is greater than the strength factor. Furthermore, the analysis of farmer groups' external factors (opportunities and threats) produced four indicators of opportunities and four indicators of threats. The factor chosen as a reference in formulating a strategy is the opportunity factor because it obtained a higher total score than the threat factor, which was 1.25, while the total score obtained by the threat factor was only 0.98 (*Table 2*). Based on the calculation of the IFAS and EFAS matrices, the factors that can be used as a reference to determine alternative strategies to increase farmer participation in farmer groups are weaknesses and opportunities that together produce the WO strategy because these two factors obtain the highest scores.

The combination of weakness and opportunity indicators produces four alternative strategies to overcome the weaknesses of farmer groups by taking advantage of external environmental opportunities. The four alternative strategies are: 1). Capacity building and dynamism of members, 2). institutional capacity building, and 3). Establishing cooperation with external parties, and 4). An increase in extension worker support (Table 3). Figure 2 shows four alternative efforts to increase the participation of oil palm farmers in farmer groups: establishing cooperation with external parties, extension support, institutional capacity building, and expanding the capacity and dynamism of members. The selection of strategy priorities using AHP obtained an inconsistency ratio of 0.04 or 4%. It means that the analysis results are feasible because the inconsistency ratio value obtained is smaller than the maximum index of 0.1 or 10%.

The strategy chosen to increase farmer participation in farmer groups is to increase institutional capacity. This strategy can be implemented in three ways: 1) drafting rules/norms through mutual agreement and imposing strict sanctions on members who violate them. Rules/norms are fundamental in an organization whose purpose is to regulate the behavior of its members. 2) Carry out regular and continuous meetings such as member meetings, management meetings, and evaluation meetings; and 3) prepare administrative books and work plans and activities.

Improving performance and institutional capacity can be the primary solution to increase farmer participation in farmer groups. Esman in Anantanyu (2011) proposed the elements that are the assessment of performance and institutional capacity, namely: 1) the existence of leadership; 2) the existence of rules and norms that guide the actions of members; 3) the output of the institution in the f orm of programs for members; 4) group resources in the form of finance, human, material, and technology; and 5) membership structure. Farmer groups that can meet members' needs, solve problems experienced by members, and facilitate their members' growth and development can certainly increase members' trust and awareness of the importance of the grouping/community.

CONCLUSION

This study shows that the strategy that is a priority in increasing the participation of independent oil palm farmers in farmer groups is the *Turn-around* (WO) strategy, which takes advantage of opportunities by overcoming existing weaknesses. This strategy produces four alternative approaches, with the prioritized strategies being capacity building and institutional performance. There are three ways to improve institutional capacity and performance: compiling institutional rules/norms, holding regular meetings between administrators and members, and preparing administrative books and work/activity plans.

Table 3 SWOT analysis

Critical key success factor	Strength	Weakness
	1. The initiative to attend meetings and actively provide proposals in determining the activities to be carried out 2. Actively provide feedback and suggestions in the election of new management 3. Initiative to donate manpower and cash for the smooth running of activities 4. There is an increase in members' income and assets social programs such as road construction, health, and education 5. Active in providing criticism and suggestions during evaluation meetings	1. Low participation of members in budget proposals and activity locations 2. Low participation of members in planning the needs and flow of activities 3. Absence of written rules and norms 4. Absence of material contribution initiatives 5. Lack of initiative to be the person in charge or coordinator of activities 6. Lack of personal benefits such as knowledge and skills that members gain 7. Low participation of members in providing assessment and supervision of activities
Opportunities 1. The role of the government in providing administrative licensing 2. The existence of an oil palm replanting program 3. The ease of marketing FFB to companies 4. There is counseling and training from private companies		1. Increased capacity and dynamism of members (w1,w2, w4,w7,o4,w5) 2. Institutional capacity building (w3, w6, o1,o2) 3. Establish cooperation with external parties (o2,o3,o4,w6) 4. Increase in extension worker support (o1, w6)
Threats 1. Lack of facilities and infrastructure assistance from the government 2. There has been no oil palm plantation counseling from government agencies 3. The existence of many collector traders who have a better payment system and provide capital loans and production inputs		

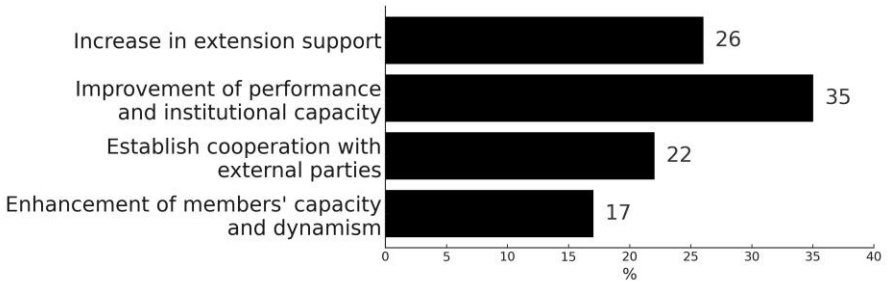

Figure 2 Priorities to increase the participation of the independent oil palm smallholders in farmer groups.

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