



Credit Access among Arable Crop Farmers in Ondo State, Nigeria. Implication for Agricultural Productivity Enhancement

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The study assessed credit access among arable crop farmers in Ondo State. A three stage random sampling techniques used in selection of respondents. Primary data were collected using structured questionnaire and analyzed using descriptive and inferential statistics. The bulk of farmers were in the age range of 40-49, with a mean age of 40 years. There was a higher percentage of female farmers (55%) compared to male farmers (45%). Most respondents had household sizes of 4-6

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members. A significant portion of farmers (80.8%) had applied for loans, primarily from Cooperative Societies. Challenges to credit access included lack of collateral, high interest rates, lengthy loan approval processes, limited access to credit, inadequate financial literacy, unclear loan requirements, insufficient loan amounts, lack of farmer support, and inflexible repayment terms. The coefficient for age is 0.007, which advocates that for each extra year of age, there was a positive increase in credit access. The negative t-value of -6.255 and the p-value of 0.000 of the sex indicate that this relationship was statistically significant. The negative t-value of -3.687 and the p-value of 0.000 for marital status indicates that this relationship was statistically significant at 5% level of probability. The result showed that education (p-value of 0.000) has significant relationship with credit access. Based on the findings, it is recommended that government should develop and implement educational programs to enhance financial literacy among farmers. Strengthen and support existing cooperative societies, as they emerged as a significant source of credit.

Keywords: Agricultural enhancement; arable crop; credit access; farmers; productivity introduction.

1. INTRODUCTION

A variety of yearly crops are produced through the practice of arable farming. Accordingly, the crop life cycle from germination to seed production is finished in a year. Arable crops come in a diverse varieties depending on the purpose. These include: wheat, maize, rice, barley, proso millet, lentil, beans, peas, rapeseed, soybean, sunflower, cowpea, clovers, timothy, cotton, jute, flax, potato and yam. Despite the fact that just roughly one-fifth of Africa's GDP and half of its exports are derived from agriculture, over two thirds of the population lives in rural areas, where more than 85% of people rely on agriculture for a living (World Bank, 2014). Therefore, it is believed that the key to escaping poverty is to increase the productivity, profitability, and sustainability of cultivating arable crops. In economics and finance, credit is used specifically to refer to the faith placed by lender in a borrower by extending a loan to the borrower. The scholar Emaziye and Ogisi (2017) reported that there are two broad sources of credit to agriculture namely, traditional or informal source and the formal or Institutional source. Traditional source includes saving scheme locally known as esusu, money lender, friends and relatives which are fast and effective in disbursement of money to farmers. The central bank of Nigeria (CBN) observed that institutional credit source provide services to about 35% of the economically active population leaving the remaining 65% at the mercy of the informal credit sources (Isiorhovoja 2012 and CBN, 2005). Enhancing Financial Innovation and Access (EFInA) (2018) notes that 23 % of the adult population in Nigeria has access to formal financial institutions, 24 percent to informal financial services, while 53 percent are financially excluded. Credit acquired by the small holder

farmers can be used to purchase inputs, hire labor, meet storage needs, land clearing needs, and purchase equipment, children's school fees. In an attempt to alleviate the hardships of farmers and escalate agricultural output to advance the country's balance of payment deficit, farmers' co-operatives and other associations were formed with the view of providing credit (Emaziye, 2022). However, these measures have not achieved any appreciable success in providing dependable and adequate sources of credit for the small-holder farmers. This is due to small-holder farmers are scattered over mostly inaccessible rural areas, making it quite difficulty in farmers to access credit facility. The importance of small-holder farmers in the economic development of Nigeria, especially in Delta State, has manifested in the provision of food, personal income, shelter, clothing, raw materials and others (Tawaih, 2020). A high percentage of Nigeria labour force (75%) engaged in this small-scale farming. These farmers who provide all these important functions are faced with the problem of low capital and need access to credit to improve their production. Small scale farming development implies increase in the farming effort which naturally calls for increased capital investment in procurement of adequate quantity and quality of farming inputs. However, low income accruing to small scale farmer is a well-recognized constraint (Obidozie, 2016). Thus, farmers who do not have alternative sources of financing resort to burrowing in the form of credit. These programmes were geared towards monetarization of the rural society leading to its transformation from traditional isolation, to integration with national economy. In pursuance of this broad objective, government tried several programmes, approaches and strategies in order to make funds accessible to small-scale farmers

in the rural areas (Ehigiamusae, 2020). Government also gives encouragement to these small scale farmers to form co-operative societies to improve their financial base but despite these efforts at both Federal and State levels, credit among these small-scale farmers are still not accessible. Farmers are still found looking for credit to purchase farming inputs and to pay labour. The loan terms and conditions are still not favorable. This study is therefore designed to analyze access to credit among small-scale farmers.

The stated objectives were to:

- i. Ascertain the socioeconomic characteristics of the small-holder farmers
- ii. Ascertain the type of credit institution available to small-holder farmers
- iii. Determine the level of farmers awareness for the sources of credit among small-holder farmers in small-holder farmers
- iv. Determine the strategies involve in accessing credit
- v. Examine the factors influencing farmers' access to credit.
- vi. Ascertain the challenging facing small-holder farmers.

The outcome will help in boosting the existing literature on farmers loan access.

2. MATERIALS AND METHODS

This study was conducted in Ondo state due to its inhabitants engaging in a variety of economic farming activities such as cocoa, yam, cassava, maize, and vegetables being grown. It is situated between longitude 5.1478° E and latitude 6.9149° N with a population of about 5.3 million persons and land area of 15,500 square kilometre (NPC, 2016). A three stage random sampling techniques used in selection of respondents. Stage I involved random selection of 5 Local Government Area followed by Stage II involved random selection of ten (10) communities giving 50 communities. Lastly 5 farmers each were randomly selected from the communities giving a total of 250 farmers. Primary data were collected using structured questionnaire and analyzed using descriptive and inferential statistics.

3. RESULTS AND DISCUSION

3.1 Socio-economic Characteristics of Farmers

The result in the Table 1 shows that bulk of the farmers fall within the age range of 40-49, with a

mean age of 40 years. This result implies that older farmers need more credit for farming operation. Also, the mean age of farmers which is 40 years is in agreement with Emaziye *et al.* (2022) who stated that the active farming age for Nigerian farmers was 41years, implying a certain level of demand for credit but in agreement with Emaziye *et al.*, 2023 that average rural farming age is 40 – 47 years. The result indicates that there is more female arable crop farmers (55.2%) compared to male farmers (44.8%). This could have implications for gender-specific interventions in agriculture and rural development (Adesina and Djato, 2017). The result also affirmed that bulk of the respondents have small households size of 4-6 members, with a mean of 5 members. Larger households may have more labor available for farming activities but might also face greater resource demands. The family size of the respondents is in contrast with the finding of Nmadu, *et.al.* (2011), that farmers maintained large family size and concluded that large size of respondents seemed to encourage seeking knowledge about the availability of credit. It further indicates that most arable crop farmers were married (52.4%) with secondary school education status. The distribution shows that a significant portion has secondary education. This is positive as higher education levels can contribute to improved farming practices, adoption of new technologies, and better decision-making. This finding corresponded with Balogun *et al.*, (2007), who stated that the average level of education among farmers was secondary education. Idiong *et al.*, (2006) and revealed that education facilitates the acquisition and utilization of appropriate technology. The result indicates that majority of the farmers have 12years farming experience. Experience can lead to better knowledge of local conditions, improved techniques, and better risk manageme. The result in Table 1 shows that most farmers have small to medium-sized farms (0.5-2.4 hectares) with a mean of 1.8 farm sizes. This is common in subsistence agriculture, which might indicate limited access to resources for expansion.

3.1.1 Membership of cooperative

The result shows that 66.0% of farmers are members of a cooperative. Cooperative membership can provide access to collective resources, shared knowledge, and market opportunities. According to Ibitunde *et al.*, (2021) the high membership may be as a result of derivation of benefit from the association. The

result shows that majority of the arable crop farmers (90.8%) have no contact with extension agents. This indicates lack of access to agricultural advice and information, which can lead to poor arable crop production. The result implies that, the extension program within the study area is inactive which in agreement with Emaziye *et al* (2022) that inadequate extension contact is major concern to farmers. The result indicates that most farmers either rent land (59.2%) or have purchased it (29.2%). This indicates that land access might be a challenge for some, impacting their ability to invest in long-term arable crop investment. The results

shows that family labor is the primary source of labor (48.4%), followed by hired labor (34.0%). Family labor might reduce costs, but hired labor can bring specialized skills. The result shows that significant portion of farmers (80.8%) have applied for loans. This indicates a need for external capital, possibly for investment in inputs, equipment, or other farming-related activities. The result shows that substantial numbers of loan applications (46.8%) were approved. The average approved loan amount is 279,275.3, which could suggest that these loans were being used for moderate-sized investments.

Table 1. Distribution of respondents according to socio-economic characteristics

Parameter	Frequency	Percentage	Mean
Age			
20-29	33	13.2	
30-39	77	30.8	
40-49	106	42.4	40 years
50-59	29	11.6	
Above 60	4	1.6	
Sex			
Male	112	44.8	
Female	138	55.2	Female
Household size			
1-3	90	36.0	
4-6	102	40.8	
7-9	46	18.4	5 perons
Above 10	12.5	5.0	
Marital status			
Single	81	32.4	Married
Married	131	52.4	
Divorced	27	10.8	
Widowed	10	4.0	
Educational status			
No formal edu	56	22.4	
Primary edu	60	24.0	
Secondary edu	85	34.0	Secondary school
Tertiary edu	48	19.2	
Years of farming experience			
Less than 5	27	10.8	
6-10	73	29.2	
11-15	90	36.0	12 years
Above 16	60	24.0	
Farm size (ha)			
0.5-1.4	108	43.2	
1.5-2.4	85	34.0	
2.5-3.4	35	14.0	1.8
Above 3.5	21	8.4	
Member of cooperative			
Yes	165	66.0	Yes
No	85	34	
Contact with extension worker			
Yes	6	2.4	
No	244	97.6	No

Parameter	Frequency	Percentage	Mean
Contact with extension worker			
Weekly	0	0.00	
Monthly	2	0.8	
Quarterly	8	3.2	
Yearly	13	5.2	Never
Never	227	90.8	
Land acquisition			
Purchased	73	29.2	
Rented	148	59.2	Rented
Inherited	29	11.6	
Source of labour			
Family	121	48.4	Family labour
Hired labour	85	34.0	
Both hired and family	44	17.6	
Have u applied for loan			
Yes	202	80.8	Yes
No	48	19.2	
How much did you apply for			
000-199,000	63	25.2	
200,000-399,000	88	35.2	
400,000-599,000	33	13.2	N607.500
Above 600,000	25	10.0	
Was it approved			
Yes	117	46.8	
No	133	53.2	No
How much did you receive			
0-199,000	60	24.0	
200,000-399,000	88	35.2	
400,000-599,000	33	13.2	N279,275.3
Above 600,000	4	1.6	
What is the source of the loan			
Commercial Bank	40	16.0	
Cooperative bank	58	23.2	Cooperative
Osusu	48	19.2	
Friends	58	23.2	

Source: field survey data

Table 2. Type of credit institution available

Type of credit institution	Frequency/percent	Rank order
Commercial Banks	78(17.8%)	2 nd
Microfinance Banks	77(17.6%)	3 rd
Agricultural Development Banks	38(8.7%)	6 th
Agricultural Credit Guarantee Scheme Fund (ACGSF)	33(7.6%)	7 th
Cooperative Societies	89(20.4%)	1 st
Non-Governmental Organizations (NGOs)	24(5.5%)	8 th
Rural Finance Institutions (osusu)	57(13.0%)	4 th
Agricultural Inputs Suppliers	41(9.4%)	5 th

Source: (Field Survey, 2013)

3.1.2 Distribution of respondents according to the type of credit institution available

The result of the credit institution available to arable crop farmers in Akure North L.G.A is presented in Table 2. The result shows that Cooperative Societies ranked 1st most available

credit institution while commercial bank ranked 2nd, microfinance bank ranked 3rd, Rural Finance Institutions (Osusu) ranked 4th, Agricultural Inputs Suppliers ranked 5th, Agricultural Development Banks ranked 6th, Agricultural Credit Guarantee Scheme Fund (ACGSF) ranked 7th and Non-Governmental Organizations

(NGOs) ranked 8th. The result implies that Cooperative Societies credit institution was the most accessible credit institution to the farmers. The scholar Emaziye (2020) showed that cooperatives is a viable mechanism for source of credits in rural farming households.

3.2 Level of Farmers' Awareness for Sources of Credit

The result presented mean (2.3) of arable crop farmers in the study area were aware of Commercial Banks credit institution. The mean result also shows that bulk of the respondent were aware of Microfinance Banks (2.4), Cooperative Societies (2.6), Rural Finance Institutions (Osusu) (2.4). However, some of the respondent indicated they were not aware of Agricultural Development Banks (1.9),

Agricultural Credit Guarantee Scheme Fund (ACGSF) (1.8), Non-Governmental Organizations (NGOs) (1.5), Agricultural Inputs Suppliers (1.5) as a source of credit institution. This affirmed the work of Ogisi and Emaziye (2015) that major sources of credits to rural farming households is personal savings and Osusu.

3.3 Strategies Involve in Accessing Credit

Table 4 indicates the strategies involve in accessing credit. The result shows that provision of guarantor (3.2) is an efficient strategy involve in accessing credit and also the supply of collateral (3.4), payment of interest in due time (3.5) are efficient strategies involve in accessing credit institution while the supply of transaction records of previous produces (2.3) is considered an inefficient strategy in accessing credit.

Table 3. Level of farmers' awareness for sources of credit

Sources of credit	Much aware	Aware	Not aware	Mean	Remark
Commercial Banks	78 (65.0)	16 (13.3)	26 (21.7)	2.3	Aware
Microfinance Banks	65 (54.2)	37 (30.8)	18 (15.0)	2.4	Aware
Agricultural Development Banks	38 (31.7)	31 (25.8)	51 (42.5)	1.9	Not aware
Agricultural Credit Guarantee Scheme Fund (ACGSF)	29 (24.2)	32 (26.7)	59 (49.1)	1.8	Not aware
Cooperative Societies	76 (63.3)	35 (29.2)	9 (7.5)	2.6	Aware
Non-Governmental Organizations (NGOs)	22 (18.3)	19 (15.8)	79 (65.8)	1.5	Not aware
Rural Finance Institutions (Osusu)	53 (44.2)	56 (46.7)	11 (9.1)	2.4	Aware
Agricultural Inputs Suppliers	34 (28.3)	39 (32.5)	47 (39.2)	1.9	Not aware

Source: Field Survey data

Note: Mean above 2 is Aware. Mean below 2 is not aware

Table 4. Strategies Involve in Accessing Credit

Strategy	NVE	NE	E	VE	Mean	Remark
Provision of guarantor	12 (10.0)	6 (5.0)	52 (43.3)	50 (41.7)	3.2	Efficient
Supply of transaction records of previous produces	8 (6.7)	10 (8.3)	48 (40.0)	58 (45.0)	2.3	Not efficient
Supply of collateral	4 (3.3)	0 (0.0)	60 (50.0)	56 (46.7)	3.4	Efficient
Payment of interest in due time	2 (1.7)	2 (1.7)	52 (43.3)	64 (53.3)	3.5	Efficient

Source: Field Survey data

Note; means above 2.5 is efficient while below 2.5 is inefficient. Not very efficient strategy (NVE), Not efficient strategy (NE). Efficient strategy (E) and Very efficient strategy (VE)

3.4 Challenges Facing Small-holder Farmers

The results shows that lack of collateral (2.8), high interest rate (3.2), lengthy loan approval process (3.0), limited access to credit (3.1), inadequate financial literacy (2.8), unclear loan requirements (2.7), insufficient loan amounts (2.7), lack of farmer support (3.1) and inflexible repayment terms (3.1) are serious challenges facing small holder farmers in accessing credit in Ondo State while discrimination (2.3) was not identified as serious challenge to credit access. Conformably. Ibitunde *et al.*, (2021) 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 Odo-Otin Local Government Area of Osun State. These were collaborated by

Emaziye and Emaziye (2022) that inadequate funds to save was a major constraint to rural farming households.

3.5 The Regression Analysis

The results indicated that the coefficient for age is 0.007, which advocates that for each extra year of age, there was a positive increase in credit access. The negative t-value of -6.255 and the p-value of 0.000 of the sex indicate that this relationship was statistically significant. The negative t-value of -3.687 and the p-value of 0.000 for marital status and extension agent indicates that their relationship was statistically significant at 5% level of probability respectively. The result showed that education (p-value of 0.000) has significant relationship with credit access.

Table 5. Challenging Facing Small-Holder Farmers

Constraint	Very serious	Serious	Not serious	Not very serious	Mean	Remark
Lack of Collateral	7(5.8)	22(18.3)	40(33.3)	51(42.5)	2.8	Serious
High Interest Rates	6(5.0)	21(17.5)	40(33.3)	53(42.5)	3.2	Serious
Lengthy Loan Approval Process	11(9.2)	22(18.3)	41(34.2)	46(38.33)	3.0	Serious
Limited Access to Credit	7(5.8)	23(19.2)	40(33.3)	50(41.7)	3.1	Serious
Inadequate Financial Literacy	9(7.5)	25(20.8)	39(32.5)	47(39.2)	2.8	Serious
Unclear Loan Requirements	25(20.8)	29(24.2)	27(22.5)	39(32.5)	2.7	Serious
Insufficient Loan Amounts	25(20.8)	29(24.2)	27(22.5)	39(32.5)	2.7	Serious
Lack of Farmer Support	14(11.7)	18(15.0)	43(35.8)	49(40.8)	3.1	Serious
Inflexible Repayment Terms	14(11.7)	18(15.0)	43(35.8)	49(40.8)	3.1	Serious
Discrimination	33(27.5)	37(30.8)	28(23.3)	22(18.3)	2.3	Not serious

Source: Field Survey data

Note; means above 2.5 is serious constraint while below 2.5 is not a serious constraint.

Table 6. There are no significant differences between the socioeconomic characteristics of the farmers and credit access

Explanatory Variable	P-value	t.stat
Constant	232 (0.311) ***	6.835
Sex	0.058(0.000)**	-6.255
Household Size (Persons)	0.184 (0.181)	2.246
Extension Agent	0.060(0.000) **	1.750
Farming Experience	0.760 (0.124)	5.032
Age (Years)	0.132 (0.007) **	1.863
Marital Status	0.173 (0.000) **	-3.687
Educational Status	0.172(0.000) **	1.653

R-squared = 0.887; Adjusted R2 = 0.876; F. Statistics = 248.651;

Note: *, ** and *** represent significance level at 10 %, 5 %, and 1 % respectively;

4. CONCLUSION AND RECOMMENDATIONS

The study highlights the importance of credit access for arable crop farmers in Ondo State. Various socio-economic factors such as gender, marital status, education, and membership in cooperatives influence farmers' ability to access credit. While some challenges hinder credit access, cooperative societies emerged as a primary source of credit. Addressing challenges like lack of collateral and improving financial literacy can enhance farmers' credit access. Education plays a crucial role in improving access to credit, leading to better farming practices and decision-making. It therefore recommends improvement of credit access and enhance agricultural productivity among arable crop farmers and development and implementation of educational programs to enhance financial literacy among farmers. Strengthen and support existing cooperative societies, as they emerged as a significant source of credit. Finally to revitalize extension services in providing farmers with agricultural advice, training, and information which will lead to improved farming techniques and increased productivity.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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