

Proceeding Paper

The Influence of Performance and Service Quality on Farmer Satisfaction at the Lampung Province TPH Protection Center

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Abstract

This research seeks to determine how farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency is influenced by performance and service quality. Descriptive correlation research using quantitative techniques is the methodology used in this study. All 36 farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency constituted the study population, which was selected using direct random sampling technique. Questionnaires on farmer satisfaction, service quality, and performance provided the data. Multiple linear regression analysis is the method used to analyze the data in this study. Based on the results of Multiple Linear Regression analysis with t test and F test, this study concluded that farmer satisfaction is influenced by performance in the Lampung Province TPH Protection Center environment in Hulu Sungkai District, North Lampung Regency. Service quality affects farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Service quality and performance affect farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Performance and service quality affect farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency by 29.8%.

Keywords: Performance, Service Quality, Farmer Satisfaction

1. Introduction

In efforts to improve the sustainable agricultural sector, the quality of services and performance of government institutions play an important role.(Setiawan & Subarjo, 2024). The Food Crops and Horticulture Protection Center (TPH) of Lampung Province has a strategic task in providing services to farmers, especially in terms of controlling pests and plant diseases. Good performance and quality of service are expected to support increased agricultural productivity, which is one of the main pillars of national food security.(Widya et al., 2023). Therefore, analysis of the performance and quality of services of the TPH Protection Center is relevant to be carried out in various regions, including in Lampung Province.

The quality of the agricultural sector cannot be separated from the various challenges faced by farmers, such as pest attacks, climate change, and technological limitations.(Caniago, 2022). Balai Perlindungan TPH is here to provide solutions through effective plant protection services. In this case, fast and targeted services are expected to increase harvest yields and farmer welfare.(Monica & Marlius, 2023). However, there is variation in farmers' perceptions of the quality of services provided, so it is important to evaluate the performance of the center as a whole.(Septia et al., 2023).

The performance of the TPH Protection Center includes various aspects such as the ability of officers to respond to reports, provision of training programs, and implementation of pest control technology.(Pertiwi et al., 2022). Good performance depends not only on the speed of response, but also on the sustainability of the impact of the implemented program.(Septiani & Hastuti, 2023). By understanding the role of this performance, it is hoped that there will be an increase in farmer trust in the institution.(Palelu et al., 2022). Therefore, research on the influence of performance on farmer satisfaction is very relevant.

In addition to performance, service quality is also one of the main pillars in

determining the level of farmer satisfaction. Indicators of service quality include friendliness, clarity of information, accessibility of services, and the ability of officers to understand the specific needs of farmers.(Rahardjo & Yulianto, 2021). Good service quality can strengthen the relationship between farmers and the TPH Protection Center, thus creating a conducive environment for the development of the agricultural sector.(Widyananta & Utomo, 2024). Thus, improving the quality of service is a top priority in supporting the success of agricultural programs.(Paputungan et al., 2022).

Farmer satisfaction is one indicator of the success of public service programs.(Simarmata & Hodi, 2024). Previous research shows that farmer satisfaction can increase their participation in government programs, such as training or the use of new technology.(Wijaya et al., 2023). In addition, satisfaction also plays a role in strengthening long-term relationships between farmers and service institutions.(Munzir et al., 2020). Therefore, measuring farmer satisfaction can provide valuable insights for future service improvements.(Maulidin et al., 2022). The local context in Lampung Province, particularly in North Lampung Regency, presents unique challenges and opportunities for the TPH Protection Center. This region has great potential in food crop and horticultural production, but is also vulnerable to pest attacks that affect productivity. Factors such as farmer education levels, land area, and commodity types are important elements that influence service dynamics in this region. A data-driven approach is needed to understand the interactions between these factors.

This study aims to provide a comprehensive picture of the influence of performance and service quality on farmer satisfaction in Lampung Province. The results of the study are expected to be used as evaluation material and recommendations for the TPH Protection Center in improving the effectiveness of their services. By utilizing empirical data, this study can also contribute to the development of better public service strategies. In addition, the results of this study can be used as a reference by local governments in making policies that support the agricultural sector.

Overall, the importance of synergy between performance and service quality in improving farmer satisfaction cannot be ignored. Through a deep understanding of farmers' needs and expectations, the TPH Protection Center can continue to innovate in providing relevant and effective services. Thus, this research is expected to provide real contributions to the development of the agricultural sector, both at the local and national levels.

2. Research Method

This study uses a non-experimental research design and a descriptive correlational research approach. The quantitative research approach used in this study aims to determine the relationship between one independent variable and the dependent variable or to produce a specific sample or population. This study aims to determine how the performance and level of satisfaction of farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency affect their performance. The study population was all farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. The research sample consisted of 36 farmers selected by purposive sampling, with the criteria being farmers who had worked at least one year in the company.

Data were collected using a questionnaire divided into three main parts, namely performance measurement, service quality, and farmer satisfaction, each of which was measured by relevant instruments. The collected data will be analyzed using multiple regression techniques to determine the simultaneous effect of performance and service quality on farmer satisfaction, by first conducting validity, reliability, and classical assumption tests to ensure 5% data reliability.

3. Result and Discussion

The results of this study come from data from performance questionnaire sheets, service quality questionnaire sheets, and farmer satisfaction questionnaire sheets

conducted on farmers who were the research samples.. The following is a description of the research data.

Table 1. Description of Observation Data

Data	X_{\max}	X_{\min}	Central Density Measure			Group Variance Measure	
			\bar{x}	M_o	M_e	R	Sd
Performance	95.56	54.00	79.88	91.11	78.00	31.56	9.32
Quality of service	92.00	52.00	75.04	80.00	78.00	40.00	10.04
Farmer satisfaction	92.00	56.00	75.36	82.00	74.00	36.00	8.45

Table 1 shows the maximum and minimum values of 95.56 and 54.00 for performance, 92.00 and 52.00 for service quality, and 92.00 and 56.00 for farmer satisfaction questionnaire. Then, the mean, median, and mode values for performance results are 79.88, 91.11, and 78.00 respectively; the mean, median, and mode values for service quality results are 75.04, 80.00, and 78.00 respectively; and the mean, median, and mode values for farmer satisfaction questionnaire results are 75.36, 82.00, and 74.00 respectively. The conclusion is that the results of the performance questionnaire are a little higher than the results of the farmer satisfaction and satisfaction questionnaire sheet.

After obtaining the data values of the performance questionnaire sheet, service quality, and farmer satisfaction, the data obtained will then be analyzed. The data will be analyzed using the classical assumption test and multiple linear regression analysis. If the data analyzed is normally distributed, then parametric statistical techniques can be used, while if the data analyzed is not normally distributed, then non-parametric statistical techniques can be used (Casella & Berger, 2002). The first step that will be taken is to analyze the data in the form of a Kolmogorov Smirnov normality test on the questionnaire results. The test decision is if the $p\text{-value} > \alpha = 0.05$, then the data is normally distributed. The following are the results of the normality test calculation:

Table 2. Results of the Kolmogorov Smirnov Normality Test

		Unstandardized Residual
N		50
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	4.03672235
Most Extreme Differences	Absolute	.172
	Positive	.152
	Negative	-.142
Test Statistics		.172
Asymp. Sig. (2-tailed)		.161 ^c

The results of the calculation of the normality test of performance data, service quality, and farmer satisfaction at a significance level of $\alpha = 0.05$ can be seen in Table 2. The data can be said to come from a regularly distributed population because the $p\text{-value}$ is greater than α .

Step two Data analysis will be carried out in the form of a test multicollinearity of questionnaire results. The following are the calculation results multicollinearity on the results of this research questionnaire:

Table 3. Multicollinearity Test Results

No	Data	Tolerance	VIF
1.	Performance	0.610	1,755
2.	Quality of service	0.610	1,755

Dependent Variable: Farmer satisfaction

Because the VIF value is less than 10 and the tolerance value is more than 0.10, Table 3 shows that there is no multicollinearity in the performance and service quality data. Step three heteroscedasticity test was conducted questionnaire results. The following are the results of the heteroscedasticity calculations on the results of this research questionnaire:

Table 4. Summary of Heteroscedasticity Test

No	Data	<i>p – Value</i>	Significance
1.	Performance	0.322	0.05
2.	Quality of service	0.364	0.05

The results of the heteroscedasticity test, as shown in Table 4, show that the independent variables (service quality and performance) have p-values of 0.322 and 0.364, respectively, with a significance level of $\alpha = 0.05$. The fact that the p-value is higher than $\alpha = 0.05$ indicates that heteroscedasticity does not occur.

A parametric test called multiple linear regression analysis is used in this investigation to evaluate the hypothesis. The first test of multiple linear regression analysis is the t-test. The results of the t-test of Multiple Linear Regression analysis are shown in the following table.

Table 5. Results of Partial Statistical Test (t-Test)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	10,750	10,958		.312
	Performance	.286	.100	.026	.021
	Quality of service	.726	.086	.016	.000

a. Dependent Variable: Farmer satisfaction

Based on Table 5, the value for the relationship between performance and farmer satisfaction is less than 0.05. The findings indicate that the performance of workers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency is influenced by their performance. As a result, the p-value for the relationship between farmer satisfaction and service quality is 0.000 and less than 0.05. The findings indicate that the performance of workers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency is influenced by the level of their service quality. $p\text{-value}=0,021$

The F test is the second test used in multiple linear regression analysis. The table below shows the results of the F test of Multiple Linear Regression analysis:

Table 6. Results of F Statistic Test (Simultaneous Test)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2154.625	2	1352.641	138,031	.000b
	Residual	245,821	27	8,775		
	Total	2965.216	29			

Based on Table 6, there is no correlation between farmer satisfaction with performance and service quality. The p value is less than 0.05, this indicates that performance and service quality have proven to have an influence on farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Multiple Linear Regression Analysis aims to determine the relationship between performance and service quality to farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. The results of the Multiple Linear Regression test can be seen in the following table

Table 7. Results of Multiple Linear Regression Analysis
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,750	10,958		1,032	.312
	Performance	.286	.100	.026	.543	.021
	Quality of service	.726	.086	.016	11,530	.000

a. Dependent Variable: Farmer satisfaction

The multiple linear regression equation based on Table 7 is:

$$Y = 10,750 + 0,286X_1 + 0,726X_2$$

The value of 10.750 is constant, meaning that the quality of service and performance will approach 10.750 if farmer satisfaction does not increase. The regression coefficient, which is 0.286, indicates that there will be an increase in performance of 0.286 for each additional farmer satisfaction number. Thus, the regression coefficient is 0.726, meaning that there will be an increase in service quality of 0.726 for each increasing farmer satisfaction number.

The following test, the coefficient of determination (R²) test, basically assesses the extent to which service quality and performance explain variance in farmer satisfaction characteristics. The table below displays the results of the coefficient of determination (R²)

Table 8. Results of the Determination Coefficient Test(R²)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496a	.298	.301	3.012

a. Predictors: (Constant), Service quality, Performance

b. Dependent Variable: Farmer satisfaction

Table 8 shows that the result of R² = 0.298, which indicates that the quality of service and performance have an influence of 29.8% on farmer satisfaction. The results indicate that 29.8% of farmers at the Lampung Province TPH Protection

Center in Hulu Sungkai District, North Lampung Regency have performance that is influenced by performance and satisfaction at work.

Previous research shows that performance and quality of service have a major influence on farmer satisfaction. Research The Last Supper (2024) found that customer satisfaction at the workshop was influenced by price, performance and quality of service. In addition, the study Virgawenda et al., (2020) found that service quality and performance have a large combined impact on public satisfaction at the Sub-district Office in Pesisir Barat Regency. Furthermore, Saputri et al., (2023) revealed that student satisfaction at the Faculty of Economics, Muhammadiyah University of Aceh is influenced by the quality of service, performance, and facilities.

Each indicator of farmer satisfaction, service quality, and performance was examined during the research process. Performance indicators include core values, norms and rules, vision and mission, leadership style, internal communication, innovation and adaptation, work environment, reward system, rituals and traditions, and commitment to ethics. Then the service quality indicators include satisfaction with salary, relationships with coworkers, relationships with superiors, work environment, career development opportunities, performance rewards, and appropriate workload. Furthermore, farmer performance indicators include work quality standards, amount of work, knowledge of work, teamwork, innovation, creativity, and initiative.

In general, the results of the descriptive statistical analysis of farmer performance at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency are still quite good (77.32), while the farmer satisfaction value (75.04) is still below average and the farmer service quality value (75.34) is still average. Based on these results, most farmers still do not master the performance, service quality, and farmer satisfaction. Therefore, the performance, service quality, and performance of farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency need to be improved. Based on the results of this study, the researcher intends to provide the best solution in order to improve and increase the performance, service quality, and performance of farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency.

Based on the results of Multiple Linear Regression analysis, service quality and performance have a positive effect on farmer satisfaction, with a coefficient of determination of 29.8%. Based on this, performance and service quality together can contribute 29.8% to farmer satisfaction if the influence of other factors is ignored. The assumption is that farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency will perform better as a result of farmer satisfaction.

It is determined that the results of the Multiple Linear Regression analysis that performance has an impact on farmer satisfaction based on the findings of the t-test that tests the relationship between two independent and dependent variables partially (alone). This finding indicates that the findings of the study on farmer performance and farmer satisfaction are consistent. This study shows the actual results of farmer performance and work performance at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Performance will increase along with farmer satisfaction, and vice versa. The second conclusion is that farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency is influenced by the level of their service quality. The findings also indicate that the findings of the study on farmer service quality and farmer satisfaction are consistent. The

actual findings on worker satisfaction and performance in schools are presented in this study.

Furthermore, the results of the Multiple Linear Regression analysis with the F test that tests the relationship between two independent variables and the dependent variable together (collectively) show that performance and service quality affect farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. The results of this study indicate that the importance of farmer satisfaction and the research value of farmer performance and service quality are comparable. This study presents the performance, performance, and achievement of farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Farmer satisfaction will increase along with the quality of service and performance, and vice versa. The three main competencies required of farmers are: service quality, performance, and farmer satisfaction.

$Y \approx 10,750 + 0,286X_1 + 0,726X_2$ is a multiple linear regression equation model produced. This shows that the value of 10.750 is constant, meaning that the quality of service and performance will approach 10.750 if farmer satisfaction does not increase. The regression coefficient of 0.286 means that there will be an increase in performance of 0.286 for every increase in farmer satisfaction. The regression coefficient is 0.726, meaning that for every increase in farmer satisfaction, there will be an increase in performance of 0.286.

4. Conclusion

Based on the results of the analysis and discussion of this study, it can be concluded that performance has an influence on the satisfaction of farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Furthermore, service quality also affects the satisfaction of farmers at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Next, performance and service quality have an influence on farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency. Performance and service quality have an influence on farmer satisfaction at the Lampung Province TPH Protection Center in Hulu Sungkai District, North Lampung Regency by 29.8%.

This research is expected to provide benefits for organizations and academics. The results of this study can help companies in increasing farmer satisfaction by focusing on performance and service quality. Meanwhile, academics can use this research as a reference for future research on performance, service quality, and farmer satisfaction, both as more in-depth research and as ongoing research..

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