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## Barriers to Establish a Cooperative to Manage a Machinery Rental Business in Farmer Groups: A Multi-Case Study Approach

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## Barriers to Establish a Cooperative to Manage a Machinery Rental Business in Farmer Groups: A Multi-Case Study Approach

### Abstract

This study aimed to analyze the barriers faced by farmer groups in establishing a cooperative to manage a machinery rental business. The qualitative method with a multi-case study approach was used in this study with farmer groups as the research objects and chairpersons and members as the participants. The chairpersons were chosen by purposeful sampling and the members by snowball sampling. Data collection techniques were in-depth interviews and focus group discussions. The data credibility tests were triangulation and member checks. The results showed that all chairpersons and members positively responded to the cooperative and that the main barrier to establishing cooperatives in farmer groups was the absence of volunteers. The barriers for farmer groups that had volunteers included: (1) it was difficult to find members who wanted to become administrators because they felt they were unable to overcome the problem of shortage of operators and customers; (2) the obligation to make financial reports to the Cooperative Office and members; (3) management has not been able to prepare financial reports; and (4) expensive notary fees. Our recommendations for the Ministry of Agriculture are to assign agricultural extension civil servants as volunteers and to conduct operator training. The recommendation to the Ministry of Cooperatives is to guide the preparation of financial reports.

### Keywords

cooperative, farmer groups, barriers, machinery rental business, multi-case study

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# **Barriers to Establish a Cooperative to Manage a Machinery Rental Business in Farmer Groups: A Multi-Case Study Approach**

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## **Introduction**

Farmer organizations in Indonesia include farmer groups, combined farmer groups, and farmer-owned enterprises in the form of a cooperative or limited company (Regulation of Agriculture Minister Number 67, 2016). Farmer organizations have provided benefits to members, including increased profits (Dan et al., 2021; Abdul-Rahaman & Abdulai, 2020), increased access to markets (Frese & Gielnik, 2014), reduced transaction costs (Mbeche & Dorward, 2014), and effective empowerment tools (Desiana & Aprianingsih, 2017). The Ministry of Agriculture provided machinery grants from 2008 until 2019 with about 299,652 units, consisting of 13 types and the majority being hand tractor machines (Directorate General Agricultural Infrastructure and Facilities, 2018; 2020). The machinery grants became capital to establish farmer-owned enterprises in the form of cooperatives because to establish a cooperative, there is no minimum capital limit. Meanwhile, to establish a limited company, there is a minimum capital requirement of IDR 50,000,000, which is difficult for members of farmer groups to fulfill.

Farmer organizations are also sometimes known as agricultural cooperatives, producer organizations, producer-owned enterprises, and member-owned firms (Prasertsang et al.,

2020). Several previous studies have proven the benefits of cooperatives for farmers. Cooperatives increase farmers' income (Ortega et al., 2019; Wassie et al., 2019), improve farmers' working conditions and market access (Gava et al., 2021), and increase net returns and return on investment (Ma et al., 2021). Cooperatives play a positive role in the rural economy (Ji et al., 2019). Cooperatives increase farmers' production, increase their bargaining power, and enable them to benefit from modern value chains (Hao et al., 2018). The agricultural cooperative system is an important way for farmers to improve their economic status (Ito et al., 2012). Hanggana et al. (2022) concluded that farmer groups that manage tractor rental business units with a cooperative system are more effective than others. The management of a machine rental business is considered effective if it provides members with a lower rental price than the market price and has savings to buy a new machine.

This research is important to do to improve the effectiveness of farmer groups in managing machinery rental businesses because there is only one out of 25 farmer groups in Kebakkramat District, Karanganyar Regency, Central Java Province, Indonesia that effectively manages machinery rental businesses with a cooperative system. The other 24 farmer groups are ineffective and do not use the cooperative system (Hanggana et al., 2022). This fact shows that the aim of the Ministry of Agriculture to provide machinery grants to reduce machinery rental costs and to establish cooperatives has yet to be successful. This incident can occur in other areas when the government provides grants to farmer groups without legal and precise management. The results of this study are expected to provide information on the barriers to establishing cooperatives that the Ministry of Agriculture can use to revise the distribution policy for agricultural machinery grants to farmer groups.

### **Purpose of the Study**

This study aimed to analyze the barriers of farmer groups to establish a cooperative with unique characteristics to manage a machinery rental business. The establishment of cooperatives was the most accessible alternative for farmer groups to increase their effectiveness of farmer groups in managing the machinery rental business.

## **Literature Review**

### **Characteristics of Farmer Groups in Indonesia**

“Farmer group” is used to refer to a farmer organization in Indonesia. Farmer groups were established in 1979 based on the Circular Letter of the Minister of Agriculture number 130/Mentan/II/1979. Furthermore, farmer groups are regulated by Regulation of the Minister of Agriculture, which has been revised several times, and finally by Regulation of Agriculture Minister Number 67, 2016 about farmer institutional development. This regulation explains that farmer groups are farmer organizations formed by the government with an area of 25-40 hectares of rice fields in one village. Owners of these fields are set as members. The farmer groups are a tool of extension to improve farmer competencies and distribute the grant to farmers in agricultural machinery, subsidized fertilizers, seeds, etc. The farmer groups are a non-formal farmer organization with funding from the government, establishment and development carried out by agricultural extension civil servants, and are places to learn and cooperate.

Regulation of Agriculture Minister Number 67, 2016 assigns agricultural extension civil servants to establish and develop farmer groups with the following activities: (1) socializing the establishment of farmer groups to farmer chairpersons and village officials; (2) holding a meeting for the establishment of a farmer group that invites farmers, community

chairpersons, and village officials; (3) developing farmer groups by providing assistance, so that farmer groups develop into independent organizations; (4) conducting training and counseling activities with a group approach to improving the competence of members in agribusiness; and (5) channeling grants from the Ministry of Agriculture to farmer groups, both at the group level and to individual farmers. Group-level grants include agricultural machinery and organic fertilizer manufacturing plants. Individual-level grants include subsidized seeds and fertilizers.

Farmer groups in Indonesia have more dominant characteristics as a tool for the government to carry out the obligation to carry out the law rather than as a means for farmers to fight for their interests. Farmer groups were established because of the persistence of the Ministry of Agriculture to implement Law Number 19 of 2013 concerning the Protection and Empowerment of Farmers, not because of the persistence of farmers to fight for their interests. Farmer groups have the characteristics of being a means of facilitating communication, smoothing program administration, distributing government assistance to farmers, and carrying out government programs (Syahyuti et al., 2014). Farmer groups also have the characteristics of being a forum for farmer collaboration (Hamilton et al., 2015), a means of empowering farmers (Desiana & Aprianingsih, 2017), and accelerating the adoption of technological innovations (Adawiyah et al., 2017). Understanding the characteristics of farmer groups can help a more comprehensive analysis of the factors that barrier the establishment of cooperatives.

### **Characteristics of Cooperatives**

A “cooperative” is an autonomous association of persons united voluntarily to meet common economic, social, and cultural needs and aspirations through jointly owned and democratically controlled enterprises (International Cooperative Alliance, 2022). A cooperative is often societies of farmers wanting to achieve the same socio-economic aspirations based on their democratic control of the organization (Bouamra-Mechemache & Zago, 2015). Hanel (1989) proposed the theory of "Tri-angel Identity of Cooperative," which explains the position of members as owners as well as customers. The development of cooperatives is highly dependent on the participation of its members. A cooperative is an example of collective action, where farmers contribute to the management of the cooperative. Furthermore, cooperatives increase market stability and improve services to farmers (Gerard et al., 2020). Cooperatives are considered democratic businesses based on participatory decision making (Jossa, 2014).

Swasono (2018) distinguished the character of cooperatives from corporations. Cooperatives were groups of people, so cooperatives prioritize all human dignity equally. Cooperatives placed members as owners, managers, and customers. The cooperative's goal was to maximize shared use/shared services in contrast to corporations that prioritize capital in the form of money. The corporation placed members as owners, but not managers or customers. The purpose of the corporation was to maximize profit.

The International Cooperative Alliance sets out seven cooperative principles, namely: voluntary and open membership; democratic member control; members' economic participation; autonomy and independence; education, training, and information; cooperation among cooperatives; and concern for the community. These principles have been adopted in Indonesia in Law Number 25 (1992) on cooperatives.

Law Number 25 (1992) mentions the characteristics of the cooperative are (1) members as owners; (2) members as users; (3) the decision of the Members' Meeting is based on a consensus, and if it fails, the decision is made based on the majority vote, where one person

has one vote; and (4) the Members' Meeting has the authority to determine the profit-sharing and cooperative capital.

Farmer cooperatives improved food security in rural areas (Gebremichael, 2014). To that end, the Ministry of Agriculture encourages farmers to form cooperatives. Laurett and Franco (2018) stated that the variables that motivate people to become members of cooperatives include: family influence in participating in the cooperative; being invited to participate in the cooperative by the manager, or some element of chairpersonship, voting rights; quality of the products and services supplied; transparency; being an owner; easy access to credit, market, training; greater competitiveness in the sector; and opportunity to make collective purchases. After becoming a member, the cooperative management must try to increase member satisfaction. Member satisfaction with horticultural cooperatives is influenced by business participation, meeting attendance, investment value, trust in management, profitability, diversity of services, and the suitability of the location of the cooperative (Prasertsang et al., 2020).

Cooperatives have the potential to be a source of creativity and innovation (Rusko et al., 2017). The most relevant elements to produce a creative work environment in cooperatives are decentralization of power, freedom of autonomy, and support of work teams (Morlà-Folch et al., 2019). Flecha and Ngai (2014) argue that cooperatives explore and create alternative forms of organization responding to the economic, social, and democratic needs of society, although there are sometimes tensions between cooperative values and the competitiveness of firms.

The Ministry of Agriculture wants farmer groups to develop into cooperatives by providing machinery grants as capital to run a machinery rental business. The characteristics of farmer groups are in line with cooperatives, so it should be easy for the heads of farmer groups to establish cooperatives. However, only one out of 25 farmer groups had established a cooperative. Understanding the characteristics of cooperatives will facilitate the analysis of barriers to establishing cooperatives.

### **The Unique Characteristic of a Cooperative Concept from the Researcher**

The unique characteristic of a cooperative concept from the researchers is that the cooperative's business capital does not come from member capital contributions like cooperatives in general but from the machinery grants of the Ministry of Agriculture. Business development funds are prioritized from undivided profits and commercial bank loans. The member's capital deposit is as tiny as possible only to fulfill the formal requirements of establishing a cooperative according to cooperative law. Researchers suggest a capital deposit of IDR 25,000 per member to be paid once while being a member. Capital from members is used to pay for the consumption costs of member meetings. This unique characteristic was developed from the researchers' ideas based on the observations of the chairperson and members of farmer groups who were participants in the 2021 research. The chairperson and members disliked cooperatives because they had terrible experiences being members of village unit cooperatives that the government required. The bad experience was that all farmers were made cooperative members obligated to deposit capital, but the management failed to share profits between members and return the members' capital.

### **Organization Theory**

Organizations are social units that are intentionally established for a relatively long period of time, consisting of two or more people who work together and are coordinated, have certain structured work patterns, and are established to achieve common goals (George &

Jones, 2012; Bayle, 1986). The organization is also a formal union system (Hasibuan, 2013), a place to work together systematically in utilizing resources (Ambarwati, 2018).

The reasons people become members of organizations, among others, want to get economic benefits, self-recognition, pride, and so on (Cherrington, 1989). Organizations are formed to fight for the interests of their members (Olson, 1971). Organizations will die if they do not act in the interests of their members. For example, farmers' organizations fight for laws that benefit farmers, favorable prices for agricultural products, farm subsidies, and so on.

Farmers' organizations were established to support their members in pursuing their individual and collective interests, such as access to agricultural technology, extension services, and credit (Bairagi & Mottaleb, 2021). The more benefits that members receive, the more loyal members are to the organization. Conversely, the fewer benefits that members receive, the lower their loyalty to the organization, even leaving the organization. The more farmer groups provide benefits to members, and the more loyal members are to farmer groups.

Farmer group regulations do not regulate the rights and obligations of members or administrators as in cooperatives. Managing the Ministry of Agriculture's grants machinery is fully handed over to the chairman. Most farmer groups that are the object of the research have yet to manage the machinery rental business effectively, so they do not provide economic benefits to members. As a result, members are reluctant to become customers or administrators. The management of the machinery rental business using the cooperative model will clarify the rights and obligations of members and administrators so that it is expected to become an organization that is more effective in realizing the goals of farmers becoming members of the organization.

## **Research Methodology**

The establishment of cooperatives in farmer groups is urgently needed to improve the effectiveness of managing the machinery rental business so that it benefits the chairpersons and members of farmer groups and officials from the Ministry of Agriculture tasked with developing farmer groups into farmer-owned enterprises in the form of a cooperative. The research methodology was designed to answer the following research questions: (1) How do the chairperson and members of farmer groups respond to the establishment of cooperatives with unique characteristics? (2) what were the barriers to establishing cooperatives in farmer groups according to the opinions of the chairperson and members?

We use the qualitative method with a multi-case studies approach and thematic analysis to answer this question. The qualitative methods allow researchers to get participants' original opinions even though these opinions can offend other people interacting with participants. The qualitative method was suitable for understanding social interactions and understanding people's feelings (Murdiyanto, 2020). The qualitative research was a process of exploring and understanding the meaning of behavior and describing social problems (Creswell, 2012). The case studies were relevant to answer research questions that required answers and were broad, in-depth descriptions of contemporary circumstances and in real-world contexts (Yin, 2018). A multi-case study can describe as many barriers as possible in establishing a cooperative according to the opinion of the chairpersons and members of the farmer groups with the same regulations. Data were collected and analyzed based on themes to facilitate understanding of events in farmer groups related to the management of the machinery rental business. Thematic analysis was suitable to be used to identify and explore the pattern of an event that was the object of research (Heriyanto, 2018).

The objects of research were selected based on information from the results of research conducted in 2021. All tractor income was deposited into the farmer group. The attitude of the chairperson who gave up all of the tractor's income proved he was a faithful volunteer and

highly committed to developing farmer groups. The chairperson had sacrificed money and human resources to submit proposals for machinery grants, lobby relevant officials, look for customers, and look for operators without taking advantage. This attitude of the chairperson had the potential to accept the concept of a cooperative that gives all members equal rights to the income of the machinery rental business. The location of the study was Kebakkramat District, Karanganyar Regency, Central Java Province, Indonesia. This study was conducted from March to September 2022. The participants were the chairperson and members of the farmer groups. The chairpersons were chosen by purposeful sampling, and the members were chosen by snowball sampling, starting with members appointed by the chairperson. Furthermore, members who have been interviewed appoint another member to be the next participant. Participants were selected from people who understand the following three things: the process of obtaining machinery grants; the management of the machinery rental business that has been carried out by chairpersons; and the culture of farmer group management, which the chairpersons and a small number of members know. Before meeting the participants, the researcher submitted a research assignment letter from Sebelas Maret University as a research institution to the head of the village where the participant lived. Researchers explain the type of data needed, how to collect it, and the participants with pseudonyms. Usually, the village head will permit if the data collection does not harm the participants or other parties.

Data collection techniques were in-depth interviews and focus group discussions (FGD). The interview data collection method has advantages in providing deeper and more detailed insight into the research topic (Jain, 2021). In FGD, participants engage in synergistic discussions so that Participants get many perspectives that enrich their understanding of the topics discussed (Piercy et al., 2011). The research instruments were the researchers and interview guide. The interview guide avoided closed questions so that the informant was not influenced by the wishes of the researcher but answered according to his wishes (Yeong et al., 2018). Interviews were conducted by the researcher with each informant for between 60-90 minutes. The interviews and FGD were conducted when the researchers and participants were in good health, had no symptoms of COVID-19, and followed the health protocol. The FGD was conducted in each farmer group. The FGD was led by the researcher and placed in Gubuk Tani (open space). Interview and FGD data were displayed, analyzed, interpreted, and concluded in FGD, followed by all research teams.

The data credibility tests were triangulation and member checks. Triangulation was carried out by comparing data from the interview method with FGD and the chairperson with members. Member checking was done by the researcher, confirming the suitability of the researcher's interpretation of the participant's answer. Member checking was carried out at the end of the in-depth interviews and FGD.

The research team had four data collection and analysis steps to determine the barriers to establishing cooperatives within farmer groups. In the first step, the research explained to the chairperson and members the benefits of establishing a cooperative with unique characteristics to increase the effectiveness of managing the machinery rental business. The unique characteristic in question is that members deposit as little capital as possible only to fulfill the requirements for establishing a cooperative according to the cooperative law, not for cooperative business capital like cooperatives in general. Business development funds are prioritized from undivided profits and commercial bank loans, not from member capital deposits, as cooperatives generally do. This step was carried out with in-depth interviews with the chairperson and members of farmer groups. The purpose of the first step was for the chairperson and members who become participants to understand the unique characteristics of the cooperative to be established, the benefits of the cooperative, and the consequences of the chairperson getting reduced rights to determine policies for managing the machine rental business.



The second data collection and analysis step identified the chairperson and members' response to the cooperative's establishment by conducting in-depth interviews with the same participants as the first step; namely, the chairperson and members who already understood the cooperatives' unique characteristics. This step resulted in participants who responded positively to the establishment of cooperatives and those who rejected the establishment of cooperatives. Examples of questions: "What is your response to establishing a cooperative in this farmer group? What are your reasons?"

The third data collection and analysis step identified chairpersons and members of farmer groups willing to become volunteers to establish cooperatives by conducting in-depth interviews with chairperson and members who responded positively. This step resulted in finding volunteers willing to invite members of farmer groups to conduct FGD regarding establishing cooperatives. Example question: "Are you willing to invite other farmer group members to set up a cooperative? What are your reasons?" An example of a follow-up question for an unwilling to invite members to set up a cooperative: "In your opinion, who has the potential to become a volunteer for the establishment of a cooperative in this farmer group?"

The fourth data collection and analysis step identified the barriers to establishing cooperatives in detail by conducting FGD with the chairperson and members of farmer groups. This step resulted in the conclusion of the barriers to establishing cooperatives agreed upon by the participants. Sample question: "In your opinion, what are the barriers or difficulties in setting up a cooperative?"

## **Results**

### **Overview of the Role of the Chairpersons in the Existence of the Machinery Rental Business**

The research objects had the following pseudonyms: Farmer Group 1, Farmer Group 2, and Farmer Group 3. The three chairpersons had relatively similar roles, namely, making tractor grant proposals, lobbying agricultural extension civil servants, lobbying political party cadres, reporting on tractor activities to the office of agricultural extension civil servants every year, looking for customers, and looking for operators. The most crucial role was lobbying to get tractor grants because the grants provided were far less than the farmer groups that put forward the proposals. All tractor rental proceeds were deposited to the treasurer of the cash management of the farmer group. The chairperson was not compensated for the role performed. Thus, the chairpersons of the three farmer groups had a high volunteer spirit and had a dominant role in the success of the tractor rental business.

### **Participants Profile**

There were 27 participants in total: three chairpersons and 24 members. The chairperson of Farmer Group 1 was willing to volunteer to establish a cooperative, so researchers need more participants from members of Farmer Groups 1 to fulfill the minimum requirements for establishing a cooperative and to increase researchers' confidence in data on members' commitment to establishing a cooperative. There were two members from Farmer Group 2 and two from Farmer Group 3 because the chairpersons of Farmer Group 2 and 3 were unwilling to establish a cooperative, so researchers only needed a little information to gain confidence. All participants actively participated in farmer group activities so that they understood farmer group activities. Five participants had baccalaureate graduates, and 22 high school graduates. All participants have been members of farmer groups for more than ten years. The age of the participants ranged from 33 to 72 years. Seven participants admitted farming as

their primary occupation. Twenty participants admitted to farming as a side job while working for a company as their main job. Participants have a minimum of 0.22 hectares of rice fields, a maximum of 2.15 hectares, and an average of 0.35 hectares.

### **A Barriers to Establish a Cooperative in Farmer Group 1**

Farmer Group 1 was located in Macanan Village, Kebakkramat District, Karanganyar Regency, central Java, Indonesia. Farmer Group 1 has been chaired by CP1 since 2018. The farmer group had 130 members with an area of 48 hectares. Farmer Group 1 manages a tractor rental business without a specific form of business entity. The tractor was a grant from the Ministry of Agriculture in 2020 with a value of IDR 30,000,000. The capacity of the tractor was seven hectares per season. There were three growing seasons in a year. The rental price for the tractor machinery was set according to the market price, which was IDR 1,500,000 per hectare. Farmer groups did not share profits with members, did not compensate managers, and had no savings to buy new machinery. All profits from the tractor rental business were put into the farmer group treasury to pay for the operation of the farmer group. The first data collection and analysis step in Farmer Group 1 was an in-depth interview with CP1 as the chairperson and MB1-1 as the member. CP1 appointed MB1-1 as a participant because he was seen as actively participating in farmer group activities. CP1 and MB1-1 become a participant in the first, second, third, and fourth steps. The result of the first step was that CP1 and MB1-2 understood the unique characteristics of the cooperative to be established, the benefits of the cooperative, and the consequences of the chairperson getting reduced rights to determine policies for managing the tractor rental business.

The second data collection and analysis step identified the chairperson and members' response to the cooperative's establishment by conducting in-depth interviews with the same participants as the first. The unique characteristics of cooperatives can provide more benefits to the chairperson and members so that the chairperson and members can respond positively to the establishment of the cooperative. CP1, as chairperson, responded positively to establishing a cooperative after understanding the unique characteristics and benefits. CP1 also has no objection if the cooperative reduces CP1's rights in managing the tractor rental business.

Hearing the research team's explanation of the cooperative concept, I was very interested in establishing a cooperative. The cooperatives used capital deposits from members only to meet the formal requirements of the cooperatives, not for cooperative business capital. Cooperatives capital was the machinery of a grant from the Ministry of Agriculture. Thus, the members were not burdened with dues. Members had benefits and complained when they were burdened. With the existence of a cooperative, the profits of the tractor rental business became apparent: how much was it for the management, members, and cash for the farmer group? (Participant CP1).

The chairperson of the farmer group can carry out regulations for obtaining machinery grants without the role of the members. CP1 has done the essential work of obtaining tractor grants and running a tractor rental business but has not received any economic benefits. CP1 did not get proportional rights and obligations. CP1 responded positively to establishing a cooperative because the cooperative will regulate the rights and obligations of the chairperson and members proportionally. The profit-sharing proportion for management including the chairperson, members, operational costs, and business development reserves, was decided at the annual cooperative member meeting. Establishing a cooperative gave benefits to

chairpersons who were volunteers like CP1. CP1 got profit sharing at the will of all members at the meeting from previously not getting economic benefits.

Members felt they did not have a role in obtaining tractor grants, so they did not have the right to determine tractor management policies. Establishing a cooperative will benefit members because they will get the same rights as the chairperson.

I respond positively to establishing cooperatives if those that will be established do not burden members with contributions as business capital like previous cooperatives, harming farmers. After all, the contributions are not returned when the cooperative is no longer operating. Besides that, as a member, I have the right to determine the tractor rental price policy that benefits the members, which was decided at the member meeting (Participant MB1-1).

Members responded positively to the establishment of the cooperative because the cooperative did not withdraw money from members for cooperative business capital like cooperatives that have existed, and members had the same right to determine the price of tractor rental. MB1-1 as members felt that they got additional benefits from the existence of the cooperative, including receiving profit-sharing and having the right to participate in determining tractor rental rates so that they could reduce tractor rental prices. These additional benefits can increase the motivation of MB1-1 and other members to become loyal cooperative customers.

The third data collection and analysis step identified chairperson and members of farmer groups willing to become volunteers to establish cooperatives by conducting in-depth interviews with chairpersons and members who responded positively. This step resulted in finding volunteers willing to invite members of farmer groups to conduct FGD regarding establishing cooperatives. CP1 responded positively and was ready to volunteer to establish a cooperative, but MB1-1 was only willing to become a cooperative member.

I am willing to volunteer and invite all members to conduct FGD regarding establishing cooperatives. The cooperative can be established soon because it will reduce my obligations and increase my rights. My most challenging duty after receiving tractor grants is finding customers. Establishing a cooperative makes it easier to find customers because being a cooperative member will get profit sharing, while currently, it does not (Participant CP1).

CP1 was willing to volunteer because they felt they benefited from establishing the cooperative. CP1 found it challenging to find customers because the members already had tractor rental business partners with long-standing relationships. Establishing a cooperative can be a solution for adding customers because the community, including tractor rental entrepreneurs, understands that cooperative members are obligated to become cooperative customers. Besides that, members can set lower tractor rental prices so that the cooperative gets more customers.

The fourth data collection and analysis step identified the barriers to establishing cooperatives in detail by conducting FGD with the chairperson and members of Farmer Groups 1. The chairman invited all 130 farmer group members, but only 20 attended. The research team leader led the FGD. The FGD began with an explanation by the research team's leader about the benefits of establishing a cooperative with unique characteristics, namely relatively small capital contributions from members. Furthermore, CP1, as the chairperson of Farmer Group 1, explained the process of obtaining tractor assistance, the management of the tractor rental business that had been carried out, and the reasons CP1 was willing to establish a

cooperative. The next event was a discussion led by the research team's leader, discussing participants' responses to establishing cooperatives and the possible barriers.

Members have high trust in CP1 and believe their policies for the organization are good; as a result, all members present respond positively to the establishment of the cooperative. All members present supported CP1's opinion that managing the machinery rental business with a cooperative clarifies the rights and obligations of members and administrators compared to the current management model.

The chairperson and members present agreed to establish a cooperative because it would provide more benefits than farmer groups. However, establishing cooperatives also provides additional obligations that can be barriers to establishing cooperatives. One of the barriers that might occur is the need for members to become cooperative administrators.

One of the difficulties of setting up a cooperative is getting members willing to become cooperative administrators. It has been a long time since the members have been lazy to participate in farmer group activities let alone become cooperative administrators which require more time and energy to find customers and tractor operators. Regular meetings scheduled once a month were only attended by around 15-20 of the 130 members. They consider participating in farmer group activities unimportant because most members have narrow rice fields, so farming is only a side job (Participant CP1).

Members think that farmer groups do not benefit members, so members are not interested in becoming administrators. Establishing a cooperative can increase the motivation of members to become administrators by providing profit sharing to the management and making members customers so that it makes it easier for administrators to find customers.

Establishing a cooperative raises new obligations to make financial reports that were reported to the Karanganyar Regency Cooperative Office and members at the annual member meeting. The obligation to make financial reports has the potential to become a barrier to the establishment of cooperatives.

There is an obligation to make financial reports that must be reported to the Karanganyar Regency Cooperative Office and members at the annual member meeting. None of the members can create financial reports, and none are at an accounting school. Apart from farming, most members work in factories as machine operators, security guards, and work supervisors. Currently, the treasurer, seen as the most competent in administration, only report cash in, cash out, and balance (Participant MB1-2).

MB1-2, a member of Farmer Group 1 and the secretary of the cooperative in the company where he works, provided information that the absence of members or administrators who can prepare financial reports can be an obstacle in establishing a cooperative. Cash reports from the treasurer are sufficient for farmer group reports, but not sufficient for cooperatives. The farmer group only has one tractor, so the results obtained are relatively small and it is not yet possible to recruit accounting staff.

Managing a cooperative legal entity requires a relatively large fee to pay a notary. Cooperatives with legal entities find it easier to seek assistance from the Ministry of Cooperatives and credit from banks.

I once took care of the deed of establishment of a village cooperative to a notary at Rp. 5,000,000. Each notary has a different rate, some set Rp 7,000,000. The

notary fee can be a barrier to establishing a cooperative with a legal entity (Participant MB1-3).

MB1-3 as a member of Farmer Group 1 and an official in the village office where Farmer Group 1 believes that notary fees can be an obstacle because they are relatively expensive, and members may not want to be burdened with notary fees. Members will assume that these fees provide no real benefit. After a cooperative has the status of a legal entity, it is not sure that it will receive assistance from the Cooperative Office, and it is not sure that it will receive credit from the bank.

The conclusion of the barriers to establishing cooperatives agreed upon by the participants in Farmer Group 1 based on the results of the FGD was: (1) it was difficult to find members willing to become administrators because they felt unable to overcome the problem of operators shortages and customer shortages; (2) the obligation made a financial report at least once a year to the Karanganyar Regency Cooperative Office and members at the annual member meeting; (3) the management had not been able to prepare financial reports; and (4) a notary fee to ratify the deed of establishment of a cooperative of IDR 5,000,000 to IDR 7,000,000 was considered a burden to the farmer group.

## **A Barriers to Establish Cooperative in Farmer Group 2**

Farmer Group 2 is located in Malangaten Village, Kebakkramat District, Karanganyar Regency, Central Java, Indonesia. FG2 have been chaired by Mr. CP2 since 2015. The business unit was managed by tractor rental. The business unit was managed without a specific form of business entity. The tractor was a Minister of Agriculture grant in 2017. The capacity of the tractor was seven hectares per season. The farmer group had 105 members with an area of 35 hectares. The rental price for the tractor was set according to the market price, which was IDR 1,500,000 per hectare. The farmer group did not compensate managers, did not share profits with members and had no savings to buy new machinery. All profits were included in the farmer group's cash to pay for the operational costs of the farmer group.

The first data collection and analysis step in Farmer Group 2 was an in-depth interview with CP2 as the chairperson and MB2-21 and MB2-22 as the members. CP2 appointed MB2-21 as a participant because he was a group leader and was still actively involved in farmer group activities. MB2-21 designated MB2-22 as a participant because he actively participates in farmer group activities and has a relatively large rice field (about 1 hectare), so farming is his main occupation. The result of the first step was that CP2, MB2-21, and MB2-22 understood the unique characteristics of the cooperative to be established, the benefits of the cooperative, and the consequences of the chairperson getting reduced rights to determine policies for managing the tractor rental business.

The second data collection and analysis step identified the chairperson and members' response to the cooperative's establishment by conducting in-depth interviews with the same participants. After understanding the unique characteristics and benefits, CP2 responded positively to establishing a cooperative.

I am very interested in the concept of a cooperative that uses basic savings and mandatory savings only to meet the formal requirements of the cooperative. The cooperative's main capital is machinery from a grant from the Ministry of Agriculture and profits from the machinery rental business. With the cooperative, the distribution of profits becomes clear. I struggled to get tractor grants, find customers, and deposit the profits with the farmer group treasurer. I do not dare to take economic benefits because there are no rules. Even though

the cooperative is good and gives the management the right to share profits (Participant CP2).

CP2 has done the essential work of obtaining tractor grants and running a tractor rental business but has not received any economic benefits. CP2 responds positively to establishing a cooperative because, with the cooperative, the distribution of profits becomes clear. CP2 benefits from establishing the cooperative because CP2 will get legal rights in return for the obligations carried out.

Members felt they did not have a role in obtaining tractor grants. However, with the cooperative model, they would get profit-sharing rights so that members respond positively to establishing cooperatives.

I respond positively to establishing cooperatives in farmer groups because the investment is small. Besides that, I will get profit-sharing rights and participate in determining the price of the tractor rental. I have received more benefits than the capital deposit I made (Participant MB2-21).

I responded positively to establishing cooperatives in farmer groups because the chairman also responded positively. So far, I have supported the chairman's policy because the chairman has proven he has sacrificed a lot for the members (Participant MB2-22).

MB2-21 and MB2-22 naturally respond positively to establishing cooperatives because they will get profit-sharing rights and participate in determining prices that benefit members. If the cooperative fails, it will not harm the members because the member's capital contribution has been enjoyed by the members in the form of consumption.

The third data collection and analysis step identified chairpersons and members of farmer groups willing to become volunteers to establish cooperatives by conducting in-depth interviews with chairpersons and members who responded positively. The presence of volunteers to establish cooperatives is very important in the process of establishing cooperatives. However, no one was willing to volunteer, so the fourth FGD step was not carried out.

I positively welcome the establishment of cooperatives, but I am not willing to volunteer to establish cooperatives because it will add to my duties. It will not be easy to find members willing to become the cooperative chairperson, so they will likely appoint me. Several times I have said at member meetings that I cannot find operators and customers to increase profits. I also did not dare to risk being antagonized by tractor rental entrepreneurs. As a result, I only rent tractors to operators, not to farmers. However, I am still hoping for someone to become a volunteer (Participant CP2).

I am not willing to volunteer to set up a cooperative even though the chairperson has appointed me because I feel I cannot compete for customers with tractor rental entrepreneurs and do not have time to take care of the cooperative (Participant MB2-21).

I refused to volunteer to set up a cooperative because I was afraid of being made chairman of the cooperative. I cannot become chairman because I see the task

as tough, members often complain, but the compensation is unclear (Participant MB2-22).

None of the participant's chairperson and members of Farmer Group 2 were willing to volunteer to set up the cooperative because it was difficult to find members who were willing to become chairpersons, challenging to find operators, difficult to find customers, not have time, fear of members' complaints, and unclear compensation. There are no volunteers, so the fourth data collection and analysis step, the FGD, cannot be carried out. Thus, the absence of volunteers is the main barrier to establishing cooperatives in Farmer Group 2.

### **A Barriers to Establish Cooperative in Farmer Group 3**

Farmer Group 3 is located in Alastuwo Village, Kebakkramat District, Karanganyar Regency, Central Java, Indonesia. Farmer Group 3 have been chaired by Mr. CP3 since 2016. The business unit was managed by tractor rental. The tractor was a Minister of Agricultural grant in 2017. The capacity of the tractor every season was seven hectares. There were three growing seasons in a year. The farmer group had 117 farmers with an area of 39 hectares. The rental price for the tractor machinery was set at the market price, which was IDR 1,500,000 per hectare. The business unit was managed without a specific form of business entity. Farmer groups did not compensate administrators, did not share profits with members, and had no savings to buy new machinery. All profits were put into the farmer group's cash to pay for the operational costs of the farmer group.

The first data collection and analysis step in Farmer Group 3 was an in-depth interview with CP3 as the chairperson and MB3-23 and MB3-24 as the members. CP3 appointed MB3-23 as a participant because he was still actively involved in farmer group activities. MB3-24 designated MB3-24 as a participant because he often represents the chairman in meetings attended at the Village Office. The result of the first step was that CP3, MB3-23, and MB3-24 understood the unique characteristics of the cooperative to be established, the benefits of the cooperative, and the consequences of the chairperson getting reduced rights to determine policies for managing the tractor rental business.

The second data collection and analysis step identified the chairperson and members' response to the cooperative's establishment by conducting in-depth interviews with the same participants. After understanding the unique characteristics and benefits, all participants responded positively to establishing a cooperative.

The cooperative concept of the Research Team to manage the tractor rental business is very good. There are currently no guidelines for sharing tractor rental profits. I deposited all the profits to the treasurer of the farmer group. With the existence of a cooperative, the rights and obligations of the chairperson, other administrators, and members become clear. I respond positively to the establishment of this cooperative (Participant CP3).

I support the establishment of a cooperative and am willing to become a member because the deposit for members is small, and the cooperative regulates members' rights more clearly than the current capital (Participant MB3-23).

I support the establishment of cooperatives because members will get profit-sharing and small member capital deposits (MB3-24).

The participants in Farmer Group 3 responded positively to the establishment of the cooperative. They will get a profit-sharing of the tractor, and the presence of a small capital contribution will reduce the risk of members experiencing losses.

The third data collection and analysis step identified chairpersons and members willing to become volunteers to establish cooperatives by conducting in-depth interviews with chairpersons and members who responded positively. None of the participants in Farmer Group 3 were willing to become volunteers to establish the cooperative.

I am not willing to volunteer for the establishment of the cooperative for the following reasons: (1) I was old and unable to argue with members who had different opinions. (2) The average member had a small rice field, so many were lazy to participate in farmer group activities, especially cooperatives, which were seen as more formal and had many obligations. (3) It was difficult to get members to use the group's tractors, so the cooperative management had a heavy burden on marketing. (4) Finding machinery operators made it difficult for administrators to run a machinery rental business. (5) It wasn't easy to find members who were willing to become the management of the cooperative (Participant CP3).

I am willing to become a member but not an administrator because I work in a factory, so I do not have time, and the results from farming are also small (Participant MB3-23).

I am unwilling to volunteer to set up a cooperative because I want to be something other than a cooperative administrator. Managing a cooperative has heavy obligations such as finding customers, looking for operators, and making reports with little compensation (Participant MB3-24).

The chairperson and members were unwilling to volunteer to set up a cooperative. They had reasons, including the majority of members not actively participating in farmer group activities, members not willing to become cooperative administrators, difficulty finding operators, difficulty finding customers, not having time to manage cooperatives, and little compensation. The incident in Farmer Group 3 was the same as in Farmer Group 2. The fourth data collection and analysis step was that the FGD could not be carried out, and it can be concluded that the main barrier to establishing cooperatives in Farmer Group 3 was the absence of volunteers.

## **Discussion**

### **A Positive Response of Chairperson and Members to Establish Cooperatives**

The heads and members of the participating farmer groups positively responded to establishing cooperatives. Their main reasons are the small capital deposit and the characteristics of cooperatives which regulate the rights and obligations of members proportionally so that the chairman and members have confidence that cooperatives can increase economic benefits for members. These benefits include profit sharing, strengthening the bargaining power of farmers to buyers of crop yields, facilitating access to credit to banks, and facilitating access to providers of production facilities. The beliefs of cooperative members follow organizational theory, which states that the goals of people becoming members of organizations are to gain economic benefits (Cherrington, 1989), fight for the interests of their



members (Olson, 1971), facilitate access to credit and realize the interests of farmers collectively (Bairagi & Mottaleb, 2021).

Tractor rent entrepreneurs understand that cooperative members must become cooperative customers, receive profit sharing, and have the right to determine cooperative strategic policies so that cooperatives have great potential to win the competition. The current price of tractor rental is determined by the agreement of the tractor rental business community, which tends to harm farmers. With the existence of a cooperative, the price for renting a tractor is determined by the farmer through a decision of the meeting of the cooperative members so that it benefits the farmer.

### **The Role of Volunteers in the Establishment of Cooperatives**

Volunteers had a significant role in the establishment of cooperatives in farmer groups. Volunteers were willing to sacrifice their assets, energy, thoughts, and feelings to establish a cooperative without expecting material rewards from the cooperative or its members. The chairperson had volunteered with his success in obtaining tractor grants and running a tractor rental business for nothing. Thus, the most significant potential to become a volunteer was the chairman of the farmer group because he had great power in managing the tractor and had been proven as a volunteer, so it was easier to invite members of the farmer group to become members of the cooperative. If the chairperson refuses to volunteer, then it is likely that the members will also refuse.

Of the three farmer group heads who participated, only one was willing to volunteer, while none of the participating members were willing to volunteer. CP1 is the head of a farmer group who is willing to become a volunteer for the establishment of a cooperative. CP1 is willing to volunteer because cooperatives can reduce the problematic task, namely adding customers from cooperative members because he believes cooperative members must become cooperative customers. CP1's opinion follows the opinion of Hanel (1989) and Swasono (2018), who say members are owners and customers. Making members customers is easy to realize because lower rental prices determine the winner of the competition in the tractor rental business. Cooperatives can determine lower tractor rental prices according to members' wishes as customers through member meetings.

The chairperson and members of the farmer groups who refused to become volunteers for the establishment of the cooperative had reasons, including not being willing to be appointed as the chairman or administrator of the cooperative, and it was not easy to find members of the farmer group who were willing to become the chairperson or administrator of the cooperative. People are unwilling to become chairpersons or administrators of cooperatives because (1) finding customers and tractor operators is difficult; (2) they did not dare to risk being antagonized by tractor rental entrepreneurs; (3) the attitude of members who are lazy to participate in farmer group activities because of the income from small farming; and/or (4) the compensation of the chairperson and administrator was unclear.

The chairperson's task of getting customers is the most challenging task at this time. One way is to reduce the price of tractor rental to members. The chairperson determines the tractor rental price according to market prices controlled by the tractor rental entrepreneur community. This condition resulted in farmer groups failing to succeed in increasing member profits by reducing tractor machinery rentals, so they had not increased farmer empowerment. This finding contradicts the findings of Dan et al. (2021); Abdul-Rahaman and Abdulai (2020), who stated that farmer institutions increased farmers' profits. This finding also contradicts the findings of Desiana and Aprianingsih (2017), which stated that farmer groups were an effective tool for empowering farmers. This finding also does not support the findings of Mbeche and Dorward (2014), which concluded that farmer groups could reduce transaction costs.

## **Barriers to Establishing a Cooperative in Farmer Groups**

The main barrier to establishing a cooperative in the farmer groups was the absence of volunteers. On the other hand, the presence of volunteers will facilitate the establishment of cooperatives, because members of farmer groups positively respond to cooperatives that set low capital contributions for members. The chairperson and members of the farmer groups could not overcome the volunteers. Agricultural extension civil servants are the parties with the most potential to become facilitators for the establishment of cooperatives in farmer groups because one of their duties is to develop farmer groups and also receive a salary from the government, which can be considered as compensation for the time and energy sacrificed to establish cooperatives.

Barriers to establishing a cooperative for farmer groups that had volunteers include: (1) difficulty finding members willing to become administrators because they felt unable to overcome the problem of operator shortages and customer shortages; (2) the obligation to make a financial report at least once a year to the Karanganyar Regency Cooperative Office and members at the annual member meeting; (3) the management had not been able to prepare financial reports; and (4) a notary fee to ratify the deed of establishment of a cooperative of IDR 5,000,000 to IDR 7,000,000 was considered a burden to the farmer group.

The government has great potential to overcome barriers to establishing cooperatives in farmer groups. The government can increase members' interest in becoming chairpersons or administrators of cooperatives by overcoming the difficulties they face. Problems that the government can overcome include overcoming the scarcity of operators, the inability of cooperative management to make financial reports, and notary fees.

Through the Ministry of Cooperatives, the government already has a mentoring program for forming cooperatives by assigning Cooperative Extension Officers at the District Level. This program can be coordinated with the Ministry of Agriculture so that farmer groups that establish cooperatives receive assistance in preparing financial reports. So far, farmer groups have yet to receive the attention of cooperative extension officers. Meanwhile, to overcome the problem of scarcity of agricultural machine operators and notary fees, the government needs a new program.

## **The Limitations of Study**

The limitations of the study were the absence of participants from agricultural extension workers to obtain information on the management of the machine rental business, which was suggested as confirmation of the explanation of the farmer group leaders. Based on regulations, agricultural field extension workers assist farmer groups, foster the machine rental business, and check reports on machinery rental activities. Another limitation was that participants needed complete data regarding the tractor rental business's income, costs, and profits, which might influence members' interest in volunteering to establish a cooperative.

## **Recommendations**

Recommendations for overcoming barriers to establishing cooperatives are: (1) the Ministry of Agriculture issued a policy requiring farmer groups to submit proposals for machinery grants to establish cooperatives to manage the machinery rental business; (2) the Ministry of Agriculture assigns agricultural extension civil servants as facilitators for establishing cooperatives; (3) the Ministry of Agriculture conducts operator training and organizes operators at the district level; (4) the Ministry of Cooperatives assigns Cooperative Extension Workers to assist in preparing financial reports for managing cooperatives formed

by farmer groups; and (5) the government, through the Ministry of Law and Human Rights or the Ministry of Cooperatives, issues a subsidy program for notary fees for establishing cooperatives by farmer groups.

The recommendation for further research is to add participants from civil servant agricultural extension workers to confirm the chairman's answer. Future research should add to the analysis of the profitability of the machine rental business. If profitability is high, it can provide high rewards to the management so that members can change their answers to be willing to become volunteers and cooperative administrators.

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