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Evaluation of Socio-Economic Factors Influencing Information Accessibility among Farmers in Oyo State, Nigeria

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Abstract
This study evaluated the socio-economic factor influencing information accessibility in Oyo State. Primary data were obtained from 50 farmers with the aid of structured questionnaire. The result showed that, 100% of the farmers got their information from Radio, 90% TV, 20% Friend, 30% Non-Governmental Organisation and 26% got information through their ADP. Therefore, majority of the farmers obtained their agricultural information through the Radio which indicates that information plays a vital role in the life of the farmers, especially in fertilizer application, pest and disease in crop production and economic development. The determinants of factors influencing information were age, education and extension contact. Therefore, the study recommends that farmers in Oyo State should be encouraged financially to have access to information to enhance crop production.
Keywords: Determinant, Socioeconomic factor, agricultural information, extension contact

Introduction

Realization of the objectives of nations'socio-economic development programmes depends on availability and speedy access to information through provision of relevant infrastructure as it is other element such as the transportation network. It should therefore be accorded the same level of support and priority, because it provides information on the geography of the country in terms of her asset and potentials (Kuforiji, 2004, GSDI, 2004). Increase in sharing and better access to high quality information would lead to efficient management of a natural resources and environment, resulting in the improvement of the life of the people. Information communication technology (ICT) is a major driving force in the implementation of an efficient data infrastructure among farmers in rural settlement (i.e. information about on who owns what, when, where and how). Transparent to a wide variety of information can provide good ideas and knowledge for countless applications lead to increase food production and economic development in the country. Adequate accesses to information among the farmers enhance services and market opportunities worldwide, (NASRDA, 2003). The development of information is seen as a major development towards poverty alleviation and sustainable development (UNECA, 2003). Therefore any resources that will improve agriculture will directly affect the lives of people in the continent. Information has been identified as one of the resources required for the improvement of agricultural production. It defines as data for decision-making. It is said to be a resource that must be required and used in order to make an informed decision. Those who possess appropriate and timely information will make a more rational decision than those without. According to Dervin (1996) every individual whether literate or non literate needs information in order to take decision, thus every sector of population engaged in agriculture needs information. Aina (1990) defined agricultural information as all published and unpublished knowledge on all agriculture aspect of agriculture.

Materials and Methods

The study area was Ibadan in Oyo State, Nigeria. Located approximately on longitude 3054 east of the Greenwich meridian and longitude 7023 North of the equator at a distance of about 154km North-east of Lagos. It has a total of 130km^2 and 750m above sea level (department of methodological sciences, Federal ministry of Aviation, Zonal office, Ibadan, 1989. It is located in lowland semi-deciduous forest belt of Nigeria with topography 121m to 163m above the sea level and the soil is ferruginous with underneath crystallise rock. Rainfall of the area is average 1520 min per annual. The area is suitable for cultivation of cash and root crops fruits trees and both indigenous and root crops fruits trees and both indigenous and exotic forest species. The total land size area is about 800 hectares and made up of farmers, with three hundred (300) housing units. This farm settlement is managed and controlled by the Oyo State government. The sampling frame for this study comprised of all farmers in the study area. Primary data were used for this study. These were collected with the aid of structured questionnaire. The data were collected from 50 respondents in the study area.

Analytical techniques

Descriptive statistics: this was used to describe socio-economic characteristics of the farmers and level of information accessibility. It includes frequency count and percentages.

Logit regression: this was used to identify socio-economic and institutional factors influencing information

accessibility among the farmers. The probability of respondent accessing information is determined by an underlying response variable that captures the true socio-economic status of the respondents. The underlying response variable y* in the case of binary choice is defined by the multivariate logit regression relation:

$$y^* = (-\sum X i \beta j) + \mu$$

where: $\beta_j = \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$, and $X_i = X_{i1}, X_{i2}, X_{i3}, X_{i4}, X_{i5}, X_{i6}, X_{i7}, X_{i8}$
The relevant logistic expressions are given as:

$$Prob\ (y* = 1) = 1 - F*\ (\Sigma X_i \beta_j) = \frac{e^{\Sigma X_i \beta_j}}{1 + e^{\Sigma X_i \beta_j}}$$

$$Prob\ (y* = 0) = F*\ (\Sigma X_i \beta_j) = \frac{e^{\Sigma xi\, \beta j}}{1 + e^{\Sigma xi\, \beta j}}$$

Where: F = The cumulative distribution function for $\mu_{i,...}$

$$Prob\left(Y_i = \frac{0}{\beta j} X_i\right) = F\left(-\sum X_i \beta_j\ \right), \quad Prob\left(Y_i = \frac{1}{\beta_j} X_i\right) = 1 - F\left(-\sum X_i \beta_j\ \right)$$

Where;
Y = accessibility (1= accessible, 0= no-access)
μ_i = a logistic cumulative distribution in F
X_i = characteristics of households
X_1 = Age
X_2= Education (years of formal schooling)
X_3 = Household size (number of persons in the household)
X_4 = Amount of credit received (Naira)
X_5 = Membership of cooperative (years)
X_6 = Income (Naira)
X_7 = Extension contact (Number of contacts)
β_i = The coefficients for the respective variables in the logit function

Results and Discussion
Results in Table 1 shows that farming activities are predominated by male; this may be due to religious belief, that men are more involved in agriculture than the women in the area. Table 1 further reveals age size between 40-49 has percentage of (50%), this implies that age have positive significant role in farming activities. Therefore, it indicates that farming generally is of settled minds. Also, farming activities is higher among household than the small-sized household.. This may be due to the fact that farmers with large household have many families to care for. Also, 80% of the respondents were married men while 20% were single. This shows the farming as that of settled minds and that it contributes to household economic stability in one way or the other, Amaechi (2000). Most of the respondents (80%) had secondary school education, 10% had primary education, 6%tertiary education,80% of them are literates and had one form of education or the other. Education may not prerequisite to enter into farming, but their productivity could be enhanced by some level of educational attainment. 95% of the respondents have access to agricultural information, while 5% did not have access to information. The reason for relatively greater accessibility to information may be that, this agricultural enhanced farming practices and yield production.

Table 1: Socio-economic characteristics of farmers

Variables	Frequency	Percentage (%)
Gender		
Male	50	100
Female	0	-
Age		
20-29	1	2
30-39	5	10
40-49	25	50
50-59	14	28
60 years and above	5	10
Marital status		
Married	40	80
Single	10	20
Religion		
Islam	2	4
Christianity	48	96
Others	0	-
Educational level		
Primary	5	10
Secondary	40	80
Tertiary	3	6
Qur'anaic school	2	4
Normadic Education	0	-

Farmers accessibility to information

One of the objectives of the study was to determine the extent to which farmers have access to information in the settlement. Table 2 showed that, 96% percent have access to information and 4 did not have access to information. The reason for greater accessibility to agriculture information is because; the majority of the farmers are educated and interested in improved practices to enhance their crop yield.

Table 2: accessibility of farmers to information

Variables	Frequency	Percentage
Access to information	48	96
Non-access	2	4
Total	40	100

Factors influencing information accessibility among farmers.

Results presented in Table 3 show the factors that influence the accessibility of the information in the study area. It was revealed that four out of the seven variables included in the model were significant. These variables were age, education, extension contact and membership of cooperative. Age was positive and significantly influential to the adoption of technology. This implied that as farmers increase in age the probability of access to information would also increase. The importance of age lies in its effect on the accessibility and the processing of information. This is evident that, there is a positive relationship between age and information accessibility behaviour of farmers. The coefficient obtained for education is positive and significant at 5 percent level. This implies that the higher the educational level, the more the probability that respondents would have interest in agricultural information, this is because education enhances the level of understanding. Also, the more educated a farmer, the more the chances that he/she would utilize available opportunity and accept agricultural information.

The coefficient obtained for extension contact was positive and significant at 1 percent. The implication of this is that if farmers have more contact with the extension agent. There is probability that access to information would increase. This implied that availability of extension services and information about a particular technology as well as its utilization play important role in determining level of information accessibility. The coefficient (0.447) for membership of associations was positive and significant at 5% level of probability. Membership of association can provide means of interaction with other farmers and this can also provide avenue or forum through which agricultural information can be diffused among farmers. Membership of association affords the farmers the opportunity of sharing information on modern farming practices by interacting with other farmers.

Table 3: Factors influencing information accessibility

Variable	Coefficient	Standard error	b/St.Er.
Age	0.063	0.028	2.25**
Education	0.432	0.142	3.04***
Household size	-0.251	0.523	-0.480
Amount of credit received	0.472	0.743	0.635
Membership of cooperative	0.573	0.149	3.846***
Income	0.015	0.063	0.238
Extension contact	0.171	0.023	7.434***

*** = P < 0.01 ** = P < 0.05 * = P < 0.10

From Table 3,100% of the farmers got their information from Radio, 100% TV, 20% Friend, 30% Non-Governmental Organisation and 26% got information through their ADP. Therefore, most of the farmers obtained their agricultural information through the Radio which indicates that information plays a vital role in the life of the farmers, especially in fertilizer application, pest and disease in crop production and economic development.

Table 3 Respondent's information sources

SOURCE	FREQUENCY	PERCENTAGE
Radio	50	100
TV	30	90
FRIEND	10	20
NGOS	15	30
ADP	13	26

Multiple responses

Conclusion

The result of this finding revealed that, Information communication technology is a major driving force in the implementation of an efficient data infrastructure among farmers in rural settlement (i.e. information about on who owns what, when, where and how). Transparent to a wide variety of information can provide good ideas and knowledge for countless applications lead to increase food production and economic development in the country. Also, adequate attention should be paid to farmers' socio-economic characteristics as these would be significant facilitators of information. Extension agents should be trained to understand the socio-economic characteristics of farmers which influence their level of information.

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