

Analysis of the Role of Agricultural Extension Officer on Rural Development in Sunggal District, Deli Serdang Regency

Suheri Sitepu¹, H.B. Tarmizi², Rujiman²

^{1,2} Master of Agribusiness Study Program on Faculty of Agriculture of University of Sumatera Utara

Corresponding Author: Suheri Sitepu

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ABSTRACT

The success of rural development is closely related to agricultural development in an area. Agricultural extension officers play a very important role in determining the success of agricultural development in the village. The objectives of this study were 1) to analyze the perception of farmer groups on the role of agricultural extension officers in rural development in Sunggal District, Deli Serdang Regency, and 2) to analyze the influence of the agricultural extension agent's role on rural development in Sunggal District, Deli Serdang Regency and 3) to analyze efforts to increase the role of the agriculture extender in rural development in Sunggal District, Deli Serdang Regency. The method used in this research is descriptive quantitative. The population in this study were 45 respondents and all of them were used as samples (saturated samples), the sample was the head of the irrigated rice farmer group. The data collection method used in this study is a survey method. The analytical method used is descriptive analysis and multiple regression analysis. The results showed that the perception of farmer groups on the role of the agricultural extension officer in rural development was positive, and the influence of the role of the agricultural extension officer as a facilitator, innovator, motivator, dynamist and educator simultaneously had a significant effect on rural development in terms of income. Partially, the facilitator variable has a significant effect on rural development in terms of income. Meanwhile, the innovator, motivator, dynamist and educator variables have no significant effect on rural development. Efforts to increase the

role of agricultural extension officer in rural development in Sunggal District, Deli Serdang Regency can run well and correctly if they are supported by professional extension workers, reliable extension institutions, and continuous flow of extension materials, a correct extension system and appropriate extension methods appropriate and polyvalent extension management.

Keywords: agricultural extension officer, rural development

BACKGROUND

Village development is an effort to improve the quality of life and life for the greatest welfare of the village community. UU no. 6 of 2014 article 78 paragraph (1) states that village development aims to improve the welfare of rural communities and the quality of human life as well as poverty alleviation through the fulfilment of basic needs, development of village facilities and infrastructure, development of local economic potential, and sustainable use of natural resources and the environment. the success of rural development is closely related to agricultural development in a region. Counselling to help farmer groups by conducting coaching, implementation and technical work to improve or explore the potentials that exist in farmer groups.

Agricultural extension officers play an important role in the success of agricultural development in the village. Agricultural extension officers act as

intermediaries and information liaisons for both farmer groups and farmer groups. Extension workers convey information from the study centre as well as to farmer groups and convey aspirations from farmer groups to policy makers. Because here the extension workers go directly to farmer groups and the community so that they will know more about the actual conditions in the field, the Ministry of Agriculture (2019).

Indonesian Law No. 16 of 2006 defines Agricultural Extension as a learning process for the main actors and business actors so that they are willing and able to assist and organize themselves in accessing market information, technology, capital, and other resources, to increase productivity, business efficiency, income, and welfare as well as increasing awareness of the preservation of environmental functions.

Rice is a strategic food commodity in Indonesia. Rural areas are still a source of rice commodity producers to this day. The quality of agricultural products from rural areas is demanded to always increase and in sufficient quantities. Crop failure in the food crop sector in rural areas affects the availability and prices of food in urban areas. To increase agricultural production, many things must be addressed and one of the important things is the assistance of farmer groups. Assistance for farmer groups is carried out to improve the ability of the farmer groups in terms of skills, knowledge and mental attitude to improve their welfare.

The Sunggal District is one of the centres of rice production in the Deli Serdang Regency which is in the working area of Medan Krio Agricultural Extension Center. Researchers feel the need to research the role of agricultural extension officers in rural development from the perspective of farmers as beneficiaries with the title "The Effect of Agricultural extension officer Roles on Rural Development in Sunggal District, Deli Serdang Regency".

Based on Aziz's research (2021), entitled The Role of Agricultural Extension Officers on Farmer Group Development in Pasongsongan District, Sumenep Regency, it is stated that the role of Agricultural Extension Officers as facilitators, innovators, motivators, dynamists, and educators is quite significant for the development of farmer groups in Pasongsongan District, Sumenep Regency.

Based on Imandari's research (2019) under the title The Role of Sub-District Extension Centers on Income Levels of Paddy Sawah Farmers' Groups, shows that the involvement of the role of Sub-District Extension Centers (BPK) in the level of income of lowland rice farmer groups. First, the District Extension Center (BPK) is a motivator or encouragement. Second, the District Extension Center (BPK) as a mentor. Third, the District Extension Center (BPK) is a facilitator. Fourth, the District Extension Center (BPK) as a Consultant. The results of the average score calculation of the role of the District Extension Center (BPK) on the income level of lowland rice farmer groups in Rawang Panca Arga District with a Likert Scale and a rating scale of 122 which is on the regional rating scale of 89-132, which is a role. Overall the District Extension Center (BPK) plays a very important role in increasing the income of lowland rice farmer groups.

The Role of Agricultural Extension Officer

According to the Big Indonesian Dictionary, roles are as behaviour saviors that are expected to be possessed by people who are domiciled in society. Meanwhile, according to Soekanto (2007) role is a dynamic aspect of position (status). If a person carries out his rights and obligations according to his position, then he has carried out his role. The role is more towards function, as an adjustment, and as a process. The role of the Agricultural Extension Officer is related to the duties and functions, which are two

things that cannot be separated in carrying out the work by a person or person institution. Tasks are a set of fields of work that must be done and attached to a person or institute with the functions they have.

The function comes from the English word function, which means something that contains use or benefit. The function of an institution or formal institution is the existence of power in the form of rights and duties possessed by a person in his position in the organization to do some by with the fields of duty and authority of each. The function of the institution or institution is structured as a guide or direction for the organization to carry out activities and achieve organizational goals, Aprinalia (2020). According to Mardikanto (2019), the role of the instructor is as edification, which is an acronym for:

1. The role of education

Acting as an educator in the sense of developing the learning process with the beneficiaries, and continuing the importance of lifelong learning to the beneficiary community. There are three indicators of the role of the extension agent as education, namely: the material of the extension program is relevant to the needs of the farmer group, the skills of the farmer group are increased, and the knowledge of the farmer group is increased.

2. The role of disseminating innovation

The dissemination of information/innovation from "outside" to the beneficiary community, or vice versa and from fellow citizens to members of the community to other communities (within and between other social systems). Measurement can be measured through the delivery of information/technological innovations to farmer groups and the dissemination of information/new technology innovations.

3. The role of facilitation

Providing facilities and/or showing the sources of convenience carried out by

beneficiaries and other development stakeholders. Facilitation can be seen in facilitating each farmer group complaint and facilitating the development of motivation or interest in farming.

4. Consulting role

Advisors or providers of alternative solutions to problems faced by the beneficiary community and other stakeholders. Its role as a consultant can be seen in helping solve problems faced by farmer groups, providing facilities and infrastructure to solve common problems and helping to provide consultation on new technologies.

5. The role of advocacy

Providing the role of assistance in the formulation/return of policy decisions in favour of the interests of the beneficiary community. Assist in making regulations made by farmer groups.

6. The role of supervision

The role as a provider (supervisor) of the implementation of advocacy and community empowerment activities offered and/or implemented by the beneficiaries. Supervision or coaching is activity supervision is carried out jointly between extension workers and farmers to see and find out the development of farming carried out and see problems that occur in the field so that they can solve problems together and can correct the shortcomings of existing problems. Supervision/guidance is carried out by guiding technical problems faced by farmer groups and alternative problem-solving.

7. The role of monitoring and evaluation

The role of observing, measuring, and assessing the process and results of community empowerment. Monitoring and evaluation activities are seen from conducting monitoring and evaluation of farming, monitoring and evaluation of farming on the mastery of

innovations/technology and evaluating the results of activities.

Agricultural Extension Officer

According to Bahua (2015), Agricultural Extension is the empowerment of farmer groups and their families as well as the community of agribusiness actors through non-formal education activities in agriculture so that they can help themselves both in the economic, social and political fields so that an increase in their income and welfare can be achieved.

Agricultural extension officers are an integral part of BPP. Agricultural extension officers are also known as facilitators, the term facilitator is workers or implementers

of community empowerment. Meanwhile, according to (Lippit 1983, Mardikanto 2019) called it a "change agent", namely someone who on behalf of the government or community empowerment institution is obliged to influence the decision-making process carried out by potential beneficiaries in adopting innovations.

The role of the agricultural extension officer is a series of activities such as facilitation, learning process, source of information, assistance, problem-solving, coaching, monitoring and evaluation of farmer group activities to support sustainable agricultural development. In agricultural activities, it is necessary to have the presence of extension workers as a trigger as well as a driver of agricultural development in Indonesia.

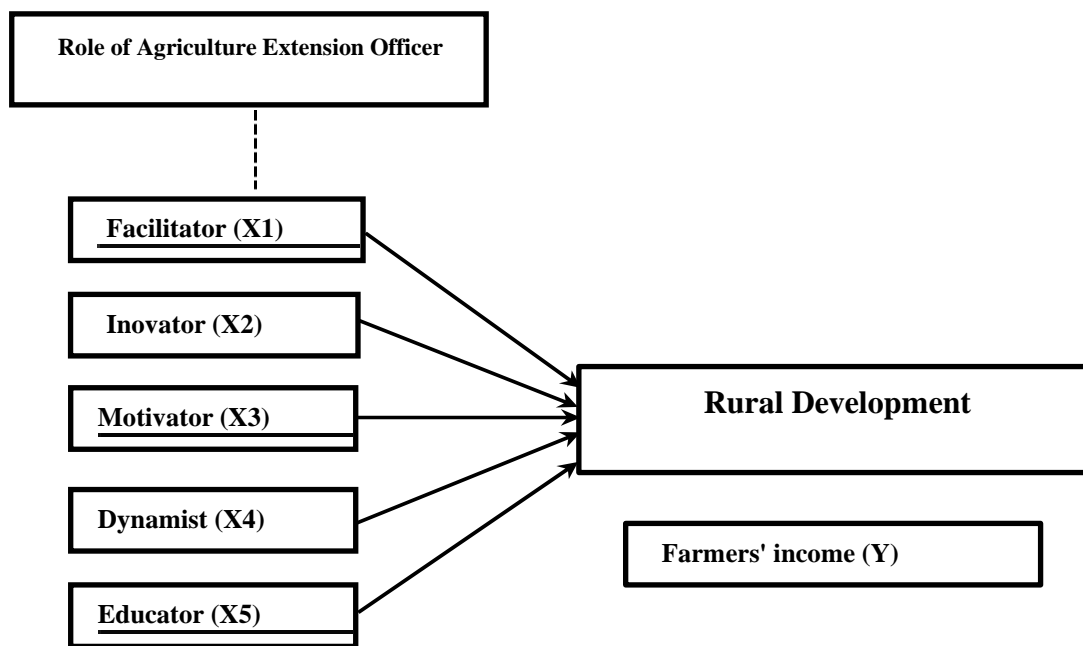


Figure 1. Conceptual Framework

Hypotheses

The role of the agricultural extension officer has a positive effect on rural development in Sunggal District, Deli Serdang Regency

RESEARCH METHOD

This type of research is descriptive and quantitative. The research was conducted in Sunggal District, Deli Serdang Regency. The time to carry out the research is planned for September - October 2021. The population in this study were all chairmen of irrigated rice farmer groups in Sunggal District, Deli Serdang Regency, amounting to 45 people. The entire population is the

sample in this study, with as many as 45 respondents. The determination of the entire population to be the sample/object of research (saturated sample) aims to ensure that the research carried out obtains data as expected.

The data collection method used in this research is a survey method. The survey in this study was conducted using a questionnaire containing a list of questions regarding the role of agricultural extension officers on the attributes of agricultural extension officers addressed to the head of farmer groups located in Sunggal District, Deli Serdang Regency. Other supporting data from the Medan Krio Agricultural Extension Center and BPS Deli Serdang Regency and other agencies are documented as secondary data.

To answer the first problem, how is the perception of farmer groups towards agricultural extension officer in Sunggal District, Deli Serdang Regency. Then do a descriptive test, by doing the average test. If the average value of the respondent's answers is greater than or equal to 4 (four), then the perception of the farmer group towards agricultural extension officer in Sunggal District, Deli Serdang Regency is positive.

RESULT AND DISCUSS

Coefficient of determination test results (R^2)

The coefficient of determination is used to test the goodness-fit of the regression model which can be seen from the R Square value. Determine the relationship between the role of agricultural extension officers as facilitators, innovators, motivators, dynamists and educators with rural development in terms of income, can be seen through the magnitude of the coefficient of determination.

Table 1. The results of testing the coefficient of determination (R^2) the influence of the role of agricultural extension officer on rural development in terms of income

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .773 ^a | .597 | .546 | 1.768 |

a. Predictors: (Constant), x_5, x_3, x_1, x_4, x_2

The calculation result of the R Square value is 0.597, which means that 59.7% of rural development in terms of farmer income can be explained by the variables (facilitator, innovator, motivator, dynamist and educator) above, while the remaining 40.3% is explained by other variables which were not investigated in this study.

Simultaneous test results (Test F)

A simultaneous test is used to determine whether the independent variables simultaneously or simultaneously affect the dependent variable.

Table 2. Simultaneous test results (Test F) the effect of the role of agricultural extension officer on rural development in terms of income

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1 | Regression | 180.729 | 5 | 36.146 | 11.569 | .000 ^b |
| | Residual | 121.849 | 39 | 3.124 | | |
| | Total | 302.578 | 44 | | | |

a. Dependent Variable: y

b. Predictors: (Constant), x_5, x_3, x_1, x_4, x_2

Simultaneous statistical tests are shown by the comparison of the calculated F value with the F-table. The value of the F-table with a degree of confidence of 95%, is 2.45. In this table, it can be seen that in the equation, F count 11,569 is greater than F-table. The probability level is 0.000. So it can be concluded that $P = 0.000 \leq 0.05$ which means H_a is accepted. This explains that the independent variables (facilitators, innovators, motivators, dynamists and educators) simultaneously have a positive and significant effect in explaining rural development in terms of income.

Partial test results (t-test)

In the partial statistical test with a critical value of t (critical value) at $df = (n-k)$,

where n is the number of samples and k is the number of independent variables including constants.

Table 3. Partial test results (Test - t) the effect of the role of agricultural extension officer on rural development in Sunggal District, Deli Serdang Regency

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -3.324 | 2.998 | | -1.109 | .274 |
| | x_1 | .436 | .140 | .458 | 3.122 | .003 |
| | x_2 | -.100 | .237 | -.075 | -.423 | .674 |
| | x_3 | .308 | .278 | .229 | 1.107 | .275 |
| | x_4 | .262 | .258 | .172 | 1.017 | .315 |
| | x_5 | .137 | .185 | .102 | .739 | .465 |

a. Dependent Variable: y

1. The variable of the role of the agricultural extension officer as a facilitator shows t-count = 3.122 and t-table 1.68 with a probability level of 0.003. Thus, it can be concluded that $P = 0.003 < 0.05$, so the H_0 hypothesis is rejected and the H_a hypothesis is accepted, which states that the facilitator variable has a positive and significant effect on rural development in terms of income.
2. The role of agricultural extension agents as innovators shows t-count = -0.423 and t-table 1.68 with a probability level of 0.674. Thus, it can be concluded that $P = 0.674 > 0.05$, so the H_0 hypothesis is accepted and the H_a hypothesis is rejected which states that the innovator variable has no significant effect on rural development in terms of income.
3. The variable of the role of the agricultural extension officer as a motivator shows t-count = 1.107 and t-table 1.68 with a probability level of 0.275. Thus, it can be concluded that $P = 0.275 > 0.05$, so the H_0 hypothesis is accepted and the H_a hypothesis is rejected, which states that the motivator variable has a positive but not significant effect on rural development in terms of income.
4. The variable of the role of the

agricultural extension officer as a dynamist shows t-count = 1.017 and t-table 1.68 with a probability level of 0.315. Thus, it can be concluded that $P = 0.315 > 0.05$, so the H_0 hypothesis is accepted and the H_a hypothesis is rejected, which states that the motivator variable has a positive but not significant effect on rural development in terms of income.

5. The role of the agricultural extension officer as an educator shows t-count = 0.739 and t-table 1.68 with a probability level of 0.465. Thus, it can be concluded that $P = 0.465 > 0.05$, so the H_0 hypothesis is accepted and the H_a hypothesis is rejected, which states that the educator variable has a positive but not significant effect on rural development in terms of income.

CONCLUSION

1. The perception of agricultural extension officer in rural development in Sunggal District, Deli Serdang Regency is positive, meaning that farmers think that agricultural extension officer have an important role in rural development.
2. The role of agricultural extension officers as facilitators, innovators, motivators, dynamists and educators simultaneously has a positive and

significant effect on rural development in terms of income. Partially, the facilitator variable has a positive and significant effect on rural development in terms of income. Meanwhile, the variables of innovator, motivator, dynamist and educator have no significant effect on rural development.

3. Efforts to increase the role of agricultural extension officer in rural development in Sunggal District, Deli Serdang Regency can run well and correctly if they are supported by professional extension workers, reliable extension institutions, continuous flow of extension materials, correct extension system and methods proper extension and polyvalent extension management.

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