

ASSESSMENT OF SOCIO-ECONOMIC FACTORS INFLUENCING INFORMATION ACCESSIBILITY AMONG FARMERS AKUFO FARM SETTLEMENT IN OYO STATE, NIGERIA

FADYIN, A.S., ZACCHEAUS, O.S., *HAASTRUP, N.O., BAMIGBOYE, O.A.,
ASONIBARE, A.O., AGBOJE, I., ABU, A.T., BOLAJI, O.O. AND ORIPELAYE, O.S.

Federal College of Forest Resource Management, Fugar, Edo State, Nigeria

*Corresponding author: bobnath2013@gmail.com

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 organization and 26% got information through Automatic Data Processing indices (ADP). Therefore, majority of the farmers obtained their agricultural information through 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 coefficient obtained for extension contact was positive and significant at 1%. The implication of this is that if farmers have more contact with 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. The determinant of factors influencing information were age, education and extension contact. Therefore, there is needs for farmers in Oyo State to have access to information to enhance crop production. 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

Keywords: *Determinant, Socioeconomic factor, Agricultural information, Extension contact*

Introduction

Realization of the objectives of nation's 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. Owolabi and Ajiboye. (2014)

found that farmers in Oyo State rely heavily on radio (100%) and television (90%) for agricultural information. Extension services and NGOs play a role but reach fewer farmers (26%). Socio-economic factors such as education and income strongly influenced access and utilization highlighted that rural farmers in

Nigeria often depend on informal networks (friends, neighbors, cooperatives) due to limited institutional support. 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). Owolabi and Oke (2012) revealed in his findings that age, gender, education, and income significantly determine farmers' ability to access and use agricultural information. Younger and more educated farmers adopt ICT tools more readily. Ademola and Adepoju (2019) in a study of Oyo State farmers, income levels and cooperative membership were found to improve access to extension services and ICT-based information. Increase in sharing and better access to high quality information would lead to efficient management of the natural resources and environment, resulting in improvement of life of people.

Information communication technology (ICT) is a major driving force in the implementation of an efficient data infrastructure among farmers in rural settlement (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 leading to increase food production and economic development in the country. Adequate accesses to information among 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 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. Adebayo and Ajayi (2001) found that poor infrastructure, low literacy, and high costs hinder ICT use among farmers, though education and farm size positively influence adoption. Oluwatayo and Ojo (2018) noted that mobile phones are increasingly used by farmers in Southwest Nigeria, but affordability and digital literacy remain significant barriers. Every individual whether literate or non-literate needs information in order to take decision, thus every sector of population engaged in agriculture needs information, which is a published and unpublished knowledge on all aspect of agriculture.

Therefore, the objective of this project is to assessment of socio-economic factors influencing information accessibility among farmers Aakufo farm settlement in Oyo State, Nigeria.

Study Area

The study area was Ibadan in Oyo State, Nigeria located approximately on longitude 3054 east of the Greenwich meridian and latitude 7023 North of the equator at a distance of about 154km North-east of Lagos. It has a total of 130km² 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 crystallize 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 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 Oyo State government.



Map of Oyo State. Nigeria

Materials and Methods

Analytical Techniques

The sampling frame for this study comprised of all farmers in study area. Primary data were used for the study. These were collected with the aid of structured questionnaire. The data were collected from 50 respondents in the study area.

Descriptive statistics: was used to describe socio-economic characteristics of 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 farmers. The probability of respondent accessing information is determined by an underlying response variable that captures the true socio-economic status of respondents. The underlying response variable y^* in the case of binary choice is defined by the multivariate logit regression relation:

$$y^* = (-\sum X_i\beta_j) + \epsilon$$

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:

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

$$Prob (y^* = 0) = \frac{1 - F * (\sum X_i \beta_j)}{1 + e^{-\sum X_i \beta_j}}$$

Where: F = The cumulative distribution function for μ_i, \dots

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

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

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 women in the area. Table 1 further revealed age size of 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, according to Fadoyin *et al.* (2015). Economic capacity also determines the breadth of information channels available to farmers. Wealthier farmers and those managing larger farms often invest in ICT tools, attend training programs, and subscribe to agricultural newsletters. Conversely,

smallholder farmers with limited income depend heavily on free or low-cost sources such as radio broadcasts and community meetings. Also, 80% of the respondents were married men while 20% were single. This shows farming as that of settled minds, and that it contributes to household economic stability in one way or the other. Most of the respondents (80%) had secondary school education, 10% had primary education, 6% tertiary education, and 80% of them are literates and had one form of education or the other. Education may not be a prerequisite to enter into farming, but their productivity could be enhanced by some level of educational attainment, Education consistently emerges as a major factor influencing information accessibility. Farmers with higher levels of formal education are more likely to engage with diverse information sources, including print media, extension

bulletins, and ICT platforms. Udama *et al.* (2024) found that cassava farmers in Cross River State with secondary or tertiary education were more inclined to use mobile phones and internet resources, while less educated farmers relied primarily on radio and interpersonal

networks. 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 practice and yield production.

Table 1: Socio-economic characteristics of farmers

Variables	Frequency	Percentage (%)
<u>Gender</u>		
Male	50	100
Female	0	0
Total	50	100
<u>Age</u>		
20-29	1	2
30-39	5	10
40-49	25	50
50-59	14	28
60 years and above	5	10
Total	50	100
<u>Marital status</u>		
Married	40	80
Single	10	20
Total	50	100
<u>Religion</u>		
Islam	2	4
Christianity	48	96
Others	0	0
Total	50	100
<u>Educational Level</u>		
Primary	5	10
Secondary	40	80
Tertiary	3	6
Quranic	2	4
Nomadic	0	0
Total	50	100

Farmer 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 to information	2	4
Total	50	100

Factors Influencing Information Accessibility Among Farmers

Results presented in table 3 showed factors that influence the accessibility of 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 chances he/she would utilize available opportunity and accept agricultural information. The coefficient obtained for extension contact was positive and significant at 1%. The implication of this is that if farmers have more contact with 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 farmers 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 ≤ 0.10 ** = P ≤ 0.05 *** = P ≤ 0.01

From table 4, 100% of farmers got their information from radio, 100% TV, 20% friend, 30% non-governmental organisation and 26% got information through ADP. Therefore, most of the farmers obtained their agricultural

information through radio which indicates that information plays a vital role in the life of farmers, especially in fertilizer application, pest and disease, crop production and economic development.

Table 4: Respondent information sources

Source	Frequency	Percentage
Radio	50	100
Television	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.

References

Adebayo, O.O. and Ajayi, O.A. (2001). Socio-economic factors influencing the adoption of ICT among farmers in Nigeria. *Journal of Rural Development Studies*, 17(2): 45–56.

Ademola, A.O. and Adepoju, A.O. (2019). *Determinants of farmers' access to extension services in Oyo State, Nigeria. African Journal of Agricultural Research*, 14(5): 210–218.

Fadoyin, A.S., Ayanrinde, F.A., Baba G.O., Majolagbe, M.O., Erhabor T.A., Sulaimon, Y.D. and Musa, K. (2015). Evaluation of socio-economic factors influencing information accessibility among farmers in Oyo state, Nigeria. *Developing Country Studies*, 5(9): 43-47.

Kuforiji, O. (2004). Geospatial Information Policy Development in Africa. In proceeding of the 7th International conferences on Global Spatial Data Infrastructures, Bangalore, India.

NASRDA, (2003). Draft Geo-Information policy for Nigerian National Space Research and development Agency (NASRDA), Federal Ministry of Science and Technology Nigerian.

Oluwatayo, I.B. and Ojo, A.O. (2018). ICT adoption and use among

- farmers in Southwest Nigeria. *Journal of Agricultural Extension*, 22(3): 45–57.
- Owolabi, T.O. and Ajiboye, B.A. (2014). Information sources and utilization among farmers in Oyo State, Nigeria. *Library Philosophy and Practice*, 2014(1): 1–12.
- Owolabi, T.O. and Oke, J.O. (2012). Socio-economic determinants of agricultural information use among farmers in Nigeria. *International Journal of Agricultural Economics and Rural Development*, 4(1): 23–31.
- Udama, P.I., Edem, T.O. and Anjorin, O.D. (2024). Analysis of factors affecting accessibility of information communication technologies among cassava farmers in Obubra Local Government Area, Cross River State, Nigeria. *International Journal of Agricultural Extension and Rural Development Studies*, 11(2): 1–12.
- United Nations Economic Commission for Africa (UNECA) (2003) The future Orientation of Geo-Information activities in Africa.