

The Assistance Quality, Farmer Characteristics, and Farmer Motivation Towards the Performance of Farmer Groups

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ABSTRACT

The agricultural sector plays an important role in national economic development, with farmer groups contributing greatly to the effectiveness of farm businesses. Nevertheless, farmer group performance is still influenced by various factors, such as the quality of mentoring, farmer characteristics, and farmer motivation, which have not been fully understood in depth, especially in Pitu Riawa district, Sidenreng Rappang Regency. This study aims to analyze the effect of mentoring quality, farmer characteristics, and farmer motivation on farmer group performance. The sampling method used non-probability sampling with saturated sampling technique involving all farmers from 300 farmer groups. Data were collected through questionnaires and analyzed using Partial Least Square (PLS) software. The findings uncover that the quality of mentors and farmer characteristics had a positive and significant effect on farmer motivation. In addition, both variables also have a positive and significant effect on farmer group performance. Meanwhile, farmer motivation has a positive but insignificant effect on performance. Other findings show that the quality of mentors has a significant effect on farmer group performance through motivation, while farmer characteristics only have a positive but insignificant effect through motivation. The implications suggest a strong emphasis on increasing the competence of facilitators as well as strengthening the capacity of farmers through continuous training and coaching to encourage motivation and improve the performance of farmer groups.

Keywords: *Assistance Quality, Farmer Characteristics, Motivation, Performance*

BACKGROUND

The agricultural sector in the industrial world, both food and textile, plays a very important role as a support for progress and the main support in meeting the needs of food and textile raw materials for the country. This strategic role is not only limited to the production aspect, but also includes direct contributions to national economic development. The agricultural sector is able to create jobs, provide industrial raw materials, and encourage export growth which leads to an increase in foreign exchange. Data from GoodStats (2023) shows that the contribution of the agricultural sector to Indonesia's Gross Domestic Product (GDP) reached 12.53%, with the estate crop subsector being the dominant contributor. This figure shows the high dependency of the economy on this sector, especially in ensuring the availability of raw materials for the national food and textile industries.

Furthermore, the agricultural sector also contributes significantly to national exports. Based on a report from Indonesia.go.id (2024), the value of Indonesia's agricultural exports increased by The Assistance Quality, Farmer Characteristics, And Farmer Motivation (Sulaiman, et., al 2026)

29.81%, most of which came from an increase in exports of leading commodities such as coffee. In fact, according to the Agency for Standardization of Agricultural Instruments (BSIP-Biogen), in January 2024 exports of agricultural products increased by 5.32%, when other sectors experienced a decline. This fact shows that the agricultural sector not only acts as the backbone of the domestic industry, but also has high resilience and competitiveness in the global market. Therefore, sustainable development of the agricultural sector will have a positive impact in supporting industrial stability, expanding employment opportunities, and increasing state revenues in terms of international trade.

The implementation of agribusiness strategies within the agricultural system plays a crucial role in the overall economic growth of a country (Akbar & Fawwaz, 2022). Agribusiness encompasses five key subsystems, including the procurement of production facilities, farming, processing and the agricultural products industry, marketing, and supporting institutions (Asmarantaka et al., 2017). Farmer institutions hold significant importance in agricultural development as they provide collective solutions to address issues faced at the farmer level. Moreover, it is essential for farmers to possess competitiveness and a strong bargaining position (Deviani et al., 2019). Hence, the formation of farmer groups with a focus on farm business development becomes imperative.

As revealed in a study by Marcus et al. (2014) in Trinidad, West Indies, farmer groups play a crucial role in the development of the agricultural sector. By engaging in group discussions, farmers are able to provide mutual support and exchange valuable information. The collective strength of these groups surpasses that of individuals. Supporting group farmers is also more feasible for the government compared to supporting individual farmers. Furthermore, Saleh (2014) emphasizes the importance of understanding group dynamics in order to facilitate group development, enhance cooperation among members, and ultimately increase group productivity. Additionally, being a member of a farmer group enables farmers to effectively identify potential opportunities, address agricultural challenges, and gain easier access to information, markets, technology, capital, and other resources. Consequently, farmer groups hold a strategic position in ensuring the success and quality of farmers' endeavors.

According to the Regulation of the Minister of Agriculture of the Republic of Indonesia No. 82/Permentan/OT.140/8/2013 on Guidelines for the Development of Farmer Groups and Farmer Group Associations, Farmer Groups (poktan) are groups of farmers, breeders, or planters formed on the basis of common interests, socio-economic and environmental conditions, commodity similarities, and relationships of mutual trust and recognition. The main purpose of establishing farmer groups is to increase the efficiency and progress of the business of its members through organized cooperation.

One of the active regions in forming and developing farmer groups is Sidenreng Rappang (Sidrap) Regency in South Sulawesi Province. This region is known as one of the largest rice production centers in South Sulawesi, with rice field areas reaching 47,947.3 hectares and having the ability to harvest up to three times a year through planting acceleration programs. According to data from the Central Statistics Agency (BPS) of South Sulawesi, in 2020 Sidrap ranked fourth as the largest rice producer in the province, with a total production reaching 136,574 tons of paddy rice

Among the regions in Sidrap district, Pitu Riawa district is the most productive in the agricultural sector. In 2022, this district recorded agricultural production of 640,970 kg and has 300 farmer groups spread across various villages. With an area of 2,506.19 km² and a population of around The Assistance Quality, Farmer Characteristics, And Farmer Motivation (Sulaiman, et., al 2026)

264,955 people, Sidrap has great potential to continue developing the agricultural sector, including through national programs such as the expansion of new rice fields launched by the Ministry of Agriculture (Nurhana et al., 2019).

Still, there is an issue in the community, particularly in Sidrap Regency, known for its rice fields and farmland. The agricultural land is dwindling due to conversion into housing, roads for agriculture, and other development ventures. People build houses and sell their land in the green belt, which violates the regional spatial plan, and this conversion of agricultural land has an impact on food security in the Sidrap region because rice fields and agricultural land are reduced due to land conversion there are roads between rice fields built by the Government, so that people tend to sell their land or agricultural land.

One factor influencing institutional performance is the presence of intensive mentoring, including information and counseling, assistance for farmer groups, and the human resources of farmer groups (Wijaya et al., 2020). Mentoring programs are efforts to enhance and empower farmers. There are several principles that can serve as guidelines in empowering farmers through mentoring program (Undru & Yasin, 2022). Firstly, the principle of farmer self-reliance, which involves motivating and encouraging farmers to strive based on their own will and capabilities, without relying on external assistance. Secondly, the principle of group formation, where groups emerge from, by, and for the interests of farmers. Thirdly, the principle of network collaboration, where cooperation is not only within the group itself but also extends to other groups and other working partners. Fourthly, the principle of sustainability, where initiatives and developments are oriented towards creating systems and mechanisms that support sustainable empowerment of farmers. Finally, the principle of self-discovery learning, where farmer groups grow and develop based on their willingness and ability to learn and discover what they need and what they will develop.

Another factor is the characteristics of farmers. In line with this, (Sukanata & Yuniati, 2016) state that the quality of farmers is related to their characteristics such as age, level of education, experience, land size, family dependents, and motivation. Farmers with good characteristics tend to have a better understanding (Setiyowati et al., 2022), enabling them to consider the presence and readiness to adopt innovations and technology (Darusalam et al., 2017; Setiawan & Astiti, 2017; Setiyowati et al., 2022). Furthermore, farmers, as agricultural managers, naturally have the initiative to practice and develop their farming. Internal factors that motivate farmers include age, education, village size, and the number of dependents (Kusuma et al., 2015). Essentially, motivation can be defined as a desire to act, originating from the individual's own self to satisfy their needs. Therefore, motivation influences the needs and goals that can be achieved. This motivation creates differences between one individual and another because each member is present in their work. Farmer motivation is influenced by several factors, including: 1) Financial factors, consisting of the desire to meet family needs, the desire for high income, the desire to purchase luxury goods, the desire to own and increase savings, and the desire for a more prosperous life; 2) Sociological factors, consisting of the desire to improve relationships or friendships, the desire to collaborate with others, the desire to strengthen harmony, the desire to exchange opinions, and the desire to receive assistance from others. Thus, farmer characteristics not only play a role in technology adoption readiness, but also form the basis of motivation that drives collective farming success.

There have been many studies on farmer group performance using various benchmarks. Most of the research emphasize on the internal group factors or external support such as the role of The Assistance Quality, Farmer Characteristics, And Farmer Motivation (Sulaiman, et., al 2026)

extension workers and member participation. For example, research by Gustika et al. (2020) in Kandis District, Siak Regency, the study shows that group dynamics, member participation, and group leader characteristics are significant factors influencing the performance of forest farmer groups (KTH), whereas member characteristics, the role of extension agents, and the role of the Forest Management Unit (UPT KPHP) do not have a significant effect. Research by Machmudah et al. (2019) also found that social factors such as work motivation, the role of extension workers, and the guidance of village facilitators had a simultaneous effect on the success of women's farmer groups, although group norms had no partial effect. Furthermore, research by Sukanata & Yuniati (2016) indicates that farmer characteristics and motivation affect farmer group performance, while land size and number of family dependents have no significant impact.

Even so, most existing literature does not clearly highlighted assistance quality as an independent variable influencing the performance of farmer groups. Moreover, the geographic and sociocultural context of Sidrap, particularly in Pitu Riawa District, exhibits unique agricultural characteristics, such as the intensity of government assistance programs, the dominance of specific commodities (rice and maize), and the distinct social structure of farmers compared to other regions. This context potentially generates unique group dynamics that have not been widely explored in the existing literature. Therefore, the research gap lies in the absence of integrated studies that examine the influence of assistance quality, farmer characteristics, and farmer motivation on the performance of farmer groups within the specific socio-economic and agricultural setting of Sidrap.

In response to this situation, the present study aims to fill the gap in the literature by offering a new perspective on the determinants of farmer group performance in under-researched regions, and to enrich the theoretical understanding of the importance of external intervention quality in enhancing the success of farmer institutions. This can enrich the understanding of the factors affecting the performance of farmer groups in Indonesia. It is expected that the results of this study can serve as a reference in the formulation of strategies to improve the performance of farmer groups through strengthening the quality of mentoring, developing the character of farmers, and increasing their motivation. In addition, the findings are expected to enrich the scientific literature and become a reference for policy makers in designing more effective and contextual farmer empowerment programs in various regions.

RESEARCH METHODS

This research is an associative research with a quantitative approach, which is specifically an empirical study that aims to examine the influence of the Quality of Assistance, Farmer Characteristics, and Farmer Motivation on Farmer Group Performance. The research was conducted in Pitu Riawa District, Sidrap Regency, South Sulawesi Province. This location was chosen because it is one of the leading areas in agriculture that has active and organized farmer groups. In addition, this area also receives intensive assistance from agricultural extension workers, making it a relevant location to examine the relationship between assistance, individual farmer characteristics, and farmer group performance. The region's high agricultural productivity also provides a rich context to comprehensively observe the variables under study.

The population in this study were all farmers who were members of active farmer groups in Pitu Riawa District. Sampling was done using saturated sampling technique, where all members of The Assistance Quality, Farmer Characteristics, And Farmer Motivation (Sulaiman, et., al 2026)

the population were used as research samples. The number of samples in this study was 300 farmers. This technique was chosen so that the research results could represent the overall condition of the population.

Data were collected using questionnaires and semi-structured interviews. The questionnaire instrument was developed based on theoretical constructs and previous research results, then validated before distribution. To ensure the validity and reliability of the instrument, a series of validation steps were carried out. Content validity was assessed by consulting three experts in the fields of agricultural extension and social research methodology, who were affiliated with universities and agricultural research institutions. These experts evaluated the alignment of the indicators with the theoretical constructs, as well as the clarity of the wording in each questionnaire item. Interviews were conducted to strengthen and deepen the quantitative findings by eliciting views directly from the farmers. The variables examined in this study are the assistance quality, farmer characteristics, and farmer motivation, which are tested against the variable of farmer group performance.

This study investigates the influence of three independent variables assistance quality, farmer characteristics, and farmer motivation on the performance of farmer groups. The selection and conceptualization of these variables are grounded in the Theory of Planned Behavior (TPB) by Ajzen (1991), which posits that behavior is shaped by attitudes, subjective norms, and perceived behavioral control. The TPB framework is relevant to agricultural development contexts, where farmers' behavioral intentions are influenced by internal motivations, personal characteristics, and external facilitation (e.g., extension support). Additionally, the Agricultural Innovation Systems (AIS) approach emphasizes the interplay of human capital, institutional support, and motivation in enhancing the performance of farmer organizations.

Table 1. Variable Operationalization

Variable	Indicator	Scale	Source
Quality Of Agricultural Assistance Extensión	Adopting new healthier behaviors Achieving full and comprehensive self-understanding Learning to communicate Transitioning towards growth	Likert 1–5	(Rivera & Sulaiman, 2009)
Farmer Characteristics	Ability Needs Experience Trust	Likert 1–5	(Feder et al., 1985)
Farmer Motivation	Family needs Income Expanding relationships or friendships Collaboration	Likert 1–5	(Ryan & Deci, 2000)
Performance Of Farmer Groups	Output Results The connection of efforts with achievements Explanatory information	Likert 1–5	(Korten, 1980)

In this study, Structural Equation Modeling (SEM) analysis is employed to address the research objectives, which include examining the influence of the quality of assistance, farmer

characteristics, and farmer motivation on the variable of farmer group performance in the Pitu Riawa District, Sidrap Regency, South Sulawesi. This method is used because it is able to test the relationship between complex variables, especially when the data is not fully normally distributed or the sample size is relatively large. PLS-SEM is suitable for use in this study because it aims to test the effect of several independent variables on the dependent variable simultaneously. In addition, this method is also able to evaluate the measurement model and structural model simultaneously.

The steps of PLS-SEM analysis in this study include:

1. Developing a Structural Model (Inner Model): Determine the relationship between latent variables (for example, the effect of mentoring quality on farmer group performance).
2. Develop a Measurement Model (Outer Model): Determines the relationship between latent variables and their indicators. In this study, all constructs are reflective in nature.
3. Creating a Path Diagram: A visualization of the model that shows the direction and strength of the relationship between variables.
4. Processing Data with SmartPLS: Using SmartPLS software to calculate the value of the relationship between variables, test the validity and reliability of indicators.
5. Model Evaluation:
 1. Evaluation of the Measurement Model: With the criteria of indicator reliability (loading value > 0.7), internal reliability (Cronbach's alpha and Composite Reliability), convergent validity (Average Variance Extracted > 0.5), and discriminant validity (Fornell-Larcker criteria).
 2. Structural Model Evaluation: Includes an assessment of the R² value, path coefficient, effect size (f²), and predictive relevance (Q²).

The use of PLS-SEM allows this study to identify the strength of the influence of each independent variable on the dependent variable simultaneously and provides a thorough understanding of the dynamics between the constructs under study.

RESULT AND DISCUSSION

Measurement Model (Outer Model)

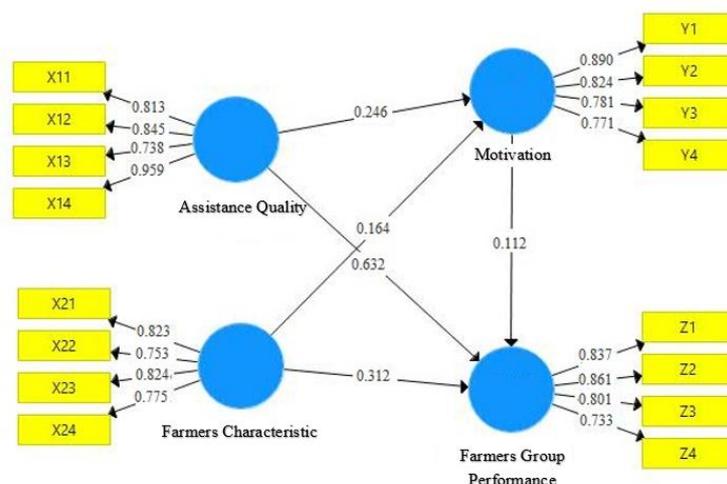


Figure 1. SEM PLS Measurement Model (Outer Model)
Source: Primary data processed, 2023

The constructs of assistance quality, farmer characteristics, motivation, and farmer group performance were analyzed by examining the validity and reliability convergence of each indicator. The outputs in Table 1 and Figure 1 below show factor loadings for all four constructs above 0.5, which is necessary, with T-statistic values above 1.65 (for a significance level of 0.05). This indicates that these constructs have good discriminant validity.

Table 2. Outer Loading (Mean, STDEV, T-Value)

Variable	Indicator	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STERR)	P Value
Assistance Quality	X11	0.813	0.812	0.018	43.076	0.000
	X12	0.845	0.844	0.013	54.115	0.000
	X13	0.738	0.727	0.029	25.352	0.000
	X14	0.959	0.948	0.021	26.667	0.000
Farmer Characteristics	X21	0.823	0.822	0.020	37.328	0.000
	X22	0.753	0.745	0.031	26.462	0.000
	X23	0.824	0.814	0.014	66.894	0.000
	X24	0.775	0.780	0.043	28.776	0.000
Farmer Motivation	Y1	0.890	0.888	0.017	55.879	0.000
	Y2	0.842	0.835	0.023	34.875	0.000
	Y3	0.781	0.780	0.026	32.374	0.000
	Y4	0.771	0.770	0.035	30.072	0.000
Farmer Group Performance	Z1	0.837	0.838	0.018	44.229	0.000
	Z2	0.861	0.863	0.021	42.458	0.000
	Z3	0.801	0.805	0.020	43.751	0.000
	Z4	0.733	0.735	0.036	31.973	0.000

Source: Primary data processed, 2023

Inner Model

The criteria state that if Discriminant Reliability (AVE) is greater than 0.5, Cronbach's Alpha is greater than 0.6, and Composite Reliability is greater than 0.7, then the constructs are considered reliable (Hair Jr et al., 2019). The reliability test (Table 2) shows that all latent constructs have AVE values greater than 0.5, CA values greater than 0.6, and CR values greater than 0.7. Therefore, based on reliability criteria, all items can be considered reliable in measuring latent variables. The R-squared model for assistance quality, farmer characteristics, motivation, and farmer group performance is 0.696 or 69.6%, which means that the influence of assistance quality, farmer characteristics, and motivation on farmer group performance is 69.6%.

Table 3. Composite Reliability, Cronbachs Alpha, AVE and R Square

	AVE	Root AVE	Composite Reliability	R Square	Cronbachs Alpha
Assistance Quality	0.644	0.802	0.837		0.754
Farmer Characteristics	0.635	0.796	0.829		0.713
Farmer Motivation	0.648	0.804	0.831	0.689	0.726
Farmer Group Performance	0.654	0.808	0.859	0.696	0.757

Source: Primary data processed, 2023

Hypothesis Test

Based on the conducted research, it was found that there is an influence exerted by assistance quality, farmer characteristics, and farmer motivation on the variable of farmer group performance. According to Table 3, it can be observed that all path coefficients in the constructs have significant results.

Table 4. Path Coefficients (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Desc.
Assistance Quality → Farmer Motivation	0.246	0.267	0.056	6.763	0.000	Significant
Farmer Characteristics → Farmer Motivation	0.164	0.165	0.051	8.211	0.000	Significant
Motivation → Farmer Group Performance	0.112	0.122	0.040	7.397	0.055	Not Significant
Assistance Quality → Farmer Group Performance	0.632	0.633	0.062	13.825	0.025	Significant
Farmer Characteristics → Farmer Group Performance	0.312	0.315	0.063	6.928	0.002	Significant
Assistance Quality → Motivation → Farmer Group Performance	0.027	0.112	0.024	4.735	0.004	Significant
Farmer Characteristics → Motivation → Farmer Group Performance	0.018	0.112	0.049	7.844	0.000	Significant

Source: Primary data processed, 2023

The analysis results indicate that assistance quality and farmer characteristics have a positive and significant impact on farmer motivation. Assistance quality and farmer characteristics also have a positive and significant impact on farmer group performance. Farmer motivation has a positive but not significant effect on performance. Assistance quality has a positive and significant impact on farmer group performance through farmer motivation, while farmer characteristics have a positive but not significant impact on farmer group performance through motivation.

Effect of Assistance Quality on Farmer Motivation

The results show that the quality of mentoring has a positive and significant influence on farmers' motivation, with a path coefficient of 0.246 and a T-statistic value of 6.763 (p-value 0.000). This indicates that the higher the quality of assistance received by farmers, the higher their motivation in carrying out agricultural activities. The quality of mentoring includes technical skills, practical knowledge, and interpersonal skills of the mentors. When the mentor is able to give the right direction, understand farmers' problems contextually, and establish effective communication, farmers will feel supported both technically and emotionally.

The increase in motivation is reflected in the enthusiasm of farmers to adopt new agricultural techniques, actively participate in group activities, and engage in decision-making processes within farm groups. In the research area, the structured and ongoing mentoring program has successfully built trust between mentors and farmers. Mentors with high competencies and the ability to establish good relationships promote the creation of a conducive environment for farmers' motivation to grow.

This process of influence occurs through the delivery of clear information, consistent moral support, and a participatory approach. Thus, farmers not only receive knowledge, but also feel involved and valued, which in turn increases their confidence and morale. This finding is reinforced by Irviani (2018), which underscores that motivation is a process that creates intensity, direction, and perseverance in individuals to achieve certain targets. Therefore, the quality of effective mentoring is a strategic factor in building farmers' motivation in a sustainable manner. Previous research conducted by (Imanudin et al., 2023) indicates that work motivation also has a positive and significant impact on organizational performance.

Thus, the quality of good mentoring not only impacts farmers' technical knowledge but also has the ability to cultivate motivation, self-confidence, and a sense of ownership towards the farmer group. This is crucial to be maintained and enhanced, as demonstrated in this study, farmers' motivation also serves as a mediating pathway that strengthens the influence of mentoring quality on farmer group performance.

Effect of Farmer Characteristics on Farmer Motivation

Based on the results of hypothesis testing (Table 3), farmer characteristics have a positive and significant effect on farmer motivation with a T-statistic value of 8.211 and a p value of 0.000. This indicates that the better the characteristics of farmers, the higher their motivation in carrying out agricultural activities. This finding is reinforced by the path coefficient of 0.164, which indicates a direct effect of farmer characteristics on motivation. In other words, improvements in aspects such as farmers' experience, skills, confidence, and needs will be followed by an increase in farmers' motivation to farm.

This finding is in line with previous research Arifianto et al. (2018), Dayat & Anwarudin, (2020), Hanafiah et al. (2013), and Nisa & Zain (2015) which emphasizes that internal factors such as experience, skills, needs, and self-confidence are the main drivers in increasing farmers' enthusiasm and willingness to farm.

In this study, the dominant indicators of farmer characteristics are farming experience and technical ability. Farmers in Pitu Riawa District have good farming experience because agricultural knowledge has been passed down from generation to generation in their families. Many of them have

been accustomed to farming activities from an early age, so their farming skills have been honed and they are not too dependent on agricultural extension workers for basic technical knowledge. These characteristics directly influence farmers' intrinsic motivation to continue growing rice, not only as a livelihood but also as part of their identity and culture. Farmers are motivated to farm because they want to fulfill their basic needs (such as food and income), security (economic stability) and social needs (being part of a farmer group). When these needs are met, their motivation increases.

The impact of farmer characteristics on motivation is evident in the field, especially among farmers with more than 20 years of experience and high skills. Farmers with this background tend to have greater motivation to continue farming, are open to new innovations, and even become role models for other farmer group members. They are often trusted as informal leaders in the group, which indirectly encourages other members to be more active and develop. Positive impact resonates deeply with individual farmers and bolsters dynamics and overall performance of farmer groups remarkably as a whole.

Motivated farmers are more active in attending meetings, open to new technologies and participate in joint decision-making processes. This strengthens collaboration among farmer group members and improves their work efficiency. The impact is most visible during planting and harvesting seasons, when highly motivated and skilled farmers are able to show better yields and respond more quickly to directions from group leaders and agricultural extension officers. In the Pitu Riawa area, farmers with these characteristics have proven to be able to maintain agricultural productivity consistently, even though they do not always receive intensive assistance from outside parties. This finding shows that it is not enough for farmer assistance programs to focus only on providing technical assistance, but they also need to be directed at strengthening farmers' internal characteristics, such as confidence, experience and skills. Therefore, training and agricultural policies should be contextualized and based on farmers' local characteristics in order to increase the motivation and performance of farmers and farmer groups in a sustainable manner.

Effect of Farmer Motivation on Farmer Group Performance

The results showed that motivation has a positive but insignificant influence on the performance of farmer groups in Pitu Riawa District, with a path coefficient of 0.112, T-statistic of 7.397, and p-value of 0.055 (above the significance threshold of 0.05). This shows that statistically, although the direction of the relationship between motivation and farmer group performance is positive, the effect is not strong enough to be significant. This finding diverges markedly from those earlier results that suggests work motivation significantly boosts organizational performance (Hasibuan & Bahri, 2018; Imanudin et al., 2023; Jatmika & Dewi, 2020).

Based on primary data, the motivation of farmers in Pitu Riawa District is driven more by family needs and increasing personal income, which are the most dominant indicators in the motivation variable. This aligns fairly well with Bulu et al. (2020), which states that farmers are encouraged to manage their farms by maximizing technology to meet basic needs such as food, clothing and security, and to increase family income. These motivations tend to be fairly individualistic rather than collective and have less impact on group performance as a whole generally.

This phenomenon suggests that farmers with extensive experience and high technical skills are more motivated to work independently than in a group system. In Pitu Riawa district when this

research was conducted, it also showed that farmers were accustomed to managing land independently even before farmer group programs were active. Motivation is not significant to the performance of farmer groups because their internal motivation is more directed at meeting personal needs, not because of the collective incentives offered by the group. Despite group meetings and shared agendas, many group members prefer to grow and sell their produce individually.

As a concrete example, a farmer respondent stated that he came to farmer group meetings only to fulfill invitations or administrative requirements for assistance, while all production activities were carried out individually. This affects group performance by decreasing synergy among group members, weak coordination, and low collaborative spirit, making it difficult to achieve maximum group goals.

Therefore, it can be concluded that in certain contexts, such as in Pitu Riawa, motivation does not necessarily contribute to improved group performance. This has important implications for the development of group-based agricultural programs, where there is a need for a more contextual and participatory approach in understanding the sources of farmers' motivation, as well as building an incentive system that is not only based on individual economic needs, but also encourages collective spirit and a sense of belonging to the group.

The results of this study indicate that the motivation of farmers in Pitu Riawa district has a positive direction of influence on group performance, but is not statistically significant. This indicates that although individuals have the motivation to work and improve their welfare, this motivation has not been able to encourage the achievement of collective goals in the form of farmer groups. This finding can be explained through the integration of several perspectives of motivation theory that emphasize the importance of balance between personal orientation and social commitment.

According to Self-Determination Theory (Deci & Ryan, 1985), the quality of motivation is influenced by the extent to which three basic psychological needs - autonomy, competence and relatedness - are met. In this context, farmers in Pitu Riawa show fulfillment in the aspects of autonomy and competence, as seen from their independence in managing land and high technical ability. However, the need for relatedness or social connectedness in the group has not been fulfilled optimally, so that the motivation formed tends to be individualistic and contributes less to collective performance.

In line with this finding, Maslow's hierarchy of needs theory suggests that as long as individuals still focus on fulfilling basic needs such as physiological and security, needs at the social and appreciation levels tend to be neglected. Observations in the field reinforce this, where farmers' motivations are driven more by the desire to fulfill family needs and increase income. In this situation, the need to actively participate in the group or build social solidarity has not been prioritized, which ultimately results in low synergy and overall group performance.

Further, Herzberg's Two-Factor Theory also provides additional insights. Farmers in this study were generally motivated by external factors such as incentives or favors, which are classified as hygiene factors, i.e. elements that prevent dissatisfaction but are not enough to increase motivation deeply. In contrast, true motivators such as recognition, a sense of responsibility and shared achievement are not yet part of the farmer group dynamics. As a result, although individual motivation appears high, its contribution to achieving group goals remains low.

Hence, this finding confirms that personal motivation oriented towards individual economic interests does not automatically contribute to improved group performance, especially when it is not

accompanied by a sense of social attachment and commitment to collective goals. The practical implication of this is the need for a more contextualized and participatory empowerment program design, which not only offers economic incentives, but also reinforces collective values, a sense of belonging, and recognition of members' contributions within the group structure. This approach is expected to direct individual motivation towards a more cooperative and productive direction in the context of farmer group work.

Effect of Assistance Quality on Farmer Group Performance

The results showed that the quality of mentoring has a positive and significant effect on the performance of farmer groups in Pitu Riawa. This indicates that the better the quality of assistance provided by facilitators, the higher the performance of the fostered farmer groups. The high quality of mentoring is reflected in the ability of facilitators to transfer new knowledge, provide the latest information related to agricultural practices, and guide farmers in group decision-making. In this context, the transformation toward growth indicator is the most dominant aspect, reflecting the success of facilitators in encouraging farmers to make positive changes, both in terms of cultivation techniques, group management, and market orientation.

The real impact of good quality mentoring can be seen in the increased ability of farmer groups to design and implement work programs independently, efficiency in managing agricultural resources, and adaptability to environmental and technological changes. For example, in one of the assisted villages in Pitu Riawa district, facilitators intensively assisted farmers in implementing an organic-based sustainable farming system. This assistance has resulted in increased productivity, decreased dependence on chemical fertilizers, and the establishment of a wider market network for their agricultural products. In addition, the facilitators have also strengthened the institutional capacity of farmer groups by increasing members' participation in planning and evaluating group activities.

This finding aligns closely with study results conducted recently Undru & Yasin (2022), Rangga (2021) Rizqullah et al. (2021), and Saputri (2016) which emphasizes that the quality of extension services determines the effectiveness of farmer groups. In fact, from the results of SEM-PLS data processing, it is known that the quality of mentoring directly contributes to improving the performance of farmer groups by 63.2%, indicating that the role of mentors is not just a formality, but is the main driving force in the development of sustainable and community-based agriculture.

Further, Pribadi (2016), and Sumarno et al. (2019), found that the role of facilitators is very important in shaping farmers' collaborative behavior, strengthening social cohesion in the group, and directing farmer groups to carry out institutional functions optimally. Thus, the quality of mentoring is proven to make a substantial contribution to strengthening agricultural institutions and improving the performance of farmer groups in the research area.

Effect of Farmer Characteristics on Farmer Group Performance

The results showed that farmer characteristics have a positive and significant effect on the performance of farmer groups, with a path coefficient of 0.312 and a significance value of 0.002. This finding indicates that farmers who have superior characteristics such as higher education levels, longer farming experience, larger land area, and active involvement in extension activities are more

able to contribute to the effectiveness and efficiency of farmer group work. In the field, farmers with more than a decade of experience proved to be more adaptive to the latest agricultural technologies and actively encouraged other group members to implement innovations, such as balanced fertilization and modern cropping systems.

In addition, farmers with higher levels of formal education also demonstrated a better ability to understand the training materials and to convey information to fellow group members, resulting in faster diffusion of innovations. The impact of these contributions can be seen in increased group productivity, organizational solidity, and success in achieving production and marketing targets. Farmer characteristics have also been shown to support data-based decision-making and strengthen communication between members, which in turn improves the quality of cooperation within the group. Such findings align closely with previous research undertaken by Chaerani (2019) and Purwowitzanto et al. (2020) which shows that farmer characteristics shape the ability to cooperate in groups and accelerate the process of innovation diffusion, especially for new technologies that are applied collectively.

This finding is in line with the results of the study Bakce (2021) which states that farmer characteristics such as education, experience, and land size affect the production of independent oil palm farmers. Apriandis et al. (2022) findings reinforce this notion further which revealed that the factors of age, education, farming experience, income, and participation in extension play an important role in the adoption of balanced fertilization in maize crops. As such, it can be concluded that farmer characteristics are important factors that play a strategic role in improving the performance of farmer groups through increasing the capacity of individual farmers in the face of the evolving dynamics of the agricultural sector.

In summary, farmer characteristics directly improve synergy within groups and influence individual farming behavior quite significantly under various circumstances naturally. This results in increased productivity, work effectiveness, and group capacity to absorb and implement various agricultural programs from the government and partner institutions.

Effect of Assistance Quality on Performance Through Farmer Motivation

Results indicate that quality of mentoring has a positive and significant indirect effect on farmer group performance through farmer motivation, as indicated by the path coefficient value of 0.027 with a T-statistic of 4.735 and a p-value of 0.004. This means that the quality of mentoring plays a role in increasing farmer motivation, which in turn can lead to improved farmer group performance.

In other words, higher quality assistance provided yields a greater motivational boost among farmers thereby significantly impacting overall performance of farmer groups for better results. In the field, farmers in Pitu Riawa district benefit significantly from the presence of facilitators who have high quality, both in terms of technical knowledge, professional attitude, and communication skills. Such facilitators are able to build constructive relationships, provide solutions to technical agricultural problems, and increase farmers' morale through educative and participatory approaches.

Findings align fairly well with Arifianto et al. (2018) and Banunaek et al. (2019). The research findings indicate that the role of the assistance quality in motivating farmers is evident through a direct improvement in the performance of farmer groups. Farmers in Kec. Pitu Riawa greatly benefit

from the services provided by high-quality facilitators, boosting their work enthusiasm through the guidance and education offered by these facilitators. The quality of the facilitator needs to be the very best, encompassing behavior, understanding, and communication skills.

Farmers in Pitu Riawa district claim to feel more energized and confident in carrying out agricultural activities after receiving direct guidance from qualified assistants. The assistants referred to in this case are facilitators from the agriculture office and NGOs who have technical understanding, friendly attitudes, and good communication skills. They provide education, solutions to field problems, and encourage the adoption of the latest agricultural technologies.

Yet, can quality mentoring motivate farmers? As intensive and quality interactions between facilitators and farmers build trust and engagement. Motivated farmers are more likely to accept and implement new innovations and techniques, which in turn leads to increased productivity and group performance. However, statistically, motivation alone is not able to show a significant direct effect on farmer group performance (coefficient value = 0.112, p-value = 0.055). This confirms that motivation needs to be catalyzed by other factors such as group leadership, supporting infrastructure, and the sustainability of the mentoring program to have a more tangible impact.

This finding is particularly relevant in semi-traditional farming communities, such as those in Pitu Riawa district. In this context, the presence of qualified facilitators is still the main source of information, technical guidance and assistance in implementing more modern agricultural practices. The role of facilitators is especially crucial during the transition period towards the implementation of sustainable agriculture, where farmers are faced with new challenges such as climate change, land limitations, and the need for production efficiency. In this situation, highly competent facilitators are able to bridge the knowledge gap and encourage gradual changes in farmer behavior.

Mentoring quality profoundly influences farmer group performance by fuelling motivation which unfolds by ongoing empowerment and learning processes. Qualified facilitators are able to create informal but effective learning spaces, such as through group discussions, demonstrations of agricultural techniques directly in the field, and regular visits to farmers' fields. This approach not only improves farmers' technical understanding, but also fosters intrinsic motivation that encourages them to be more active in group activities, more open to innovation, and more responsible for achieving common goals.

The implications of these findings confirm that improving the quality of mentoring is not only a technical necessity, but also an essential human capacity building strategy in the agricultural sector. Therefore, future farmer empowerment programs need to place capacity building of facilitators as a top priority, covering aspects of technical knowledge, interpersonal communication skills, and contextual socio-cultural approaches. This comprehensive approach is believed to strengthen the positive influence of mentoring on farmers' motivation and performance, ultimately contributing to agricultural productivity and farmers' welfare in a sustainable manner.

Effect of Farmer Characteristics on Performance Through Farmer Motivation

Findings from this investigation suggest an intriguing impact of farmer characteristics on farmer group performance through motivation has a positive but insignificant relationship, with a path coefficient value of 0.018, T-statistic 7.844, and P-value 0.000. The path is statistically significant, but substantively its effect on improving farmer group performance through motivation

is relatively weak. This finding can be explained by the sociocultural conditions of farmers in Pitu Riawa District, Sidenreng Rappang District, where most respondents have a family background as farmers, and farming is the main profession that has been passed down from generation to generation. Farming activities are not solely based on motivational drives arising from training or external interventions, but because agriculture has become part of their social and economic identity. In this context, motivation is internal and stable, so it is not easily influenced by individual characteristics such as formal education, experience, or access to resources.

As an implication, although in theory farmer characteristics such as education level, farming experience, and access to information have the potential to increase motivation (evidenced by path coefficient 0.164, T-statistic 8.211, and P-value 0.000), in practice, motivation does not directly contribute to improving farmer group performance. This indicates that the role of motivation as a mediating variable in this context is not strong enough. For example, some farmers continue to perform well not because of improved motivation through training or extension, but because of economic demands and habits that have been built up over the years. Therefore, to optimize the performance of farmer groups, it is necessary to develop strategies that not only focus on increasing motivation through strengthening personal characteristics, but also consider incentive-based approaches, technology and innovation that can create new challenges for farmers to break out of established routine patterns.

CONCLUSION AND SUGGESTION

From this study, it was found that the variables of assistance quality and farmer characteristics directly and significantly influence motivation and performance. The motivation variable has a positive but not significant effect on farmer group performance. The assistance quality variable has a positive and significant effect on performance through motivation, while the farmer characteristics variable has a positive but not significant effect on performance through motivation. This research indicates the crucial role of assistance quality or agricultural extension in the success of farmer groups in the Pitu Riawa District. Improving agricultural resources first involves creating quality human resources, especially in the farming community, so that the sustainability of agricultural development is measured not only by the ability of farmers to manage their businesses but also by the sustainability and capability of farmers to manage natural resources wisely and effectively, being competent, skilled, able to read market opportunities, and adapt to changes in the world, especially in agricultural developments. This highlights the importance of agricultural extension in building and producing quality human resources.

The implication of these findings is the importance of strengthening the agricultural assistance and extension system as a strategic effort in building quality human resources for farmers. This leads to the need to design extension programs that are not only informative, but also transformative - capable of increasing farmers' adaptive capacity, innovation power, and awareness of changes in the global agricultural environment. In this context, the quality of mentoring must include aspects of improving technical skills, the ability to read market opportunities, as well as instilling sustainable values in natural resource management.

As a suggestion, to increase the effectiveness of farmer group motivation and performance, local governments and related agencies need to develop a needs-based extension approach, designed The Assistance Quality, Farmer Characteristics, And Farmer Motivation (Sulaiman, et., al 2026)

based on the specific characteristics of farmers in the area. Assistance programs can be conducted through participatory training, direct coaching in the field, and strengthening networks between farmer groups. In addition, it is necessary to utilize digital technology and agricultural information that can reach farmers more widely and efficiently. With this approach, latent motivation within farmers can be productively mobilized towards improving performance of sustainable farmer groups highly competitively.

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