**Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development**
**Vol. 21, Issue 3, 2021**
**PRINT ISSN 2284-7995, E-ISSN 2285-3952**

# DETERMINANTS OF CREDIT ACCESSIBILITY BY ARABLE CROP FARMERS IN ODO-OTIN LOCAL GOVERNMENT AREA OF OSUN STATE NIGERIA

**Ibidun Olatohun IBITUNDE, Oluwagbenga Titus ALAO, Segun Emmanuel AKINWALE**

Osun State University, Department of Agricultural Extension and Rural Development, Ejigbo Campus, Nigeria, Emails: tounibitunde@gmail.com, oluwagbenga.alao@uniosun.edu.ng, akinwalesegun123@gmail.com

***Corresponding author***: tounibitunde@gmail.com

***Abstract***

*The study assessed agricultural credit accessibility by arable crop farmers in Odo-Otin Local Government Area, Osun State, Nigeria. Multi stage sampling procedure was used in selecting 120 arable crop farmers. Primary data were collected with the aid of a well-structured interview schedule and subjected to frequency counts, percentage, mean, standard deviation, chi-square and Pearson Product Moment Correlation (PPMC) analyses. The results revealed that the mean age of the arable crop farmers was 53.04 years ± 13.48 years, majority (75.8%) were male and majority (85.8%) were married. Majority (83.3%) were at moderate level of farm credit accessibility. The major constraints to accessing credit in the study area were delay in approval/disbursement ($\bar{X}$ =4.85) and lack of collateral ($\bar{X}$ =4.58). Results of the hypothesis showed significant association between accessibility of farm credit and sex ($\chi^2$=14.219, p=0.001) and level of education, the results also showed positive and significant relationship between accessibility of farm credit and age (r=0.527; p= 0.000) and household size (r=0.426, p= 0.000) of the arable crop farmers. It was concluded that there was moderate level of credit accessibility by the arable crop farmers. Also, sex, level of education, types of arable crops grown, land acquisition pattern, age, household size, farming experience and farm size were the determinants of credit accessibility by the arable crop farmers. It was recommended that the arable crop farmers should increase their scale of farming in order to have better access to farm credit and that government should provide enough farm credit at low interest rate for the arable crop farmers in the study*

***Key words*****:** *accessibility, agricultural credit, arable crop farmers*

## INTRODUCTION

Agricultural credit refers to one of the several credit vehicles used to finance agricultural transactions. These vehicles include loans, and advances [4]. According to [13], credit is an important tool to increase agricultural productivity. Essentially because credit is a support service that enables farmers to procure inputs, hire labor and equipment, it is also perceived as an aid to agricultural transformation and economic development. Agricultural credit is needed to hasten the transformation of traditional farm practice to modern commercial farming [1].

In the same vein, [7] cited that credit is a significant sustenance facility for improved agricultural productivity. It has been observed that credit expedites adoption of innovations, bringing about additional farm productivity and income, promotes capital formation and expands marketing efficiency. It also aids farmers to procure inputs, hire labor and acquire equipment and improved seed varieties for improved agricultural production. Presumptuously, the need for credit is more acute in the rural areas because access to financial resources is decreased by low productivity and wide spread poverty of the rural farm sector. This low productivity is solely owing to the fact that they produce for subsistence consumption and a little salable excess.

In industrialized economies, households generally obtain credit against individual guarantees from commercial sources that arrive at loan decisions based on readily available information on borrowers' credit risk. However, in most developing economies poor households often do not have access to the guarantee mechanisms, such as non-real estate-based collateral. This situation,

combined with the overall lack of information about potential borrowers' credit worthiness, contributes to a virtual exclusion of this group of borrowers from formal credit markets [6].

According to [8], credit enables the entrepreneur to train the right calibre of manpower, attract skilled ones where possible and provides them with a conducive environment for optimum performance. Since trained manpower is necessary for healthy economy, illiterate and unskilled persons are highly limited in their ability to go beyond their defects, so credit provides one with the right calibre of management personnel with which the proprietor can confidently hope for a proper organization of his farm.

There are two main sources of agricultural credit, which are of the formal and informal sources [7]. In the formal credit, organizations give arbitration among investors and borrowers, and charge farmers for reasonably lesser rates of loans interest that usually are government subsidized. In informal credit, markets money is offered by private persons. The Nigerian agriculture is characterized by mainly peasant farmers and majority of these rural farmers live in the rural area and operate at subsistence level with land holding average of less than five hectares [3]. This assertion is one of the many reasons why agriculture in Nigeria is still very much at its lowest ebb. This is further compounded by several other constraints. The deterioration in the Nigerian economy, particularly in the area of agricultural productivity, has often been attributed to lack of credit services, which inhibited many farmers from adopting improved practices, since some of them lack the collateral to obtain loan or credit from financial institutions [3]. Procurement and use of credit for agricultural intentions advance productivity and therefore enhance food security status of a community. In concordance, [5] underlined low access to agricultural credit among other problems limiting agricultural productivity in Nigeria. Farming is virtually subsistence in nature in rural Nigeria, perhaps, commercial agriculture was largely absent in the areas, this is partly because most people dwelling in rural areas are poor, characterized by low income, large family size, lack of adequate formal education, low savings and investment, lack of access to credit facilities and use of crude farm implements.

Arable crop farmers have limited access (ability and entitlement to borrow from a credit source) and/or participation (the actual borrowing) in credit/loan facilities [10] resulting to inadequate production resources. These farmers are excluded from formal lending institutions to finance their small farm holdings because of the stringent conditions placed on their ways to access credit from the conventional banks [11].

Agricultural credit financing has been identified as a means of transforming the agricultural sector and revamping the Nigeria economy.

However, the difficulty of smallholder farmers who produce more than 90 percent of domestic food supply to participate in agricultural credits/loans has remained a fundamental problem.

Sub-Saharan African agriculture generally suffers this fate and this explains the socioeconomic characteristics of farmers and the nature and state of agricultural production across the African sub region.

Based on the foregoing, this study assessed accessibility of farm credit by arable crop farmers in Odo-otin Local Government Area, Osun State, Nigeria.

**Objective of the study**

The major objective of the study was to assess the accessibility of farm credit by arable crop farmers in Odo-otin Local Government Area, Osun State.

The specific objectives were to:

(i) describe the socio economic characteristics of the arable crop farmers in the study area;

(ii) determine the level of accessibility of farm credit by the arable crop farmers in the study area; and

(iii) determine the constraints to accessing agricultural credit in the study area.

**Hypothesis of the study**

There is no significant relationship between the level of farm credit accessibility and socio-economic characteristics of the arable crop farmers.

## MATERIALS AND METHODS

The study was carried out in Odo-Otin Local Government Area in Osun State. The Local Government Area has its headquarters in the town of Okuku. It has an area of 294 km² and a population of 134,110 [9]. Multi stage sampling procedure was used in the study. The first stage involved purposive selection of two wards out of the seven wards in the local government area, due to high proportion of arable farmers in the wards. The second stage involved random selection of three villages each from the two wards selected to make a total of six villages. The last stage involved random selection of twenty (20) arable crop farmers from each of the villages to make a total of 120 arable crop farmers. Primary data were used in this study. The data were collected through the use of a well-structured interview and were subjected to percentage, mean scores, and standard deviation, chi-square and PPMC analyses.

## RESULTS AND DISCUSSIONS

### Socio-economic characteristics of arable crop farmers

Results in Table 1 showed that the mean age of the arable crop farmers was 53.04 years ± 13.48 years. This implies that most of the arable crop farmers were middle-aged and were still in their productive age. This conforms to [2] that the arable crop farmers in the study area were strong and agile. The results further showed that majority (75.8%) of the arable crop farmers were male, while 24.2% of the arable crop farmers were female. This implies that farming is a male dominated enterprise in the study area. This conforms to [7] results, that male acquire agricultural credits than female. This result is also in consonance with the norm where males are expected to take control of arable crops production while the female are expected to take control of the home management. The results further showed that majority (85.8%) of the arable crop farmer were married, this implies that majority of the arable crop farmers in the study area had marital with relationships and as such have responsibilities to cater for.

Table 1. Distribution of the arable crop farmers according to their socio-economic characteristics (n = 120)

| Characteristics | Percentage | Mean |
|---|---|---|
| **Age (in years)** | | |
| ≤30 | 7.5 | **53.04 ±13.48 years** |
| 31-60 | 55.0 | |
| ≥61 | 37.5 | |
| **Sex** | | |
| Male | 75.8 | |
| Female | 24.2 | |
| **Marital status** | | |
| Single | 4.20 | |
| Married | 85.8 | |
| Separated | 0.8 | |
| Divorced | 5.0 | |
| Widowed | 4.2 | |
| **Household size** | | |
| 1-5 | 23.3 | **8 persons per household** |
| 6-10 | 54.2 | |
| 11-15 | 22.5 | |
| **Level of education** | | |
| No formal education | 9.2 | |
| Primary | 23.3 | |
| Secondary | 47.5 | |
| Tertiary | 20.0 | |
| **Years of formal education (in years)** | | |
| 0 | 9.20 | **10.0 years** |
| 1-6 | 23.3 | |
| 7-12 | 47.5 | |
| 13-18 | 20 | |
| **Farming experience (years)** | | |
| 1-10 | 36.7 | **19.9 years** |
| 11-20 | 30.8 | |
| 21-30 | 9.2 | |
| 31-40 | 10.0 | |
| Above 40 | 13.3 | |
| **Farm size (hectares)** | | |
| 1-5 | 57.5 | **5.5 hectares** |
| 6-10 | 28.3 | |
| 11-15 | 14.2 | |
| **Membership in cooperative societies** | | |
| Yes | 95.8 | |
| No | 4.2 | |

Source: Field Survey, 2020.

This might not be unconnected with reliance on the family as a source of labor, the result is consistent with [7] and [8]. The results further showed that the mean household was 8 persons, which indicates that each household had at least 8 persons as members. This implies that arable crop farmers in the study

area had medium number of households which may serves as labor in their respective occupations. The results further showed that the mean year of formal education was 10. 0 years. These results imply that arable crop farmers in the study area had good access to formal education. The results further showed that the mean farm experience was 19.9 years, this implies that majority of the arable crop farmers had been into farming for a long time and as such may be able to make optimum decision in their respective occupations. The results further showed that the mean farm size was 5.5 hectares. The results further showed that majority, (95.8%) of the arable crop farmers were members of cooperative societies, while few (4.20%) were not members of cooperative societies. The high membership may be as a result of derivation of benefit from the association.

**Frequency of access to farm credit in a year**

Results in Table 2 revealed that some, (43.30%) of the arable crop farmers accessed credit twice, 40.0 percent accessed credit once while few (16.70%) accessed credit three times in a year. This implies that the arable crop farmers had access to credit at least twice out of their time(s) of request.

Table 2. Distribution of arable crop farmers according to frequency of access to farm credit in a year (n = 120)

| Frequency | Percentage (%) |
|---|---|
| 1 | 40.00 |
| 2 | 43.30 |
| 3 | 16.70 |

Source: Field Survey, 2020.

## Level of access to farm credit

Results in Table 3 showed that only few (16.7%) of the arable crop farmers indicated high level of farm credit accessibility, majority (83.3%) indicated moderate level of farm credit accessibility and 0% indicated low level of farm credit accessibility.

Table 3. Distribution of arable crop farmers according to level of farm credit accessibility in a year (n=120)

| **Level of farm credit accessibility** | **Values** | **Percentage (%)** |
|---|---|---|
| High | > 2.49 | 16.7 |
| Moderate | Btw 2.49- and 1.05 | 83.3 |
| Low | < 1.05 | 0.0 |

Source: Field Survey, 2020.

This shows that there was moderate level of credit accessibility by the arable crop farmers.

**Constraints to accessing farm credit**

Results in Table 4 revealed that delay in approval/disbursement with a mean score of 4.85 and lack of collateral with a mean score of 4.58 were the main constraint to accessing credit in the study area, falling approximately in the strongly agreed scale. This was followed by high interest rate and unavailability of farm credit with a mean score of 4.4 and 4.3 respectively, which falls approximately in the agreed scale. Inadequate capital and lack of guarantor also have considerable scale of 3 (Undecided) with mean score of 3.84 and 3.42 respectively.

However, the least severe constraint to accessing farm credit identified by the arable crop farmers was poor harvest and distance from source with mean scores of 3.17 and 3.08 of respectively. Conformably, [7] also reported that lack of collateral and delay in approval were the main constraints to access to credit.

Table 4. Constraints to accessing farm credit (n = 120)

| **Constraints** | **Mean score** | **Rank** |
|---|---|---|
| Delay in approval/disbursement | 4.85 | 1st |
| Lack of collateral | 4.58 | 2nd |
| High interest rate | 4.4 | 3rd |
| Unavailability of farm credit | 4.3 | 4th |
| Inadequate information on farm credit | 3.84 | 5th |
| Lack of guarantor | 3.42 | 6th |
| Poor harvest | 3.17 | 7th |
| Distance from source of credit | 3.08 | 8th |

Source: Field Survey, 2020.

## Test of hypothesis

Results in Table 5 show the result of chi-square analysis of association between accessibility of farm credit and selected socio-economic characteristics of the respondents. The results show significant association between accessibility of farm credit and sex ($\chi^2$=14.219, p=0.001), level of education ($\chi^2$=11.530, p=0.073), types of arable crops grown ($\chi^2$=14.488, p=0.025) and land acquisition pattern ($\chi^2$=26.603, p=0.000).

Sex had a significant association with accessibility of farm credit. This implied that accessibility of farm credit varies between

male and female arable crop farmers. This may be due to the fact that male farmers have the tendency to have more farmland, hence get engaged in farming more than their female. This result might also be due to the fact that majority, 75.8 per cent of the respondents as observed from the study were males who might be assumed to be physically active engaging in different economic livelihood activities. This implied that the higher the number of male arable crop farmers, the higher the accessibility of farm credit.

Level of education also had a significant association with accessibility of farm credit. This implied that level of education varies among respondents with various levels of education sampled for the study; 23.3 per cent had Primary six certificates, 47.5 per cent had Secondary school certificates, and 20.0 per cent had Tertiary school certificates. This result agrees with that of [12] which revealed that access to farm credit increased with education among farmers. The implication of this result is that the higher the level of education of farmers, the higher their likelihood of accessing credit for their farm operations.

Types of arable crops grown also had a significant association with accessibility of farm credit. This implied that accessibility of farm credit varied among farmers based the types of arable crops grown. This result might also be due to the fact that maize was the most grown arable crop in the study area (42.50%). This result means that the more the arable crop farmers engage in growing maize, the higher the likelihood of accessing farm credit.

Land acquisition pattern also had a significant association with accessibility of farm credit. This implied that accessibility of farm credit varied among farmers based on their farmland acquisition pattern. This result might also be due to the fact that lease was the most employed form of land acquisition pattern in the study area (41.7%). This result shows that acquisition of land used for farming activities through lease will favour the accessibility of farm credit, meaning that the more the arable crop farmers acquire land used for farming activities through lease, the higher the likelihood of accessing farm credit.

Table 5. Chi-square analysis showing the association between accessibility of farm credit and selected socio-economic characteristics of the arable crop farmers (n=120)

| Variables | $\chi^2$ - value | Df | P-value | Decision |
|---|---|---|---|---|
| Sex | 14.219 | 2 | 0.001 | Significant |
| Marital status | 9.258 | 5 | 0.321 | Not significant |
| Religion | 1.358 | 4 | 0.851 | Not significant |
| Level of education | 11.530 | 6 | 0.073 | Significant |
| Types of arable crops grown | 14.488 | 6 | 0.025 | Significant |
| Land acquisition pattern | 26.603 | 6 | 0.000 | Significant |
| Source of farming inputs | 2.471 | 6 | 0.650 | Not significant |
| Source of farm credit | 13.607 | 8 | 0.110 | Not significant |

Source: Field Survey, 2020.

Results in Table 6 show the PPMC analysis of relationship between the accessibility of farm credit and selected socio-economic characteristics of the respondents. The results show a positive and significant relationship between accessibility of farm credit and age (r=0.527; p= 0.000), household size (r=0.426, p= 0.000), farming experience (r=0.436, p=0.000) and farm size (r=0.518, p=0.000).

Age had a significant and positive relationship with accessibility of farm credit implies that as the arable crop farmer gets older, his involvement in farming activities and his ability to access credit increases because some credit agencies will prefer to give loan to older farmers than younger ones.

Household size had a significant and positive relationship with accessibility of farm credit.

This implies that as the number of household size of the farmer increases and they get engaged in farming activities, the more the tendency of farmers to access farm credit.
Farming experience also had significant and positive relationship with accessibility of farm credit. This might also be due to the fact that most the respondents as observed from the study had relatively extensive farming experience. This implied that increase in years of farming experience will lead to increase in accessibility of farm credit.
Also, farm size had positive and significant relationship with accessibility of farm credit. This implies that the bigger the size of a particular farm, the easier for the farmer to access more credit from the credit institution. The increase in size of farm would lead to an increase in credit accessibility and in turn increase productivity.

Table 6. PPMC analysis showing the relationship between accessibility of farm credit and selected socio-economic characteristics of the arable crop farmers (n=120)

| Variables | r - value | P-value | Decision |
|---|---|---|---|
| Age | 0.527 | 0.000 | Significant |
| Household size | 0.426 | 0.000 | Significant |
| Years spent in formal schooling | -0.259 | 0.004 | Significant |
| Farming as primary occupation | -0.389 | 0.000 | Significant |
| Farming experience | 0.436 | 0.000 | Significant |
| Farm size | 0.518 | 0.000 | Significant |
| Household headship | -0.390 | 0.000 | Significant |
| Membership of cooperative society | -0.165 | 0.072 | Not significant |

Source: Field Survey, 2020.

The implication of these findings is that sex, level of education, types of arable crops grown, land acquisition pattern, age, household size, farming experience and farm size should be considered by farm credit lending institutions in granting farm credit to arable crop farmers in the study area.

## CONCLUSIONS

From the findings it was concluded that there was moderate level of credit accessibility by the arable crop farmers, delay in approval/disbursement, lack of collateral, high interest rate and unavailability of farm credit delay were major constraints to accessing farm credit. Also, based on study findings, it was recommended that the arable crop farmers should increase their scale of farming in order to have better access to farm credit, government should provide enough farm credit at low interest rate for the arable crop farmers in the study area and the arable crop farmers should organize themselves into cooperative groups in order to have short term and quick access to farm credit.

## REFERENCES

[1]Ahmad, N., 2011, Impact of institutional credit on agricultural output: A case study of Pakistan. Theoretical and Applied Economics, Vol. 10(10), pp 99-120.
[2]Amao, J. O., 2013, Determinants of credit demand among arable crop farmers in Odo-Otin Local Government Area of Osun State, Nigeria. American-Eurasian Journal of Agriculture and Environmental Science, Vol. 13(10):1382-1389.
[3]Asogwa, B.C., Abu, O., Ocheche, G.E., 2014, Analysis of peasant farmers' access to agricultural credit in Benue State, Nigeria. British Journal of Economics, Management and Trade, Vol. 4(10): 1525-1543.
[4]Chen, J., 2021, Corporate finance and accounting-debit. Investopedia.com. pp 1.
[5]Dayo, P., Nkonya, E., Pender, J. L., Oni, O. A., 2009, Constraints to increasing agricultural productivity in Nigeria: A review. International Food Policy Research Institute.
[6]Iyanda, J. O., Afolami, C. A., Obayelu, A. E., Ladebo, O. J., 2014, Social capital and access to credit among cassava farming households in Ogun State, Nigeria. Journal of Agriculture and Environmental Sciences, Vol. 3(2): 175-196.
[7]John, C. I., Charles, K. O., 2015, Agricultural credit sources and determinants of credit acquisition by farmers in Idemili Local Government Area of Anambra State, Journal of Agricultural Science and Technology, Vol. (B 5), pp. 34-43.

[8]Mgbakor, M. N., Uzendu, P.O., Ndubisi, D. O., 2014, Sources of agricultural credit to small-scale farmers in Ezeagu Local Government Area of Enugu State, Nigeria Journal of Agriculture and Veterinary Science, Vol. 7(8):01-08.
[9]National Population Commission, Nigeria (2006): National Population Commission Provisional Census figure Abuja.
[10]Okojie, C., Monye-Emina, A., Eghafona, K., Osaghae, G., Ehiakhamen, J.O., 2010, Institutional environment and access to microfinance by self-employed women in the rural areas of Edo State. NSSP Brief No. 14. International Food Policy Research Institute: Washington. D.C.
[11]Osifo, A. A., Daramola, A. G., 2016, Analysis of credit utilization and the determinants of micro-credit in arable crop farming in Edo State, Nigeria. IOSR Journal of Agriculture and Veterinary Science, Vol. (9:7): 54-58.
[12]Saqib, S. E., Kuwornu, J. K. M., Panezia, S., Ali, U., 2018, Factors determining subsistence farmers' access to agricultural credit in flood-prone areas of Pakistan. Kasetsart Journal of Social Sciences Vol. 39, pp. 262-268.
[13]Yusuf, H. O., Ishaiah, P., Yusuf, O., Yusuf, H. A., Shuaibu, H., 2015, The Role of Informal Credit on Agriculture: An Assessment of Small Scale Maize Farmers Utilization of credit in Jemaa Local Government Area of Kaduna State, Nigeria. American Journal of Experimental Agriculture, Vol. 5(1), p. 36.