Original Article

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Analysis of Extension Worker Competencies and Factors Influencing The Readsi Program on Rice Farmers in Lasusua District, North Kolaka Regency

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Abstract:

This study analyzes the competency of agricultural extension workers and the factors influencing the success of the READSI (Rural Empowerment and Agricultural Development Scaling Up Initiative) Program in increasing the income of rice farmers in Lasusua District, North Kolaka Regency. The competencies of extension workers studied include technical knowledge, communication skills, attitudes and work ethics, facilitation skills, and the use of information technology. Data were obtained through a survey of respondent farmers, then analyzed using multiple linear regression with the classical assumption test, t-test, F-test, and the coefficient of determination (R^2). The results showed that simultaneously the five variables of extension worker competency had a significant effect on activities to increase farmer income (F = 9.207; Sig. 0.000). Partially, communication skills, attitudes and work ethics, and facilitation skills had a significant positive effect, while technical knowledge and the use of information technology had no significant effect. The R^2 value of 0.775 indicates that 77.5% of the variation in farmer income can be explained by extension worker competency, while 22.5% is influenced by other factors outside the model, such as policy, market access, and infrastructure. These findings emphasize the importance of improving the competency of extension workers, particularly in communication, work ethics, and facilitation skills. They also highlight the need for field mentoring and policy support to optimize the application of agricultural technology and innovation to increase rice farmer incomes in North Kolaka Regency.

Keywords: Extension Worker Competence, READSI, Farmer Income, Rice, North Kolaka, Linear Regression

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Introduction

Agricultural development is a sustainable process that requires growth in the agricultural sector and positive change through the involvement of competent human

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resources, including agricultural extension workers (Soekartawi, 2021). Farmers' trust in extension workers is a crucial factor in the success of farming, which can be built through the role of informal figures such as farmer group leaders (Prayoga et al., 2019). Trusted extension workers are able to facilitate farmers from the production process to the marketing of agricultural products (Rahmawati et al., 2019), while also serving as a bridge between the government and research institutions in the adoption of agricultural innovations (Padillah et al., 2018; Putri & Safitri, 2018).

The Rural Empowerment and Agricultural Development Scaling-up Initiative (READSI) program aims to improve the welfare of smallholder farmers through empowerment and skills development. In Southeast Sulawesi, the program has been running for six years and has had a positive impact, including through knowledge-sharing meetings that enable successful farmers to share their experiences with others to increase productivity and income. This program serves as an example of sustainable agricultural development based on innovation and empowerment of farming communities.

The competence of agricultural extension workers is key to the success of empowerment programs like READSI. Extension workers need technical and managerial competencies, along with an understanding of technology, natural resources, the environment, and farmer behavior (Bahua, 2016; Arifin & Miftakhul, 2015). However, many extension workers remain incompetent due to poor learning processes and a focus on the formalities of functional positions (Wijanarko, 2006; Marliati et al., 2008). Improving this competence is crucial for extension workers to be able to act as agents of change in the Industrial Revolution era (Bahua, 2022).

Since its implementation in 2018, READSI in North Kolaka Regency has successfully empowered thousands of farmers through training, agricultural equipment provision, and intensive mentoring. This program has received praise for improving the welfare of poor farming families and has won four national awards (Wanti, 2024). With the assistance of extension workers, READSI covers all aspects of agriculture, including post-harvest processing and marketing (I Made Widanta, 2023). This success demonstrates the importance of synergy between farmers, the government, and extension workers as drivers of agricultural development.

The number of agricultural extension workers nationally in 2022 reached 67,241, with the largest proportion coming from independent extension workers (43.01%) (Extension Statistics, 2022). In Southeast Sulawesi, there were 1,916 extension workers, while in North Kolaka there were only 92, who had to assist 133 villages, resulting in a very high workload (Simluhtan Kolaka Utara, 2023). This situation contrasts with farmers' increasingly critical demands for quality extension services. Therefore, improving the competence of extension workers through programs such as READSI is essential to strengthen the capacity of farmers, particularly rice farmers in Lasusua District, North Kolaka Regency.

The research problem formulation focuses on two issues: the level of competency of agricultural extension workers in the READSI program in Lasusua District, North Kolaka Regency, and the factors influencing this competency. In line with the research problem formulation, this study aims to analyze the level of competency of agricultural extension workers and identify the factors influencing their implementation in the READSI program.

This research is expected to provide information and input on improving the competency of agricultural extension workers, while also providing researchers with a

means to gain knowledge and experience. Furthermore, the results are expected to enrich knowledge in the field of agricultural extension, serve as a reference for further research, and support efforts to improve the quality of agriculture in Indonesia.

Methods

Competencies and competency models

Competence is a basic individual characteristic that enables someone to produce superior performance in their work. According to Trotter in Saifuddin (2004), a competent person can complete work quickly, intuitively, and with minimal errors. Wood et al. (2011) emphasize that competence is an individual attribute that differentiates performance in an organization, while Palan (2017) differentiates between the terms competency (behavior) and competence (work results). Spencer & Spencer (2013) outline five characteristics that form competence: knowledge, skills, self-concept and values, personal characteristics, and motives. The last three aspects tend to be hidden and therefore difficult to assess and develop, making the selection process the most effective way to ensure this competence.

In the context of agricultural extension workers, adequate knowledge determines the success of task implementation, while skills accelerate the achievement of organizational goals. Self-concept and values influence attitudes and work behavior, while personal characteristics reflect the ability to complete tasks. Motives are the main drivers of behavior in achieving goals (Palan, 2007). Covey, Roger, and Merrill in Mangkunegara (2005) added that competence encompasses three main dimensions: technical competence (knowledge and expertise), conceptual competence (the ability to think strategically and holistically), and social competence for living in interdependence, including communication skills, collaboration, and creating joint solutions. Thus, extension worker competence encompasses the integration of aspects of knowledge, skills, attitudes, and interpersonal abilities that support the success of agricultural development.

Competency models describe the essential behaviors required for superior performance in a specific role, encompassing academics, communication, problem-solving, critical thinking, teamwork, and leadership (Wibowo, 2007). According to Wibowo (2007), competency models can be differentiated based on importance (leadership, coordinator, expert, support) as well as position, level, and work function (Zwell, 2000), while Spencer & Spencer (1993) group individual competencies into five main aspects: motives, character, self-concept, knowledge, and skills. Spencer & Spencer (1993) also divide competencies into six clusters with indicators that include task achievement, relationship, personal attributes, managerial, and leadership. Furthermore, Wibowo (2007) outlined 12 types of competencies, including planning, influence, communication, thinking, leadership, self-management, and technical competency. In the agricultural context, these competencies are crucial because farmers, as the primary actors in development (Hernanto, 1989), require the assistance of competent extension workers to achieve increased productivity and well-being.

Agricultural Extension Workers, Extension Worker Competence, and Innovation Diffusion

Agricultural extension is a learning process for key actors (farmers, plantation owners, livestock breeders, fishermen, and their families) and business actors so that

they are able to organize themselves in accessing information, technology, capital, and other resources to increase productivity, income, and welfare, as well as maintain environmental sustainability (SP3K Law, 2006). Extension plays an important role as an instrument of agricultural development policy that encourages changes in farmer behavior, but its success is largely determined by the suitability of innovations to community needs (Ibrahim, 2003; Ilham, 2010). Beneficiaries of extension include key actors, policy makers, and other stakeholders such as researchers, NGOs, and business actors (Mardikanto, 1993).

Agricultural extension worker competencies include communication skills, attitudes, knowledge, and skills in conveying innovations, understanding the socio-cultural conditions of the community, and building empathy with farmers (Berlo, 1960). Professional extension workers not only master extension materials and methods, but are also able to influence behavioral changes in the target community through effective interactions. Spencer & Spencer's (1993) competency model emphasizes five main aspects: motives, character, self-concept, knowledge, and skills, while research by Kusnendi (2006) and Khalil (2009) shows that extension worker competency can be measured through the dimensions of program planning, implementation, and evaluation.

According to Rogers (1983), diffusion of innovation is the process of spreading new ideas or practices through specific communication channels over a period of time among members of a social system. This process encompasses four main elements: innovation, communication channels, the time dimension, and the social system. Innovation is perceived as something new by recipients, while mass media and interpersonal communication are the primary channels for its dissemination. Adoption of innovation is also influenced by the speed with which individuals or groups accept change, as well as the role of the social system in facilitating cooperation to achieve common goals.

This research was conducted for two months, February–March 2025, in Lasusua District, North Kolaka Regency, as the location of the READSI Program. The research population was two beneficiary farmer groups, namely Bunga Padi and Masakada, with a total of 50 people. Because the population was less than 100, the entire population was used as a research sample using the total sampling technique (Arikunto, 2010; Notoatmodjo, 2010). The data used consisted of primary data in the form of direct interviews with respondents and secondary data obtained from related agencies such as BPS, BPP Lasusua, and the Regency and Provincial Agriculture Offices of Southeast Sulawesi.

The research instrument was compiled based on the extension worker competency indicators which include five sub-variables: technical knowledge, communication skills, work attitudes and ethics, ability facilitating, and using information technology, with 5 statements each using a Likert scale (Sugiyono, 2021). The competency score is determined by calculating the highest and lowest scores:

Highest value = highest score × number of respondents × number of instruments
Lowest value = lowest score × number of respondents × number of instruments

Next, the interval distance is determined for the classification of competencies in the categories of very competent (86–100), competent (67–85), quite competent (48–66), less competent (29–47), and incompetent (10–28).

For the second objective, namely analyzing the factors influencing extension

worker competence and farmer income, multiple linear regression analysis was used with the help of SPSS and Excel (Hanun, 2011). The mathematical model used is:

$$Y=a+b1X1+b2X2+b3X3+b4X4+b5X5+e$$

with Y = income, X1 = technical knowledge, X2 = communication skills, X3 = attitude and work ethics, X4 = facilitation ability, and X5 = use of information technology. Before the regression, validity tests were conducted (Bungin, 2005; Santoso, 2005), reliability with Cronbach Alpha > 0.60 (Nunnally, 1967), and classical assumption tests: multicollinearity (VIF approaching 1), heteroscedasticity (Park Test), and autocorrelation (Durbin-Watson Test). Hypothesis testing was carried out using simultaneous F tests and partial t tests at a significance level of 5%, as well as the coefficient of determination (R^2) to measure the contribution of the independent variables to the dependent variable (Imam Ghozali, 2005)

Results

Respondent Characteristics

North Kolaka Regency covers an area of 2,924.46 km² (3.74% of Southeast Sulawesi) with diverse topography ranging from coastal to mountainous areas >2,000 meters above sea level, with a humid climate with the highest rainfall of 422.4 mm (May) and the lowest 78.6 mm (August). The population in 2024 reached 140,488, with the majority working in the agriculture, plantation, fisheries, and livestock sectors. Land potential covers 98,379 ha, dominated by cocoa plantations (62,260 tons, 2024), rice (7,074 tons), as well as horticulture, cattle (3,630 heads) and poultry (867,643 heads). Agricultural infrastructure is supported by 42 extension workers, 1,410 farmer groups, and 88 farmer associations (gapoktan). The wealth of natural resources, such as podzolic soil, large rivers, and coastal areas with tourism potential, makes this region strategic for the development of sustainable agriculture and the regional economy.

Farmers are people who strive to meet agricultural needs. In research, respondent identification is important, including age, education, number of dependents, experience, and land area, to provide more accurate information about their farming practices.

Farmers' age influences their ability to think, work, and accept innovation. Younger farmers are generally physically stronger and adapt more quickly, while older farmers tend to be more resistant.

have physical limitations. This age difference is an indicator of work ability in managing the garden.

Table 2. Average Age Group of Respondent Farmers in Lasusua District, North Kolaka Regency

No	Age Group (Years)	number of people)	Percentage (%)
1	33 - 44	17	42.5
2	45 - 56	15	37.50
3	57 - 68	8	20.00
Amount		40	100

Source: Primary data after processing 2025

Based on the data, the majority of farmer respondents are in the 33–44 age group

(42.5%), which is considered to be in the early productive age group with good physical condition and adaptability to technology, providing great potential for implementing innovation. The 45–56 age group (37.5%) is in the late productive age group with mature experience and skills, although physical abilities are starting to decline. Meanwhile, the 57–68 age group (20.0%) is already considered unproductive, but has valuable traditional knowledge and serves as a role model. This age distribution shows the potential for regeneration of the agricultural workforce, although the number of young farmers is still low, so strategies are needed to attract the younger generation to enter the agricultural sector.

Education is a crucial factor in agricultural development because it influences mindsets, the ability to absorb innovation, and the application of technology to increase yields and income. In North Kolaka Regency, the development of positive community values demonstrates a growing awareness of the importance of education, both formal and informal, such as training, counseling, and internships, which all play a role in improving farmers' skills. The higher the level of formal education, the greater the farmer's knowledge and skills in managing a modern and efficient agricultural business, including in the development of the shallot agribusiness.

Table 3. Education of Respondent Farmers in Lasusua District, North Kolaka Regency

No	Level of education	Number of people)	Percentage (%)
1	Elementary School	10	25.00
2	JUNIOR HIGH SCHOOL	11	27.50
3	SENIOR HIGH SCHOOL	19	47.50
Amount		**40**	**100**

Source: Primary data after processing 2025

The results of the study show that the majority of respondent farmers in Lasusua District have a high school education (47.50%), which gives them adequate literacy skills and basic understanding to more easily receive information and adopt new technology, in line with the findings of Sari et al. (2020). While 27.50% of respondents with a junior high school education are still quite adaptable to innovation if supported by appropriate extension methods (Wahyudi & Rahman, 2019), 25.00% only completed elementary school and therefore require intensive guidance using visual and applied media (Haryanto, 2018). This condition indicates that the majority of farmers have a secondary education, but groups with lower education require a special approach to optimally understand and implement agricultural innovation.

Land size influences the scale of the business and farmer income, as the larger the area cultivated, the greater the potential yield. In this study, the land area cultivated by shallot farmers in North Kolaka Regency varied between 0.20 and 0.50 hectares.

Table 4. Respondent Farmers' Land Area in Lasusua District, North Kolaka Regency

No	Land Area (Ha)	Number of people)	Percentage (%)
1	0.50 – 1.50	38	95.00
2	>1.50	2	5.00

Amount	**40**	**100**

Source: Primary data after processing in 2018

Most farmers in Lasusua District own 0.50–1.50 ha of land (95.00%), classified as small to medium-sized, so productivity is highly dependent on cultivation efficiency, technology, and cropping intensity (Rahmawati et al., 2020). Only 5.00% own land >1.50 ha, which offers greater production potential but still requires good management (Susilowati, 2016). The dominance of small land reflects limited ownership due to hereditary factors, limited access, and land conversion (Fitriani & Syamsudin, 2019). Therefore, income-increasing strategies need to focus on land intensification through appropriate technology, optimal fertilization, the use of superior seeds, and assistance from extension workers to maximize innovation adoption.

3.2. Competency level of field agricultural extension workers (PPL) in the Rice Plant Development Readsi Program in Palopo City

The competency of agricultural extension workers (PPL) significantly impacts the success of programs, particularly rice development in Lasusua District, North Kolaka. These competencies encompass technical knowledge, communication skills, work attitude, facilitation skills, information technology utilization, and the ability to empower farmers to implement innovations.

Table 5 Competency Level of Extension Workers in the Readsi Program for Rice Plants in Lasusua District, North Kolaka Regency 2025

No	Competence	SS (5)	S (4)	N (3)	TS (2)	STS (1)	Score Highest	Score Count	Category
1.	Technical knowledge	8	25	7	0	0	200	161	80.5
2.	Communication skills	9	26	6	0	0	200	167	83.5 Compotent
3.	Attitude And work ethic	5	31	4	0	0	200	161	80.5 Compotent
4	Ability to facilitate	6	33	1	0	0	200	165	82.5 Compotent
5	Useinformation Technology	2	23	15	0	0	200	147	73.50 Compotent
Jlh							1000	801	80.1 Compotent

Source: Primary Data, 2025

The results of the study indicate that the competency level of agricultural extension workers (PPL) in Lasusua District is classified as competent, with an average

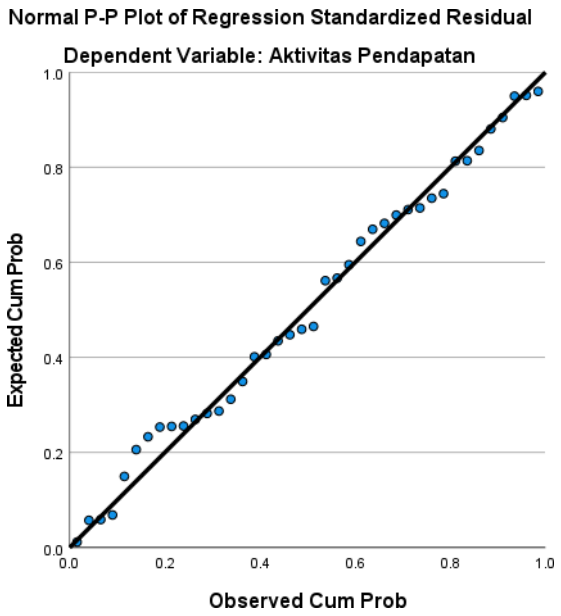
score of 80.1%. In terms of technical knowledge, the score was 80.5%, communication 83.5%, attitude and work ethic 80.5%, and facilitation ability 82.5%, all of which are in the competent category. This indicates that extension workers are able to master technical materials, communicate effectively, maintain work ethics, and facilitate farmer groups well. According to several studies, high competency in these aspects directly influences technology adoption, productivity, and the success of agricultural programs.

However, the information technology utilization aspect received the lowest score, at 73.5%, although it is still considered competent. This indicates that the use of digital media such as agricultural applications, social media, and technological devices is still suboptimal. Digital literacy is crucial for accelerating information dissemination, especially for young farmers who are more adaptable to technology. This challenge is generally caused by limited training and support facilities, so improving the digital capacity of extension workers needs to be a development priority.

Overall, strong extension worker competency in almost all aspects is a key factor in the successful implementation of the READSI program in Lasusua District. However, improving digital literacy and institutional support are still needed to make extension workers more effective and adaptive. Government support in the form of facilities, technology-based training, and strengthening networks among extension workers will strengthen the program's sustainability and positively impact farmer welfare.

Factors that influence the competence of extension workers in developing rice crops in Palopo City Classical assumption tests are required in multiple linear regression, one of which is the normality test to ensure the data is normally distributed. Analysis using SPSS produces a Normal PP Plot, where the distribution of points close to the diagonal line indicates a normally distributed residual, while points spread far from the line indicate abnormal data (Singgih, 2014; Rohman, 2018).

Figure 1. Normality Test Results



Source: SPSS Ver.22 Output (processed)

The distribution of points in the Normal PP Plot indicates a normally distributed

residual distribution, in accordance with the classical assumptions of linear regression. Furthermore, a multicollinearity test was used to ensure there was no high correlation between the independent variables. A regression model is considered multicollinearity-free if the tolerance value is > 0.1 and the VIF is < 10 (Ghozali, 2011).

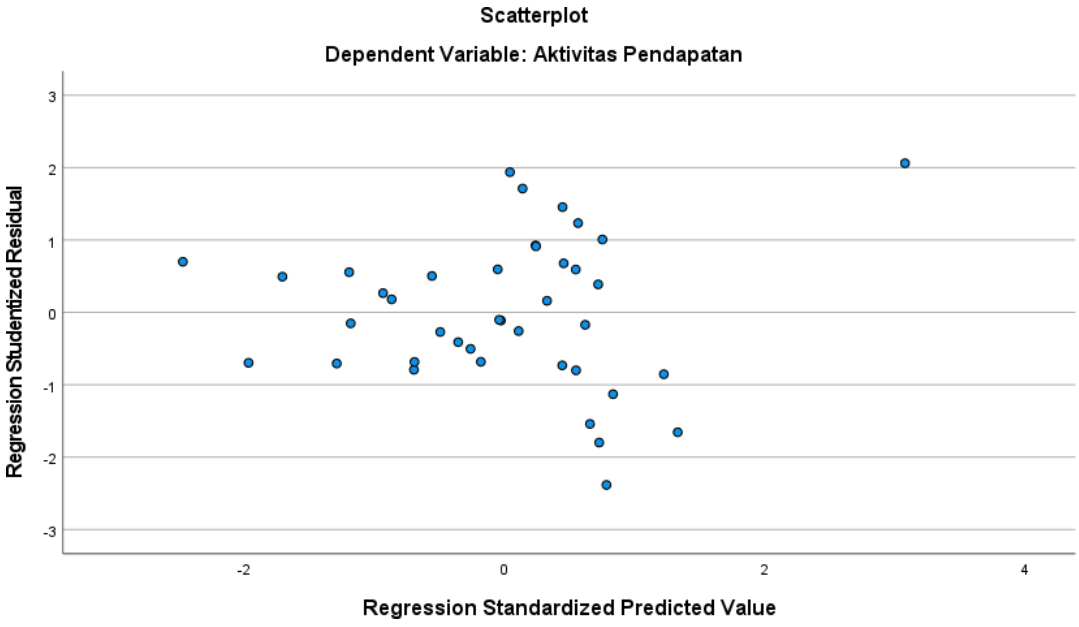
Table 6. Multicollinearity Test Results

Independent Variable	Collinearity Statistics	
	Tolerance	Vif
Technical knowledge	0.611	1,636
Communication skills	0.835	1,198
Attitude and ethics	0.617	1.62
Ability to facilitate	0.744	1,343
Use of technology	0.93	1,075

Source: Primary Data After SPSS 23

The multicollinearity test results show that all independent variables have a tolerance > 0.1 and a VIF < 10, thus preventing multicollinearity. Furthermore, a heteroscedasticity test was performed to ensure equality of residual variances between observations. A regression model is heteroscedasticity-free if the scatterplot distribution is around zero on the Y-axis without forming a specific pattern, indicating homoscedasticity of the residuals.

Figure 2. Results of Heteroscedasticity Test



Source: SPSS Ver.27 output (processed)

The image above shows that the distribution of points does not form a particular pattern/flow, so it can be concluded that heteroscedasticity does not occur or in other words, homoscedasticity occurs.

Multiple Linear Regression Analysis

Multiple linear regression analysis was used to determine the effect of extension worker competence (independent variable) on income-increasing activities in the READSI program (dependent variable) in Lasusua District, North Kolaka Regency. The regression model was obtained from the results of the analysis calculations.

Table 7. Multiple Linear Regression Equation of Factors Influencing Extension Worker Competence in Rice Plant Development in Lasusua District, North Kolaka Regency

	Unstandardized Coefficients		Standardized Coefficients				
	B	Std. Error	Beta	t	Sig.		
(Constant)	.793		1,002		.791	.434	
Technical knowledge	-.094	.135	-.100	-.698	.490		
Communication skills	.730	.112	.801	6,544	.000		
Attitude and ethics	.121	.112	.153	2,073	.031		
Ability to facilitate	.183	.154	.153	2,184	.045		
Use of technology	-.240	.103	-.269	-2,319	.027		

The regression equation:

Y = 0.793 – 0.094X1 + 0.730X2 + 0.121X3 + 0.183X4 – 0.240 +e.

Y=0.793–0.094X1+0.730X2+0.121X3+0.183X4–0.240X5+eY 0

The results of the regression analysis show that a constant of 0.793 indicates the existence of a baseline of extension worker competency even without the influence of other variables. Technical knowledge (X_1) has a coefficient of -0.094 with a t-value of -0.698 and a Sig. of 0.490 (>0.05), so it does not have a significant effect on extension worker competency. This means that increasing technical knowledge alone is not enough to improve competency, in line with the findings of Siregar et al. (2020) that knowledge without practical skills, communication, and facility support does not have a significant effect. Conversely, communication skills (X_2) have the most dominant effect with a coefficient of 0.730, significant (Sig. 0.000), which means that an increase in one communication point can increase extension worker competency by 0.730 points.

Attitude and work ethic (X_3) also have a positive effect with a coefficient of 0.121 and are significant (Sig. 0.031), indicating that professionalism and integrity strengthen the competence of extension workers, as emphasized by Prasetyo (2019). The ability to facilitate (X_4) has a coefficient of 0.183, significant (Sig. 0.045), which means that effective facilitation encourages active farmer participation (Nasution et al., 2021). Meanwhile, the use of information technology (X_5) has a negative effect with a coefficient of -0.240 and is significant (Sig. 0.027), indicating that inappropriate digital

utilization can reduce the effectiveness of extension services, in line with Rachmawati et al. (2021). Thus, the factors of communication, work ethic, and facilitation are proven to significantly strengthen the competence of extension workers, while technical knowledge is not significant and the use of technology still faces obstacles.

T-Test Analysis

The results of the regression analysis show that a constant of 0.793 indicates the existence of a baseline competence of extension workers even without the influence of other variables. Technical knowledge (X_1) has a regression coefficient of -0.094 with a t-value of -0.698 and a Sig. 0.490 (>0.05), meaning it has no significant effect on extension worker competence. This indicates that technical knowledge alone is not enough to improve competence without the support of practical skills, tools, and motivation. Research by Siregar et al. (2020) and Wulandari & Hartati (2021) emphasizes that technical knowledge needs to be integrated with field practice, information updates, and ongoing mentoring to be effective.

In contrast, communication skills (X_2) were shown to be a dominant factor with a coefficient of 0.730, a t-value of 6.544, and a Sig. 0.000 (<0.05), indicating a significant positive effect on extension worker competence. This confirms that effective communication improves extension workers' ability to convey innovations, build trust, and encourage farmer participation (Lestari & Wahyudi, 2022). Research by Nugraha et al. (2021) also emphasized the importance of two-way communication that encourages farmer involvement, so improving communication skills through public speaking training, discussion facilitation, and mastery of modern media is crucial.

Attitude and work ethics (X_3) have a coefficient of 0.121 with a t-value of 2.073 and a Sig. of 0.031 (<0.05), indicating a significant positive influence on extension worker competence. Professionalism, integrity, discipline, and a positive attitude play an important role in building farmer trust and strengthening cooperation (Prasetyo, 2019; Yuliani et al., 2020). Likewise, facilitation ability (X_4) has a coefficient of 0.183, a t-value of 2.184, and a Sig. of 0.045 (<0.05), indicating a significant positive influence. Good facilitation helps extension workers create a participatory learning atmosphere and accelerate the adoption of agricultural innovations (Nasution et al., 2021; Rahman & Supriyadi, 2022).

Meanwhile, the use of information technology (X_5) actually showed a significant negative effect with a coefficient of -0.240, a t-value of -2.319, and a Sig. 0.027 (<0.05). This indicates that low digital literacy among extension workers or the incompatibility of digital media with farmer characteristics makes technology less effective in supporting extension performance. Rachmawati et al. (2021) and Fadhilah & Handayani (2022) emphasized that inappropriate use of technology actually hinders the effectiveness of extension, so a digital literacy mentoring strategy and a combination of face-to-face methods are needed to reach farmers more optimally.

The Simultaneous Effect of All Independent Variables on the Corn Cultivation System in Suli District, Luwu Regency. (F Test)

The F test is used to determine the simultaneous influence of independent variables on dependent variables.

(Y). An influence is considered to exist if the F-count > F-table or the significance value < 0.05.

Table 8. Results of F-Test Calculation

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,473	5	.895	9,207	.000 b
	Residual	3,303	34	.097		
	Total	7,776	39			

a. Dependent Variable: Revenue Activity

b. Predictors: (Constant), Use of technology, Technical knowledge, Communication skills, Ability to facilitate, Attitude and ethics

Based on the results of the ANOVA test, an F value of 9.207 was obtained with a significance value of 0.000 (<0.05), so that the regression model is significant at the 95% confidence level. This indicates that the independent variables, namely the use of technology, technical knowledge, communication skills, facilitation abilities, and attitudes and ethics simultaneously have a significant effect on income activities. The Sum of Squares Regression value of 4.473, which is greater than the Sum of Squares Residual of 3.303, confirms that variations in income activities are explained more by the regression model than other factors outside the model. In addition, the Mean Square Regression of 0.895, which is much higher than the Mean Square Residual of 0.097, strengthens the differences in variability explained by the model, resulting in a high F value. Thus, the null hypothesis (H_0) which states that all regression coefficients are equal to zero is rejected, meaning that there is at least one independent variable that has a significant effect on respondents' income activities.

Coefficient of Determination (R2)

The coefficient of determination (R^2) indicates the percentage influence of the independent variable on the dependent variable. The higher the value, the better the independent variable explains the dependent variable, making the regression equation more accurate for estimation.

Table 9. Value of Determination Coefficient

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1.0	.758a	.775	.713	.31170

Predictors: (Constant), Technology use, Technical knowledge, Communication skills, Facilitation ability, Attitude and ethics Dependent Variable: Income Activity Based on the Model Summary table, the R value = 0.758 indicates a strong relationship between the independent variables (Technology Use, Technical Knowledge, Communication Skills, Facilitation Ability, and Attitude & Ethics) with Income Activity.

The R Square value = 0.775 means that 77.5% of the variation in Income Activity can be explained by the model, while the remaining 22.5% is influenced by other factors. Adjusted R Square = 0.713 indicates the stability of the model without overfitting. and the low Standard Error of the Estimate = 0.31170 indicates that the model's predictions are quite accurate. Overall, this regression model is robust and suitable for further analysis.

Conclusion

Based on the analysis results, the F test shows a calculated F value of 9.207 with a significance of 0.000. <0.05, which means that simultaneously the variables of Technology Use, Technical Knowledge, Communication Skills, Facilitation Ability, and Attitude & Ethics have a significant effect on Revenue Activity, so the regression model is suitable for use. The t-test shows that not all variables have a significant effect partially, so that some variables are more dominant than others. The R Square value of 0.775 indicates that 77.5% of the variation in Revenue Activity can be explained by the model, while 22.5% is influenced by other factors outside the study.

As a recommendation, it is necessary to prioritize partially significant variables and optimize synergies between variables with simultaneous effects. Improving the competence of extension workers through communication training, facilitation, and the development of good attitudes and work ethics is crucial, along with field mentoring for the application of technology and technical knowledge. Furthermore, it is necessary to explore external factors such as policy support, market access, and infrastructure to support sustainable increases in income-generating activities:

Suggestion

Based on the research findings, several recommendations can be considered to improve service quality and meet customer expectations. These recommendations include:

1. BRI Ciwastra Bandung Unit needs to improve consistency in service delivery, such as fulfilling service promises, punctuality, and uniform procedures among staff. Regular training on operational standards and service ethics is highly recommended to strengthen service reliability.
2. Management needs to update service facilities such as waiting rooms, work equipment, and office layouts to make them more modern and comfortable. Furthermore, the appearance of staff needs to be considered to reflect the institution's professionalism and credibility.
3. It is recommended that staff receive training in product knowledge, convincing communication skills, and how to build trust with customers. This is crucial for providing a sense of security and confidence.
4. Banks need to align the number of staff with customer volume to expedite service processes and respond to complaints. Strengthening digital-based queuing and service systems can also be a solution to increase responsiveness.
5. It's recommended to develop a more personalized service approach, such as recognizing individual customer needs and building long-term relationships. Soft skills training and service empathy can help staff become more sensitive to customers' emotional needs.

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