Roles extension agents in the dynamics of rice farmer groups in Taroada Village, Turikale District, Maros Regency

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Abstract. Agricultural instructors are tasked with assisting farmers in improving their standard of living through empowerment by developing human resources. One of the programs that must be carried out in education, skills, and employment-related to increasing the ability of farmer groups supported by initiatives, concrete actions, and the creative power of farmers and extension workers as supporters. This study aims to examine the role of extension agents in the dynamics of rice farmer groups in Taroada Village, Turikale District, Maros Regency. The data used in this study are primary data and secondary data. This study, using the Rank Spearman data analysis method. The results of this study conclude that the role of agricultural extension agents on the dynamics of farmer groups is concluded to have a significant relationship that the better the role applied by agricultural extension agents, the more dynamic farmer groups are.

1. Introduction
The government forms farmer groups assisted by agricultural extension agents to improve the farmers’ living standards through empowerment with human resource development. One of the programs must be carried out in education, skills, and employment. The agricultural extension includes activities to provide knowledge and skills to farmers’ groups.

Agricultural extension workers must be competent agricultural experts, besides being able to communicate effectively with farmers so that they can encourage their interest in cooperation and must be oriented to the problems faced by farmers and their understanding. According to Hafsah [1] that the extension agent’s competence is a characteristic inherent in the instructor that increases the
effectiveness of the extension's performance in carrying out the extension mission. In the extension organization, it is necessary to determine the level of competence, to know the expected level of performance. Determination of the need for extension agents’ competency thresholds can be used as the basis for selection processes, successful planning, performance evaluation, and competency development for each extension's qualification level.

Farmer groups exist to further improve and develop the ability of farmers and their families as the subject of the group approach to playing a more role in development. Better farming activities can be seen from an increase in farm productivity which in turn will increase farmers’ income so that it will support the creation of better welfare for farmers and their families. Therefore, the development of farmer groups needs to be carried out more intensively, directed, and planned so that they can increase their roles and functions [2].

What is no less important related to the existence of farmer groups as an institution is the need to increase the capacity of farmer groups through efforts to strengthen farmer institutions. The strengthening of farmer institutions is an effort to create a condition in which farmer groups have integrity as a formal organization that has a structure and social relations, rules and norms/laws, goals and ways to achieve goals and independence shown by the ability to organize the organization so that it is able to develop and play an appropriate role functions [3].

The role of farmer groups will increase if they can grow the strengths they have within the group to be able to mobilize and encourage the behavior of its members towards the achievement of group goals so that the farmer group will develop to be more dynamic. In order for farmer groups to develop dynamically, they must be supported by activities that include initiative, creative power, and concrete actions taken by the management and members of the farmer group in implementing the work plan of group members that have been mutually agreed upon, also as well as guidance from agricultural agents. Basically, the dynamics of farmer groups is a collective movement carried out by members of farmer groups simultaneously in carrying out all activities of members of farmer groups in achieving their goals such increasing production yields and their quality which it will increase their income [4].

The mission of agricultural development must empower the participation of farmers as agricultural business actors play an important role in agricultural development. One of the efforts to achieve this goal is to unite farmers through the formation of an organization in a farmer group institutional forum. However, the existence of farmer groups until now is still faced with various obstacles that have resulted in a weak bargaining position for farmers, including constraints on institutional aspects such as limited knowledge of farmers about organizational and institutional management, lack of participation of members of farmer groups, insufficient group dynamics and less effective interaction between related stakeholders.

Based on the above background, it encourages researchers to examine the role of agricultural extension agents in the dynamics of rice farmer groups.

2. Research method

This research was conducted in Taroada Village, Turikale District, Maros Regency, which lasted for 3 months, from January to March 2019. The location selection was carried out by purposive method, namely by considering that this area is one of the centers of lowland rice production, this area has farmer groups that have different grade levels and location determination based on easily accessible villages.
Information was collected from respondents using a questionnaire. Respondents to farmer groups were determined through a multistage sampling method with a technique of taking respondents through the selection of farmer groups. There are 3 farmer groups selected by considering the existence of the farmer group class level. This can see the different roles of extension workers from each level of the farmer group. The three selected farmer groups were the Mamminasae farmer group, the Sanggalea Jaya farmer group, and the Garuda Jaya farmer group.

Table 1. Respondents taken from each farmer group, 2018.

| No. | Group         | Hamlet    | Membership | Class     |
|-----|---------------|-----------|------------|-----------|
| 1   | Mamminasae    | Baniaga   | 45         | Middle    |
| 2   | Sanggalea     | Sanggalea | 59         | Advanced  |
| 3   | Garuda Jaya   | Maccopa   | 34         | Beginner  |
|     | Total         |           | 138        |           |

Samples were selected based on suggestions from field agricultural extension agents in Taroda Village with the consideration that the locations of these farmer groups are easy to reach and have active meeting activities of 138 respondents. The variables observed in the dynamics of farmer groups, namely objectives (Y1), structure (Y2), task function (Y3), coaching and development (Y4), cohesiveness (Y5), atmosphere (Y6), pressure (Y7), effectiveness (Y8), Mean tucked (Y9). As for the role of the agricultural extension agent, there are five variables, namely Communicators (X1), Facilitators (X2), Innovators (X3), Educators (X4) and Motivators (X5).

The Spearman rank correlation analysis was used to determine the relationship between the role of extension agents and the dynamics of farmer groups. To analyze the relationship between the role of extension workers on the dynamics of farmer groups in Turikale District, Maros Regency, the Spearman Rank Correlation analysis was used. The results of the calculation of the Spearman Rank analysis using SPSS.

Spearman Rank Correlation can be used to measure the correlation or association/relationship between two variables that have the least ordinal scale. The formula for determining the Spearman correlation coefficient (rho) is as follows [5].

\[ r_s = 1 - \frac{6 \sum_{i=1}^{N} d_i^2}{N^3 - N} \]

**information:**
- \( r_s \) = Spearman rank correlation coefficient
- \( d_i \) = Multiply the difference between two ordered sets of values
- \( N \) = number of cases or samples ordered

After knowing the correlation coefficient, then determining the coefficient of determination by squaring rho (rs) 2 to determine the amount of error reduced in one variable through the use of another variable as a predictor. After that, the significance test was carried out using the following formula [5].

\[ Z = \frac{r_s}{S} \]

**information:**
- \( S = \text{standar error } rho \left| \frac{1}{\sqrt{N - 1}} \right| \)
Furthermore, this Z value is compared with the critical value of Z. The hypothesis is rejected if the Z value of the calculation is greater than the Z value in the table.

3. Result and discussion

3.1. The relationship between the role of extension agents on the dynamics of farmer groups.

To analyze the relationship between the role of extension workers on the dynamics of farmer groups in Turikale District, Maros Regency, the Spearman Rank Correlation analysis was used. Variables of farmer group dynamics are objective (Y1), structure (Y2), task function (Y3), coaching and development (Y4), cohesiveness (Y5), atmosphere (Y6), pressure (Y7), effectiveness (Y8), hidden intent (Y9). As for the role of the agricultural extension agent, there are five variables, namely communicators (X1), facilitators (X2), innovators (X3), educators (X4), and motivators (X5). The results of the calculation of the Spearman Rank analysis using SPSS.

3.1.1. The relationship between the role of the extension officer and the group goals. The relationship between the role of the extension agent and group goals can be seen in table 2 below:

| Spearman’s rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|----------------|-------------------|------------------|----------------|---------------|---------------|
| Group Goals (Y1) |                   |                   |                |               |               |
| Correlation Coefficient N | 0.456 | 0.754 | 0.453 | 0.371 | 0.633 |
| Significant | 0.006** | 0.001** | 0.006** | 0.028** | 0.001** |

Note: * Significantly related to α = 0.05 ** Significantly related to α = 0.01.

Based on table 2, the test results or correlation of the two variables can be concluded that the relationship between the role of agricultural extension agents is Communicators (X1), Facilitators (X2), Innovators (X3), Educators (X4), and Motivators (X5) with Group Goals (Y1).

It can be explained that the big correlation coefficient value of the relationship between the instructor’s role as a communicator with the objectives of the farmer group is 0.456 with a probability value of 0.006 which is smaller than α = 0.01, meaning that the extension's role as a communicator has a real relationship with the objectives of the farmer group. These results indicate that the more the extension agent plays as a communicator the more mature he is in assessing the objectives of farmer groups so that what the extension agents convey can make the farmer group goals better.

The correlation coefficient value of the relationship between the instructor's role as a facilitator and the goal of the farmer group is 0.754 with a probability value of 0.001 smaller than α = 0.01, meaning that the role of the instructor as a facilitator has a significant relationship with the objectives of the farmer group. The results show that extension agents are increasingly taking on the role of facilitators in assessing the objectives of farmer groups.

The correlation coefficient value of the relationship between the instructor's role as an innovator with the farmer's group goals is 0.453 with a probability value of 0.006 which is smaller than α = 0.01, meaning that the role of the instructor as an innovator has a significant relationship with the objectives of the farmer group. These results indicate that extension workers play a good role as innovators in assessing the objectives of farmer groups.
The correlation coefficient value of the relationship between the role of the instructor as an educator and the goal of the farmer group is 0.371 with a probability value of 0.028 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as an educator has a significant relationship with the objectives of the farmer group. This shows that the role of extension workers as educators is sufficient in assessing the objectives of farmer groups.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the goal of the farmer group is 0.633 with a probability value of 0.001 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as a motivator has a significant relationship with the objectives of the farmer group. These results indicate that the role of extension workers as a motivator makes the farmer group goals better.

3.1.2. The relationship between the role of the extension officer on the group structure. The relationship between the role of the extension agent and the group structure can be seen in Table 3 below:

**Table 3.** The relationship between the role of agricultural extension to the structure of farmer groups 2019.

| Spearman’s rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|---------------|-------------------|------------------|----------------|---------------|---------------|
| Group Structure (Y2) |                  |                  |                |               |               |
| Correlation Coefficient N | 0.462 | 0.611 | 0.371 | 0.362 | 0.475 |
| Significance | 0.005** | 0.000** | 0.028** | 0.032** | 0.004** |

Note: * Significantly related to $\alpha = 0.05$ ** Significantly related to $\alpha = 0.01$.

Based on table 3, the test results or the correlation of the two variables can be concluded that the relationship between the role of agricultural extension agents is communicators (X1), facilitators (X2), innovators (X3), educators (X4) and motivators (X5) with group structure (Y2). The value of the correlation coefficient of the relationship between the role of the instructor as a communicator and the structure of the farmer group is 0.462 with a probability value of 0.005 which is smaller than $\alpha = 0.01$, meaning that the role of the extension worker as a communicator has a significant relationship with the structure of the farmer group. These results indicate that the more the extension agents play as communicators the more mature they are in assessing the structure of farmer groups so that what the extension agents convey as communicators can strengthen the structure of farmer groups.

The correlation coefficient value of the relationship between the instructor's role as a facilitator and the farmer group structure is 0.611 with a probability value of 0.000 smaller than $\alpha = 0.01$, meaning that the role of the extension worker as a facilitator has a significant relationship with the structure of the farmer group. The results show that the more the extension worker plays the role of facilitator, the better the group structure will be.

The correlation coefficient value of the relationship between the instructor's role as an innovator and the farmer group structure is 0.371 with a probability value of 0.028 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as an innovator has a significant relationship with the
structure of the farmer group. These results indicate that the more the extension worker plays an innovator, the stronger the farmer group structure will be.

The correlation coefficient value of the relationship between the role of the instructor as an educator and the structure of the farmer group is 0.362 with a probability value of 0.032 which is smaller than \( \alpha = 0.05 \), meaning that the role of the instructor as educator has a significant relationship with the structure of the farmer group. These results indicate that the education provided by extension agents will strengthen the structure of farmer groups.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the structure of the farmer group is 0.475 with a probability value of 0.004 which is smaller than \( \alpha = 0.01 \), meaning that the role of the instructor as a motivator has a significant relationship with the structure of the farmer group. These results indicate that the motivation given by extension agents to farmers will make the farmer group structure even better.

3.1.3. The relationship between the role of extension agents on group task functions. The relationship between the role of the instructor and the function of group assignments can be seen in Table 4 below:

**Table 4.** The relationship between the role of agricultural extension to the task functions of the 2019 farmer group.

|                 | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|-----------------|-------------------|------------------|----------------|---------------|----------------|
| **Spearman’s rho** |                   |                  |                |               |                |
| Group Task Function (Y3) | Correlation Coefficient N | | | | |
| 0.448 | 0.702 | 0.419 | 0.385 | 0.619 |
| Significant | 0.007** | 0.000** | 0.012** | 0.022** | 0.000** |

Note: * Significantly related to \( \alpha = 0.05 \) ** Significantly related to \( \alpha = 0.01 \)

Based on Table 4, the test results or correlation of the two variables can be concluded that the relationship between the role of agricultural extension agents is communicators (X1), facilitators (X2), innovators (X3), educators (X4), and motivators (X5) with group task functions (Y3).

It can be explained that the magnitude of the correlation coefficient value of the relationship between the role of the instructor as a communicator and the task function of the farmer group is 0.448 with a probability value of 0.007 which is smaller than \( \alpha = 0.01 \), meaning that the role of the instructor as a communicator has a significant relationship with the task function of the farmer group. These results indicate that the more the extension agent plays as a communicator, the better the farmer group's task function will be.

The correlation coefficient value of the relationship between the instructor's role as a facilitator and the farmer group's task function is 0.702 with a probability value of 0.000 which is smaller than \( \alpha = 0.01 \), meaning that the role of the instructor as a communicator has a significant relationship with the task function of the farmer group. The results show that the role of the extension works as a facilitator makes the farmer group's task function better.

The correlation coefficient value of the relationship between the instructor's role as an innovator and the farmer group task function is 0.419 with a probability value of 0.012 which is smaller than \( \alpha = 0.01 \), meaning that the role of the extension agent as an innovator has a significant relationship with
the farmer group task function. These results indicate that the higher the role of extension agents in providing innovation, the better the task function of farmer groups will be.

The correlation coefficient value of the relationship between the role of the instructor as an educator and the task function of the farmer group is 0.385 with a probability value of 0.022 which is smaller than \( \alpha = 0.05 \), meaning that the role of the instructor as an educator has a significant relationship with the task function of the farmer group. These results indicate that the amount of education provided by extension agents will affect the function of farmer groups.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the task function of the farmer group is 0.619 with a probability value of 0.000 which is smaller than \( \alpha = 0.01 \), meaning that the role of the instructor as a motivator has a significant relationship with the task function of the farmer group. These results indicate that the higher the motivation provided by the extension agents, the better the farmer group's task function.

3.1.4. The relationship between the role of the extension officer on coaching and group development.

The relationship between the instructor's role on coaching and group development can be seen in table 5 below:

**Table 5.** The relationship between the role of agricultural extension to the fostering and development of farmer groups 2019.

| Spearman's rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|----------------|-------------------|------------------|----------------|---------------|---------------|
| Coefficient N  | 0.403             | 0.751            | 0.467          | 0.413         | 0.415         |
| Significant t  | 0.016**           | 0.000**          | 0.005**        | 0.014**       | 0.013**       |

Note: * Significantly related to \( \alpha = 0.05 \) ** Significantly related to \( \alpha = 0.01 \)

Based on the table above, the test results or the correlation between the two variables, it can be concluded that the relationship between the role of agricultural extension agents is communicators (X1), facilitators (X2), innovators (X3), educators (X4) and motivators (X5) with coaching and development (Y4).

It can be explained that the magnitude of the correlation coefficient value of the relationship between the role of the extension works as a communicator with the guidance and development of farmer groups is 0.403 with a probability value of 0.016 which is smaller than \( \alpha = 0.05 \), meaning that the role of the extension works as a communicator has a significant relationship with the guidance and development of farmer groups. These results indicate that the more the extension agent plays a role as a communicator, the better the guidance and development of farmer groups.

The correlation coefficient value of the relationship between the instructor's role as a facilitator with the coaching and development of farmer groups is 0.751 with a probability value of 0.000 smaller than \( \alpha = 0.01 \), meaning that the role of the extension works as a communicator has a real relationship with
the coaching and development of farmer groups. The results show that the role of extension workers as facilitators makes the guidance and development of farmer groups better.

The correlation coefficient value of the relationship between the instructor's role as an innovator with the coaching and development of farmer groups is 0.467 with a probability value of 0.005 which is smaller than \( \alpha = 0.01 \), meaning that the extension's role as an innovator has a significant relationship with the coaching and development of farmer groups. These results indicate that the more role extension workers play in providing innovation, the coaching and development of farmer groups become stronger.

The correlation coefficient value of the relationship between the instructor's role as an educator with the coaching and development of farmer groups is 0.413 with a smaller probability value of 0.014 from \( \alpha = 0.05 \), it means that the role of extension workers as educators has a real relationship with the guidance and development of farmer groups. These results indicate that the education provided by the extension agents makes the guidance and development of farmer groups better.

The correlation coefficient value of the relationship between the role of the instructor as a motivator with the coaching and development of farmer groups is 0.415 with a probability value of 0.013 which is smaller than \( \alpha = 0.05 \), meaning that the role of the instructor as a motivator has a significant relationship with the coaching and development of farmer groups. These results indicate that the higher the motivation is given to farmers, the better the coaching and development of farmer groups.

### 3.1.5. The relationship between the role of the extension officer on group cohesiveness.

The relationship between the instructor's role in group cohesiveness can be seen in Table 6 below:

#### Table 6. The relationship between the role of agricultural extension against the cohesiveness of farmer groups 2019.

| Speaker's rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|---------------|-------------------|------------------|----------------|---------------|----------------|
| Group cohesion (Y5) | Correlation Coefficient N | 0.401 | 0.650 | 0.474 | 0.447 | 0.500 |
| Significance | 0.017** | 0.000** | 0.004** | 0.007** | 0.002** |

Note: * Significantly related to \( \alpha = 0.05 \) ** Significantly related to \( \alpha = 0.01 \).

Based on the table above, the test results or correlation of the two variables can be concluded that the relationship between the role of agricultural extension agents is Communicators (X1), Facilitators (X2), Innovators (X3), Educators (X4) and Motivators (X5) with Group Cohesiveness (Y5).

It can be explained that the magnitude of the correlation coefficient value of the relationship between the role of the instructor as a communicator and the cohesiveness of the farmer group is 0.401 with a probability value of 0.017 which is smaller than \( \alpha = 0.05 \), meaning that the role of the instructor as a communicator has a significant relationship with the cohesiveness of the farmer group. These results indicate that the more the instructor plays a role as a communicator, the better the group cohesiveness.

The correlation coefficient value of the relationship between the instructor's role as a facilitator with the cohesiveness of the farmer group is 0.650 with a probability value of 0.000 which is smaller than \( \alpha \).
= 0.01, meaning that the role of the instructor as a facilitator has a significant relationship with the cohesiveness of the farmer group. The results showed that the more the extension agents played a role as a facilitator, the better the cohesiveness of the farmer groups.

The correlation coefficient value of the relationship between the instructor's role as an innovator with the cohesiveness of the farmer group is 0.474 with a probability value of 0.004 which is smaller than \( \alpha = 0.01 \), meaning that the role of the extension worker as an innovator has a significant relationship with the cohesiveness of the farmer group. These results indicate that the innovation provided by the extension agents makes group cohesiveness better.

The correlation coefficient value of the relationship between the instructor's role as an educator with the cohesiveness of the farmer group is 0.447 with a probability value of 0.007 which is smaller than \( \alpha = 0.01 \), meaning that the role of the instructor as an educator has a significant relationship with the cohesiveness of the farmer group. These results indicate that the education provided by the extension agents makes the cohesiveness of the farmer groups even stronger.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the cohesiveness of the farmer group is 0.500 with a probability value of 0.002 which is smaller than \( \alpha = 0.01 \), which means that the role of the instructor as a motivator has a significant relationship with the cohesiveness of the farmer group. These results indicate that the higher the motivation given by the extension agents, the better the farmer group cohesiveness will be.

### 3.1.6. The relationship between the role of the extension officer on the group atmosphere.

The relationship between the instructor's role to the group atmosphere can be seen in Table 7 below:

| Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|-------------------|------------------|----------------|---------------|----------------|
| \( r \)           | \( r \)          | \( r \)        | \( r \)       | \( r \)        |
| 0.395             | 0.583            | 0.365          | 0.366         | 0.671          |

Note: * Significantly related to \( \alpha = 0.05 \) ** Significantly related to \( \alpha = 0.01 \)

Based on the table above, the test results or the correlation between the two variables, it can be concluded that the relationship between the role of agricultural instructors, namely communicators (X1), facilitators (X2), innovators (X3), educators (X4) and motivators (X5) with group atmosphere (Y6).

It can be explained that the magnitude of the correlation coefficient value of the relationship between the instructor's role as a communicator and the atmosphere of the farmer group is 0.395 with a probability value of 0.019 which is smaller than \( \alpha = 0.01 \), meaning that the extension's role as a communicator has a significant relationship with the atmosphere of the farmer group. These results
indicate that the more the extension agents act as communicators, the better the atmosphere of the farmer groups.

The correlation coefficient value of the relationship between the instructor's role as a facilitator and the atmosphere of the farmer group is 0.583 with a probability value of 0.000 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as a facilitator has a significant relationship with the atmosphere of the farmer group. The results show that the more the extension worker plays a role as a facilitator, the better the atmosphere of the farmer group.

The correlation coefficient value of the relationship between the instructor's role as an innovator and the atmosphere of the farmer group is 0.365 with a probability value of 0.031 which is smaller than $\alpha = 0.05$, meaning that the role of the extension worker as an innovator has a significant relationship with the atmosphere of the farmer group. These results indicate that the innovations provided by the extension agents make the farmer group atmosphere better.

The correlation coefficient value of the relationship between the instructor's role as an educator and the atmosphere of the farmer group is 0.366 with a probability value of 0.031 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as an educator has a significant relationship with the atmosphere of the farmer group. These results indicate that the education provided by agricultural extension agents makes the farmer group atmosphere better.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the atmosphere of the farmer group is 0.671 with a probability value of 0.000 which is smaller than $\alpha = 0.01$, meaning that the higher the motivation is given by the extension agents makes the atmosphere of the farmer group better.

3.1.7. The relationship between the role of the extension officer and the pressure in the group. The relationship between the role of the instructor and pressure in the group can be seen in Table 8 below:

Table 8. The relationship between the role of agricultural extension to pressure in farmer groups 2019.

| Spearman's rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|---------------|------------------|-----------------|----------------|--------------|---------------|
| Group pressure (Y7) Correlation Coefficient N Significant | 0.347 | 0.640 | 0.350 | 0.447 | 0.754 |
| 0.041** | 0.000** | 0.039** | 0.007** | 0.000** |

Note: * Significantly related to $\alpha = 0.05$ ** Significantly related to $\alpha = 0.01$

Based on the table above, the test results or the correlation between the two variables, it can be concluded that the relationship between the role of agricultural extension agents is communicators (X1), facilitators (X2), innovators (X3), educators (X4) and motivators (X5) with group pressure (Y7).

It can be explained that the value of the correlation coefficient of the relationship between the role of the instructor as a communicator and the pressure in the farmer group is 0.347 with a probability value of 0.041 which is smaller than $\alpha = 0.05$, meaning that the role of the instructor as a
communicator has a significant relationship with pressure in the farmer group. These results indicate that the more the instructor plays a role as a communicator, the better the pressure in the farmer group.

The correlation coefficient value of the relationship between the role of the instructor as a facilitator and the pressure in the farmer group is 0.640 with a probability value of 0.000, which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as a facilitator has a significant relationship with the pressure in the farmer group. The results show that the more agricultural extension agents play a role as facilitators, the better the farmer group pressure will be.

The correlation coefficient value of the relationship between the instructor's role as an innovator and the pressure in the farmer group is 0.350 with a probability value of 0.039 which is smaller than $\alpha = 0.05$, meaning that the role of the instructor as an innovator has a significant relationship with pressure in the farmer group. These results indicate that the innovation provided by the extension agents makes the pressure in the farmer groups even better.

The correlation coefficient value of the relationship between the role of the instructor as an educator and the pressure in the farmer group is 0.447 with a probability value of 0.007 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as an educator has a significant relationship with the pressure in the farmer group. These results indicate that the education provided by the extension agents makes pressure within the farmer groups better.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the pressure in the farmer group is 0.754 with a probability value of 0.000 which is smaller than $\alpha = 0.01$, meaning that the higher the motivation provided by the agricultural extension agents, the better the pressure in the farmer groups.

3.1.8. The relationship between the role of extension agents on group effectiveness. The relationship between the role of extension agents on group effectiveness can be seen in Table 9 below:

Table 9. The relationship between the role of agricultural extension to the effectiveness of farmer groups 2019.

| Spearman's rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|----------------|------------------|-----------------|----------------|--------------|---------------|
| Group Effectiveness (Y8) | Correlation Coefficient N | 0.449 | 0.749 | 0.362 | 0.458 | 0.440 |
| Significance | 0.007** | 0.000** | 0.033** | 0.006** | 0.008** |

Note: * Significantly related to $\alpha = 0.05$ ** Significantly related to $\alpha = 0.01$

Based on the table above, the test results or the correlation between the two variables can be concluded that the relationship between the role of agricultural extension agents is Communicators (X1), Facilitators (X2), Innovators (X3), Educators (X4), and Motivators (X5) with Effectiveness (Y8).

It can be explained that the magnitude of the correlation coefficient value of the relationship between the instructor's role as a communicator and the effectiveness of the farmer group is 0.449 with
a probability value of 0.007 which is smaller than $\alpha = 0.01$, meaning that the extension's role as a communicator has a significant relationship with the effectiveness of farmer groups. These results indicate that the more the extension agents act as communicators, the better the effectiveness of farmer groups.

The correlation coefficient value of the relationship between the instructor's role as a facilitator and the effectiveness of the farmer group is 0.749 with a probability value of 0.000, which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as a facilitator has a significant relationship with the effectiveness of the farmer group. The results showed that the higher the role of the extension works as a facilitator, the better the effectiveness of farmer groups.

The correlation coefficient value of the relationship between the instructor's role as an innovator and the effectiveness of the farmer group is 0.362 with a probability value of 0.033 which is smaller than $\alpha = 0.05$, meaning that the role of the instructor as an innovator has a significant relationship with the effectiveness of the farmer group. These results indicate that the innovations provided by the extension agents make the effectiveness of farmer groups better.

The correlation coefficient value of the relationship between the role of the instructor as an educator and the effectiveness of the farmer group is 0.458 with a probability value of 0.006 which is smaller than $\alpha = 0.01$, meaning that the role of the instructor as an educator has a significant relationship with the effectiveness of the farmer group. These results indicate that the education provided by agricultural extension agents makes the effectiveness of farmer groups better.

The correlation coefficient value of the relationship between the role of the instructor as a motivator and the effectiveness of the farmer group is 0.440 with a probability value of 0.008 which is smaller than $\alpha = 0.01$, which means that the role of the instructor as a motivator has a significant relationship with the effectiveness of the farmer group. These results indicate that the higher the motivation is given by the extension agents, the better the farmer group's effectiveness.

3.1.9. *The relationship between the role of the extension officer and the group's hidden intent.* The relationship between the instructor's role and the group's hidden intentions can be seen in Table 10 below:

Table 10. The Relationship between the role of agricultural extension and the hidden intent of the 2019 farmer group.

| Spearman's rho | Communicator (X1) | Facilitator (X2) | Innovator (X3) | Educator (X4) | Motivator (X5) |
|----------------|-------------------|-----------------|----------------|---------------|---------------|
| Hidden Purpose Group (Y9) | n, Correlation Coefficient | n | 0.464 | 0.720 | 0.423 | 0.395 | 0.401 |
| Significance t N | 0.005** | 0.000** | 0.001** | 0.019** | 0.017** |

Note: * Significantly related to $\alpha = 0.05$ ** Significantly related to $\alpha = 0.01$
The test correlation of the two variables can be concluded that the relationship between the role of agricultural instructors is Communicators (X1), Facilitators (X2), Innovators (X3), Educators (X4), and Motivators (X5) with Group Covert Purposes (Y9).

It can be explained that the magnitude of the correlation coefficient value of the relationship between the instructor's role as a communicator with the covert intention of the farmer group is 0.464 with a probability value of 0.005 smaller than α = 0.01, meaning that the extension's role as a communicator has a real relationship with the covert intent of the farmer group. These results indicate that the more the extension worker plays a role as a communicator, the better the hidden intentions of the farmer groups.

The correlation coefficient value of the relationship between the instructor's role as a facilitator with the covert intent of farmer groups is 0.720 with a probability value of 0.000 smaller than α = 0.01, meaning that the role of the extension works as a facilitator has a real relationship with the covert intent of farmer groups. The results show that the more the extension agent plays a role as a facilitator, the better the group's hidden intentions are.

The correlation coefficient value of the relationship between the instructor's role as an innovator with the covert intent of the farmer group is 0.423 with a probability value of 0.001 which is smaller than α = 0.01, meaning that the role of the extension agent as an innovator has a real relationship with the hidden intentions of the farmer group. These results indicate that the innovations provided by agricultural extension agents make the hidden intentions of farmer groups even better.

The correlation coefficient value of the relationship between the instructor's role as an educator with the covert intent of the farmer group is 0.395 with a probability value of 0.019 which is smaller than α = 0.05, meaning that the role of the instructor as an educator has a real relationship with the intention covert farmer groups. These results indicate that the education provided by agricultural extension agents makes the hidden intentions of farmer groups better.

3.1.10. The relationship between the role of extension agents on the dynamics of farmer groups in Taroada Village, Turikale District, Maros Regency. The role of the extension worker is not only limited to the function of delivering innovation and influencing the decision-making process carried out by the target extension agent, but he must be able to become a bridge between the government or the extension agency he represents and the target community, both in terms of delivering innovations or policies that must be implemented, accepted and implemented by the target community, as well as for the government or the relevant extension agency. Because only placing himself in a position or position like that he will be able to carry out his duties properly [6].

The overall results of the role of extension personnel in Taroada Village, Turikale District, Maros Regency, which consisted of the role of extension personnel as communicators, obtained significant results, the role of extension personnel as facilitators was very instrumental, the role of extension personnel as innovators had a significant role, the role of extension personnel as educators had a
significant role and the role of the instructor as a motivator was obtained by the category of having a role.

The relationship between the instructor's role as a communicator, facilitator, innovator, educator, and motivator on the dynamics of farmer groups in Taroada Village, Turikale District, Maros Regency can be concluded to have a real relationship. Extension agents have a significant role in establishing good relationships and communicating between extension workers and farmers. Extension workers use language that is easy to understand, extension workers are able to have good discussions with group members so that farmers do not feel tense and are able to adapt to the environment.

Extension agents have a very important role in helping members of farmer groups to attend training held by the government or private institutions. Extension agents have a very important role in providing information about the training held both from the government and the private sector so that group members can participate in these activities freely to increase their knowledge of the training material being held.

Extension agents play a role in providing the latest ideas or breakthroughs on agricultural cultivation, for example in lowland rice farming. Farmers stated that extension workers played a role, namely, because in providing extension materials, extension workers always provided material about cultivation in rice farming, both cultivation that had been carried out for a long time, up to extension material on new cultivation.

The extension worker plays a role in providing training on how to use new technology. In the current era, agricultural technology is already in the modern category, such as transplants, tractors, and combine harvesters. The technology is known by farmers because of the information provided by the extension agents and their use practices from the extension workers themselves.

Extension workers have a role in encouraging members of farmer groups to improve skills in entrepreneurship. The farmer group assessed that extension workers help farmers provide information on marketing agricultural products.

4. Conclusion

The role of agricultural extension agents in the dynamics of farmer groups in Taroada Village, Turikale District, Maros Regency is concluded to have a significant relationship. The better the role applied by the agricultural extension agents, the more dynamic the farmer groups are.

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