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RESEARCH ARTICLE

Determinants of Farmers' Adoption of Agricultural Development Programme Extension Technology Packages in Ivo L.G.A of Ebonyi State

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ABSTRACT

The study analyzed the determinants of farmers' adoption of Agricultural Development Programme (ADP) extension technology packages in Ivo L.G.A of Ebonyi State. Multistage sampling procedure was employed to select 80 farmers and eight extension agents who formed the respondents for the study. Data were collected through the aid of questionnaire and interview schedule whereas the analysis was done using descriptive and inferential statistics suiting each specific objective. The result showed that most of the farmers (82.50%) and extension agents (75%) were males, respectively. Evidence showed that the mean age of the farmers was 37 years while the mean age of the extension agents was 44 years. It was obvious that 67.50% and 75% of the farmers and extension agents were, respectively, married. The mean annual income of the farmers and extension agents was ₦98,070 and ₦504,200, respectively. The result showed further that about 81.9% change in the dependent variable (adoption of extension technology packages) was caused by variations of socio-economic characteristics included in the regression model. The following were the research recommendations; educational facilities should be made available for rural farmers to enhance easy adoption of ADP extension technology packages to enhance production; government and NGOs should endeavor to subsidize the cost of ADP extension technology packages to enhance easy adoption by rural farmers; and credit institutions are advised to give farmers loans to enhance their accessibility of ADP extension technology packages in the area.

Key words: Adoption, extension, technology, packages, rural farmers

INTRODUCTION

Background statement

It is obvious that the improvement of agricultural sciences and technology has brought about dramatic changes in the agricultural sector which has led to the increased need and opportunity for investigating the effectiveness of agricultural extension services in various parts of the world. Farmers in the rural areas are beneficiaries of the numerous innovations that an extension worker carries about which aims at rural development. The priority of agricultural development in Nigeria is to be self-sufficient in food supply. In the past, the traditional system allowed for subsistence farming, where individuals were able to feed and there was self-sufficiency in basic food needs. Millions of small farmers produced enough food for themselves. Everyone was responsible for the food requirement of the family members and self and the surplus was marketed. Substantial quantities of export crops such as cocoa, groundnut, oil palm, and coffee were also produced.[1]

The integrated Agricultural Development Programme (ADP) that could also be described as agricultural development project started in 1975 as an enclave project which covered three small

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geographical areas Funtua in Kaduna, Gusau in Sokoto, and Gombe in Bauchi states. These formed the first generation of ADPs in Nigeria. The program gradually expanded with the establishment of other enclave ADPs in Lafia, Akungba, Bida, Ilorin, Oyo North and Ekiti Akoko, in Kogi, Ondo, Niger, Kwara, Oyo, and Ekiti states, respectively.[2-5] Kemi (2016) was of the view that the mission of cooperative extension is to extend the resources of their respective resources to a variety of interested parties.

Anka (2010) noted that agricultural development is almost impossible without the presence of extension service which includes extension education. According to Oladele (2005), agricultural education is becoming increasingly important in countries which depend heavily on agriculture for both the living of the majority of their population and their export earnings. Nigerian labor is about 80% of farmers who basically depend on agriculture for a living.[6-10] Trager (2016) noted that agricultural extension includes the promotion of any aspect of technology development, method of resources acquisition by farmers, method of the evolvement of new technologies, determinants to farmers' choice, the kind of support a given technology requires, sources of finance for its, and its maintenance method. Seevers and Graham (2012) opined that agricultural extension is the exchange of knowledge with the aim of helping rural families to develop skills needed to solve their immediate problems and improve their standing of living.

Research institutes were established in different parts of the country to develop new innovations in agriculture. The primary responsibility of extension workers, therefore, is to disseminate these innovations to the farmers. The process of acceptance and use of ideas or innovations follows a successful pattern such as (a) awareness of the innovation, (b) interest of the farmers, (c) trail of the innovations through demonstrations, (d) adoption of new innovations, and (e) effective communication between the extension workers and farmers and a good working relationship must be maintained to make the farmers understand the innovations.

The role of extension is to empower farmers and enable them to identify and analyze their agricultural problems to be able to make correct decisions (Kimaro *et al*., 2010). Alunas (2014) reported that almost all countries in the world deliver some type of extension service to help rural people advance their agricultural productivity and improve their living standards. The extension is responsible for serving about 1 billion small scale farmers in the world (Davis, 2010). The main role of extension is to empower farmers and enable them to identify and analyze their agricultural problems and be able to make the right decisions.[11,12] Jain (2010) pointed out that the central task of extension is to assist rural families to be able to help themselves through the application of science to their daily life of farming and homemaking and that it uses the communication of valuable information, which helps people make sound decisions. Another importance of extension is reaching a larger number of farmers while providing a greater amount of higher quality information to anyone interested.

However, the following factors affect the responses of farmers on innovations such as cultural influence, educational level, attitudes of the extension staff, bulkiness of the innovations, and low-income levels by the farmers. When these factors are properly understood, farmers are encouraged to respond positively to their production in the areas of crop production, animal production, apiary, horticulture, etc. All these serve as income earners for the farmers in the country.[13-15]

Agricultural technology packages include different techniques, methods, and practices which are adopted by farmers in the different stages of agricultural production. Adejoh *et al.* (2017) defined technology as an organized capacity for some purposive activity. These processes may include production of plant and animal breeding, the introduction of new crops, livestock and fisheries, mechanization, infrastructural development and inputs; planting distance, fertilizer application.

Swanson (2006) noted that there have been a number of criticisms regarding the acceptance of agricultural innovation generally in developing countries. These includes (a) a pro-innovation and the sources of failure of unsuccessful innovation, (b) a tendency to blame the farmers or the peasant for failure to adopt rather than question the appropriateness or profitability of innovation, (c) inadequate attention to the interrelated process involved in innovation generation and utilization, and (d) failure to develop the appropriate technology for adoption by farmers. Other issues

affecting the efficiency of the extension system include poor organizational structure, poor administrative and institutional structure, lack of clientele involved in the planning process, and untimely provision of extension services (Swanson and Samy, 2003). Kemi (2016) pointed out that a limited number of extension workers in relation to the number of farmers, lack of funds for supporting farmer field schools and farmers demonstration plots constrain the flow of information reaching farmers. Abdullah and Samah (2013) pointed out that weak perception of technology, low education of farmers, disorganization, and limited knowledge among extension workers are some of the factors that affect the success of extension training because extension deals with people.[16-20]

Kemi (2016) stated that the unhealthy perception of extension prevails in many developing countries, as a result of a weak extension lobby, imperfect initial organizational set-up, an inherent lack of trust in extension by most of the research organizations, and traditionally poor career development conditions in the profession of extension. Furthermore, many research works have been conducted on the importance of extension service delivery to farmers among which include Kemi, Israel, Abdulazeez and Foluke (2016) researched on the determinants of the level of participation of farmers in group activities in Kwara State, Nigeria. Alunas (2014) worked on the assessment of the factors impacting agricultural extension training programs in Tanzania. According to Lawal (2014), the assessment of factors affecting the acceptance of agricultural Innovations in Zurmi Local Government Area, Zamfara State Nigeria. Etwire, Dogbe, Wiredu, Etwire, Owusu and Wahaga (2013) investigated the factors influencing farmer's participation in agricultural projects: The case of the agricultural value chain mentorship project in the northern region of Ghana. None of these vividly evaluated the factors influencing farmers' perception and adoption of ADP extension technology packages in Ezza South L.G.A of Ebonyi State.[21-25]

Therefore, despite so many literatures listed above and many others, there seems to be a dearth in empirical knowledge on the factors influencing farmers' perception and adoption of ADP extension technology packages in Ivo L.G.A of Ebonyi State. Thus, this research will be conducted with the broad objective of analyzing the determinant of farmers' adoption of ADP extension Technology Packages in Ivo L.G.A of Ebonyi State. Specifically, the objectives include to describe the socio-economic characteristics of farmers who use ADP extension technology packages; determine the influence of determinant factors on farmers' perception and adoption of ADP agricultural extension technology packages while the null hypothesis stated that the selected socio-economic factors of farmers do not significantly influence their adoption of ADP agricultural extension programs packages in Ivo L.G.A of Ebonyi State.

METHODOLOGY

The study area is Ivo L.G.A of Ebonyi State. It is located in the southern senatorial district of Ebonyi State. The L.G.A is bounded in the north by Ohaozara L.G.A, in the south by Uturu in Abia State, in the east by Afikpo South L.G.A and by Awgu, Enugu State in the west. Ivo as a local Government Area got its name from the predominant river by name, Ivo River, which is the major source of water to the inhabitants of the area. The L.G.A is made up of 11 political wards to include Ngwogwo, Amagu, Amaeze, Akaeze, Umobor, Ndiokoroukwu, Amonye, Okue, Akazeukwu, Ihenta, and Obinagu. There are basically four autonomous communities in the area; Ishiagu, Akaeze, Okue, and Ihie. The topography of the area is relatively flat and with vegetation which can be said to be grassy with a predominant tree plant as a palm tree. This area has a soil which is mainly clayey in nature and creates room for swampland which is suitable for the growing of swamp price. ADP contact farmers in the area were sampled using multistage and purposive random sampling techniques. Twenty contact farmers were selected from each of the four autonomous communities in Ivo, while two extension agents were as well selected from each autonomous community to give a total of eight extension agents. Data for the study were collected through the primary sources. The primary source was through the use of questionnaires administered to literate farmers while the interview schedule was employed to collect data from farmers who

found it difficult to read. The data collected were analyzed using relevant descriptive and inferential statistics lines with the different objectives: Objectives i and ii were achieved using frequency, percentage and mean, with bar charts, objectives iii and iv were analyzed using mean score obtained from a 4-point Likert scale, and objective v was achieved using multiple regressions. The null hypothesis was be tested using F-cal at 5% level of significance.

Model specifications

Multiple regression model

Multiple regression analyses were used to analyze objective v.

$$K = F(X_1, X_2, X_3, X_4, X_5, X_6, X_7) \quad (3.1)$$

The explicit form of the model is represented thus;

$$Y = {}_{g0} + {}_{g1}X_1 + {}_{g2}X_2 + {}_{g3}X_3 + {}_{g4}X_4 + {}_{g5}X_5 + {}_{g6}X_6 + {}_{g7}X_7 + ut \quad (3.2)$$

Where;

Y = number of technology packages adopted

X_1 = Age of respondent (years)

X_2 = Gender of Respondent (dummy)

X_3 = Income level of respondents (#)

X_4 = Household size of respondents (number)

X_5 = Farm size of respondents (ha)

X_6 = Educational qualification of respondents (years)

X_7 = Marital status (dummy)

g_1–g_7 = Estimated parameters

g_0 = autonomous level of production known as the constant.

Test of hypothesis

The stated hypothesis (H_0) was tested using the F-test at 5% level of significance. The formula for calculating F-cal is shown below:

$$\text{F-cal} = \frac{R^2(N-K)}{(1-R^2)(K-1)} \quad (3.3)$$

Where,

R^2 = Coefficient of multiple determination

N = Sample size

K = Number of variables

Decision Rule: If F- cal> F– tab, reject the null hypothesis otherwise accept.

RESULT AND DISCUSSION

Socio-economic characteristics of respondents

The result of the analysis presented in Table 1 showed that most of the farmers (82.50%) and extension agents (75%) were males, whereas 17.50% and 25% were females for farmers and extension agents, respectively. This implies that the majority of the respondents who were into farming were males. This is in line with the result of Ogunsumi (2008) in the analysis of extension activities on farmers' productivity in Southwest, Nigeria, which reported that most of the farmers and extension agents in the area were males.

Relating to age, the result was evident that a good number of the farmers (60.00%) were between 30 and 40 years, while 50% of the extension agents were between 41 and 50 years. Furthermore, it showed revealed that nobody among the extension agents was above 60 years while only 2.50% of the farmers were above 60 years. The result finding further showed that the mean age of the farmers was 37 years while the mean age of the extension agents was 44 years. The meaning of this finding is that most of the farmers and extension agents fall between the age of active agricultural productivity. According to FAO (2012), the age for agricultural productivity is between 30 and 45 years. This explains the age when the farmers are agile and zealous.

For marital status, it was obvious that 67.50% and 75% of the farmers and extension agents were, respectively, married while nobody was divorced among the extension agents but it was seen that 2.50% of the farmers were divorced. This means that most of the farmers and the extension agents were married and have their families to take care of. This finding concurs with that of Rewald (2001) success and failure in achieving the goals of the world food summit in proceeding of an International Conference Sustainable food security for all by 2020 which reported that most of the farmers and extension agents were married.

The result on household size portrays that 60% of the farmers had household size of between 9 and 12 persons while 87.5% of the extension agents had household size of between 4 and 8 persons. It was also revealed that the mean household size for the farmers and the extension agents were 9 and 5,

Table 1: Socio-economic characteristics of farmers in the study area

S. No.	Socio-economic characteristics	Farmers (Freq=80)		Extension agents (Freq=08)	
		Frequency (%)	Mean	Frequency (%)	Mean
X_1	Gender (dummy)				
	Male	66 (82.50)		06 (75)	
	Female	14 (17.50)		02 (25)	
X_2	Age (years)				
	Below 30	10 (12.50)		01 (12.5)	
	30–40	48 (60.00)	37	02 (25)	
	41–50	15 (18.75)		04 (50)	
	51–60	05 (6.25)		01 (12.5)	
	Above 60	02 (2.50)		00	44
X_3	Marital status (dummy)				
	Married	54 (67.50)		06 (75)	
	Single	17 (21.25)		01 (12.5)	
	Divorced	02 (2.50)		00 (0.00)	
	Widowed	07 (8.75)		01 (12.5)	
X_4	Household size (no of persons)				
	Below 4	05 (6.25)		01 (12.5)	
	4–8	19 (23.75)		07 (87.5)	5
	9–12	48 (60.00)	10	0 (00)	
	Above 12	08 (10.00)		0 (00)	
X_5	Farm size (ha)				
	Below 0.5	22 (27.50)		1 (12.5)	
	0.5–1.0	51 (63.75)	0.6	3 (37.5)	1.4
	1.1–2.0	13 (16.25)		4 (50)	
	Above 2.0	04 (5.00)		Nil	
X_6	Total annual income (₦)				
	Below 100,000	52 (65.00)	98,070	0 (0)	
	100,000–200,000	17 (21.25)		0 (0)	
	201,000–400,000	09 (4.16)		00 (0)	
	Above 400,000	02 (2.08)		08 (100)	504,200
X_7	Educational level (years spent)				
	Below 6	10 (12.50)		0 (00)	
	6–12	22 (27.50)		0 (00)	
	13–18	39 (48.75)	15	0 (0)	
	19–24	08 (10.00)		02 (25)	
	Above 24	01 (1.04)		06 (75)	25
X_8	Years of experience (years)				
	Below 5	06 (7.50)		01 (12.5)	
	5–10	17 (21.25)		05 (62.50)	07
	11–15	51 (63.75)	11	02 (25)	
	16–20	04 (5.00)		00	
	Above 20	02 (2.5)		00	
X_9	Membership to cooperatives				
	Yes	11 (13.75)		08 (100)	
	No	69 (86.25)		00	

Source: Field Survey, 2017

respectively. This means that the farmers had higher household size than the extension agents probably because of the fact that the extension agents must have had higher adoption of family planning

Table 2: Multiple regression analysis on the determinants and influence on perception and adoption of extension technology packages in the area

Variable name	Regression coefficient	Standard error	T-value	Level of significance
Constant	2.278	0.401	5.680	***
Age	0.499	0.087	5.736	***
Gender	0.060	0.118	0.508	NS
Income level	0.013	0.011	1.180	*
Household size	0.014	0.009	1.555	**
Farm size	0.472	0.053	8.905	***
Educational qualification	0.321	0.400	0.803	*
Marital status	-0.005	0.007	−0.714	NS
F-ratio	108.31			
R^2	0.819			
Adj R^2	0.827			
Standard error of estimates	0.303			
Durbin-Watson Constant	1.420			

Source: Field Survey, 2017.

techniques than the farmers. This synchronizes with the report of Alunas (2014) in assessment of the factors impacting agricultural extension training programs in Tanzania which observed that most of the extension agents in Tanzania adopted family.

For farm size, research evidence disclosed that 63.75% of the farmers had farm size between 0.5 and 1.0 ha in scattered plots while about 50% of the extension agents had farm size of between 1.1 and 2.0 ha in scattered plots. The result further showed a mean farm size of 0.6 and 1.4 ha, respectively, for farmers and extension agents. This connotes that the extension agents had bigger farms than the farmers maybe because of their ability to hire lands for agricultural production more than the farmers who do not have much fund. This was *in tandem* with the finding of Swanson (2004) in extension strategies for poverty alleviation in a global economy which reported that extension agents have higher ability to engage in commercial farming than small scale farmers [Table 2].

The evidence from research disclosed that 65.00% of the farmers earned below ₦100,000 while 100% of the extension agents earned above ₦400,000 annually. The mean annual income of the farmers and extension agents was ₦98,070 and ₦504,200, respectively. This implied that the extension agents earned higher than the farmers in the area. This could be attributed to the fact that most of the extension agents who are enrolled in government pay row still engage in other economic activities such as farming and business to enhance their income unlike the farmers who do not receive pay from the government. This concurs with Seevers and Graham (2012) in education through cooperative extension who reported that extension agents earned higher than rural farmers in India.

The analysis on educational level divulge that 48.75% of the farmers spent between 13 and 18 years in acquiring formal education which implied that they attended secondary school education while 75% of the extension agents of spent above 24 years in acquiring formal education which signifies that they attended tertiary education. The implication was that farmers had recieved less quality education than the extension agents. This is because though farmers do not require much education to engage in farming activities, extension agents require good education to be able to carry out their duties as trainers of farmers in different agro-enterprises. This corroborates Tladi-Sekgwama and Tselaesele (2010) in agricultural extension in Botswana: Growing a hybrid over decades of selective experience who argued that extension agents require quality education as a prerequisite for effective and efficient extension service delivery to farmers in Botswana.

The research evidence was obvious that 63.75% of the farmers had been into farming for between 11 and 15 years while 62.5% of the extension agents have been into extension service delivery for between 5 and 10 years. The mean years of experience was 11 and 7 for farmers and extension agents, respectively. This implied that the farmers have spent much more time in farming than extension agents have spent in extension service delivery that does not mean that the farmers have gathered more knowledge than the extension agents since education exposes the extension agents more than the farmers. This aligns with the result of Yurttas and Atsan (2006) in agricultural extension and communication techniques in Ataturk, Turkey which reported that though farmers have spent more number of years in farming than extension agents, they still were not as knowledgeable as the extension agents who had received quality training in different agricultural enterprises.

The result on membership to cooperatives showed that all the extension agents were members of cooperative societies whereas only 13.75% of the farmers were cooperative members. The implication of this was that only a few farmers were consistently in contact with the extension agents through cooperative associations. This aligns with Place, Kariuki, Wangila, Kristjanson, Makauki, and Ndubi (2002) in assessing the factors underlying differences in group performance: Methodological issues and empirical findings from the highlands of central Kenya which reported that most of the rual farmers did not belong to cooperative societies. However, Oladele (2005) in farmers' perception of agricultural extension agents' characteristics as factors for enhancing adult learning in Mezam Division of Northwest Province of Cameroon reported that most of the rural farmers in the area were cooperative members.

DETERMINANTS AND INFLUENCE ON PERCEPTION AND ADOPTION OF EXTENSION TECHNOLOGY PACKAGES IN THE AREA

A coefficient of multiple determinations, R^2 of 81.9% was obtained from multiple regression analysis. This means that about 81.9% change in the dependent variable (adoption of extension technology packages) was caused by variations of independent variables included in the regression model. This high value of R^2 shows that the selected factors of the respondents have strong influence on their adoption level. Furthermore, the overall influence of the independent variables was shown by F-statistics which was significant at 1% level of significance. It is believed that the power of explanatory variables was not exaggerated since R^2 was closely related to R^2 adjusted in numerical value. The low value of Durbin-Watson constant indicates absence of autocorrelation in the regression model meaning that the model was well-specified because important variables were not omitted. It is therefore assumed that the forecasting power of the regression result is very high due to its statistical reliability and dependability as shown by the low value of standard error.

The coefficient of age was positive and statistically significant at 1%. This implies that any increase in the age of the farmers will increase their adoption of extension technology packages and vice versa. This does not align with the researcher's a priori expectation since increase in age may decrease the farmers' agility, zeal or interest in farming and as well lead to decrease in adoption of extension technology packages. This does not submit to the finding of Alimba (2012) which reported that older farmers are risk averse and so may not adopt improved technologies. Umeh *et al.* (2015) further opined that increase in age decreases adoption of improved rice production technologies among rural farmers in Ebonyi state.

Research finding showed that gender was positive and not statistically significant. This connotes that gender of farmers influences the adoption of extension technology packages among rural farmers in the area. This does not align with the a priori expectation given that both males and females have equal opportunities to adopt extension technology packages if they have the capacity to do so. This corroborates the report of Rosedo (2004) who opined that both males and females have equal adoption to improved technologies in India.

Income was positively signed and statistically significant at 10%. This means that any increase in the amount of annual income generated by the farmers will lead to direct increase in the adoption of extension technology packages among the farmers and vice versa. This is in sympathy with the finding of Adejoh *et al*. (2017) in assessment of the adoption of improved rice processing technologies: A case of rice farmers in the Federal Capital Territory, Abuja, Nigeria who reported that increase in income increases adoption of improved rice production technologies among farmers in Abuja, Nigeria.

Household size was positively signed and statistically significant at 5%. The meaning of this was that any increase in the household size of the farmers will directly lead to increase in the adoption of extension technology packages in the area and vice versa. This agrees with the a priori expectation since any increase in the household size of the farmers may increase their source of extension information and awareness on technology availability and thus result to increased adoption among farmers. This concurs with Okwoche, Obinne and Onugba (2011) in adoption of herbicides and fertilizers among rural farmers of Zone B area

of Kogi State Agricultural Development Project, Kogi State, Nigeria, who opined that increase in farmers' household size is an advantage to farmers' information source on fertilizer adoption in the area. However, Agwu (2006) in adoption of improved oil palm production and processing technologies in Arochukwu Local Government Area of Abia State, Nigeria, reported that increase in household size increases the farmers' expenditure and so decreases ability to pay for improved production technologies in the area.

Farm size was positively signed and statistically significant at 1%. This insinuates that any increase in the farm size of the farmers will increase their adoption of extension technology packages and vice versa. This agrees with the researcher's a priori expectation since increase in farm size leads to increase in zeal and readiness to adopt improved technologies to enhance easy production and ensure quality produce. This backs Sani, Abubakar, Yakubu, Atala and Abubakar (2014) in socio-economic factors influencing adoption of dual-purpose cowpea production technologies in Bichi Local Government Area of Kano State, Nigeria, who reported that farmers with higher farm size had higher adoption of improved technologies than those whose farm size was small.

The coefficient of educational qualification was positive and statistically significant at 10%. The innuendo is that any increase in quality of education acquired by the farmers will directly lead to increase in the farmers' adoption of extension technology packages and vice versa. This succumbs to the a priori expectation of the researcher who noted that access to quality education is an expository value which places farmers to quickly understand the usefulness of an extension technology and as such enhance adoption. This sees eye to eye with the finding of Ofuoku, Egho, Enujeke (2009) in integrated pest management adoption among farmers in Central Agro-ecological Zone of Delta State, Nigeria, who argued that increase in access to quality education increases farmers adoption of improved technologies in the area.

Marital status was negative and not statistically significant. This implied that marital status does not influence adoption of extension technology packages among the farmers. This is true with the a priori expectation since both the married, single, divorced, widowed, and separated can adopt extension technology packages if they are capable and willing to do so. This corroborates with the work of Otunaiya and Akinleye (2010) in adoption of improved maize production technologies in Yewa North LGA of Ogun state, Nigeria, which reported that marital status did not influence adoption of improved maize varieties among farmers in the area. However, Onoh and Peter-Onoh (2012) disclosed in adoption of improved oil palm production technology among farmers in Aboh Mbaise Local Government Area of Imo State that married people have higher family responsibilities to meet and so are under much pressure to adopt improved technologies to improve yield for better family enhancement.

The resultant model was presented thus,

$$Y = 2.278 + 0.4996X_1 + 0.060\ X_2 + 0.013\ X_3 + 0.014\ X_4 + 0.472\ X_5 + 0.321\ X_6 - 0.005\ X_7 + 0.592$$
$$(0.408)^* \ (0.087)^{***} \ (0.118)^{NS} \ (0.011)^* \ (0.009)^{**}$$
$$(0.053)^{***} \ (0.400)^* \ (0.007)^*$$

Test of hypothesis

The result of the F-test on the hypothesis which stated that the selected socio-economic factors of farmers do not significantly influence their adoption of ADP agricultural extension programs packages in Ivo L.G.A of Ebonyi State was presented. From appendix two, since F-cal (108.31) > F-tab (2.12), the null hypothesis was rejected and the alternative accepted. This means that the selected socio-economic factors of farmers do significantly influence their adoption of ADP agricultural extension programs packages in Ivo L.G.A of Ebonyi State.

CONCLUSION AND RECOMMENDATIONS

It was observed that socio-economic characteristics of the farmers actually influenced their adoption of such technologies. Hence, the following were recommended;

(i) Educational facilities should be made available for rural farmers to enhance easy adoption of

ADP extension technology packages to enhance production;

(ii) Government and NGOs should endeavor to subsidize the cost of ADP extension technology packages to enhance easy adoption by rural farmers;

(iii) Credit institutions are advised to give farmers loans to enhance their accessibility of ADP extension technology packages in the area;

(iv) Farmers are encouraged to register in cooperative societies as this will enhance their access to ADP extension packages in the area.

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