Analysis of farmers/livestock groups institutional characteristics in barru regency

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Abstract. This study aims to analyze the institutional characteristics of farmer/livestock groups consists of group binding element aspects, and the groups function is in supporting institutional groups of farmers/livestock groups. The research type used is quantitative descriptive by survey approach with qualitative research data types that are quantified based on Likert measurement scale. This research was conducted in Barru Sub-District, Barru Regency, South Sulawesi. Population in this study is all beef cattle farmers who are member of farmer/livestock groups in their area with beginner group ability class, advanced, intermediate, main. The number of research samples is 91 people. Data analysis used is descriptive statistics. The results showed that the institution of farmer/livestock groups in Barru District, Barru Regency viewed from the aspect of group institutional characteristics had not been able to support groups success in achieve the common goal because there were still many groups with higher class status but the activities carried out according to the institutional function of farmer/livestock groups is unfulfilled.

1. Introduction

Food sovereignty is becoming increasingly important as Indonesia enters the era of free trade, including the ASEAN Economic Community (ECA), where trade in goods and services between countries in the South-East Asia region will be increasingly free to enter and exit. This situation makes the country increase its competitiveness through production and distribution systems. The current government aims to make Indonesia a global food stall, focused on food crops such as rice, corn, soybeans, onions, garlic, chili, sugar and beef.

The role of agricultural institutions, including agricultural institutions, which condition the success of agricultural development, is now based on the direction of agricultural development in Indonesia, which is based on the agri-food system. Farmer institutions in rural areas contribute to accelerating the socio-economic development of farmers, access to agricultural information, capital, infrastructure, markets and the adoption of agricultural innovations. In addition, the existence of farmer institutions will facilitate the work of the government and other stakeholders and facilitate their strengthening [1].

From this condition has resulted in many institutions involved to deal with. Support from an institutional group is needed and agri-food progress is greatly influenced by the involvement of support institutions. An institution is an organization or rule, both formal and informal, that governs the behavior and actions of individuals to achieve certain goals. If this is related to the agri-food system, institutions, including subsystems of support services, where they should be able to play a role in supporting activities related to the procurement of production facilities, to agriculture, agricultural processing and marketing. Farmers as major players are subjects in the development of the agri-food
industry, consumers of services provided by institutions supporting the agri-food industry [2]. In the context of their agricultural activities, farmers maintain working relationships with the institutions that support them, such as herders' groups, production input traders, agricultural commodity traders, extension workers, cooperatives, banks and local governments [3].

There are three important roles in farmer groups: social media or extension media, change tool, and place of aspiration statement. If this role is well filled, then the farmer group can play a leading role in developing its influence. By examining the functions, roles and potential of farmer groups, it is necessary to improve, strengthen and strengthen their institutions in order to enable them to develop optimally in order to enable them to carry out their activity agricultural [4,5].

Farmer groups are basically non-formal organizations in rural areas that are developed "from, by and for farmers", having the following characteristics [6,7]:

1. Characteristics of farmer groups
   a. Get to know each other, get close and trust each other among members,
   b. Having the same views and interests in farming business,
   c. Having similarities in tradition and / or settlement, business expanse, type of business, economic or social status, language, education and ecology.
   d. There is a division of tasks and responsibilities among members based on mutual agreement.

2. Binding agent of the farmer groups
   a. The existence of the same interests among its members,
   b. The existence of an agricultural zone which is the responsibility of its members,
   c. The existence of farmers' cadres dedicated to farmer mobilization and leadership is accepted by other farmers,
   d. The existence of activities that can be felt by at least most of its members,
   e. Local community leaders encourage or motivate the project to be developed.

3. Groups function
   a. Classroom learning; Kelompoktani is a teaching and learning forum for its members to increase knowledge, skills and attitudes (PKS) as well as the growth and development of agricultural self-sufficiency, so that productivity increases, income and a more prosperous life.
   b. A cooperation; Farmer groups are a place to strengthen cooperation among farmers in groups and between groups and with other parties. Through this collaboration, it is hoped that his farm business will be more efficient and better able to deal with threats, challenges, obstacles and disruptions.
   c. Production unit; The agriculture that is carried out by each member of the farmer group, as a whole, should be considered as a commercial entity that can be developed to achieve economies of scale, both in terms of quantity, quality and continuity.

South Sulawesi has several beef cattle production areas, including Barru Regency. One of the weak points of the Barru regency's agri-food system is the absence of a solid economic organization of beef cattle farmers, characteristic of modern livestock breeders. Farmers tend to do their own business and depend on help from the government and other commercial actors such as traders and capital owners. Such an individual model makes it ineffective because it has to import small volumes of inputs and faces problems of increasing productivity, quality of output, marketing, and access to technology and capital. With the number of beef cattle in the regency of Barru, every year from 2013, 62.035 tails have climbed until 2017, and up to 72.197 in total [8]. In addition to the large number of livestock, there are also many institutional farmer groups in Barru District. Breeders in the Barru subdistrict have been grouped into 35 groups, with detailed information on beginners 10, continue 12, intermediate 3 and major 10. Breeders' groups are generally based on technical interests to facilitate coordination, where there are government activities or programs, to be more program-oriented, group independence and group sustainability. Based on this, the need for the role and function characteristics of livestock
farmer groups is so large, this means that livestock farmer groups must be fostered and empowered so that they become a solid group that has the ability to access agricultural development facilities.

2. Research methods

This research was conducted in the Barru sub-district, Barru District, South Sulawesi. The selection of research sites is based on data from the Barru Regency Department of Agriculture that the district has a group institution that has the capacity class with the largest number of core groups, i.e. 10 groups. The population of this research is all members of cattle ranching groups in Barru District, Barru Regency, consisting of 960 breeders representing a total of 35 groups. Determination of the sample is calculated based on the Slovin formula using cluster random sampling, which provides the same distribution of sample amounts for each village with the most number of members with class ability groups in Barru sub-district, 6 villages. Then the number of village group members in the cluster becomes group members according to the beginner, advanced, intermediate and primary ability classes with a sample of 91 farmers. Research data were collected using data collection techniques, namely interviews, focus group discussions, in-depth interviews with key informants, namely counselors and group leaders and breeders in Barru District, Barru District, South Sulawesi. The data obtained were analyzed using descriptive statistics with a frequency distribution table.

3. Results and discussion

3.1 Classification of Respondents Age

The age of a farmer can affect the productivity of their work in livestock business activities. Age is also closely related to the mindset of farmers in determining the management system that will be applied in animal husbandry business activities. Classification of respondents by age level in Barru District can be seen in table 1.

| Age category (years) | Number of respondents (people) | Percentage (%) |
|---------------------|-------------------------------|----------------|
| 25-39               | 46                            | 50.5           |
| 40-53               | 25                            | 27.5           |
| 54-67               | 17                            | 18.7           |
| ≥68                 | 3                             | 3.3            |
| Total               | 91                            | 100            |

Table 1 shows that respondents aged 25-39 were 46 farmers / breeders with a percentage of 50.5%, aged 40-53 were 25 farmers / breeders, aged 54-67 as many as 17 farmers / breeders, and aged 68 years and over were 3 farmers / breeders, which indicates that group members are mostly of productive age. Able to run farming activities and be able to interact with group members. This is in agreement with Toha and Hendro, A [9] that middle adulthood, aged 25 to 53, is a period where a person reaches the peak of interaction in society and his work, and productive age who can work to produce goods and services.

3.2 Level of education

A person's education level is an indicator that reflects a person's ability to be able to complete a type of work or responsibility. With an educational background a person is considered capable of carrying out a particular job or responsibility given to him. An adequate level of education will certainly have an impact on the ability of the management of the farm being involved. Classification of respondents based on education level in Barru District can be seen in table 2.
Table 2. Classification of respondents based on education

| Education category          | Number of respondents (people) | Percentage (%) |
|-----------------------------|--------------------------------|----------------|
| Not Attending School        | 5                              | 5.4            |
| Elementary School           | 37                             | 40.6           |
| Junior High School          | 20                             | 22.0           |
| Senior High School          | 20                             | 22.0           |
| College                     | 9                              | 10.0           |
| **Total**                   | **91**                         | **100**        |

Table 2 shows that the level of education in Barru Subdistrict, Barru District is still relatively low, this is evidenced by respondents who are not attending school 5.4%, elementary school 40.6%, junior high school and senior high school by 22%. The rest is at the college, as bachelor degree, which is 10%. Most of the farmers have low education, they still think that their business does not need an education that can facilitate them in accepting a technology and can influence their mindset. This agrees with Siregar [10] that education is one of the factors in the development of livestock farming, because education greatly influences one's mindset, especially in terms of decision making and management management in managing a business.

3.3 Duration of Membership

The duration of membership influences the level of knowledge and skills of farmers in managing their livestock businesses. Classification of respondents based on membership duration found in Barru District can be seen in table 3.

Table 3. Classification of respondents based on membership duration

| Duration of membership (years) | Number of respondents (people) | Percentage (%) |
|-------------------------------|--------------------------------|----------------|
| 1-2                           | 5                              | 5.5            |
| 3-4                           | 11                             | 12.1           |
| 5-7                           | 25                             | 27.4           |
| 7-8                           | 14                             | 15.4           |
| 9-10                          | 20                             | 22.0           |
| >10                           | 16                             | 17.6           |
| **Total**                     | **91**                         | **100**        |

In Table 3, it shows that the duration of 1-2 years membership is 5.5%, 3-4 years is 12.1%, 5-6 years is 27.4%, 7-8 years is 15.4%, 9-10 years 2%, and more than 10 years 17.6%. Gusmaniar [11] argues that the length of membership influences the level of knowledge and skills of farmers in managing their livestock businesses.

3.4 Involvement of Group Activities

The involvement of members in the group is assessed by how much participation in group activities. The involvement of members in group activities can be seen in table 4.
Table 4. Classification of respondents’ involvement in group activities

| Group activities (monthly) | Number of respondents (people) | Percentage (%) |
|---------------------------|-------------------------------|----------------|
| 1-2                       | 85                            | 93.4           |
| 3-4                       | 4                             | 4.4            |
| >5                        | 2                             | 2.2            |
| Total                     | 91                            | 100            |

In Table 4, the involvement of members in participating in group activities 1-2 per month was 93.4%, 3-4 per month 4.4%, and more than 5 times per month was 2.2%. The involvement of group members can be felt by group members when group members play an active role. This is agreed by Danim [12] that efforts in group effectiveness can be achieved if each member is able to work on group tasks together and be responsible for their respective tasks in a farmer/livestock group.

3.5 Farmers/Livestock Groups Institutional Characteristics

3.5.1 Group Binding Elements

Characteristics of group institutions that are intended in this study are the implementation of group binding elements consisting of dedicated cadres, the activities that can be felt the benefits, as well as motivation in supporting the program. The group functions consist of class learning, a vehicle for collaboration, and a production unit [13]. Based on the results of the study as shown in table 5 shows that the characteristics of group institutions that are implemented and support the improvement of class ability groups are dedicated cadres, the activities that can be felt, and the motivation to support the program can be seen in the table below:

Table 5. Characteristics of group institutions in group binding elements

| Description                              | Class category (%) |
|------------------------------------------|--------------------|
|                                          | High   | Enough | Low    |
| Dedicated cadres                          | 50.00  | 45.00  | 5.00   |
| The activities that can be felt the benefits | 55.00  | 40.00  | 5.00   |
| Motivation to support the program         | 40.00  | 50.00  | 10.00  |
| Group Binding Elements                    | 48.33  | 45.00  | 6.67   |

The group binding element as a dedicated cadre shows the majority of 50.00% is classified as high. The remaining 45.00% is classified as sufficient, and 5.00% is classified as low. This is to make it easier for group members to achieve both individual and group goals. This is in agreement with Hermanto and Swastika [14] that in an effort to increase cadres who are technically dedicated it is carried out by Field Agricultural Instructors. Even so the development of farmer groups can also be done by non-governmental organization, and other organizations that are considered capable and experienced in empowering groups.

One of the binding elements of the group is the activities that can be felt benefits such as counseling activities to increase the involvement of group members so that they can play an active role in activities and increase human resources through group activities. The benefit of group binding in activities that can be felt shows that 55.00% is classified as high. The remaining 40.00% is considered sufficient, and 5.00% is classified as low. This is in accordance with the opinion of Hermanto and Swastika [14] that the binding element of the group through activities that can be felt benefits in groups is by increasing the capacity of farmer human resources through various mentoring activities, and exercises specifically designed for administrators and members, such as entrepreneurship courses, management participatory, development achievement, and internship/comparative study.
One of the characteristics of group institutions as a binding element of the group is motivation to support the program. The group binding element as motivation in supporting the program shows that 40.00% is classified as high. The remaining 50.00% is classified as low, and 10.00% is classified as low. This is in agreement with Hermanto and Swastika [14] that in developing farmers’ groups in support of the program, it can be through improving facilities and access to capital for farmers in the framework of developing business scale, increasing bargaining position through consolidating farmers in one farmer group container to unify the economy in groups through supply chain from pre-production to marketing, and increasing farm efficiency.

3.5.2 Group Function

The institutional characteristics of the groups intended in this study are the function of farmer / livestock groups consisting of learning classes, cooperation units, and production units [13]. Characteristics of group institutions in the function of farmer / livestock groups can be seen below:

Table 6. Characteristics of group institutions in group functions

| Description        | Class category (%) |
|--------------------|--------------------|
|                    | High | Enough | High |
| Learning Class     | 15.33| 50.52  | 34.15|
| Cooperation Unit   | 19.66| 30.23  | 50.11|
| Production Unit    | 25.30| 25.65  | 49.05|
| Group Function     | 20.10| 35.46  | 44.43|

Based on the results of the study as shown in Table 6 shows that the function of the group as a learning class is an activity carried out by the group in facilitating its members to improve their knowledge, attitudes, and skills, by showing that most of the 50.52% are classified as sufficient, the remaining 34, 15% is classified as low, and as much as 15.33% is sufficient. There are several aspects in supporting the group's function as a learning class, namely attending regular meetings, with regular meetings allowing farmers to exchange ideas and information. Through group meetings the members find it easier to find out a few things about their farming, but at the research sites rarely held regular meetings because groups rarely bring consultants or conduct training, and member participation in training activities conducted outside the group is only attended by 1-2 people. This is in accordance with the opinion of Mauludin et al. [15] that groups generally have a routine meeting agenda which is attended by breeders, extension workers, and inseminators to improve farmers' knowledge, attitudes, and skills. Mutiah, A, et al [16] argued that the function of the group as a learning class is a place to exchange information, channeling information, and technology, so that it can take place properly and through this function members' needs can be met.

The function of the group as a vehicle for collaboration illustrates cooperation among group members and outside group members can be seen with aspects of group management cooperation, capital cooperation, and cooperation with outside parties. The function of the group as a vehicle for collaboration shows that some 19.66% are classified as high, 30.23% are classified as sufficient, and 50.11% are classified as low. Cooperation among members should be higher because of the many government programs in agricultural development such as Upsus Siwab, Showroom, and Cooperatives that are at the research location. But only a few groups were active in the program, due to the dominant role of the group leader and according to the members' lack of coordination between the chair and members in marketing their products through government programs. This is consistent with the opinion of Nuryanti and Swastika [17] that the performance of each livestock farmer group in carrying out its role in agricultural development is strongly influenced by human resources, as well as the motivation and skills of group members in managing government programs. The government and the private sector can work together with farmers in establishing partnerships to improve the economic conditions and welfare of groups.
The function of the group as a unit of production is carried out by the group in planning and encouraging the achievement of an efficient business scale, by looking at the group in planning business patterns, and preparing in the plan for providing production inputs. The function of the group as a production unit shows that 25.30% is classified as high, the remaining 25.65% is classified as sufficient, and 49.05% is classified as low. The group as a production unit must be able to strengthen, expedite and at the same time encourage the development of profitable production. Planning the business pattern of the Barru District Animal Husbandry Office makes the local area an area for beef cattle development. So that with the available production units the group must be able to help its members to implement more advanced technology and management of cattle raising based on local resources and environmentally friendly. With the application of technology, it is expected that group members will be able to process livestock waste collected for processing into solid fertilizer for agricultural land or sell it. This agrees with Kartasapoetra [18] that the group must know and apply the factors of production so that it can be economically beneficial to farmers, technically easy to apply, and socially acceptable and environmentally friendly.

In Figure 1, the results show that the institutional characteristics of beef cattle farmer groups in the group binding elements in Barru District Barru District are included in the high category where the average yield obtained is 48.33%. This shows that the group binding element is the existence of a technically dedicated cadre carried out by Field Agricultural Instructors to make it easier for group members to achieve the goals in the group. With this, it is expected to be able to encourage members to be able to play an active role in activities that are beneficial for improving HR and motivation in supporting programs with activities undertaken, such as entrepreneurial training and also other positive activities that can increase the economies of scale of members.

Characteristics of group institutions on group functions obtained an average percentage result of 44.43% included in the low category. This shows that the institution of farmer groups / beef cattle in Barru District Barru Regency viewed from the aspect of group institutional function has not been able to support the group's success in achieving a common goal because there are still many groups with higher class status but the activities carried out in accordance with institutional functions farmer / livestock group have not been fulfilled. Then the need to strengthen classroom learning, a vehicle for collaboration, and production units to improve group functions and can support group success in achieving shared goals.

Figure 1. Results of Institutional Characteristics of Farmers / Livestock Groups

4. Conclusion
Farmer / livestock groups have characteristics of group binding elements and group functions. Group functions owned by farmer / livestock group members in Barru Subdistrict, Barru District are included in the low category because there are still many groups with higher class status but the activities carried out in accordance with the institutional function of the farmer / livestock group have not been fulfilled. Then the need to strengthen classroom learning, a vehicle for collaboration, and production units to improve group functions and can support group success in achieving shared goals.
References

[1] Anantanyu S 2011 Farmers' institutions: their roles and capacity development strategies. *Sepa.* 7(2): 109-90
[2] Tedjaningsih T, Suyudi, H Nuryaman 2018 The role of institutions in the development of mendong agribusiness *Mimbar Agrabisnis* 4(2)
[3] Cahyono S dan D S Tjokropandojo 2012 The role of farmer institutions in supporting agricultural sustainability as a basis for local economic development. *Jurnal Perencanaan Wilayah dan Kota B SAPPK* V2N1:15-23
[4] Hermanto 2006 Farmer institutional design in prime farmer implementation. Jambi.
[5] Rustinsyah R 2015 Social Capital and Implementation of Subsidized Fertilizer Programme for Small Farmers: A Case Study in Rural Java, Indonesia *Int. J. Rural Manag.* 11 25–39
[6] Peraturan Menteri Pertanian (Permentan) No. 273. 2007 *Pedoman pembinaan kelembagaan petani* Jakarta
[7] Rustinsyah R 2019 The significance of social relations in rural development: A case study of a beef-cattle farmer group in Indonesia *J. Co-op. Organ. Manag.* 7 100088
[8] Badan Pusat Statistik. 2018. Barru Dalam Angka 2018
[9] Toha R dan Hendro A 2009 *Adult education approach. Understand adults and how adults learn* (Jakarta : Golden Media)
[10] Siregar 2009 Analysis of beef cattle breeder income in Stabat District, Langkat Regency. Faculty of Agriculture, University of North Sumatra, Medan.
[11] Gusmaniar 2013 Income contribution of rabbit breeders to total family income in Salokaraja Village, Lalabata District, Soppeng Regency. Department of Animal Husbandry Socio-Economic, Faculty of Animal Science, Hasanuddin University, Makassar.
[12] Danim S 2004 Motivation, leadership, and group effectiveness (Jakarta: PT. Rineka Cipta)
[13] Peraturan Menteri Pertanian (Permentan) No. 273. 2007 *Pedoman pembinaan kelembagaan petani* Jakarta
[14] Hermanto dan D K S Swastika 2011 Strengthening farmer groups: The first step to improve farmers' welfare *Jurnal Analisis Kebijakan Pertanian* 9(4)
[15] Mauludin M A, S Winaryanto dan S Alim 2012 The role of the group in developing the empowerment of beef cattle breeders (Case in the South Area of Tasikmalaya Regency). *Jurnal Ilmu Ternak* 12 (1)
[16] Mutiah A, A Abdullah dan S Nurlaelah 2018 Identify the role of groups as a vehicle for cooperation in groups of beef cattle farmers in community farms *Jurnal Agripet* 18(1)
[17] Nuryanti S dan D K S Swastika 2011 The role of farmer groups in the application of agricultural technology *Forum Penelitian Agro Ekonomi* 29 (2): 115-28
[18] Kartasapoetra A G 1994 *Post-Harvest Handling Technology* (Jakarta: Rineka Cipta)