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RESEARCH ARTICLE

HOUSEHOLD LEVEL DETERMINANTS OF AGRICULTURAL EXTENSION PROGRAM PARTICIPATION: EVIDENCE FROM SEKOTA, ETHIOPIA

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ABSTRACT

Ethiopian agriculture is characterized by traditional and subsistence peasant farming whose access to modern technology and basic education is very limited. However,aagricultural technology is a means through which agricultural efficiency, productivity and production improvement can be made to fight against hunger and poverty. It is also noted these agricultural technology can be dissiminatd through exxpandin agricultural extension program.Therefore, the objective of this is to identified the main factos that hindes households to partcipate in the agriculyural extension program in Sekota,Ethiopia. Three stages sampling were used in which both non-random sampling and random sampling procedures was followed to select 252 respondents. The major output of the study indicates that agricultural extension program partcipation of the household was significantly influenced by dependancy ratio,household heades age,education level, remitance income, media access, social institution partcipation, land holding, livestock holding, and tabia distance from the woreda market.

INTRODUCTION

Agricultural extension work in Ethiopia began in 1931 with the establishment of the Ambo Agricultural School, which is one of the oldest agricultural institutions in Ethiopia and the first agricultural high school offering general education with major emphasis on agriculture. However, real agricultural extension work began in the early 1950 following the establishment of the Imperial Ethiopian College of Agriculture and Mechanical Arts (IECAMA, now Alemaya University) with the assistance of the United States of America under the Point Four Programs. The academic program of the College was modeled on the Land Grant College system with three fundamental but related responsibilities; training high-level manpower; promoting agricultural research and disseminating appropriate technologies. The role played by the IECAMA in developing the agricultural extension system is considerable. In fact, when the College was founded and it was given the mandate to develop and deliver a national program in agricultural extension. During the next few years, the number of extension agents increased considerably and they were stationed at posts all around the country (Belay, 2005). However, in the mid-1970s socialism was introduced as the political system of the country. Therefore, the MPP I of the imperial regime was renamed MPP II in 1981 after the renewal of the World Bank's commitment to finance the project.

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In 1984, the Peasant Agricultural Development Extension Programme (PADEP) replaced the MPP II. It differed from the MPP II projects in that it aimed to develop and disseminate appropriate technologies at the zonal level, using a training-and-visit approach. PADEP gave way to a new agricultural extension program known as the Participatory, Demonstration and Training Extension System (PADETES) in 1994/95. The main difference between PADEP and PADETES is that PADETES merges the training-and-visit approaches of PADEP with the technology diffusion system (Alemu, 2005). Since 1991, however, the government became determined to address the development issues, namely under guided or directed by the strategy of agricultural development led industrialization (ADLI). PASDEP was proposed as a remedy to rectify drawbacks observed during the implementation of packages programs. Public extension service has been as a main means of achieving these development initiatives and strategies. It emphasized better research extension linkage encouraged aggressive work in technology transfer to small holders, and made effort to strength the capacity of the extension system to disseminate research proven pre and post harvest technologies mainly on food crops (MoFED, 2006).

In order to transforming Ethiopian agriculture from its current subsistence orientation into market orientated production system, government designed various agricultural development strategies. The agricultural extension service is one of the institutional support services that have a central role to play in

the transformation process. The government and non-governmental organizations have consistently promoted use modern agricultural inputs as a yield augmenting technology. Despite this promotion, adoption of modern agricultural input rates remain very low which leads to low productivity. Therefore, the objective of this study is to identify factors that affect households' participation in agricultural extension program in Wagihimra Zone of Ethiopia.

MATERIALS AND METHODS

Data Sources

The data for the study was collected both from primary and secondary sources. The main source of primary data was the household survey. Structured questionnaire was used to collect information on various aspects of households. Pertinent secondary data were also collected from respective bodies.

Data Gathering Tools

Appropriate structured questionnaire was prepared and used to collect primary data through household survey. Detailed information on household demographic characteristics, household assets, land characteristics and management, modern input adoption and productivity data were collected by interviewing sample household heads. Before the formal survey, a preliminary survey was conducted to select sample kebeles and to collect general information about the study area and farming system. In this study, three stage sampling procedure was used. At the first stage, three kebeles out of the 33 kebeles of the study area were selected based on their agro ecology. In the second stage, the three kebeles grouped into strata i.e participant and nonparticipant category. In the last stage, a representative sample households randomly drawn from each category. Hence the data was collected from Tsemera (woinadega), Wal (dega) and Debre Birhan(kola). The data was collected mainly from a sample of 252 households' randomly selected using systematic sampling from three villages.

Method of Data Analysis

Both quantitative and qualitative data analysis techniques have been employed to analyze the data collected from primary and secondary sources. The study used statistical tools including descriptive statistics as well as econometric model for the analysis as briefly described below.

Descriptive analysis: Descriptive analysis such as percentage, average and measures of central tendencies and dispersions will be used to make analysis in the form of tables or graphs. To supplement the data collected through questionnaires, qualitative information was collected through focus group discussions and key informant interviews.

Econometrics Model: Regression models that include yes or no type of response are known as dichotomous or dummy dependent variable regression model in which the determinants of an event happening or not happening are identified. They are applicable in a wide variety of fields and are used in survey or census-type of data. Among the methods that are used to estimate such models, as indicated by Gujarati (2006) are the linear probability model (LPM), the logit model, and the probit model. These methods are used to approximate the mathematical relationship between explanatory variable and dependent dummy variable, which is always assigned qualitative values (Gujarati, 2006; Maddala, 1999). The LPM is the simplest of the three models to use but has several limitations, namely, non-normality of the error term, and the possibility of the estimated probability lying outside the 0-1 bounds. Even if these problems are resolved, the LPM is not a very attractive model in that it assumes that the conditional probability increases linearly with the values of the explanatory variables. So that the fundamental problem with the LPM is that it assumes that the marginal or incremental effects of explanatory variables remain constant throughout, which seems patently unrealistic (Gujarati, 2006).

Thus, due to the limitation of the LPM there is a need to have an appropriate model in which the relationship between the probability an event will occur and the explanatory variable is non-linear. The most common probability models that fill the identified gaps in LPM are the logit and probit models, which has the S-shaped of the cumulative distribution function (CDF). The Logit model is based on the logistic CDF where as the probit model is the normal CDF and both models guarantee that the estimated probabilities lie in the 0-1 range and that they are non-linearly related to the explanatory variables. The logistic and probit formulations are quite comparable; a chief difference being that logistic has slightly flatter tails that is a normal curve approaches the axes more likely than logistic curve. Therefore, the choice between the two is one of the mathematical convenience and matter of choosing between the cumulative distributions functions (Gujarati, 2006). To determine the relationships among socio-economic, institutional factors and extension participation the study adopts the Logit regression models containing certain explanatory variable. Following Green (2003), and Gujarati (2006), the logit model for extension participation determinant specified as follows

$$P(Y_i = 1/x) = \frac{1}{1+e^{-(\beta_i x_i)}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

For ease of the expression this can be written as follows,

$$P(Y_i = 1/x) = \frac{1}{1+e^{-(Z_i)}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where: P (Yi=1) is the probability that a household being participated in extension service, Z_i= the function of a vector of n explanatory variables, e- represents the base of natural logarithms and equation (2) is the cumulative logistic distribution function.

If P (Yi=1) is the probability of being participated in the extension program, then 1- P (Yi=0) represents the probability of being non-participant in the program and is expressed as:

$$1\text{-}P\ (Yi=1) = 1\text{-}\frac{1}{1+e^{-(Z_i)}} = \frac{1}{1+e^{(Z_i)}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

$$\frac{P\,(Yi=1)}{1-P\,(Yi=1)}=\frac{1+e^{Z_i}}{1+e^{-(Z_i)}}=e^{z_i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Equation (3.4) simply is the odds ratio, the ratio of the probability that households are participated in the extension program to the probability that they will not be participated in the program. Taking the natural logarithm of equation (3.4), we can get:

$$L_i = \ln\left(\frac{P\,(Yi=1)}{1-P\,(Yi=1)}\right) = Z_i \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

Where Li, is log of the odds ratio, which is not only linear in Xi but also linear in the parameters. Finally, by introducing the stochastic disturbance term (Ui) we get the logit model that is given as:

$$Z_i=\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_n X_n + \text{Ui} \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (6)$$

Where: X's = are explanatory variables that determines extension participation, β_0 is the constant term and β's are coefficients to be estimated. In this study, therefore, the logit model is customized by the equation (6) in order to analyze how various factors affect the households perception to participate in the extension service or not. The empirical model for extension participation is specified as follows:

P (ExtPart= 1 / x) = β_0 + β_1 Depratio + β_2 Hhheadsex + β_3 Hheadage + β_4 Hheadedleve + β_5 Remittance + β_6 Media+ β_7 Socialpart~n + β_8 Landhol1996+ β_9 Livestok1996 + β_{10} Agriequipm~t+β_{11}Tabiadiswmak+ε ………(7)

Definition of Variables used in Model

Dependant variable

In the logit model, extension participation of the household, has been designated by 1 if the household is participated in extension service and 0 if otherwise, is regressed as dependent variable with the independent variables mentioned and the hypothesized in the table below.

RESULTS AND DISCUSSION

Descriptive Analysis

The analysis and discussion part is divided in to two parts: descriptive and econometric analysis. The descriptive section tried to reveal mean, standard deviation, frequency and percentage distribution of the variables used in the econometrics analysis to give an overview of socio- economic and demographic characteristics of the respondents. In the Econometrics analysis part the factors affecting extension program participation in the study area was identified.

General Description of Socio-Economic and Demographic Characteristics

Understanding the general characteristics of sample households are important to provide bird's eye view of the general features prevailing in the study area. Therefore, an attempt has been made in the study to analyze some of the important characteristics of the sample households. The general socio-economic and demographic characteristics of the respondents are summarized in below for discrete variable as well as for continuous variable.

Family size

The study indicates that the average family size of sampled farmers were 5.37 persons who are expressed interims of family member and it ranges from a minimum of one person to a maximum of 12 persons. When we compare the two groups' family size, extension non-participant farm households have 4.62 persons on each family of which 1.02 of them were dependent on one active working population on average. In case of extension participant households the mean family size was 6.04 persons of which on average 1.14 persons were dependants on one active members of the household. This result shows that participant households had not only larger number of family sizes but also higher dependency ratio than non-participant households'. This implies extension participant households were not only supporting themselves but also more inactive family members than the non-participant households. Moreover, the t-test statistics indicates that there was a significant difference between the family size of participant and non-participant households yet dependency ratio variable has no any statistical difference between the two groups.

Sex of household head

The study revealed that 73.42% of the sampled households were male headed the rest 26.58% households were lead by females. The study compares the two groups and found 79.85% of male headed households and 20.15% of female headed households' were participated in the extension program. This result points out that more male headed households participate in the extension program rather than female headed households. On the other hand, 33.89% female headed households and 66.11% of male headed households were non-participant. Further, the □^{2} statistics also shows that there was significant difference between participant and non-participant household head sex.

Age of household head

Age of household head is one of the demographic characteristics, which has significant difference between participant and non-participant farmers, its chi square value is significant at one percent. The average age of household heads of the total respondents was 44.9 having minimum of 16 years and maximum of 87 years. The mean age of the non participant and participant household were found to be 43.72 years and 46 years respectively. The result indicates that extension participant household heads were more aged than non-participant heads.

Level of education

Education was one of the important variables, which increases farmer's ability to acquire, process and use agricultural related information. Low level of education and high illiteracy rate

Table 1. Definition, Hypothesis of Variables Used in the Model

Variable name	Type	Definition	Hypothesis
Dependency Ratio	Continuous	It is a ratio of the total number of dependant households to the total number of independent households' (active working labor force) of a family.	-/ +
Sex of Household Sex	Discrete	It takes a value 1 if sex of respondent male, 0 otherwise.	-/+
Age of Household Head	Continuous	It takes a value greater than zero	+
Head education level	Discrete	A dummy variable takes a value 1 if the respondents are literate either from formal or informal education and 0 otherwise.	+
Remittance income	Continuous	Remittance income is generated by the house hold members who live out of the village and transfer for the family	−
Media access	Discrete	A variable takes a value 1 if the household have access for media and 0 otherwise. Media access reflects those farmers who own radio have the opportunity of getting more agricultural information.	+
Social participation	Discrete	It takes a value of 1 if a household participates in social activities like edir, ekub, mahiber and 0 otherwise.	+
Landholding In 1996	Continuous	A variable that takes a value greater than or equal to zero and it refers to the area (local unit 'Tsimad') of cultivated land possessed by the respondents in 1996. NB: 1 tsimad=0.25 hectare	+
Livestock in 1996	Continuous	The total values of livestock in 1996 measured interims of at that time price.	+
Distance from Woreda Center	Continuous	A variable measured in Kilometer. Woreda is Amharic term which is the same as " district "	−

Table 2. Descriptive Statistics of Discrete Socio Economic and Demographic variable

		Non-Participant			Participant			Total			χ^2
Explanatory Variables		Obs	Freq.	%	Obs	Freq.	%	Obs	Freq.	%	
Headsex	Female	118	40	33.89	134	27	20.15	252	67	26.58	9.4***
	Male		78	66.11		107	79.85		185	73.42	
Educationlevel	Illiterate	118	80	67.79	134	81	60.44	252	160	63.49	14.7**
	Literate		38	32.21		53	39.56		92	36.51	
Mediaccess	No	118	76	64.41	134	68	50.74	252	144	57.14	13.1***
	Yes		42	35.59		66	49.26		108	42.86	
Socialparticipation	No	118	90	76.27	134	87	64.92	252	177	70.23	8.6***
	Yes		28	23.72		48	35.08		75	29.77	

*** Significance at 1% level. ** Significance at 5% level.
Source: computed from own survey 2012

Table 3. Descriptive Statistics of Continuous Socio Economic and Demographic variable

	Non-participant			Participant			Total			t test
Explanatory variable	obs	mean	Std. Dev.	obs	mean	Std. Dev.	Obs	mean	Std.Dev.	
Dependencyratio	118	1.02	09	134	1.14	.85	252	1.15	0.870	-0.61
Householdheadage	118	43.72	16.25	134	46	12.89	252	44.9	14.60	-2.11**
Remittance	118	973.6	10803	134	250.2	610.01	252	593.9	7412.8	1.33
Landholding in1996	118	3.29	3.12	134	4.35	3.220	252	3.65	3.201	-4.48***
Livestock in1996	118	1388.	1705.3	134	1725.	1231.5	252	1720.	1439.0	-4.03***

*** Significance at 1% level. ** Significance at 5% level.
Source: computed from own survey 2012

was typical in developing countries like Ethiopia (Kaske, 2007). In fact, education level of farmers assumed to increase the ability to use agriculture related information in a better way. Therefore, in this study, educational level was a variable helping to capture exposure of farmers to information and its utilization. The table 2 below indicates that more than half of the respondents (63.49%) were found to be illiterate who are not attending in any school, while the remaining 36.51% of respondents attending in schools either formal or in formal education. A comparison made between non participant and participant households head with regard to education level status, thus the study revealed that 39.56% participant households heads were found to be literate the rest 60.44% households' head were illiterate. On the other hand, from non-participant side 67.79% were uneducated or not attending any school the remaining 32.21% attends in either formal or informal school education. Education is a significant factor in facilitating awareness and to participate in different extension packages. Moreover, high literacy levels will enable farmers to

[1]Idir is a community –based institution established on mutual interest of members and its primary objective is to support
Equib =social financial groups

Table 4. Logit Regression Estimates of Coefficients and Marginal Effects associated Extension Participation Variable

Explanatory Var.	Logit estimates			Marginal effects after logit		
extenpn	Coeff.	Std.err	P>|z|	dy/dx	Std.err	P>|z|
Depratio	0.317***	0.099	0.00	0.134	0.002	0.000
Hhheadsex	0.260	0.207	0.206	0.06	0.05	0.205
Hheadage	0.012*	0.007	0.072	0.003*	0.002 0.046	0.072
Hheadedleve	0.381**	0.187	0.042	0.09**	0.00003	0.040
Remittance	-0.0003**	0.0001	0.023	-0.00006**	0.042 0.049	0.023
Media	0.424**	0.170	0.013	0.10**	0.009	0.012
Socialpart~n	0.419**	0.200	0.037	0.10**	0.00001	0.034
Landhol1996	0.089**	0.036	0.013	0.02**	0.0055	0.013
Livestok1996	0.0001*	0.00006	0.079	0.00003*	0.075	0.079
Tabiadiswmak	0.096***	0.0219	0.000	0.024***		0.000
_cons	-1.948***	.0418	0.000	-0.096		0.000
Log likelihood = -501.6410				Marginal effects after logit		
Number of obs = 252				y = Pr(extenpn) (predict)		
LR chi2(10) = 94.31				= .566653		
Prob > chi2 = 0.0000						
Pseudo R2 = 0.0739						

*significant at 10% **significant at 5% ***significant at 1%

understand the intricacies of factor and product markets easily. The χ^2 result also indicates that there was significant difference between education level of participant and non-participant households in the study area.

Land holding in 1996

The study revealed that the average cultivated landholding size of the respondents in 1996 before the introduction of the new agriculture extension program was 3.65 tsimad. It varied from households of no land to 20 tsimad. The mean total cultivated land size for non-participant households were found to be 3.29 tsimad where as the participant have had 4.35 tsimad. This implies that relatively participant households have more cultivated land than non participant households.

Livestock in 1996

The average value livestock's holding of the sampled households in 1996 (if it would have been sold at that time price) was 1720.66 birr with minimum of no livestock holding and maximum value of 9,100 Birr. About 17.17% of the respondents had not their own livestock's in 1996. The mean value of livestock of non-participant households is 1388 Birr whereas the average value livestock of participant ones is found to be 1725.49 birr. The result indicated that participant farmers were had more livestock's asset than the non - participant households when it expressed in terms of the livestock's value in period of 1996. This implies that households having more livestock in 1996 were participating in the new extension program after it introduced.

Social participation

As presented in the above table, 29.77% of the sample households were involved in different formal or informal institution association (like equib, edir,) membership and the rest 70.23% of the household were not participated in such institutions. Comparing the two groups 35.08% of extension participant and 23.72% of non-participant households were membership of these institutions. This result reveals that participant households more involved in these informal institutions than the non participant households. Social participation variable has significant difference between the extension participant and non-participant households since χ^2 value statistically significant at one percent.

Media Access

Agricultural extension requires conscious use of communication of information to and from farmers, involving agricultural policies; programs, research and education to help farming stakeholders. Here the assumption is that those respondents who own radio have a higher opportunity of getting agricultural information. The finding of the study indicated that, out of the total respondents 42.86% of the households have had media accesses however the rest 57.14%, which were more than half of the total, had not access for media. When comparing the two groups almost half of the participant households (49.26%) had media access but in case of non-participant household only 35.59% had access for media. From this result we can understand households which have access for media were highly elastic to participate in the extension service program. Related with this variable there was significant difference between participant and non-participant households.

Distance from Woreda Center

As table 3 below shows, the mean distance of the sample household from woreda center was 12.28 km which varies from 2.5 km to 29 km. The average distance of participant households was 11.35km and the average distance of non-participant households was 13.12 km. The t-test result indicates that this variable also significantly different between participant and non-participant households.

Remittance

Annual remittance income was an important variable that explains the characteristics of households in that those who have high transferred income could not probably participate in extension services. As indicated in Table 3, the average annual remittance income of the respondent was birr 593.9. When we

compare the two groups, non-participant households have higher remittance income than the participant ones but there was no significant difference with in the groups related to remittance variable

Determinants of Agriculture Extension Participation

In this section, logit model is used to identify the relative influence of different personal, demographic, socio-economic, and institutional variables of household that affects to participate in the extension service program. Before running the model a thorough diagnosis of the data and the variables under consideration has taken so as to ensure goodness of the model fit. Hence, logit model is estimated to identify determinant factors of extension participation in the study area.

The result obtained from the model shown in table 4 below contains the coefficients and the marginal effects of each explanatory variable that shows the probability of households of being participated in the extension service program. The estimation result of the binary logit regression indicates that the overall models was statistically significant, the estimation result depicts that the first second variables, i.e sex of household, was not statistically different from zero. Dependency ratio and age of household head were identified as one of the important socio-demographic factors that affect household's probability of being participated in extension service. So age of household head was included in the logit model to examine the effect of experience (as proxy variable) on extension participation.

As it was hypothesized before in variable definition part, aged household heads have better chance of being participated in the program than the younger household heads. The coefficient of head age has positive sign and significant at 10% level of significance. This result suggests the argument that the probability of farmers to participate rises when their age increases. Because when household heads becomes more aged, they learn from neighborhoods' and they accept the program through mass demonstration conducted on participant households plot. In short, farmers gain more knowledge through learning by doing. The coefficient for education level of the household head found to be positive and significant at 5% level of significance that means heads being literate has the probability of participating in the extension program. In other words, it indicates that literate households are better to participate in the program than the illiterate ones.

This was largely associated with literate households have better awareness to accept new extension packages, improved farm technologies and other livelihood opportunities than the illiterate households. In addition, they are expected to comprehend without any hesitation regarding advises from extension agents and other related workers regarding their farming activities. The result coincides with the theoretical evidences that educational improvement could lead to awareness of farmers. The finding of this study was found consistent with what had been done by Abebaw (2003).In addition, the model estimation indicates that remittance income variable was significant at 5 % level of significance with a negative sign. This indicates remittance income was one of the variables that discourage the households to participate in the extension program. The marginal effect result of remittance depicts that those households whose remittance income increases by one birr their probability of participating in the extension service decreases by 0.00006. This might be due to that the households' have more remittance income, they may leave the former occupation (agriculture sector) and they may join other occupation like trade and so on. In addition, higher remittance income leads the households to become reluctant to participation in extension service, give less attention to farm activities, and only depend on that income. The variable media access was positive and statistically significant at 5%. The marginal effect coefficient for media indicates that keeping other things held constant, for a change in the household from no media access to media access, the probability of households being participated in the program increase by 0.1.

The households who own media access have a higher opportunity of getting agricultural information and participating in the extension service program. Similarly, the marginal effect coefficient of social participation was 0.1 and significant at 5% level of significance. This implies that when farmers participate in social activities their probability of participating in the extension service increases by 0.1. Therefore, when farmers participated in social activities like ekub, edir and so on, their awareness about agricultural extension raises. Finally, this leads to the increase in the probability of the farmer to participate in the extension program. One of the determinants for extension participation of the households was total farm size and total livestock value held by the household before the intervention of the new extension program i.e. 1996. As indicated in table 4 both land holding in 1996 and livestock value in 1996 are significant at 5% and 10% significance level respectively with a positive sign. The marginal effect coefficient of landholding shows that the households that have one more tsimad in 1996 have the probability of involved in the program by 0.02. Similarly, the marginal effect coefficient of livestock unit was 0.00003 and it has the same interpretation like land holding variable. When farmers possessing more livestock value in 1996 the probability of farmers becomes participant increases that lead to farmers to participate in animal extension package. On the other hand having more plots result in the household to participate in crop production package. The variable of household distances from the woreda centers was included in the analysis to investigate the effect of proximity of the household to the woreda center on the probability of being participant in the program. The estimated coefficient of the distance of farmers to the woreda center was positive and significant at 1%. This implies that farmers far from woreda center were more participated in the extension service program relative to those that are closer to the woreda center. This resulted from farmers residing in remote area have had access to land since there exist sparsely population density in the remote area. This land access encourages the households to focus on agriculture sector in the remote area which leads to the household being participant in the extension service.

Conclusion

This study identifies that agricultural extension participation decision was strongly influenced by dependency ratio, house

hold head age, head education level, remittance income, media access , social participation, tabia distance from woreda center, land holding size and number of livestock before the intervention of the program. The empirical findings of this study, therefore, revealed that participation constraints particularly, remittance income which the farmer obtains hinder the probability of being participated in the extension program. On the other hand, the rest variables positively affect the probability of being participated in the program.

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Appendix: logit estimation for extension participation determinant Logit extenpn depratio hheadage hhheadsex hheadedleve remitance media socialpart~n landhol1996 livestok1996 tabiadiswmak ,level (90) Iteration 5: log likelihood = -501.6410 Logistic regression

				Number of obs	= 252
				LR chi2(14)	= 94.31
				Prob > chi2	= 0.0000
Log likelihood = -501.6410				Pseudo R2	= 0.0739

extenpn	Coef.	Std. Err.	z	P>|z|	[90% Conf.	Interval]
depratio	.3170845	.0996836	3.18	0.000	.1468804	.1810493
hhheadsex	.2602447	.2056068	1.27	0.206	-.0779484	.5984379
hheadage	.0117918	.0065608	1.80	0.072	.0010002	.0225834
hheadedleve	.3807111	.1869781	2.04	0.042	.0731595	.6882626
remitance	-.0002528	.0001109	-2.28	0.023	-.0004352	-.0000703
media	.4237512	.1701763	2.49	0.013	.143836	.7036664
socialpart~n	.4185057	.2001753	2.09	0.037	.0892466	.7477648
landhol1996	.0892429	.0358152	2.49	0.013	.0303322	.1481537
livestok1996	.000105	.0000598	1.76	0.079	6.62e-06	.0002034
tabiadiswmak	.0957256	.021914	4.37	0.000	.0596803	.131771
_cons	-1.947698	.4184302	-4.65	0.000	-2.635955	-1.259442

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