THE IMPACT OF AGRICULTURAL FIELD EXTENSION WORKERS' PERFORMANCE AND COMPETENCE ON FARMERS' SATISFACTION IN NEGERI BESAR DISTRICT, WAYKANAN REGENCY, WITH EXTENSION WORKERS' COMMITMENT AS A MODERATING VARIABLE.

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Abstract: The performance of field agricultural extension workers (PPL) is the ability of extension workers to carry out their main tasks which include providing education, information, and guidance to farmers, Currently the Agricultural Extension Unit of Negeri Besar District has as many as 12 Field Agricultural Extension Workers (PPL) with a total group of 132 farmer groups, with a total of 3,356 farmer group members, and an average of 1 farmer group of 25-30 people. This study was used to measure the level of satisfaction of farmers in assessing the performance of extension workers (X1) and the competence of extension workers (X2) with the seriousness of extension workers as a moderation variable. A quantitative approach was used by collecting data through questionnaires to 97 farmer groups. The validity test was carried out using the product moment correlation method and was carried out through the SPSS 25.0 application. The results of the analysis showed that the performance of extension workers did not have a significant effect on farmer satisfaction, the competence of extension workers had a significant effect on farmer satisfaction, the seriousness of extension workers strengthened the performance of extension workers, and the seriousness of extension workers strengthened employee competence. The results of the multiple regression correlation test showed that the R Square value of 0.746 showed that 74.6% of the variation in farmer satisfaction could be explained by a combination of independent variables. Overall, this regression model is quite strong and effective in explaining the influence of independent variables on farmer satisfaction in Negeri Besar District, Waykanan Regency

Keywords: Performance, Satisfaction, Seriousness.

1. Introduction

The level of satisfaction of farmers (Anwarudin et al., 2020) with extension services is often one of the indicators of the success of an extension program. This satisfaction is influenced by various factors, such as the competence of extension workers, communication skills, dedication, and the suitability of extension materials with the needs of farmers. Agricultural Extension Services play an important role and are a priority object in improving the agricultural sector. Extension services are public services that

provide informal assistance by providing information about agriculture to farmers and other parties in need

The performance of field agricultural extension workers (Firdaus, 2020) is the ability of extension workers to carry out their main tasks, which include providing education, information, and guidance to farmers. Currently, the Agricultural Extension Unit of Negeri Besar District has 9 Field Agricultural Extension Workers (PPL), consisting of 1 Civil Servant (PNS), 2 PPPK (Government Employees with Employment Agreements), and 6 Freelance Daily Workers, with a total of 132 farmer groups. The total number of farmer groups is 132 (with a total of 3,356 group members, an average of 25-30 members per group), while the number of extension workers is 12. This situation, of course, causes the performance and quality of the extension services provided to be less than optimal.

The formation of competencies in an organization (Budi Santoso & Hakim, 2024) can clarify work standards and goals that must be achieved, as well as communicate the values and areas that should be the focus of the Extension Officer's duties. In addition, many government agencies still lack employees with adequate competence, which is indicated by low employee productivity and difficulties in measuring Farmer Satisfaction.

The commitment of an extension worker (Moeliono et al., 2017) refers to the dedication, commitment, and perseverance of the extension worker in carrying out his or her duties. Agricultural extension workers have an important role in providing guidance, information, and innovation to farmers so that they can increase productivity, efficiency, and quality of agricultural products. The dedication (Muzakki & Hakim, 2020) of field extension workers is reflected in their responsiveness, which is judged based on how quickly they respond to questions or problems faced by farmers. This also involves the willingness of extension workers to go into the field and the frequency of their visits to farmers' lands to provide guidance or practical solutions, which ultimately helps build closer relationships with farmers (Hakim, L. (2024).

This study was conducted with the aim of testing and analyzing whether there is an influence of extension worker performance on the level of farmer satisfaction, testing and analyzing whether there is an influence of Field Agricultural Extension Worker competence on farmer satisfaction, testing and analyzing whether the seriousness of the extension worker can strengthen the influence of extension worker competence on farmer satisfaction, and testing and analyzing whether the seriousness of the extension worker can strengthen the influence of the extension worker competence to the satisfaction of farmers in Negeri Besar District.

2. Research Methods
2.1 Field Extension Officer Performance

According to (Mangkunegara, A. P., & Agustine, R. (2016)), the term performance comes from the word job performance or actual performance. Performance refers to the quality and quantity of work achieved by an employee in carrying out his duties in accordance with the responsibilities given to him.

2.2 Competence

The definition of the competence of regional government apparatus according to (Budi Santoso & Hakim, 2024) is the ability that a local government apparatus must possess in the

form of knowledge, skills, attitudes and behaviors required in carrying out their duties.

2.3 Farmer Satisfaction

Public satisfaction with public organizations is very important because it is related to the relationship of trust with the community. According to Harbani Pasolong (2020) in (Hartono, R., & Purba, T. (2022) it is said that the better the governance and quality of the services provided, the higher the public trust (high trust). Public trust will increase when the community receives good service and is satisfied with the service provided

2.4 Extension Performance

The performance of agricultural extension workers refers to the commitment and perseverance of an extension worker in carrying out his duties to improve the knowledge, skills, and welfare of farmers. This includes perseverance in providing guidance, coaching, and innovation in agricultural practices (Chandra, E., Alamsyah, A. R., & Rachmawati, I. K. (2023)

2.5 Methodology

The type of research used in this study is descriptive research with a quantitative approach (Ilyas, A., & Bahagia, B. (2021). Descriptive research is research that describes the characteristics of a state of the object being studied. Descriptive analysis is used to provide an overview of the data that has been obtained. Quantitative analysis (Sujarweni, 2014) is a research used to research a specific population or representative sample, collect field data using questionnaires, and analyze quantitative data using statistics.

2.6 Sample Population and Sampling Techniques

A population is the entire group of people (or institutions, events, or other objects that are the object of study) that a study wants to describe and understand. Because this is a large target group that researchers hope to generalize. Population (*Kassem, H. S., Alotaibi, B. A., Muddassir, M., & Herab, A. (2021* This study involved all farmers who were members of farmer groups in Negeri Besar District, Way Kanan Regency, totaling 3,356 people.

2.7 Sampling Techniques

A sample is an element of a group that is directly observed by the researcher. Sampling (Risnawati, H., Sumarga, H. E., & Purwanto, S. (2019) is closely related to the selection of a subset of individuals from within a population to estimate and represent the characteristics of the entire population (Firmansyah & Dede, 2022). The sample size in this study was determined using the Slovin formula as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Information:

n = number of elements / sample members

N = number of elements / members of the
population e = error level (5%)
So the sample size used is

$$n = \frac{3356}{(1 + 3356\,(0,1)^2)} = 97,10 = 97,10\ sampel$$

The total sample in this study is 97 farmers in Negeri Besar District, Way Kanan Regency. The results obtained from each of the proportional random samples. (Safi'i, A., & Sulistiadi, W. (2022) The results obtained by random calculation are as follows:

Table 1. Respondent Distribution

It	Village	Number of Farmer Groups	Respondent
1	Big Country Village	9	7
2	Negeri Kasih Village	4	2
3	Sribasuki Village	13	10
4	Lean Village	9	7
5	Tiuh Baru Village	9	7
6	Kali Awi Village	7	5
7	Kali Awi Indah Village	6	4
8	Pagar Alam Village	14	10
9	Desa Tegal Release	15	11
10	Desa Bima Sakti	15	11
11	Negara Jaya Village	12	9
12	Negri Jaya Village	11	8
	Tanjung Mas Village	8	6
Total			**97**

Source : Data Processing 2024

2.8 Validity Test

The analysis process (Slamet, R., & Wahyuningsih, S. (2022)), involves calculating the correlation coefficient between the score on each question and the total or average score of all questions. After that, the significance of the correlation coefficient (r) was tested by comparing it with a significance level of 5% (0.05), and the correlation coefficient (r) should be at least 0.30. The instrument is considered valid if the significance value < 0.05 and the correlation coefficient > 0.30.

2.9 Reliability Test

Reliability (Hasanah, 2017)instruments can be confirmed if the alpha coefficient value is greater than 0.60. The reliability test in this study uses data processing carried out with the help of the SPSS program. Next, to interpret the magnitude of the r alpha value of the correlation index.

3. Results and Discussion
3.1. Result
3.1.1 Multiple Linear Regression Testing

This study uses two indicator variables, namely Extension Performance (X1) and Extension Competency (X2), to measure Farmer Satisfaction (Y). Testing was carried out using the SPSS 25.0 program. Here are the results of multiple regression analysis:

Regresi Berganda : $Y = a + b1X1 + b2X2 + et$

Table 2 Multiple Regression Correlation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.864a	.746	.732	1.963

Source : Data Processing 2024

Based on Table 2 above, the results of the multiple regression correlation test (Herman, H., Kamase, J., Nujum, S., & Dewi, R. (2022) show that the R value is 0.864, which shows a strong relationship between the independent variable (Extension Worker Performance and Competence) and the dependent variable (Farmer Satisfaction). An R Square value of 0.746 shows that 74.6% of the variation in Farmer Satisfaction can be explained by a combination of these independent variables, while the remaining 25.4% is influenced by other factors outside the model. The Adjusted R Square value of 0.732 takes into account the number of variables in the model, which shows that after adjustment, the model still accounts for 73.2% variation in Farmer Satisfaction. The Std. Error of the Estimate value of 1.963 shows the average deviation between the predicted value and the actual value, which reflects the accuracy of the model in predicting Farmer Satisfaction. Overall, this regression model is quite strong and effective in explaining the influence of independent variables on Farmer Satisfaction in Negeri Besar District, Way Kanan Regency.

3.1.2 *Moderated Regression Analysis Testing*

This study uses moderation variables (Prena, G. D., & Muliyawan, I. G. I. (2020). namely the Seriousness of Agricultural Extension Workers, to assess how this variable can strengthen or weaken the impact of the Agricultural Extension Performance and Competence variables on Farmer Satisfaction. Testing was carried out using SPSS 25.0. The following are the results of the moderation regression analysis carried out:

$$Y = \alpha + \beta1X1 + \beta2X2 + \beta4X1*Z + \beta5X2*Z + e$$

Table 3 Regression Value of Extension Worker Moderation (Z) between Extension Officer Performance (X1) and Extension Officer Competence (X2) Towards Farmer Satisfaction (Y)

Variable	t-count	Mr
Extension Worker Performance Moderated Extension Officer's Seriousness	1.035	0.003
Extension Competence Moderated by Extension Worker Seriousness	1.359	0.000
Dependent Variable: Farmer Satisfaction		

Source : Data Processing 2024

Table 3 shows the results of the calculation of the moderation regression between the seriousness of Agricultural Extension Workers (Z) who interacted with the Performance of Agricultural Extension Workers (X1), which shows a sig value of 0.003, smaller than 0.050. Therefore, Ha was accepted, which shows that the Agricultural Extension Performance (X1) strengthens the influence of Agricultural Extension Performance (X1) on Farmer Satisfaction (Y). Furthermore, the variable of Agricultural Extension Competence (X2) which interacts with the variable of Agricultural Extension Competence (Z) has a sig value of 0.000, smaller than 0.050. Therefore, Ha was accepted, which shows that the seriousness of Agricultural Extension Workers (Z) weakens the influence of Agricultural Extension Competence (X2) on Farmer Satisfaction (Y).

3.1.3 t-Test Results

The t-test (Partial Test) is used to show how far the influence of one explanatory/independent variable individually in explaining the variation of the dependent variable. This test is carried out by:

$$t = \frac{\sqrt{n-2}}{\sqrt{1-r^2}}$$

Table 4 Results of Coefficient Calculation of Extension Worker Performance and Extension Competence on Farmer Satisfaction

Variable	Calculation	ttable	Condition	Information
Extension Performance	1.578	1.980	Count < t_{table}	Ho accepted and Ha rejected
Extension Competencies	16.333	1.980	Calculate > T_{Table}	Ho was rejected and Ha was accepted

Source : Data Processing 2024

1. **The Effect of Extension Worker Performance on Farmer Satisfaction**

Based on Table 4, it can be seen that the t-count value for the variable Agricultural Extension Worker Performance on Farmer Satisfaction is t-count 1.578 < t-table 1.980. This shows that there is no significant influence between the variables of Agricultural Extension Performance (X1) and Farmer Satisfaction (Y).

2. **The Effect of Extension Worker Competence on Farmer Satisfaction**

Based on Table 4, it can be seen that the t-count value for the Extension Competency variable (X2) on employee performance (Y) is 16.333 t-count > t-table 1.980 and sig 0.000 < 0.05, which shows that there is a positive and significant influence between the Extension Competency variable (X2) and Farmer Satisfaction (Y).

3.1.4 Test Results F

The F test is used to determine the influence of the independent variable (*independent*) simultaneously to the bound variable (*Depend on*) is done by comparing the results between the F_{hitung} with F_{tabel}

$$F_n = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

Table 5 Test Results F

Variable	Fcal	Table	Condition	Information
Performance and Competencies	83.460	3.00	Fcalculate $> F_{table}$	Ho was rejected and Ha was accepted

Source : Data Processing 2024

Based on Table 5, the ANOVA test is used to describe the level of influence between Agricultural Extension variables (Alfiansyah, M. (2021). Worker Performance and Competence on the Farmer Satisfaction variable simultaneously. The F-value of the table is 3.00, and the F-count value is 83.460. Therefore, since F-count > F-table, the null hypothesis (H0) is rejected, and the alternative hypothesis (Ha) is accepted. Thus, it can be concluded that there is a significant simultaneous influence between the Performance and Competence of Agricultural Extension Workers on Farmer Satisfaction in Negeri Besar District, Way Kanan Regency.

3.2 Discussion

3.2.1. The Effect of Extension Worker Performance on Farmer Satisfaction.

The test results showed that the performance of agricultural extension workers played an important role in increasing farmer satisfaction in Negeri Besar District, Way Kanan Regency, which indicated that the performance (*Slamet, R., & Wahyuningsih, S. (2022)*) of extension workers affected farmer satisfaction in Negeri Besar District, Way Kanan Regency. This is due to the large number of farmer groups in the sub-district and the insufficient number of agricultural extension workers, which causes the performance of extension workers in Negeri Besar District, Way Kanan Regency, to be not optimal.

3.2.2. The Effect of Competence on Farmer Satisfaction

The test results show that the competence of agricultural extension workers has an important role in the success of farmers on their farmland and significantly contributes to the increase in farmer satisfaction in Negeri Besar District, Way Kanan Regency. The competence of agricultural extension workers has a significant role in increasing farmer satisfaction in Negeri Besar District, Way Kanan Regency (Solehudin, S., & Syabanasyah, I. (2023)

3.2.3. Extension Workers' Seriousness in Moderating Extension Workers' Performance on Farmer Satisfaction

Based on the results of the hypothesis test, it can be seen that the dedication of extension workers (Z) has a significant effect on the relationship between Extension Officer Performance (X1) and Farmer Satisfaction (Y). In other words, the dedication of extension workers increases the influence of their performance on Farmer Satisfaction. This shows that the dedication of extension workers strengthens the relationship between their performance and farmers' satisfaction.

3.2.4. Seriousness of Extension Workers in Moderating Extension Competencies Towards Farmer Satisfaction

The results of the hypothesis test further show that the seriousness of extension workers (Z) has a significant influence on the relationship between Extension Competence (X2) and Farmer Satisfaction (Y). In other words, the seriousness of extension workers strengthens the influence of their competence on farmer satisfaction. This shows that the seriousness of extension workers improves the relationship between their competence and farmers' satisfaction.

4. Conclusion

1. Based on the test results, it was concluded that the performance of extension workers did not have a significant effect on farmer satisfaction in Negeri Besar District, Way Kanan Regency.
2. Based on the test results, it is concluded that the competence of extension workers has a

significant effect on farmer satisfaction in Negeri Besar District, Way Kanan Regency

3. The seriousness of Extension Workers strengthens the Performance of Extension Workers in Negeri Besar District, Way Kanan Regency.
4. The Seriousness of Extension Workers to Strengthen Employee Competence in Negeri Besar District, Way Kanan Regency
5. This study recommends increasing the number of agricultural extension workers to improve their performance in the Technical Implementation Unit (UPT) in Negeri Besar District, Waykanan.

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