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THE INFLUENCE OF THE ROLE OF IRRIGATED RICE FARMER GROUPS ON THE LEVEL OF FAMILY WELFARE IN SIDOMUKTI VILLAGE, BONE-BONE DISTRICT, NORTH LUWU REGENCY

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ABSTRACT

This research is quantitative research which is analyzed statistically and descriptively. The aim of this research is to present the influence of the role of irrigated rice farmer groups on family welfare in Sidomukti Village. Data collection was carried out through direct observation, distributing questionnaires and documentation. Data analysis techniques were carried out by scoring data from questionnaires, then processed with MS Excel software and IBM SPSS Statistics 29. The results of the research show that the there are 3 variables that have different results, Class and Learning Facilities (X1) has a negative effect due to lack of real involvement, while the Vehicle for Cooperation (X2) and Business Production Unit (X3) have a positive effect and contribute directly to farmer welfare. The information presented can be a consideration for the local government in determining strategic policies that will be implemented by the government.

A. INTRODUCTION

The development of agriculture in Indonesia certainly has a very strategic role in the aspect of labor in Indonesia (Kenney, 2019). This is influenced by the level of sufficiency of rice as a staple food for tropical communities such as the Indonesian population, especially if there is a world economic turnaround that requires Indonesia to export to other countries (Sugiharto, 2016; Wati, 2015).

Geographically, many people who live in lowland rural areas work as rice farmers by utilizing large areas of land in rural areas and available water such as irrigation and rain-fed (Andria, 2022). The location of an area greatly influences the farming profession that can be carried out by village communities, which can be seen from the availability of land for the rice production process as well as the available water resources as the main component in fulfilling the nutrients in the rice plants to be cultivated (Aisyah, 2021).

When rice cultivation is carried out, it cannot be separated from the need for an abundant water supply, with this, one of the most effective systems in meeting

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water supply needs is the irrigation system (Syahreza, 2022). Lowland rural agriculture generally applies an irrigation system as a very effective system applied in villages by utilizing existing water in the area (Suryaningsih, 2021). This system is very effective in lowland rural rice farming because the system is very scheduled with supervision of a central irrigation system supervised by local water department (Primadani, 2021).

Rice fields as a place for producing or planting rice certainly require the fulfillment of nutrients so that the plant with the biological name Oryza Sativa can reproduce well. There are several water systems used by village communities, namely irrigation and rain-fed systems (Tarnando, 2016; Prabowo, 2010). The Sidomukti Village area has a good irrigation system from a dam located in a neighboring village. The amount of water discharge can be adjusted during the rainy season or dry season so that the water supply continues to meet the needs of each farmer's rice fields . From the past until now the rice fields in Sidomukti Village have all used an irrigation system to meet the water needs of their rice fields, the availability of water is very sufficient for all the rice fields in Sidomukti Village.

Farmers who have obtained production results during the harvest period carry out farming business by selling their harvests to grain collectors from private parties owned by individuals in the village or those who come from outside the area carrying out harvest trade transactions to earn money to meet the daily needs and subsequent production of village farmers (Putri, 2018). The farming community of Sidomukti Village generally obtains its harvest by selling most of the production to grain collectors to get money which, apart from being used to fulfill daily needs, is also used to pay debts or further post-harvest production costs including tractor rental, nursery and maintenance costs. such as pesticides as a component to increase the quality and quantity of rice production that will or has been produced (Lumintang, 2017).

From the past until now, the life of rice farmers has depended on work groups or organizations that have been passed down from generation to generation, mutual cooperation between other farmers, a form of cooperation carried out by farmers such as tudang sipulung to determine the type of rice that will be produced in order to obtain abundant and good quality results (Setyaningrum, 2020). High selling value, scheduling of irrigation systems is very important in fulfilling the nutritional needs of rice (Arvianti, 2019). By paying attention to this, the function of farmer groups is as a forum for communication between farmers to hold deliberations so that fulfillment can be spread evenly in each rice field area (Sriyanti, 2019).

Farmer groups are organizations that cover all farmers during productivity, both pre-production and post-harvest, Farmer groups are considered to be a good forum for farmers in determining the direction of productivity (Astuti, 2019). Farmer groups, especially in rural areas, really help farmers during productivity, this is the basic basis for farmers in determining superior seeds, fertilizer and the use of sophisticated production equipment (Handayani, 2019; Syahreza, 2022). In Sidomukti Village, there are several farmer groups that are still active today, of course having the same goal, namely increasing production yields and good marketing strategies to improve the welfare of farming families (Oktinafuri, 2019).

The welfare of families in communities with professions as lowland rice farmers must of course be given attention, as well as the welfare of lowland rice farmers in Sidomukti Village. There are 5 hamlets included in the farming community, namely Sidourip, Sidorejo, Sidodadi, Sidorukun, and Sidomulyo hamlets. From a socio-economic perspective, the farming communities in these 5 hamlets have very basic differences, such as the condition of the houses the farming families live in. In the hamlets of Sidourip, Sidorejo and Sidomulyo, the majority of the people live in permanent houses and the ownership status of the rice fields is mostly owned by themselves and in these hamlets there are several grain milling factories which are owned by individuals and many of them are collectors of village harvests (grain) who own expanding rice business. This is different from the people in Sidorukun and Sidodadi hamlets, which are geographically located at the end of the village, the condition of the people is very simple, judging from the condition of the houses, most of them are semi-permanent and the ownership status of the rice fields is that most of them are occupiers (land tenants using a profit sharing system), only a few have their own rice fields. This fundamental difference is certainly one of the factors in differences in income and living standards as well as a dominant factor which of course influences the level of welfare of farming families in Sidomukti Village.

The results of this study can provide information, knowledge, education and science to the general public at large which can be used as a reference for future research in studies on the level of welfare of irrigated rice farming communities and the role of farmer groups in strategies for increasing agricultural productivity. The information presented can be a consideration for the local government in determining strategic policies that will be implemented by the government, which of course in addressing the improvement of the welfare of irrigated rice farming communities and farmer group strategies.

B. METHOD

The descriptive quantitative method used by researchers aims to describe the results that researchers have obtained during the data collection process in the field, presenting the data in the form of numbers and descriptions produced will make it easy to draw conclusions.

In descriptive research used, data has been collected through hypothesis testing or making scientific predictions, as well as explaining the circumstances of phenomena or events that are directly obtained in the field. In the next stage, the researcher describes the things that have been found in the field, both presenting data in the form of numbers and descriptions, then using processed data in the form of percentages and the average results of respondents' answers which are scored and through correlation test. This is in line with what was stated by (Abdullah, 2015) that descriptive research is a research design that is structured with the aim of presenting a systematic picture of scientific information from the object or subject in a study, with the direction of focusing on systematic explanations of facts. which have been discovered at the stage of the research process directly in the field.

This research was conducted in Sidomukti Village, Bone-Bone District, North Luwu Regency, South Sulawesi Province. Administratively, Sidomukti Village borders directly on Bone-Bone Village to the north, to the south is Sidomakmur Village, Patila Village to the east which is a village from another sub-district, and Banyuurip Village to the west. Sidomukti Village has a total area of 709.51 Ha which consists of 2 regional groupings according to use, 463.00 Ha is the land area that dominates the village area as rice production land, apart from that other areas are included in the grouping of dry land which is used as settlements and plantations with an area of 246.51 Ha. Sidomukti Village has 5 administrative hamlets, all of which are included in the rice farmer production community, namely Sidourip, Sidorejo, Sidorukun, Sidomulyo, and Sidodadi.

The results of this research are in the form of data which is of course obtained from collecting all information in the field which is referred to as the data source. Population is the total number of study objects aimed at in a study as the center and source of research data (Adnyana, 2021). In this research, the rice farming community in Sidomukti Village was the target research population studied.

This research uses purposive sampling as a sampling technique, where the researcher looks at subjects who are considered capable of representing a population, with the hope that the researcher obtains research results in accordance with the objectives that are able to answer the problems in the

research. Different in determining the number of samples needed, researchers use the Slovin formula, namely:

n = 524/ (1+524(10%))^2 ……(1)
n = 524/(1+524 (0,01))
n = 524/(1+6,24)
n = 524/6,24
n = 83,97

(Source : Adnyana, 2021)

where n is a number of sample elements/members, N Number of elements/members of the population and e is a Error level (tolerable error level 15%).

Research variables are the main component in producing answers to a research problem that can be obtained from the field during the data collection process or can be called the target object of the research (Ridha, 2020). It can also be said that variables are the focus of a research being conducted. In this study, researchers used several variables as the main reference in drawing conclusions, namely indicators of the level of family welfare and the role of farming groups in society.

Data and information collection techniques used by researchers in the research process are observations carried out by researchers in order to obtain accurate initial data to continue the research in accordance with the research plan being carried out. Documentation is very functional in archiving documents in the form of photos of interview activities with respondents in the field and other real conditions and questionnaires to use obtain data and information results for predetermined samples

Based on the welfare level indicators by the Central Statistics Agency (2022) which are used by researchers as variables in research, it requires that a statistical analysis process needs to be carried out with the aim of analyzing the results of the information presented in the form of quantitative data, equipped with a scoring method which in the next process can be used to describe formulation of the researcher's problem in determining the level of welfare of rice farming families in Sidomukti Village in the form of descriptions that are easy to understand. Based on the results of the scoring that has been carried out on the 7 welfare indicators obtained from respondents, a tabulation process will then be carried out to determine the total scores obtained. Namely income, expenses, education, living conditions, residential facilities, house ownership status, and agricultural land ownership status.

The results of data processing from the variable level of welfare and the role of farmer groups based on indicators from the Central Statistics Agency and the Ministry of Agriculture in the form of scoring results will be carried out with a multiple linear regression test using SPSS to determine the influence between the role of farmer groups in the village as an

independent variable or predictor variable between others, Farmer Groups as Classes/Learning Vehicles (X1), Farmer Groups as Cooperation Vehicles (X2), and Farmer Groups as Farming Production Units (X3) with the level of welfare of village farmer families as the dependent variable or dependent variable (Y) with using techniques multiple linear regression analysis.

Before carrying out a multiple linear regression analysis test, the data to be analyzed needs to meet the requirements for the feasibility of a multiple linear regression analysis model. To see that the data is feasible and can be analyzed with this model, there are 4 classic assumption tests that are carried out as follows:

1. Normality Test

The normality test is a classic assumption test that is carried out to fulfill the requirements before carrying out a multiple linear regression test to determine whether the data to be tested is normally distributed or not. In this test it is hoped that the data will have passed the Kolmogorov-normality test. Smirnov can have a normal distribution and can continue to the next test stage.

Basis for decision making in the Kolmogorov-Smirnov normality test

- If the significance value (Sig.) > 0.05 then the research data is normally distributed.
- If the significance value (Sig.) < 0.05 then the research data is not normally distributed.

2. Multicollinearity Test

The basis for decision making in the multicollinearity test, namely:

- If the VIF (Variance Inflation Factor) value is below or < 10 and the Tolerance Value is above > 0.01 then multicollinearity does not occur.
- If the VIF value ((Variance Inflation Factor) is above or > 10 or the Tolerance value is below < 0.01, then multicollinearity is declared to have occurred.

3. Heteroscedasticity Test

The basis for decision making is the Scatterplot Graph or the predicted value of the dependent variable, namely SRESID with the residual error, namely ZPRED, as follows, If there is a certain pattern, such as the points forming a certain regular pattern (wavy, widening then narrowing), then this indicates that heteroscedasticity is occurring and If there is no clear pattern, or points spread above and below the number 0 on the y-axis, then heteroscedasticity does not occur.

The Heteroscedasticity Test based on Glejser is a classic assumption test based on decision making so that it can be said that the data does not have heteroscedasticity as follows, If the significance value (Sig.) is greater than >

0.05, then the conclusion is that there are no symptoms of heteroscedasticity in the regression model and If the significance value (Sig.) is smaller than <0.05, then the conclusion is that there are symptoms of heteroscedasticity in the regression model.

4. Test the hypothesis in multiple linear regression analysis

The multiple linear regression equation is mathematically expressed by:

$$Ln\ Y=Ln\beta o+\beta 1 lnX1+\beta 2 lnX2 \ldots\ldots.(2)$$

Information:
Y: Dependent variable (value to be predicted).
a: Constant.
β1, β2,...: Regression coefficients.
X1,...,Xn: Independent variables.

(Source : Satrio, 2021)

The basis for partial decision making, namely: Comparing the significance value with a probability value of 0.05,

- If the significance value is <0.05, it means that variable X has an effect on variable Y.
- If the significance value is > 0.05, it means that variable X has no effect on variable Y.

Compare the calculated t value with the t table

- If the calculated t value > t table, it means that variable X influences variable Y.
- If the calculated t value < t table, it means that variable X has no effect on variable Y.

Coefficient of Determination (R2)
The coefficient of determination (R2) test is used to measure the proportion or percentage contribution of the independent variable under study to variations in the ups and downs of the dependent variable or in other words to test the goodness-of-fit of the regression model. The R2 value of the coefficient of determination ranges from 0 to 1 ($0 \leq R2 \leq 1$). The R2 value is said to be good if it is above 0.5 because the R2 value ranges from 0 to 1. The R2 value is equal to zero (R2=0) indicating that there is no influence between the independent variables on the dependent variable.

C. RESULT AND DISCUSSION

C.1. RESULT

Farmer groups are a place or forum for a group of farmers who have the same interests in the same area and are organized through mutual deliberation and consensus. There are 19 Farmer Groups in Sidomukti Village and they are spread throughout the hamlets or active agricultural areas. Sidomukti Village has several farmer groups that are still active today, of course having the same goal, namely increasing production fields and good marketing strategies to improve the welfare of farming families.

In each hamlet, namely in Sidourip Hamlet there are 3 farmer groups with the names Sidomuncul Group, Bina Usaha I, and Tunas Tani, in Sidorejo Hamlet there are 3 farmer groups namely Panca Marga, Simpati Jaya, and Tunas Jaya, the same as Sidomulyo Hamlet there are farmer groups with the names Mandiri Sejahtera, Bina Usaha II and Rukun Karya II, different from Sidorukun Hamlet, it has 4 farmer groups with the names Darma Karya, Bina Tani, Darma Bakti and Tani Mulyo and the last hamlet is Sidodadi which has the largest number of farmer groups in the village, namely 6 groups with the names Rukun Karya I, Karya Anom, Tirto Jaya, Berkah Tani, Padi Emas, and Tunas Muda. All farmer groups in each hamlet in Sidomukti Village certainly have the same goal of increasing productivity results with abundant quality and productivity and having a large selling value so that farmers can earn a lot of money to improve the welfare of the families of the people in Sidomukti Village.

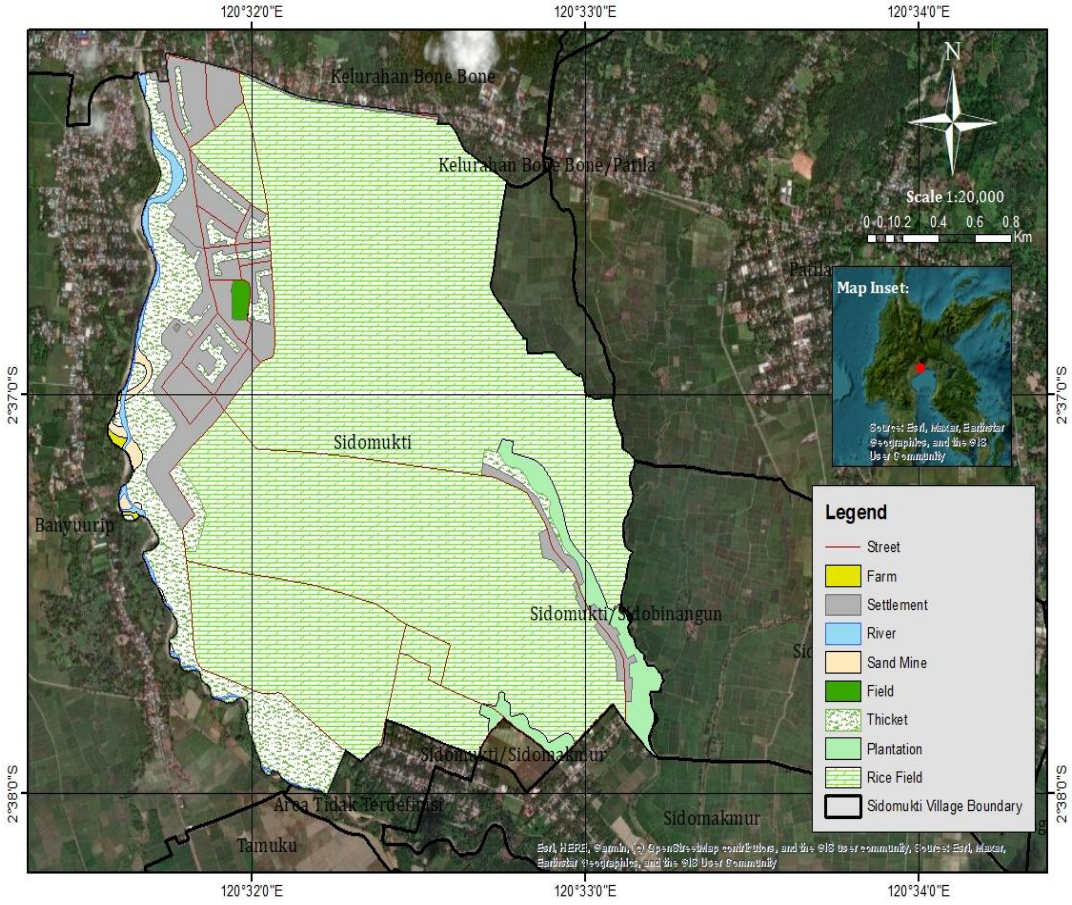

Figure 1. Research Location Map Sidomukti Village.
(Source: Data Processing, 2024)

The research was conducted by looking at indicators of the role of farmer groups by the Ministry of Agriculture in 2020 to determine the perceptions of the farming community in Sidomukti Village regarding the contribution and role of farmer groups in agricultural productivity. There are 3 general roles of farmer groups according to the Ministry of Agriculture 2020 as indicator variables for researchers, namely, Farmer Groups as Classes/Learning Vehicles, Farmer Groups as Cooperation Vehicles, and Farmer Groups as Farming Production Units. The data obtained is in the form of a numerical score taken from the perception of the farming community by adapting a list of questions on a Likert scale that has been validated regarding the role of farming groups during productivity with 4 categories, namely strongly agree with a score of 4, agree with a score of 3, disagree with a score of 2 and very much. disagree has the lowest score, namely 1. The following are the results of an analysis of the farming community's perception of the role of irrigated rice farmer groups in Sidomukti Village based on 3 indicators from the Ministry of Agriculture in 2020.

Table 1. Results of Farmer Group Role Score Analysis

Indicator	Average Score	Percentage
Class and Learning Facilities	3.23	32.8 %
Vehicle for Cooperation	3.34	33.9 %
Business Production Unit	3.28	33.33 %

(Source: Results of questionnaire processing, 2024)

From the results of the analysis of the average respondents' answers regarding the farmer community's perception of the role of farmer groups which comes from a list of questions according to variables including the role of farmer, it was found that the perception with the highest average score was found in the role of farmer groups as a vehicle for cooperation with a percentage of 33.9%, followed by the role of farmer groups as farming production units with a percentage of 33.3%, while in the group role indicator farming as a class/learning vehicle has a percentage of 32.8%. The slight average difference obtained between indicators can be caused by differences in the perceptions of each

farmer that they experience while carrying out agricultural productivity by relating the contribution of the role of farmer groups according to the Ministry of Agriculture 2020.

The level of welfare based on all indicators is welfare as measured by the total score of each farmer from 7 indicators. The criteria for determining the welfare level category are by looking at the criteria by BPS 2022. The results of calculations and analysis of all respondents can determine their welfare level which is measured using 7 BPS welfare indicators for 2022. The following are the results of the welfare level categories for families of irrigated rice farmers in Sidomukti Village, Bone-Bone District North Luwu Regency.

Table 2. Results of Family Level of Welfare Score Analysis

Category	Frequency	Percentage
Level of Welfare Family High	36	42.9 %
Level of Welfare Family Medium	42	50.0 %
Level of Welfare Family Low	6	7.1 %

(Source: Results of questionnaire processing, 2024)

Based on table 2, it can be seen that the frequency of irrigated rice farming families included in the high welfare level category is 36 respondents with a percentage of 42.9%, while those belonging to the medium welfare level category are 42 respondents or 50.0% which can be said to be half of the entire number of responses had a medium level of welfare and the remaining 6 respondents with a percentage of 7.1% were classified as low level of welfare.

1. Normality Test

Kolmogorov-Smirnov normality test results SPSS analysis output on the normality test with Kolmogorov-Smirnov is 0.996. It can be shown on the basis of the Kolmogorov-Smirnov normality test decision that 0.996 > 0.05, so it can be said that this data is normally distributed.

2. Multicollinearity Test

Based on the results of SPSS data processing with reference to the basis for making multicollinearity test decisions, it can be seen that:

- The VIF value of the learning vehicle

- variable (X1) is 1.021 < 10 and the Tolerance Value is 0.979 > 0.01, so the learning vehicle variable (X1) does not have multicollinearity.
- The VIF value of the cooperation variable (X2) is 1.047 < 10 and the Tolerance Value is 0.955 > 0.01, so there is no multicollinearity in the cooperation variable (X2).
- The VIF value of the production unit variable (X3) is 1.026 < 10 and the Tolerance Value is 0.975 > 0.01, so there is no multicollinearity in the production unit variable (X3).

Based on the results of the analysis above, it can be concluded that there is no multicollinearity in all data for each variable. Therefore, the independent variables in this study have data which means there is an imperfect linear relationship between some or all of the variables which explains the regression model and meets the requirements to continue the classical assumption test. next.

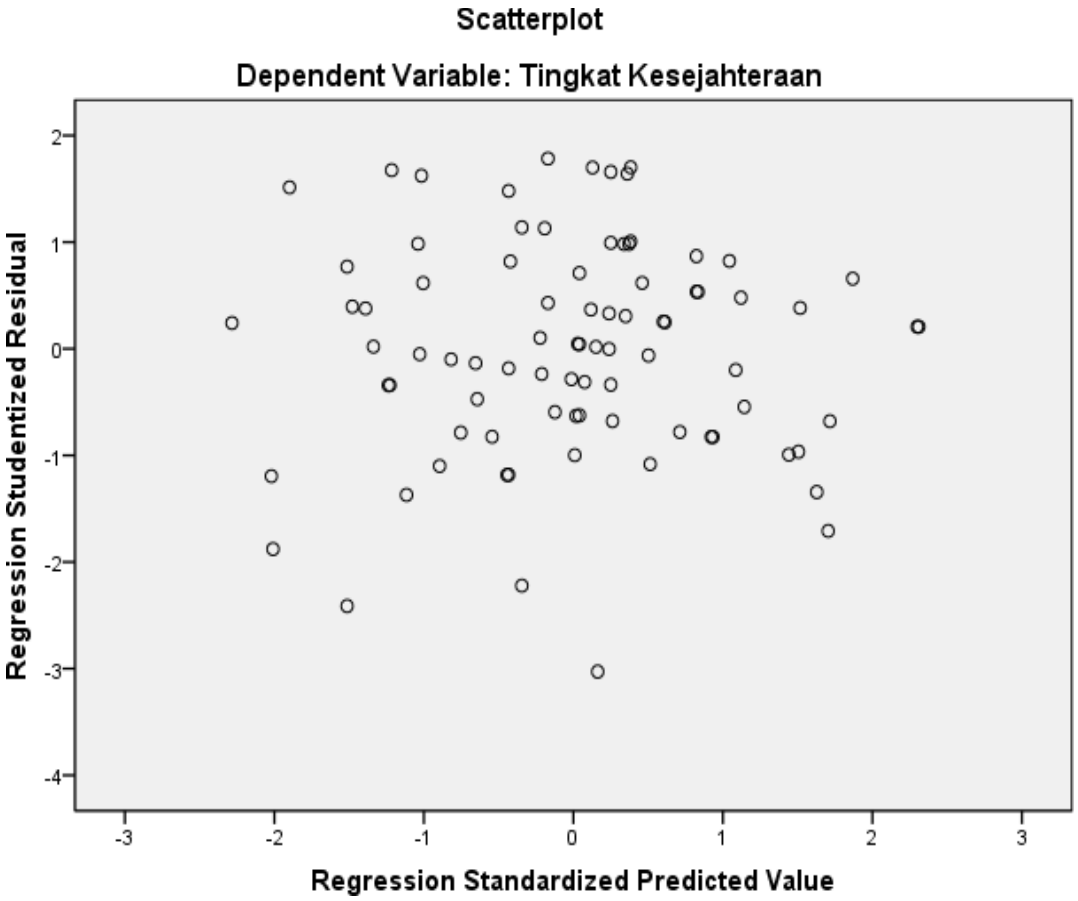

Figure 2. SPSS Output Heteroscedasticity Test Scatterplot Diagram
(Source: SPSS Analysis Output, 2024)

3. Heteroscedasticity Test

Based on the scatterplot diagram presented in Figure 2, the results of the heteroscedasticity test analysis can be seen that there is no clear pattern in the data, nor dots spread above and below the number 0 on the y-axis, so it can be said that heteroscedasticity does not occur.

Based on the presentation of the data analysis results, conclusions can be drawn by referring to the basis for decision making in the Glejser heteroscedasticity test below:

- The significance value (Sig.) of the learning vehicle variable (X1) is 0.052 > 0.05, so the conclusion is that there are no symptoms of heteroscedasticity in the regression model.
- The significance value (Sig.) of the cooperation variable (X2) is 0.244 > 0.05, so the conclusion is that there are no symptoms of heteroscedasticity in the regression model.
- The significance value (Sig.) of production units (X3) is 0.279 > 0.05, so the conclusion is that there are no symptoms of heteroscedasticity in the regression model.

Based on the conclusion analysis obtained from the Glejser heteroscedasticity test and seeing that all variables have data that does not show symptoms of heteroscedasticity in the regression model.

Table 3. Multiple Linear Regression Analysis Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.293	6.330		1.129	.262
	Wahana Belajar	-.067	.219	.034	.304	.062
	Kerja Sama	.448	.225	.220	1.995	.049
	Unit Produksi	.349	.204	.205	1.993	.046

a. Dependent Variable: Welfare Level

(Source: SPSS Analysis Output, 2024)

4. Multiple Linear Regression Analysis

Based on the results of multiple linear regression in table 3, the following regression equation model is obtained:

$$Y = 8.293 - 0{,}067 + 0{,}448 + 0{,}349 \ldots\ldots (1)$$

The results of the multiple linear regression equation above can be explained as follows:

- The constant value of βo is 8.293, meaning that if the learning vehicle (X1), cooperation (X2), and production unit (X3) variables have a value of 0 or are constant then the value of the farmer's family welfare is 8.293.
- The coefficient value β1 is -0.067, meaning that if every 1% increase in learning facilities it will cause a decrease in the level of welfare of farmers in Sidomukti Village of -0.067%. The direction of the relationship between learning facilities and the welfare of farmer families is negative.
- The β2 coefficient value is 0.448, meaning that if every 1% increase in cooperation it will cause an increase in the level of farmer welfare in Sidomukti Village by 0.448%. The direction of the relationship between cooperation and the welfare of farming families is positive.
- The β3 coefficient value is 0.349, meaning that if every 1% increase in production units it will cause an increase in the level of welfare of farmers in Sidomukti Village by 0.349%. The direction of the relationship between production units and the welfare of farming families is positive.

5. Test the Hypothesis

The results of SPSS analysis in partial testing (t test) as a test to answer the research hypothesis in the form of the influence of each or partially between the learning vehicle, cooperation and production unit variables on the level of welfare of rice farming families, shows the calculated t value and the value t the table below:

t_{tabel} = t (0,05/2 ; n-k-1)……..…….(3)

(Source: Satrio, 2021)

= t (0,025 ; 84-3-1)

= t (0,025 ; 80)

= 1,990

- Influence of Learning Vehicles

Based SPSS output analysis, it can be seen that the learning vehicle variable (X1) shows a significant value > probability with a value of (0.062 > 0.05) with a value ∝ is -0.067. Based on the tcount value < ttable value on The percentage point results of the t distribution on the learning vehicle variable show that (0.304 < 1.990).

It can be seen from the results that the significant value, tcount, and ttable of the learning vehicle variable (X1) do not have a significant effect and are negatively related to the level of welfare. Where the confidence level is 95% with these results, H1 (first hypothesis) is rejected.

- Influence of Cooperation

Based SPSS output alalysis, it can be seen that the cooperation variable (X2) shows a significant value < probability with a value of (0.049 < 0.05) with a ∝ value of 0.448. Based on the tcount > ttable value, the results of the percentage point distribution of t on the learning vehicle variable show that (1.995 > 1.990).

It can be seen from the results of the significant value, tcount, and ttable that the cooperation variable (X2) has a significant effect and is positively related to the level of welfare. Where the confidence level is 95% with these results, H2 (second hypothesis) is accepted.

- Influence of Production Unit

Based SPSS output alaysis, it can be seen that the production unit variable (X3) shows a significant value < probability with a value of (0.046 < 0.05) with a ∝ value of 0.349. Based on the tcount > ttable value, the results of the percentage point distribution of t on the learning vehicle variable show that (1.993 > 1.990).

It can be seen from the results that the significant value, tcount, and ttable of the production unit variable (X3) have a significant effect and are positively related to the level of welfare. Where the confidence level is 95% with these results, H3 (third hypothesis) is accepted.

In the analysis results F test or simultaneous test data in SPSS shows the F test value and Ftable value below:

F_{table} = F (K ; n-k)……..…(4)

(Source: Satrio, 2021)

= F (3 ; 84-3)

= F (3 ; 81)

= 2.72

Based on SPSS output analysis, it can be seen that the F test results show a significant value < probability with a value of (0.044 < 0.05). Based on the F test value > F table value, the percentage point results of the F distribution in the F test show that (3.51 > 2.72).

It can be seen in the results of the significant values, Fcount, and Ftable. The role of Farmer Groups as Classes/Learning Vehicles (X1), Farmer Groups as Collaboration Vehicles (X2), and Farmer Groups as Farming Production Units (X3) have a significant effect on the level of family welfare. (Y). Where the confidence level is 95% with these results, H4 (fourth hypothesis) is accepted.

Table 4. Coefficient of Determination Calculation Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.293[a]	.586	.052	1.75297

a. Predictors: (Constant), Learning Vehicles, Collaboration Vehicles, Production Units
b. Dependent Variable: Welfare Level

(Source: SPSS Analysis Output, 2024)

Based on Table 4 above, it shows that the influence of the learning vehicle, collaboration and production unit variables on the welfare level of families of irrigated rice farmers in Sidomukti Village, Bone-Bone District, North Luwu Regency, obtained an R2 value of 0.586. With this value, it can be seen that the variation of learning facilities, collaboration and production units on the level of welfare of irrigated rice farmers in Sidomukti Village, Bone-Bone District, North Luwu Regency is 58.6%, the remaining 41.4% is explained by other variables.

C.2. DISCUSSION

On the role of farmer groups as a vehicle for learning in Sidomukti Village does not have a significant effect on the level of family welfare due to the responses of farmers' perceptions regarding this indicator stating that there is a possibility that farmer groups in Sidomukti Village have not optimally carried out their role as a vehicle for learning based on the question variable regarding the role of farmer groups as a vehicle Study.

This is also related to the activities carried out in this role only in the form of socialization, discussions, coordinating the implementation of traditional rituals before going down to the rice fields, which means that this role only provides non-physical products in the form of knowledge which not necessarily all farmers will feel helped and apply (Akande, 2025). Based on the study targets, this research uses all farmer groups in Sidomukti Village, this influences the inequality between farmers' perceptions of farmer groups who have carried out their roles well.

In contrast to the situation of the role of farmer groups as a learning vehicle in research by (Satrio, 2021) shows that the calculated t value > t table is 7.819 > 2.036 and 0.00 ≤ 0.05, the learning vehicle variable (X1) can be significant due to the existence of activities (Warner, 2025). a place for learning in farmer groups, deliberative discussions between members

to resolve problems and plan activities, as well as a forum for carrying out extension and training activities from the government and agencies to increase knowledge and farmers' insight into developing agricultural farming which influences increased welfare for members of the Rahayu IV Farmers Group (Hermawan, 2017).

The role of farmer groups in carrying out their role as a vehicle for cooperation has been well proven by the perception of every farmer who feels helped by the assistance of sophisticated agricultural equipment for farmer groups that can be used by members, the creation of a family atmosphere of mutual assistance between farmers within a farmer group, distribution of free fertilizer subsidies from the government which are distributed directly by farmer groups to farmers, lots of pesticide sponsorship from the private sector, and the existence of forms of cooperation between farmer groups with grain collectors to get prices commensurate with agricultural products (Utami, 2024). Directly, these things support farmers to increase productivity with good quality and abundant quantity so that farmers obtain sufficient income from agricultural products to be used to meet their daily needs.

This is similar in line with research conducted by (Handayani, 2019) which states that the farmer group in Bayuning Village has a fairly good cooperative relationship between its members, characterized by the creation of an atmosphere of mutual acquaintance, mutual trust and cooperation, and there is clear division of tasks to each member. Apart from that, farmer groups also have accompanying extension workers who regularly guide and help distribute aid from the government in the form of inputs such as fertilizer seeds, seeds, hand tractors and so on. Statistical analysis shows that the calculated t value > t table is 0.514 > 2.036 and 0.00 ≤ 0.05, so Ho rejected and Hl accepted, which means that the cooperation vehicle variable partially influences welfare. towards other farmer groups who carry out this role less than optimally (Hartati, 2017).

The role of farmer groups as farming production units in Sidomukti Village shows that farmer groups in Sidomukti Village have carried out their functions well. It can be seen that there is a contribution of farmer groups in arranging the scheduling of irrigation systems, watering them evenly throughout agricultural land, owning and maintaining facilities along with agricultural equipment (Tractors, etc.) that are well maintained and can be used by farmers, distribute fertilizer and pesticide subsidy assistance from the government and the private sector to farmers evenly which are used during production, have a role in systematically determining the scheduling of subsequent agricultural activities after production, and

provide input to farmers to overcome pests and diseases during agricultural productivity (Abdulazeez, 2025).

It can be seen in research by (Marlinawati, 2023) which is in line with my research by showing the results of the analysis that the calculated t value > t table is 7.819 > 2.036 and 0.003 ≤ 0.05, so that Ho is rejected and Hl is accepted, which means that the production unit variable influences welfare. partially. Planning farming activities to become more efficient and profitable is characterized by encouraging farmers to use the latest agricultural technology, implement environmentally friendly farming and use the best superior seeds. The provision of inputs that farmers need, such as seeds, fertilizer and pesticides, has been carried out well by farmer groups (Musrifin, 2019).

Family welfare in the community with the profession as rice farmers must certainly have attention, as well as the welfare of rice farmers in Sidomukti Village. There are 5 hamlets included in the farming community, namely Sidourip, Sidorejo, Sidodadi, Sidorukun, and Sidomulyo hamlets. In terms of socio-economic, the farming community in these 5 hamlets has very fundamental differences such as the condition of the houses occupied by the farming families.

In the hamlets of Sidourip, Sidorejo, and Sidomulyo, most of the people live in permanent houses and the ownership status of the rice fields is mostly owned by themselves and in this hamlet there are several rice mills owned by individuals and many of them are collectors of the village's harvest (rice) which has a large rice business (Yazid, 2022). In contrast to the people in the Sidorukun and Sidodadi hamlets which are geographically located at the end of the village with a very simple community situation seen from the condition of the houses, most of which are semi-permanent and the ownership status of the rice fields, most of them are tenants (land tenants with a profit-sharing system) only a few have their own rice fields (Fitriana, 2025). This fundamental difference is certainly one of the factors in the difference in income and living standards and the dominant factor that certainly influences the level of welfare of farming families in Sidomukti Village (Amalia, 2025).

The information presented can be a consideration for the local government in determining strategic policies that will be implemented by the government, which of course will improve the welfare of irrigated rice farming communities and farmer strategy groups in making decisions on farmer organizations in Sidomukti Village.

Farming communities and the government must work together more in formulating strategies to produce good policies to be applied to farming communities according to the needs in increasing agricultural productivity.

D. CONCLUSION

Based on the results of data analysis and processing in SPSS regarding the influence of the role of irrigated rice farming groups on the level of family welfare in Sidomukti Village, Bone-Bone District, North Luwu Regency, a conclusion can be drawn, namely, the learning vehicle variable (X1) has a negative and no effect significantly to the level of welfare of farming families in Sidomukti Village, this is due to the perception by farmers that this role only provides non-physical products in the form of knowledge which not necessarily all farmers feel helped and implementing this (X2) has a positive and significant effect on the level of welfare of farmers in Sidomukti Village, this is because the role of farmer groups as a vehicle for cooperation has carried out its role well, the function of which is to establish cooperative relationships with internal and external parties in increasing agricultural productivity for results of good quality and abundant quantity for the sake of farmers' high income. The production unit variable (X3) has a positive and significant effect on the level of welfare of farming families. This is caused by farmers' responses to the role of farmer groups as farming production units in Sidomukti Village, which shows that farmer groups in Sidomukti Village have carried out their functions well which can be seen in the distribution of productivity tools and the direct involvement of farmer groups during rice production. in rice fields, both in providing facilities and infrastructure during productivity and in the form of strategic advice to farmers.

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