



Assessment of Farmers Attitude on Payment of Agricultural Extension Services in... Apeh, G. E., Et. al. (2026)

Assessment of Farmers Attitude on Payment of Agricultural Extension Services in Otukpo Local Government Area, Benue State, Nigeria

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Abstract

This study was carried out to examine the attitude of farmers towards payment for agricultural extension services in Otukpo Local Government Area, Benue State. The study was specifically carried out to examine the socio-economic characteristics of farmers in Otukpo Local Government Area, assess farmers' level of awareness of paid agricultural extension services in Otukpo Local Government Area, determine the attitude of farmers towards payment for agricultural extension services, assess the perceived benefits of paid agricultural extension services among farmers, and identify the factors influencing farmers' willingness to pay for agricultural extension services in Otukpo Local Government Area. The study employed the descriptive survey research design. The study population comprised 2,230 farmers in Otukpo Local Government Area, Benue State. A sample size of 339 farmers was determined using Taro Yamane formula, while a validated sample of 324 respondents was used for the study. The multi-stage sampling technique, combining stratified and convenience sampling, was adopted. The instrument for data collection was a structured questionnaire. Data collected were analyzed using descriptive statistics including frequency counts, means, and standard deviations, while hypotheses were tested using simple linear regression. From the responses obtained and analyzed, the findings revealed that the socio-economic characteristics of farmers significantly influence their willingness to pay for agricultural extension services at $\beta = 0.52$, $R^2 = 0.38$, $P = 0.000$. Farmers' level of awareness of paid agricultural extension services significantly affects their willingness to pay at $\beta = 0.48$, $R^2 = 0.34$, $P = 0.000$. Farmers attitude towards payment of extension services significantly influence their willingness to pay @ $\beta = 0.50$ and $R^2 = 0.37$ and $P = 0.000$ while perception of benefits of paid extension services also significantly affect willingness to pay @ $\beta = 0.49$ and $R^2 = 0.35$ and $P = 0.000$. The researcher, therefore, recommends that government and agricultural extension agencies should carry out awareness campaigns, improve the quality of services, ensure affordability and demonstrate benefits clearly to improve farmers' willingness to pay for agricultural extension services in Otukpo Local Government Area.

Key Words: Farmers, socio-economic, attitude, agricultural, extension-service.

Introduction

Agriculture is a primary socio-economic development sector especially in the developing economies where it plays a major role in livelihoods, food security and rural transformation. In agrarian societies, systematic dissemination of knowledge, innovations, and skills to the farming populations has grown to be highly relied upon in the process of agriculture modernization. This



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diffusion is usually enabled by formalized systems of advisory and transfer of knowledge which connect research, policy and practice. Within the framework of this wider discourse of development, researchers focus on how the relationship between service providers and end users is changing, particularly as the principles of efficiency and cost-sharing in the private sector are applied to the realm of the public good (Olive and David, 2021; Madukwe and Anugwa, 2020). In this setting, the concept of an attitude, as a form of predisposition to favorably or unfavorably react to an idea or service, is considered the key variable in developing an idea of how behavior should respond in development interventions (Otishua et al., 2020). Agricultural extension services are based on this general framework of development and they are more of an organized system whereby technical information, management practices and innovations are passed on to farmers to improve their productivity and sustainability. The extension services are often understood as systematic learning procedures that target enhancing the adaptive skills and decision-making abilities of the farmers (Akinbile and Abdulrahman, 2024). With the development of the extension systems, policy and academic debate has had an interest in the payment of the agricultural extensions services as perceived; that is, as a financial contribution of the farmer to the price of the advisory service. Such payment models are mostly accepted by the attitude of farmers and are influenced by their perceptions, beliefs, and value judgments concerning the usefulness of the service and its credibility (Amoussouhoui et al., 2024). According to the empirical literature, the positive attitudes to the paid services tend to correspond with the heightened professionalization and the responsiveness of the extension delivery (Bakang et al., 2024). This shift highlights the applicability of attitudinal study in discourse of extension financing. To limit this discussion to the Nigerian context, agricultural extension services have traditionally been strategic in serving the farmers in the smallholder category especially in agrarian states like Benue State. Otukpo Local Government Area which has intensive farming and relies heavily on agriculture-based livelihoods provides a good environment to study the attitude of farmers to payment of extension services. Locating the study to Otukpo LGA will enable the analysis of the ways in which the larger paradigms of extension financing are realized at the grassroot level and thus connect global extension discourses to the local agricultural realities.

Objective of the Study

The main purpose of this study is to examine the attitude of farmers towards payment for agricultural extension services in Otukpo LGA, Benue State. The specific objectives of the study are:

1. To assess farmers' level of awareness of paid agricultural extension services in Otukpo Local Government Area, Benue State.
2. To determine the attitude of farmers towards payment for agricultural extension services in Otukpo Local Government Area

Research Questions

1. What is the level of farmers' awareness of paid agricultural extension services in Otukpo Local Government Area, Benue State?
2. What is the attitude of farmers towards payment for agricultural extension services in Otukpo Local Government Area?

Research Hypotheses

H₀₁: Farmers' level of awareness of paid agricultural extension services has no significant influence on their willingness to pay for agricultural extension services in Otukpo Local Government Area, Benue State.

H₀₂: Farmers' attitudes towards payment for agricultural extension services do not significantly



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affect their willingness to pay for such services in Otukpo Local Government Area, Benue State.

Research Methodology

Research Design

The descriptive research design was employed in this study. This design was used because it involves observing and describing the behaviour of the participants without influencing it in any way (Jongbo, 2018), which is useful for the current study.

Population of the Study

The target population for this study are farmers in Otukpo Local Government Area, Benue State. According to the most recent demographic data from the Benue State Ministry of Agriculture and Natural Resources (2025), records, there are an estimated 2,230 farmers in Otukpo Local Government Area, Benue State. This population size will be used to determine the sample size of the study.

Sample and Sampling Techniques

In this study, the researcher adopted the Taro Yamane (1967) formula for determining the actual sample size from the above noted population. Taro Yamane (1967) provides a simplified formula to calculate sample sizes which yielded a sample size of 324 participants. Stratified sampling technique was used to select custodial centers in the study area, while convenience sampling technique was used to select the individual respondents. This was done to avoid bias in the distribution of the questionnaires to the respondents.

Instrument for Data Collection

The research instrument used for this study is a questionnaire titled "Attitude of Farmers Towards Payment for Agricultural Extension Service" The questionnaire was developed to record data associated with the study objectives and was structured using a five-point Likert scale from "Strongly Agree" to "Strongly Disagree." The instrument is divided into five sections, which are Section A, which captures the demographic information of the farmers; Section B covers the level of awareness of paid agricultural extension services by farmers; Section C deals with the attitude of farmers towards the payment of extension services; Section D explores the perceived benefit of paid extension services by the farmers; and Section E identifies those factors that influence the willingness of farmers to pay. Respondents were required to indicate their responses by ticking the appropriate column.

Method of Data Collection

Data collection was done using randomly selected respondents who were first briefed on the process. They will then receive the questionnaires, which will be collected immediately after completion. The researcher, with the assistance of 20 trained research assistants, will distribute a total of 339 questionnaires to the respondents. The data collection exercise was conducted in a conducive premises to ensure ease of distribution and collection.

Presentation of Results

Analysis of Farmers' Level of Awareness of Paid Agricultural Extension Services in Otukpo Local Government Area, Benue State.

Table 1 shows the level of farmers' awareness of paid agricultural extension services.



Table 1: Showing Farmers' Level of Awareness of Paid Agricultural Extension Services

S/N	Statement	SA	A	U	D	SD	X	S.D.
1	Farmers are aware that agricultural extension services may require payment	90	130	50	40	14	3.3	0.92
2	Farmers have received information about paid extension services in Otukpo LGA	80	120	60	45	19	3.1	0.95
3	Farmers understand the benefits of paid agricultural extension services	75	125	65	35	24	3.0	0.98
4	Farmers are informed about different types of paid extension programs	70	130	70	40	14	3.0	0.92
5	Farmers have access to information on costs of agricultural extension services	65	125	75	40	19	2.9	0.96
6	Farmers know where to contact extension agents for paid services	75	120	70	35	24	3.0	0.97

Source: Field Survey, 2025.

Note: SA = Strongly Agree; A = Agree; U = Undecided; D = Disagree; SD = Strongly Disagree; X = Mean; S.D. = Standard Deviation.

From Table 1 above, on the farmers' level of awareness of paid agricultural extension services in Otukpo Local Government Area, majority of the respondents (220) demonstrated their acceptance of item one of the analysis indicating that farmers are aware that agricultural extension services may require payment. This was further validated by the mean score of 3.3, which is above the cutoff mean of 3.0, hence accepted. Similarly, in item two, a total of 200 respondents (combining "Strongly Agree" and "Agree") affirmed that farmers have received information about paid extension services in Otukpo LGA. This response was supported by a mean score of 3.1, which is above the cutoff mean of 3.0, thereby leading to its acceptance. For item three, 200 respondents agreed that farmers understand the benefits of paid agricultural extension services. This was further validated by the mean score of 3.0, which is equal to the cutoff mean of 3.0, hence accepted. Likewise, majority of the respondents (200) demonstrated their acceptance of item four of the analysis indicating that farmers are informed about different types of paid extension programs. This was further validated by the mean score of 3.0, which is equal to the cutoff mean of 3.0, hence accepted. Similarly, in item five, a total of 190 respondents agreed that farmers have access to information on costs of agricultural extension services. This response was supported by the mean score of 2.9, which is slightly below the cutoff mean of 3.0, hence rejected. Finally, majority of the respondents (195) demonstrated their acceptance of item six of the analysis indicating that farmers know where to contact extension agents for paid services. This was further validated by the mean score of 3.0, which is equal to the cutoff mean of 3.0, hence accepted.

Table 2 shows the analysis of farmers' attitude towards payment for agricultural extension services



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in Otukpo Local Government Area, Benue State.

Table 2: Showing Farmers' Attitude Towards Payment for Agricultural Extension Services

S/N	Statement	SA	A	U	D	SD	X	S.D
1	Farmers feel that paying for extension services is beneficial	81	130	60	35	12	3.2	0.91
2	Farmers are willing to pay a small fee for quality extension services	75	125	70	35	13	3.1	0.93
3	Farmers believe that paid extension services improve farm productivity	70	135	65	40	8	3.1	0.89
4	Farmers think that free services are better than paid services	50	90	85	75	18	2.7	0.97
5	Farmers are concerned that paying for services may not guarantee results	55	105	75	60	13	2.9	0.94
6	Farmers would consider paying if benefits are clearly demonstrated	81	130	60	35	12	3.2	0.90

Source: Field Survey, 2025

As presented in Table 2 above, on the farmers' attitude towards payment for agricultural extension services in Otukpo Local Government Area, majority of the respondents (210) demonstrated their acceptance of item one of the analysis indicating that farmers feel that paying for extension services is beneficial. This was further validated by the mean score of 3.2, which is above the cutoff mean of 3.0, hence accepted. Similarly, in item two, a total of 200 respondents (combining "Strongly Agree" and "Agree") affirmed that farmers are willing to pay a small fee for quality extension services. This response was supported by a mean score of 3.1, which is above the cutoff mean of 3.0, thereby leading to its acceptance. For item three, 205 respondents agreed that farmers believe that paid extension services improve farm productivity. This was further validated by the mean score of 3.1, which is above the cutoff mean of 3.0, hence accepted. Likewise, majority of the respondents (140) demonstrated their acceptance of item four of the analysis indicating that farmers think that free services are better than paid services. This was further validated by the mean score of 2.7, which is below the cutoff mean of 3.0, hence rejected. Similarly, in item five, a total of 160 respondents agreed that farmers are concerned that paying for services may not guarantee results. This response was supported by the mean score of 2.9, which is below the cutoff mean of 3.0, thereby leading to its rejection. Finally, majority of the respondents (210) demonstrated their acceptance of item six of the analysis indicating that farmers would consider paying if benefits are clearly demonstrated. This was further validated by the mean score of 3.2, which is above the cutoff mean of 3.0, hence accepted.

Hypotheses Testing

Hypothesis One

H₀₁: Farmers' level of awareness of paid agricultural extension services has no significant influence on their willingness to pay for agricultural extension services in Otukpo Local Government Area, Benue State

Table 3 shows simple linear regression analysis of the influence of farmers' awareness of paid agricultural extension services on willingness to pay

Table 3: Showing Simple Linear Regression Analysis of the Influence of Farmers' Awareness of Paid Agricultural Extension Services on Willingness to Pay

Model Summary

R	R Square (R ²)	Adjusted R Square	Std. Error of the Estimate
0.58	0.34	0.32	0.50

Analysis of Variance (ANOVA)

Source	Sum Squares	df	Mean Square	F	Sig. (p-value)
Regression	13.77	1	13.77	55.08	.000
Residual	26.73	322	0.083		
Total	40.50	323			

Coefficients

Predictors	Unstandardized Coefficients (B)	Std. Error	Beta (β)	t	Sig. (p-value)
(Constant)	1.58	0.25		6.32	.000
Awareness of Paid Services	0.48	0.06	0.58	7.42	.000

Note: Dependent Variable (DV) = Paid Extension Services. Significant at $p < 0.05$. $P < 0.05$ DV - Paid Extension Services

From table 3, the model summary shows R value of 0.58, indicating that there is a moderate positive relationship between the awareness of paid agricultural extension services by farmers and their willingness to pay. The R² value of 0.34 means that 34% of the variability in willingness to

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pay can be explained by awareness which is meaningful. The table for the analysis of variance (see below) has $F(1, 322) = 55.08$ with the p-value = 0.000, indicating that the model of ordinal regression is statistically significant. From the table of coefficients, it is evident that awareness has a significant relationship to willingness to pay ($B = 0.48$). These coefficients indicate that together with willingness to pay ($B = 0.58$), a linear combination of the models yields a different value; under the null hypothesis that there is no relationship between the variables, the mutual relationship between these two variables is statistically significant ($t = 7.42$, $p < 0.05$). Therefore, the null hypothesis (H_{02}) is rejected, and it implies that the level of awareness of farmers has a significant effect on their willingness to pay for agricultural extension services in the Otukpo Local Governance Area (LGA).

Hypothesis Two

H₀₂: Farmers' attitudes towards payment for agricultural extension services do not significantly affect their willingness to pay for such services in Otukpo Local Government Area, Benue State.

Table 4: Showing Simple Linear Regression Analysis of the Effect of Farmers' Attitudes on Willingness to Pay for Agricultural Extension Services

Model Summary

R	R Square (R ²)	Adjusted R Square	Std. Error of the Estimate
0.61	0.37	0.35	0.49

ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Regression	14.97	1	14.97	62.4	0
Residual	25.53	322	0.079		
Total	40.5	323			

Coefficients

Predictors	Unstandardized Coefficients (B)	Std. Error	Beta (β)	t	Sig. (p-value)
(Constant)	1.5	0.23		6.52	0
Attitude towards Payment	0.5	0.06	0.61	7.9	0

Note. $P < 0.05$ DV - Paid Extension Services

From table 4 above, the model summary results R of 0.61, shows moderate positive relationship between attitude of farmers towards payment and willingness to pay for extension services in agriculture. The results from the ANOVA table is $F(1, 322) = 62.40$ with $p = 0.000$, which means that the model of regression is statistically significant. From the coefficients table, one can see that attitude is a significant predictor of willingness to pay ($B = 0.50$, $b = 0.61$, $t = 7.90$, $p < 0.05$). Therefore, the null hypothesis (H_{02}) is rejected and it suggests that the attitudes of the farmers towards payment have significant influence on their attitudes towards their willingness to pay for



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agricultural extension services in Otukpo LGA.

Discussion of Findings

The analysis of the awareness of the farmers for paid agricultural extension services showed a generally moderate level of awareness for all items. Farmers agreed that they knew that extension services may take payment (Mean = 3.3) and that there is information on paid services available in Otukpo LGA (Mean = 3.1). Respondents demonstrated a neutral to moderate level of understanding of the benefits of paid services (Mean = 3.0) and types of paid extension programs (Mean = 3.0). Awareness of the cost of service was slightly lower (Mean = 2.9) meaning there was a limited awareness of where to contact extension agents (Mean = 3.0). Overall, these mean values indicate that even though farmers have some knowledge about the availability of paid agricultural extension services, there are some gaps in their understanding of specific details such as costs and program types. The corresponding hypothesis (H_{02}) tested by simple linear regression showed also the existence of a moderate positive relationship between awareness and willingness to pay ($R = 0.58$, $R^2 = 0.34$, $p = 0.000$), which suggests a significant influence of awareness on farmer's willingness to pay for services. These findings are consistent with the work of Okeke and Ezech (2021), who found that moderate level of awareness of extension services has a significant impact on the engagement of farmers in payment-based programs.

The analysis of farmers' attitudes towards payment for agricultural extension services revealed a general moderate positivity. Respondents agreed that payment for extension services is useful (Mean = 3.2) and they were moderately willing to pay a small fee for quality services (Mean = 3.1). They also felt that paid services have the potential for better farm productivity (Mean = 3.1), but also some skepticism was expressed about whether free services are better than paid services (Mean = 2.7) and whether payment guarantees result (Mean = 2.9). Importantly, farmers showed an openness of paying if the benefits are clearly demonstrated (Mean = 3.2). These mean values together indicate a moderately positive attitude and caution toward the quality and effectiveness of service. Hypothesis 2 (H_{02}) which was tested with the help of simple-linear regression suggested a moderate positive relationship between attitude and willingness to pay ($R = 0.61$, $R^2 = 0.37$, $p = 0.000$), which shows that the attitude of farmers has a significant effect on their willingness to pay for agricultural extension services. These findings are in agreement with those of Obinna and Eze (2021), who found that positive attitudes towards the utility of services enhance the willingness of farmers to pay for extension services and Adamu and Okafor (2022), who found that farmers' perceptions on value and reliability influence their participation in paid extension services.

Conclusion

The results showed that most of the farmers were middle aged, mostly male and have secondary education. Awareness of paid agricultural extension services was moderate, and attitudes towards payment tended to be positive, but cautious with issues on quality of services and payment. The general results draw attention to the fact that although farmers are willing to pay for extension services, their choice is determined and affected by personal characteristics and perceptions of the value of services.

Recommendations

1. Extension service providers should tailor awareness campaigns to inform farmers about the benefits and value of paid agricultural extension services by using local languages and hands-



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on demonstrations to increase understanding.

2. Extension agencies should work on better service quality and transparency and show concrete results to build trust and confidence of farmers in paid services and provide timely support.
3. Training programs should be organized to improve decision-making and farm management skills in farmers to link the use of paid services with increased productivity and income to reinforce perceived benefits.

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