

**Determinants of Access and Use of Credit From Bank of Agriculture ((Boa) by the Farmers' Cooperative for Increased of Food Output in Abia State.****Fortune, N. Agu Aguiyi Ph.D.<sup>1</sup> & Umebali, E.E Ph.D<sup>2</sup>**<sup>1</sup> Micheal Okpara University of Agriculture Umudike<sup>2</sup>Nnamdi Azikiwe University Awka**ABSTRACT**

*The study focused on the determinants of credit access among farmers' cooperative clients of Bank of Agriculture (BOA) in Abia State". Famers are financially poor and find it difficult to finance their farm production. The objectives of the study were to describe the socio-economic characteristics of the cooperators, determine the difference in the amount of credit applied for and amount disbursed, estimate the institutional factors of BOA influence credit access by farmers cooperatives, describe institutional and organizational factors influencing access to credit and challenges faced by cooperative farmers and BOA in the delivering and assessment of farm credit. A multi stage sampling technique was employed in the determination of a sample size of 60 respondents. Structured questionnaires were used to solicit data from the sample population. Statistics tools such as mean, frequency, percentage and ordinary least square were used to analyze the data collected. Multiple regressions was used to analyze the factors that influences the use of credit among cooperative farmers. Result obtained from the socio-economic characteristics of the respondent shows that 48.3% were males while 51.7 were females. The farmer's age ranged from 20 to 60 years with a mean age of 29.5 years. Result of 9 our 12 factors were significant. Based on the findings, it was recommenced that, cooperative farmers in the study area needs urgent attention in terms of accessing credit from BOA, more should be done by the government or BOA to make loans more accessible for those farmers who need it at subsidized rate, the farmers should deem it necessary to belong to a cooperative society. As cooperatives can aid in accessing credit from BOA and the farmers' cooperative should have a good knowledge of the procedures and conditions applied in obtaining credit from BOA in order not to make mistake.*

**INTRODUCTION**

Today, there is a growing need advocate for achieving not only sustainable food security in Nigeria but expanding market for agricultural produce, produced in commercial quantities. Indeed, a lot of efforts have been directed at funding appropriate institution for organizing million of small scale farmer towards achieving optional productivity ( Anyanwu 2004).

Credit plays a vital role in economic transformation and rural development. In agricultural production, farm credit is a crucial input required by co-operative farmers to establish and expand their farms with the aim of increasing income of their members and the nation in general while augmenting the individual borrower's ability to repay borrowed funds. Access to credit is required as one of the key elements in raising agricultural productivity Ojiako and Ogbukwa (2012).

Credit enables the poor farmers to tap the financial resources and take advantage of the potential profitable investment opportunities in their immediate environment, Zeller and Sharma (2006). The use of credit has been envisaged as one way of promoting technology transfer, while the use of recommended farm inputs is regarded as key to agricultural development.

While credit to the agricultural sectors remains a veritable tool for agricultural transformation and economic growth, credit repayment is of paramount important to have viable financial institutions. Despite the importance of credit, many of the farmers do not have sufficient access to credit from formal financial institutes.

Their major source of finance, especially at the start up stage, is the informal sector (i.e. from friends, relative's local money lenders, e.t.c).

### **Statement of the problem**

The poor credit access from formal financial source, based on the experience of some developing countries, arises partly from biased government policy, due to the operational practices and procedures of the formal financial institutions and the internal problems of farmers cooperative themselves.

Given the income level of the average small holder farmers in Nigeria and the constraints in access credit, it is believed that farm credit is an indispensable tool for achieving socio-economic transformation of the rural communities. If well applied, it could stimulate capital formulation and diversified agriculture, increased resource productions in farming marketing efficiency and value addition while enhancing net farm incomes Nwagbo (2009). Despite the acclaimed importance of credits for agribusiness promotion in Nigeria, empirical studies have shown that their management and repayment have been burdened with numerous challenges(Awoke 2004; Lobi 2010; Oboh and Ekpebu 2011).

Adegeye and Dittoh (2005) describe agricultural credit access as the process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at a future date.Imouduand Onaksapnome (2006) contended that agricultural loan is a crucial input in small holder agriculture because it enables cooperative to establish and expand their farms as this would increase their income and ability to repay the loan.

The crucial role of credit in agriculture production and development can also be appraised from the perspective of the quality of problems emanating from the lack of it. In modern farming business in Nigeria most especially in Abia State, provision of agricultural credit is not enough but efficient use of such credit has become an important factor in order to increase productivity. Credit is not only needed for farming purpose, but also for family and consumption expenses especially during the off season period. Credit has also been discover to be a major constraint on the intensification of both large and small scale farming Von-Pischke (2006). High interest rate is also a problem.

Bank of Agriculture (BOA), is Nigeria's premier agriculture and rural development finance institution, 100% wholly owned by the federal government of Nigeria. The ownership structure is – Central Bank of Nigeria (CBN) 40% and Federal Ministry of Finance Incorporated 60%. Bank of Agriculture Limited is supervised by Federal Ministry of Agriculture.

The Bank was incorporated as Nigeria Agriculture Bank (NAB) in 1973 and in 1978, was renamed Nigeria Agricultural and Cooperative Bank (NACB). Subsequently in 2000, it was merged with the people's Bank of Nigeria (PBN) and took over the risk assets of family Economic Advancement Programme (FEAP) to become Nigeria Agricultural Cooperative and Rural Development Bank Limited (NACRDB), a name that has always been considered too long and unwieldy. A plan to reposition the Bank into an effective and sustainable national agricultural and rural development finance institution in 2010 led to a further name change to Bank of Agriculture Limited (BOA).

### **Objectives of the study**

The broad objective of this study is to study the determinants of access and use of credit from BOA by the farmers cooperatives for increased food output in Abia State. The specific objective are to:

1. study the socioeconomic characteristics of the farmers.
2. study the factors influencing cooperative access to credit.
3. determine institutional factors influencing cooperative farmers access to credit.
4. determine the factors influencing the use of credit
5. identify the problems facing cooperative in accessing credit
6. make policy recommendations based on the findings.

### **Research methodology**

#### **Area of study**

The study was conducted in Abia State. The state is located in the south part of Nigeria. The capital is Umuahia and the major commercial city is Abia.

Abia State lies within approximately latitude of 04 40' and 60 14' north and longitude 07 10' and 80 east. It covers about 5,243.7km square which is approximately 58% of the total land area of Nigeria.

Abia State is bounded on the north and north east by Anambra, Enugu and Ebonyi states, to the west of Abia State is Imo Stat, to East and South East are cross River State and Akwa Ibom State and to the South is Rivers state.

Abia is one of the nine constituent's states of the Niger Delta Region. Its population stood at about 2,833,999 person with a relatively high density of approximately 450 persons per square Kilometer (NPC, 2007).

Abia State has 17 Local Government Areas which are grouped into three zones, namely; Ohafia, Umuahia, and Aba zones. In terms of occupation, about 70% of Abians are farmers (ABSG, 1992).

### **Sampling Technique and sample size**

A multistage random sampling adopted in sampling for the location and respondents. The study consists of two sets of population which is the total number of credit officers in BOA and the cooperative farmers who are the clients of BOA. The credit officers of the Bank of Agriculture (BOA) were twenty while a total number of sixty were respondents from the farmers of cooperative who are the clients of BOA. The president, secretary, treasurer and a member of the management committee was purposively selected for the study because they represent the group especially in items of assessing BOA credit. They are also in charge of processing and allocation of the credit disbursed to the cooperative societies. The farmers cooperative society were randomly selected for the study. The total sample size for this study was sixty respondents.

### **Data Collection**

The data were collected from both primary and secondary sources. The primary data were collected using structured questionnaire. Secondary data were collected from publications such as a journal, textbooks and internet.

### **Analytical Techniques**

Different analytical tools were used to analyze various objectives of the study.

Objective 1, 5 and 6 were analyzed with descriptive statistics tools, while objective 2, and 3 were analyzed using four point adjusted likert summative scale. The mean of the response value which is 2.5 was taken as the cut-off point. A mean response between 2.5 and above was regarded as positive while a mean score below 2.5 was regarded as negative. Objective 4 was analyzed using regression.

Z-test was used to test hypothesis generated in this study.

### **Model Specification**

Formula for Z-test

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

DF = n-1

Where;

$\bar{X}_1$  and  $\bar{X}_2$  = Sample mean

$S_1^2$  and  $S_2^2$  = Standard deviation

$N_1$  and  $N_2$  = sample size

DF = Degree of freedom

The linear regression model of the ordinary least square (OLS) approach was used for objective 3.

The model is implicitly specified as follows;

$$Y = f( X_1, X_2, X_3, X_4, \dots, X_n, e_i)$$

The model is explicitly specified as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5$$

$$X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 \dots \beta_n X_n + e_i$$

Exponential

$$\text{Log } y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \dots \beta_n X_n + e_i$$

**Double log**

$$\text{Log } y = B_0 + B_1 \text{Log} X_1 + B_2 \text{Log} X_2 \dots B_n \text{Log} X_n + e_i$$

Semi- log

$$Y = B_0 + B_1 \text{Log} X_1 + B_2 \text{Log} X_2 + B_3 \text{Log} X_3 \dots B_n \text{Log} X_n + e_i$$

Where:

B = Intercept

Y = access to BOA Loans (₦)

B1-B8 = Regression coefficient

e<sub>i</sub> = error term

X1 = Age of farmers (yrs)

X2 = Level of education

X3 = Duration of membership (yrs)

X4 = Membership size (number of persons)

X5 = Gender (Dmmy variable; 1 = Male, 0 = Female)

X6 = Household size (no)

X7 = Distance to credit source (km)

X8 = Interest rate (%)

a = Constant term

## Results and Discussion

### Social-economic characteristics of the respondent

Social economic characteristics were examined, gender, age, marital status, education, farming experience, farm income, non- farm income, household size, membership of cooperative, number of extension contact etc.

### Gender

**Table 4.1** Distribution of Respondents According To Gender

Gender	Frequency	Percentage (%)
Male	29	48.3
Female	31	51.7
Total	<b>60</b>	<b>100</b>

Source: field survey, 2017

Table one showed that 29 respondents accounting for 48.3% who were farmers cooperative were males while 31 respondents which account for 51.7% were females. This implies that there were more female farmers of cooperative than male counterpart and are ready to work.

### Age

**Table 4.2 Distribution of Respondents According to Age**

Age	Frequency	Percentage	Mean
20-40	34	56.7	
31-40	17	28.4	
41-50	2	3.4	
51-50	1	1.7	
Total	60	100	29.5

**Source: field survey, 2017**

The result shows that majority (56.7%) of the respondent were within the range of 20-30 years while 28.4% and 3.4% were within the age ranges of 31-40 years and 41-50 years. Only 1.7% was at the age range of 51-60 years. Nwaru (2004) noted that the ability of a farmer to bear risk, be innovated and be able to do manual work decrease with increasing age. Young farmers readily accept farm innovation and bear risk than their aged counterparts.

### Marital Status

**Table 4.3 Distribution of The Respondents According to Marital Status**

Marital status	Frequency	Percentage
Single	31	51.7
Married	27	45.0
Widow	2	3.3
<b>Total</b>	<b>60</b>	<b>100.0</b>

**Source: field survey, 2017**

It was observed from above that the majority (51.7%) of the respondent were single while 27 and 2 respondents representing 45.0 and 3.3 were married and widow respectively. this implies that there were single persons and more energetic.

### Educational Status

**Table 4.4 Educational Status of Respondent**

Educational status	Frequency	Percentage (%)
FSLC	1	1.7
SSCE/GCE/NECO	7	11.7
OND/NCE	13	21.7
HND/BSC	32	53.3
MSC/PHD	7	11.7

**Source: Field Survey, 2017**

It was observed in table 4.4 that the majority (53.3%) of the respondent had HND/BSC. 1 respondent representing 1.7% had FSLC of education. 7 respondents representing 11.7% had SSCE/GCE/NECO. 13 respondents representing 21.7% had OND/NCE. 7 respondents representing 11.7% had MSC/Ph.D. this shows that the members of cooperatives are educated .Effong (2005) noted that educated farmers may be more amiable to bear risks and accept possible changes than the non-educated farmers Obasi (2010) lending credence to this, noted that the level of education attained by a farmer does not only increase his, farm productivity but also enhance his/her ability to understand and interpret new production technologies.

### Farming experience

**Table 4.5** Distribution of respondent according to farming experience

Farming experience (yrs)	Frequency	Percentage	Mean
2-10	56	93.4	
11-20	3	5.1	
21-30	1	1.7	
<b>Total</b>	<b>60</b>	<b>100.0</b>	<b>5.66</b>

**Source: Field Survey, 2017**

In table 4.5, the farming experience of the respondents were examined and it shows that 56 respondents, 93.4% had a farming experience ranging from 2-10 years. 3 respondents representing 5.1% had farming experience 11-20 years. 1 respondent which represent 1.7% had a farming experience that ranges from 21-30 years.

Nwaru (2009) observed that the longer the experience, the more efficient the farmer becomes because, the number of years a farmer has spent in the farming business may clearly give an indication of the practical knowledge he/she has acquired.

### Farm income

**Table 4.6** Distribution of respondents according to income

Farm income (N)	Frequency	Percentage	Mean
10000-100000	25	41.9	
110000-300000	15	25.0	
310000-600000	9	15.1	
810000-1000000	6	10.0	
<b>Total</b>	<b>60</b>	<b>100.0</b>	<b>N600,550</b>

**Source field survey, 2017**

Table 4.6 shows, the result that farm income of the respondent was examined and it shows that 25 respondent representing 41.90 had a farm income that ranges from 100000-10000

naira. 15 respondents representing 25.0% had a farm income that ranges from 310000-60000 naira. 4 respondents representing 8.3% had a farm income that ranges from 810000-100000 naira, many of them had a low income.

### Household Size

**Table 4.8** distribution of respondents according to household size

Household size	Frequency	Percentage (%)	Mean
1-5	31	51.7	
6-10	19	31.7	
11-20	60	100.0	6.73

Source: field survey, 2017

The result showed that the majority (51.7%) of the respondents had household size range from 1-5 persons while 31.7% and 16.8% had between 6-10 persons 11-20 persons respectively. Nwaru (2008) noted that a large households rely more on their members than hired workers for labour on their farms.

### Membership of Cooperative

**Table 4.9** Distribution of respondents according to membership of cooperative

Membership of cooperative	Frequency	Percentage (%)
Non-members	7	11.7
Members	53	88.3
Total	60	100.0

Source: Field survey, 2017

Table 4.9 shows that majority (88.3%) of the respondents were members while 11.7% of the respondents were non-members.

### Extension Contact

**Table 4.10** Distribution of respondents according to number of extension contact

Extension contact	Frequency	Percentage	Mean
None	24	40.0	
1-5	26	43.3	
6-10	2	3.4	
11-15	8	13.4	
<b>Total</b>	<b>60</b>	<b>100.0</b>	<b>2.883</b>

Source: field survey, 2017



The result showed that 40.0% of the respondents had no contact with the extension while 43.3% and 13.4% had between 1-5 and 11-15 extension contact respectively. Contact with extension helps farmers to adopt innovation for increased productivity.

**Z-test comparative analysis of the amount of credit/loan applied and amount disbursed to cooperative farmers in the study area**

**Table 4.11 Z-test comparative analysis of the amount of credit/loan applied and disbursed to cooperative farmers in the study area**

Source	Mean	Df	Std. Deviation	Std. mean error	Z-test	p-value
Loan applied for	2.0041E6		4.85479E6	6.26751E5		
Loan disbursed	1.0843E6		2.73529E6	3.53124E5		
Loan applied for loan disbursed	9.597500E6	59	2.522675E6	3.25675E5	2.947	0.005

**Source: field survey, 2017**

Table 4.1 above, was set to find if the amount of loan the farmers applied for differ from the amount disbursed to them. This study found a significant difference at 5% level of probability between the amount of loan/credit applied for and the amount disbursed to its farmers. The amount applied for by the farmers was N2,044,000 while the amount disbursed to the farmers was N1,084,000. The different is very significant in the sense that the amount applied is not the same with the amount disbursed.

**Table 4.12 Institutional factors influencing cooperative farmers access to credit**

Institutional factors	Sum	Std. Dv	Mean
Availability of fund	269	0.81286	4.48
Interest rate charged	261	0.81978	4.35
Availability of collateral	249	0.86013	4.15
Other rates (managerial, legal quarterly etc) charged	233	0.90370	3.88
Adequate credit officers for supervision and monitoring	218	1.20685	3.6
Logistics for effective supervision and monitoring	219	1.05485	3.65
Short term nature of loan payment	221	1.37152	3.68
Loan default in the past	220	1.28841	3.67
Complex mechanisms of loan procedure	237	1.22716	3.95
Inadequate information on procedure for assessing credit (loan)	223	1.10610	3.72
Not having bank account with BOA	223	1.24997	3.72
Location of BOA	231	1.11738	3.85
High cost of getting the loan	135	1.10916	3.92
Delays in getting loan	240	1.14980	4.0

Uncertainly of agricultural production/agribusiness	211	1.15702	3.53
Credit history of the agriculture cooperative society	252	1.02180	4.2
Economic feasibility report of intended agribusiness	228	1.17603	3.8

**Source field survey 2017**

From the table 4.12 above, the result shows the institutional factors influencing cooperative farmers' access to credit from Bank of agriculture (BOA) in the study area and it also showed that every factor that is above 3.00 (i.e Benchmark mean) is one of the factors that influence farmers cooperative access credit from BOA. They are as follows;

Availability of fund: The result showed that availability of fund ( $\bar{X}=4.45$ ) was one of the factors that influences farmers of cooperative access to credit from BOA.

Interest rate charged: The result showed that availability of fund ( $\bar{X}=4.35$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Availability of collateral: The result showed that availability of collateral ( $\bar{X}=4.15$ ) was one of the factors that influences farmers cooperative access to credit/ from BOA.

Credit history of the agricultural cooperative society: The result showed that availability of collateral ( $\bar{X}=4.15$ ) was one of the factors that influences farmers of cooperative access to credit/loan from BOA.

Delays in getting loan: The result showed that availability of collateral ( $\bar{X}=4.0$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Complex mechanism of loan procedure: The result showed that availability of collateral ( $\bar{X}=3.95$ ) was one of the factors that influences farmers of cooperative access to credit from BOA.

High cost of getting the loan: The result showed that availability of collateral ( $\bar{X}=3.92$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Other rates (managerial, legal quarterly etc) charged: The result showed that managerial, legal, quarterly, etc charges ( $\bar{X}=3.88$ ) were one of the factors that influences farmers cooperative access to credit from BOA.

Location of BOA: The result showed the location of BOA ( $\bar{X}=3.85$ ) was one of the factors that influences farmers cooperative access to credit.

Economic feasibility report of intended agribusiness: The result showed that availability a feasibility report ( $\bar{X}=3.8$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Inadequate information on procedure for accessing credit/loan: The result showed that inadequate information ( $\bar{X}$ =3.72) was one of the factors that influences farmers cooperative access to credit/loan from BOA.

Not having bank account with BOA: The result showed not having bank account ( $\bar{X}$  =3.72) was one of the factors that influences farmers cooperative access to credit from BOA.

Short term nature of loan repayment: The result showed that short term nature of loan repayment ( $\bar{X}$  =3.68) was one of the factors that influences farmers cooperative access to credit from BOA.

Loan default in the past: The result showed that loan default in the past ( $\bar{X}$ =3.67) was one of the factors that influences farmers cooperative access to credit from BOA.

Logistics for effective supervision and monitoring: The result showed that logistics for effective supervision ( $\bar{X}$ =3.65) was one of the factors that influences farmers cooperative access to credit from BOA.

Adequate credit officers for supervision/monitoring: The result showed that adequate credit officers ( $\bar{X}$ =3.6) was one of the factors that influences farmers cooperative access to credit from BOA.

Uncertainty of agricultural production/agribusiness: The result showed that uncertainty of agricultural production ( $\bar{X}$ =3.52) was one of the factors that influences farmers cooperative access to credit from BOA.

### **Factors influencing cooperative farmers access to credit.**

**Table 4.12 factor influencing cooperative farmers' access to credit**

<b>Factors influencing credit access</b>	<b>Sum</b>	<b>Std. Dv</b>	<b>Mean</b>
Membership size (Number) of the Agricultural Cooperative society	269	0.87317	4.48
Leadership of the Agricultural cooperative society	242	0.86292	4.03
Age (permanency) of the Agricultural Cooperative society	225	1.0	3.75
Location of the Agricultural Cooperative	227	0.92501	3.85
Corporate governance of the agricultural cooperative society	246	0.93337	4.1
Managerial ability of the cooperative business	260	0.96843	4.3
Effective meeting/deliberation of Agricultural cooperative society	231	0.95358	3.85
Democratic tendencies in the operation of the Agric cooperative society	205	1.14042	3.43
Credit history of the Agricultural cooperative society	239	1.04948	3.98
Conflict management ability of the Agric. Cooperative society	227	1.19450	3.78
Asset (worth) of the Agricultural Cooperative Society	258	0.72017	4.3
Nature/Type of the Agricultural Cooperative Society	249	0.84020	4.6

Disciplinary history of the Agricultural cooperative Society	236	1.07146	3.93
Ability of the Agricultural cooperative society to apply group guarantee of credit	234	1.00338	3.9
Ability of the Agric. Cooperative Society to apply peer-pressure	212	0.92913	3.53
Ability of the Agric. Cooperative to provide guarantors of credit (loan)	224	1.20545	3.73
Homogenous nature (same background)of the membership of Agricultural Cooperative Society	191	1.21421	3.18
Heterogeneous nature (different background) of the membership of Agricultural cooperative society	191	1.3082	3.18
Accounting/Record keeping activities of Agricultural Cooperative Society	248	1.04908	4.1
Strong believe (commitment) about the Agricultural Cooperative Society by members	237	0.9983	3.95
Existence of rules and regulations	248	0.89190	4.13
Formal registration (ministry, LGA) by the Agricultural Cooperative Society	245	1.10916	4.1
Existence of a constitution that guides the Society	245	1.19734	4.1

**Source: Field survey, 2017**

From table 4.12\_above, the result generally shows the factors influencing cooperative farmers access credit from Bank of Agriculture (BOA) in the study area. They are as follows;

**Nature/Type of the Agricultural Cooperative Society:** The result showed that membership size ( $\bar{X}$ =4.6) was one of the factors that influences farmers cooperative access to credit from BOA.

**Membership size (number) of the Agricultural Cooperative Society:** The result showed that asset ( $\bar{X}$ =4.48) was one of the factors that influences fanners of cooperative access to credit from BOA.

**Managerial ability of the cooperative business:** The result showed that availability of collateral ( $\bar{X}$ =4.3) was one of the factors that influences farmers of cooperative access to credit/loan from BOA.

**Asset (worth) of the Agricultural Cooperative Society:** The result showed that availability of collateral ( $\bar{X}$ =4.3) was one of the factors that influences farmers cooperative access to credit from BOA.

**Corporate governance of the agricultural cooperative society:** The result showed that cooperate governance ( $\bar{X}$ =4.1) was one of the factors that influences farmers cooperative access to credit from BOA.

**Accounting/Record keeping activities of Agricultural Cooperative Society:** The result showed that availability of collateral ( $\bar{X}$ =4.1) was one of the factors that influences farmers cooperative access to credit from BOA.

Existence of rules and regulations: The result showed that existence of rules ( $\bar{X}=4.13$ ) was one of the factors that influences farmers of cooperative access to credit from BOA.

Formal registration (ministry, LGA) by the Agricultural Cooperative Society: The result showed that formal registration ( $\bar{X}=4.1$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Existence of a constitution that guides the society: The result showed that existence of constitution ( $\bar{X}=4.1$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Leadership of the Agricultural Cooperative Society: The result showed that leadership of agriculture cooperatives ( $\bar{X}=4.03$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Credit history of the Agricultural cooperative society: The result showed that credit history ( $\bar{X}=3.98$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Strong believe (commitment) about the Agricultural Cooperative Society by members: The result showed that strong believe ( $\bar{X}=3.95$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Disciplinary history of the Agricultural Cooperative Society: The result showed that disciplinary history ( $\bar{X}=3.93$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Ability of the Agricultural Cooperative Society to apply group guarantee of credit: The result showed that application for group credit ( $\bar{X}=3.9$ ) was one of the factors that influences farmers of cooperative access to credit from BOA.

Location of the Agricultural Cooperative: The result showed that location of agriccooperative ( $\bar{X}=3.85$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Effective meeting/deliberation of Agricultural Cooperative Society: The result showed that effective meeting ( $\bar{X}=3.85$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Age (permanency) of the Agricultural Cooperative Society: The result showed that age of the society ( $\bar{X}=3.75$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Conflict management ability of the Agric. Cooperative Society: The result showed that conflict management ( $\bar{X}=3.78$ ) was one of the factors that influences farmers cooperative access to credit from BOA.

Ability of the Agric. cooperative to provide guarantors of credit (loan): The result showed that ability to provide gurantors ( $\bar{X}$ =3.73) was one of the factors that influences farmers cooperative access to credit from BOA.

Ability of the Agric. Cooperative Society to apply peer-pressure: The result showed that to apply peer pressure ( $\bar{X}$ =3.53) was one of the factors that influences farmers cooperative access to credit from BOA.

Democratic tendencies in the operation of the Agric. cooperative society: The result showed that democratic tendencies ( $\bar{X}$ =3.43) was one of the factors that influences farmers cooperative access to credit from BOA.

Homogenous nature (same background) of the membership of Agricultural Cooperative Society: The result showed that homogenous nature of membership ( $\bar{X}$ =3.18) was one of the factors that influences farmers cooperative access to credit from BOA.

Heterogeneous nature (different background) of the membership of Agricultural Cooperative Society: The result showed that heterogeneous nature ( $\bar{X}$ =3.18) was one of the factors tat/ influences farmers cooperative access to credit from BOA.

**Table 4.13 Challenges faced by Cooperative farmers in the assessment of credit from BOA**

<b>Challenges faced by cooperative farmers</b>	<b>Sum</b>	<b>Std. Dv</b>	<b>Mean</b>
Interest rate charged	267	0.90993	4.45
Other rates (administrative, legal etc) charged	252	1.00507	4.2
Loan default in the past	248	0.94719	4.13
Short-term nature of the repayment	242	0.94719	4.13
Complex mechanism of loan procedure	266	0.85105	4.43
Inadequate information on procedure for accessing credit	257	0.99305	4.3
Not having bank account with BOA	249	1.17639	4.2
Demand for collateral/guarantors	244	0.93640	4.1
Location of BOA branches	220	1.15958	3.7
High cost of getting the loan	255	0.81563	4.3
Uncertainty of Agricultural production/agribusiness	205	1.12433	3.42
Delays in accessing loan	253	0.95831	4.22
Amount of credit (loan) is inadequate	229	1.21421	3.82
Weak leadership of cooperative society	236	0.97192	3.93
Poor accounting/record keeping of cooperative society	236	1.20545	3.93
Weak agribusiness management of cooperative society	232	1.09648	3.87
Poor education level of cooperative members	228	1.17603	3.8

*Source: Field survey, 2017*

In table 4.13 above, the result generally shows the challenges faced by farmers of cooperative in terms of accessing credit from Bank of Agriculture (BOA) in the study area and it also showed that any factor that is above 3.00 (i.e Benchmark mean) is a problem/challenge to the cooperative farmers in terms of accessing credit. These factors are as follows;

Interest rate charged: According to the result the farmers perceived that interest ( $\bar{X}=4.45$ ) was one of the challenges that cooperative farmers faced at the cause of accessing credit/loan from BOA and it is the first in ranking.

Complex mechanism of loan procedure result ( $\bar{X}=4.43$ ) shows that it is one of the challenges that the farmers had in terms of accessing loan from BOA in the study area.

According to the result the farmers perceived that inadequate information on procedure for accessing credit/loan ( $\bar{X}=4.3$ ) was one of the challenges that farmers cooperative had at the cause of accessing credit from BOA in the study area.

High cost of getting the loan: The result above shows that high cost of getting the loan ( $\bar{X}=4.3$ ) was one of the challenges that cooperative farmers faced at the cause of obtaining credit from BOA.

Delays in accessing loan: According to the result the farmers perceived that delays in accessing loan ( $\bar{X}=4.22$ ) was one of the challenges that cooperative farmers faced at the cause of accessing credit from BOA and it is the first in ranking.

Other rates (administration, legal quarterly etc) charged: According to the result the farmers perceived that other rates (administration, legal quarterly etc) charged ( $\bar{X}=4.2$ ) was one of the challenges they faced at the cause of accessing credit from BOA.

Not having bank account with BOA: The result ( $\bar{X}=4.2$ ) shows that the farmers of cooperative not having bank account with BOA was one of the challenges they had at the cause of accessing credit/loan from BOA.

Loan default in the past result ( $\bar{X}=4.13$ ) shows that the farmers perceived that it was one of the challenges they faced at the cause of accessing credit from BOA.

According to the result, the farmers perceived that demand for collateral ( $\bar{X}=4.1$ ) was one of the challenges they faced at the cause of accessing credit from BOA.

Short-term nature of the repayment: According to the result the farmers of cooperative perceived that Short-term nature of the repayment ( $\bar{X}=4.03$ ) was also one of the challenges they faced at the cause of accessing credit from BOA.

Weak leadership of our cooperative society result ( $\bar{X}=3.93$ ) shows that the farmers of cooperative perceived that it was one of the challenges they faced at the cause of accessing credit from BOA.



Poor accounting/record keeping of our cooperative society result ( $\bar{X}$ =3.93) shows that the farmers perceived that it was one of the challenges they faced at the cause of accessing credit from BOA and it is the first in ranking.

Weak agribusiness management of our cooperative society result ( $\bar{X}$ =3.87) shows that the farmers of cooperatives perceived that it was one of the challenges they faced at the cause of accessing credit from BOA.

Poor educational level of members/leaders of our cooperative: According to the result the farmers cooperative perceived that poor educational level of members/leaders of our cooperative ( $\bar{X}$ =3.8) was one of the challenges they had at the cause of accessing credit from BOA.

Location of BOA branches: According to the result the farmers perceived that location of BOA branches ( $\bar{X}$ =3.7) was one of the challenges that cooperative farmers faced at the cause of accessing credit from BOA.

Uncertainty of agricultural production/agribusiness: According to the result the farmers perceived that uncertainty of agricultural production/agribusiness ( $\bar{X}$ =3.42) was one of the challenges that cooperative farmers faced at the cause of accessing credit from BOA.

**Factor influencing the use of loan among cooperative farmers.**

**Table 4.14: OLS Regression estimates of factors influencing the use of loan among cooperative farmers**

Parameters	Linear	Exponential	Cob Douglas	+ Semi-log
Constant	65249.5166 (1.286)	10.467 (16.207)***	4.305 (4.731)***	1.292E6 5.446***
Age	-25772.915 (-1.723)*	-0.153 (-0.755)	0.756 (-2.256)**	-93237.124 (-2.914)***
Gender	418.022 (0.806)	.006 (0.845)	.371 (1.048)	21777.121 (0.644)
Marital status	-4445.507 (-0.359)	-0.052 (0.529)	-.172 (-0.586)	-33766.830 (-1.203)
Household size	945.149 (0.252)	.025 (-0.048)	0.195 (-0.907)	-22358.072 (-1.090)
Education	246.548 (10.152)***	0.011 (5.537)***	0.188 (6.611)***	1613.220 (7.055)***
Farming	2945.011 (1.841)*	.023 (1.714)*	.298 (1.876)*	38490.305 (2.284)**
Farm income	11.125	5.368E-5	.844	164878.706



	(13.307)***	(5.044)***	(4.788)***	(9.803)***
Nonfarm income	0.000	2.301E-7	0.117	52.349
	(0.586)	(6.988)***	(1.716)*	(3.330)***
Farm size	18136.906	.037	.150	31148.830
	(0.768)	(0.121)	(0.198)	(1.998)**
Extension contact	0.017	2.3450	0.028	14938.368
	(2.487)**	(2.775)***	(11.232)***	(2.005)**
Interest rate	0.002	1.476E-6	0.143	267.550
	(2.875)***	(1.706)*	(2.282)**	(2.079)**
Distance	9.592	0.002	0.003	420.526
	(8.690)***	-(3.570)***	(0.033)	(1.962)**
R-square	0.787	0.617	0.9698	0.890
R-Adjusted	0.761	0.538	0.580	0.866
F - ratio	44.833***	27.157***	16.038***	48.966***

#### Field Survey, 2016

Key: \*Significance at 10%, \*\* Significance at 5%, \*\*\* Significance at 1%, += Lead Equation and the values in bracket are the t-values.

Table 4.15 above, the result shows that among the variables considered as factors influencing the use of credit among cooperative farmers in the study area, age, education, farming experience, farm income, nonfarm income, farm size, extension contact, interest rate and distance were significant at different levels of significance.

The  $R_2$  (coefficient of multiple determination) which shows the total variation of the dependent variable accounted for by the independent variables was 0.890 (i.e 89.0%). The F-ratio value (48.966) was also significant at 1% indicating that the model was fit for the analysis.

The age of the farmers is negative but significant at 1%. The result implies that as the age of the farmers increases the use of loan also decreases.

The level of education of the farmers showed positive and it is significant at 1%. The result indicates that as the level of education of the farmers increases they have high and efficient use of credit. This implies that, the more educated the members of cooperative are the more they know how to do things.

Farming experience of the farmers showed a positive significant at 5%. The result indicates that the more experience the members of cooperatives have the easier for them to access credit from BOA.

Farm income of the farmers positively influences the use of credit and it is significant at 1%. The result means that the farm income of the farmers significantly influences the use of loan and as the farm income increases, the use of credit also increases.

Nonfarm income is positive and it is significant at 1%. This indicates that the more income the farmers make outside farming business

Farm size is positive and it is significant at 5%. The result indicates that the more farm size a farmer has, the more he/she can efficiently utilize credit. As the farm size increases, there efficiency in loan utilization also increases.

Extension contact with farmers revealed to be positive and it is significant at 5%. This indicates that it significantly influences the use of credit and as the extension contact with farmers increases the use of credit also increases.

Interest rate of the farmers is positive and it is significant at 5%. This implies that, as the interest rate increases the use of loan also increases.

Distance to credit source positively influences the use of loan and it is significant at 5%. This means that, as the distance to credit source increases the use of credit also increases.

## **CONCLUSION**

The study analysed the determinants of credit access among farmers of cooperative clients of bank of agriculture (BOA) in Abia State. Results show that the farmers have access to credit. Important variables influencing the use of loan among cooperative farmers were education, farming experience, farm income, nonfarm income, farm size, extension contact, interest rate, distance and age. There is need therefore for policies aimed at addressing these factors to enhance farmers' access to credit.

## **RECOMMENDATIONS**

Based on the findings of this work, the following recommendations were made:

1. Cooperative farmers in the study area need urgent attention in terms of accessing credit from BOA. This is to alleviate the problems faced by farmers' cooperative the course of accessing credit/loan from BOA.
2. More should be done by the government or BOA to make loans, more accessible for those farmers who need it at subsidized rate. This is because, most times it is the interest rate charged by BOA that scares Cooperative farmers away.
3. The farmers should deem it necessary to belong to a cooperative society. As cooperatives can aid in accessing credit from BOA.
4. The farmers of cooperative should have a good knowledge on procedures and conditions applied in obtaining credit from BOA in order not to make a huge mistake.

5. Access to credit by the farmers' cooperative enhances the expansion of scale of operation hence increase in food out and more income is released.

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