Determinants of Credit Acquisition and Utilization among Household farmers in the Drive towards Sustainable Output in Ekiti State, Nigeria

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OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com Also available at http://www.ssrn.com/link/OIDA-Intl-Journal-Sustainable-Dev.html

Abstract: Achieving sustainability in agricultural output will possibly reduce food shortage and create a stable and fibrant economy in Nigeria. This study adopted Three-stage sampling procedure to select hundred farmers in Ekiti State, Nigeria. Data collected were analyzed using Descriptive statistics, Gross margin and Regression analysis. The results showed that majority (84%) of the respondents were males with a mean age of 47 years. Farmers with formal education were 98%. The married respondents were 89% with majority (68%) having large household size of above 5 persons. Majority (79%) are primarily engaged in farming while the rest (19%) are secondary farmers. The study revealed the mean profit margin of credit users as ¥138,930.00 (385.92 USD) and N126,412.00 (351.14 USD) for non credit users (1 USD=N360). Also, the effect of credit on farmer's productivity level for credit users was ₩255,232.41 (708.98 USD) while non-credit user was $\frac{1232,345.76}{100}$ (645.40 USD) with a percentage change of 9.0%. The results of the regression analysis indicated that household size, marital status, educational level, occupational status and farm size had positive signs and significantly affect the amount of agricultural credit acquired by the farmers. Hence, household farmers should have access to acquire adequate credit facilities. This would boost the production capacity of the farmers leading to sustainable agricultural output.

Keywords: Credit users, Credit facilities, Household Farmers, Productivity, Sustainable agricultural Output, Ekiti State, Nigeria.

Introduction

griculture is the cultivation of crops and rearing of livestock for the satisfaction of human needs and it is the most important sector towards the development of any nation (FAO, 1998). The importance of food and especially meeting the gap in the Food and Agricultural Organization (FAO) per caput protein requirement to the development of Nigerian economy cannot be over-emphasized (Aladejebi *et al*, 2014). Agriculture provides the greatest avenue for employment, income and food for Nigerian populace. The agricultural sector has been an important component of the Nigerian economy with peasant farmers producing over 90% of available food in the country and 70% of the labour force relying on these sectors (Amao *et al.*, 2003). Agricultural sector incidentally lies in the hands of small scale farmers, whose expansion in terms of provision and scale of production is low due to low inputs and low income. The decline in the Nigerian economy, particularly in the area of agricultural productivity, has often been blamed on lack of credit facilities, which prevented many farmers from adopting improved practices, since some of them lack the collateral to secure loan or credit from financial institutions (Asogwa *et al.*, 2014). According to Alfred (2005) acquisition and utilization of credit for agricultural purposes promote productivity, sustainability and consequently improve food security status of a community.

Agricultural credit is very crucial for the achievement of sustainable agricultural development in any country of the world. Rural credit has proven to be a powerful instrument against poverty reduction and increased income among rural farmers. Farmers are particularly in need of credit as an instrument, because of the seasonal pattern of their activities and the important uncertainties they encounter (Nwaru *et al.*, 2006). Nwaru *et al.* (2006) further

established that agricultural credit enhances productivity and promotes standard of living by breaking vicious cycle of poverty among small scale farmers. Adegeye and Dittoh (1985) described agricultural credit as the means 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. Imoudu and Onaksapnome (1992) contended that agricultural loan is a crucial input in small holder agriculture because it enables small scale farmers to establish and expand their farms as this would increase their income and ability to repay loan.

The crucial role of credit in agricultural production, development and eventual sustainability can also be appraised from the perspective of the quality of problems emanating from the lack of it. In modern farming business in Nigeria, 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 discovered to be a major constraint on the intensification of both large and small scale farming (Von-Pischke, 1991).

The role of agricultural credit in the agricultural development of a country cannot be overemphasized. One of the reasons for the decline in the contributions of agriculture to the economy is lack of a formal national credit policy and paucity of credit institutions, which can assist farmers (Olagunju and Ajiboye, 2010). The absence of rural banks or their unwillingness to meet credit need of rural farmers largely account for the wide influence of informal lending institutions on agricultural production in the rural areas. In the developing countries, the role of agricultural credit is closely related to providing needed resources which farmers cannot source from their own available capital. In respect to this, the provision of agricultural credit has become one of the most important areas of intervention by the government in the promotion of agricultural development in Nigeria (Olagunju and Adeyemo, 2008). Credit (capital) is viewed as more than just another resource such as labour, land, equipment and raw materials (Rahji, 2000).

According to Shepherd (1979) credit determines access to all of the resources on which farmers depend. Consequently, provision of appropriate macroeconomic policies and enabling institutional finance for agricultural development is capable of facilitating agricultural development with a view to enhancing the contribution of the sector in the generation of employment, income and foreign exchange (Olomola, 1997). Despite the importance of credit to farmers, they still face some challenges in the acquisition of it which make most of them to get discourage and relent in their effort to contribute to the productivity of farm produce.

Despite the fact that a bigger percentage of Nigeria's population engage in agricultural activities and that about 80 percent of the rural dwellers are involved in farming activities (Nchuchuwe and Adejuwon, 2012)., there is little effort by institutional lenders and other financial institutions to facilitate credit to this industry which is crucial in rapid development of this dominant section where most of the rural sectors are engaged. There are very few banks which cater for the specific credit and saving needs. The available piecemeal credit services are operated by small credit schemes, which are limited in scope and have specific target groups (Adams, 2001). The inadequacy in financing and credit arrangements in the rural areas impede development of agriculture and rural sectors. Given that this sector is the mainstay of a large segment of the populace; their poor performance makes the fight against poverty even more challenging (Kimuyu and Omiti, 2000). According to Nyoro (2002), lack of access to credit facilities has been highlighted as key constraint to farmers' investment. The demand for credit by farmers has been high and increasing. It includes access to credit to cover lump sum and smooth farmers' consumption among others. The expenditure requiring lump sum includes purchase of farm inputs, ploughing, top dressing, labour and irrigation activities. Many farmers have hardly been able to meet these farm expenditures due to lack of financial command and potential. The thrust of this study draws from the premise that access to credit by farmers is the key to increasing Productivity (Nyoro, 2002). Majority of these farmers face liquidity constraints that compromise the crucial investments in agriculture and other sectors necessary in increasing productivity (Doward et al., 1998). The study therefore seeks to establish how socio-economic characteristics of farmers such as lack of collateral, basic loan requirements by financial institutions and interest on loans etc. has slowed down farmer's access to credit in the drive towards agricultural sustainability in Ekiti State, Nigeria.

Methodology

Study Area: This Study was conducted in Ekiti State, Nigeria. The State is in the western region of the Country and situated entirely within the tropics. Ekiti State is a landlocked State, having no coastal boundary with a total land Area of 5887.890sq km. The State enjoys tropical climate with two distinct seasons. These are the Rainy season (April–October) and the Dry season (November–March). Temperature ranges between 21° and 28 °C with high

humidity. Tropical forest exists in the south, while Savannah occupies the northern peripheries. The mean annual total rainfall in the south is about 1800mm while that of the northern part is hardly over 1600mm.

According to the 2006 census reports, the population of Ekiti State stood at 2,737,186 (NPC, 2006). The main occupation of the people includes: Farming, Trading, Civil Service, Pottery, Artisanship e.t.c. Food crops like yam, cassava, and also grains like rice and maize are grown in large qualities. Other notable crops like kola nut and varieties of fruits are also cultivated in commercial quantities. There are 16 Local Government Areas (LGAs) in Ekiti State. The apex of the administrative areas is the capital, Ado Ekiti. The State is divided into four Agricultural Zones by the Ekiti State Agricultural Development Project (EKADP) authority based on agro-ecological considerations.



Figure 1: Map of Nigeria Showing Ekiti State

Sampling procedure and data collection

Multistage sampling technique was adopted to select hundred (100) respondents from the State. A three-stage design was adopted for this study. Firstly, Ikole Local Government Area (LGA) was purposively selected from Ekiti State because majority of its populace makes farming their primary occupation and main source of income. Secondly, four districts viz Ikole, Ayedun, Ijesha-isu and Oke-Ako were randomly selected from Ikole Local Government Area. Finally, twenty five (25) household farmers were randomly selected making a total of 100 household farmers.

Local Government Areas	District/Town	Household farmers/Number of Respondents	
(LGAs)			
Ikole-Ekiti	Ikole	25	
	Ayedun	25	
	Ijesha-Isu	25	
	Oke-Ako	25	
Total	4	100	

Table 1: Sampling Design

Source: Field Survey, 2017



Figure 2: Map of Ekiti State showing the 16 Local Government Areas and their towns.

Data for the research were collected from primary sources. The data were collected using structured questionnaires. Detailed information were collected on the socio economic characteristics of the respondents such as age, sex, marital status, farming status, household size, membership of organization, educational qualification, farm size, sources of capital.

Analytical Techniques

Descriptive statistical tools such as frequency, mode, mean and percentages were used to describe the socioeconomic characteristics such as age, sex, household size, educational qualification, farm size, farming experience and sources of capital of the household farmers.

Gross margin analytical tool was used to estimate the profit margin of the household farmers. To determine the effect of using credit on farmers yield and productivity and making comparison using the input-output level of farmers that uses credit to those that do not use credit. The gross margin, the return over variable cost is an appropriate measure of profitability used for comparing enterprises for short run annual planning decision. It is a very useful planning tool in farming enterprises in the case of subsistence agriculture (Olukosi and Erhabor,1998). It forms the basis of most analysis and planning procedure and enables a practicing farmer to understand his business better. The gross margin will be calculated as follows:

 $GM = TR - TVC \dots (1)$

Where;

GM = gross margin

TR = Total revenue

TVC = total variable cost.

Also, Ordinary least square regression model was used to evaluate the effect of using credit on farmers output. The four functional forms of the OLS multiple regression model, namely, linear, double logarithmic, exponential and semi-logarithmic functions, were fitted with the data. The lead-equation was selected based on statistical and econometric criteria, which include the magnitude of R^2 , the significant level of the *F*-ratio, the number of significant variables and the conformity of the variables to a priori expectations. The four functional forms of OLS model are explicitly stated as:

Linear function:

 $Y = \mathbf{a} + \mathbf{b}_1 \mathbf{x}_1 + \mathbf{b}_2 \mathbf{x}_2 + \mathbf{b}_3 \mathbf{x}_3 + \mathbf{b}_4 \mathbf{x}_4 + \mathbf{b}_5 \mathbf{x}_5 + \mathbf{b}_6 \mathbf{x}_6 + \mathbf{b}_7 \mathbf{x}_7 + \mathbf{b}_8 \mathbf{x}_8 + ei.......(2)$ Semi-log function: $Y = \mathbf{a} + \mathbf{b}_1 \mathbf{ln} \mathbf{x}_1 + \mathbf{b}_2 \mathbf{ln} \mathbf{x}_2 + \mathbf{b}_3 \mathbf{ln} \mathbf{x}_3 + \mathbf{b}_4 \mathbf{ln} \mathbf{x}_4 + \mathbf{b}_5 \mathbf{ln} \mathbf{x}_5 + \mathbf{b}_6 \mathbf{ln} \mathbf{x}_6 + \mathbf{b}_7 \mathbf{ln} \mathbf{x}_7 + \mathbf{b}_8 \mathbf{ln} \mathbf{x}_8 + ei......(3)$ Double-log function:

 $\ln Y = \mathbf{a} + \mathbf{b}_1 \ln \mathbf{x}_1 + \mathbf{b}_2 \ln \mathbf{x}_2 + \mathbf{b}_3 \ln \mathbf{x}_3 + \mathbf{b}_4 \ln \mathbf{x}_4 + \mathbf{b}_5 \ln \mathbf{x}_5 + \mathbf{b}_6 \ln \mathbf{x}_6 + \mathbf{b}_7 \ln \mathbf{x}_7 + \mathbf{b}_8 \ln \mathbf{x}_8 + ei \dots (4)$ Exponential function:

 $\ln Y = a + b_1 x_1 + b_2 x_2 + b_3 \ln x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + b_7 \ln x_7 + b_8 x_8 + ei$ (5) where:

- Y = amount of credit obtained (naira);
- $x_1 = age of farmers (years);$
- $x_2 = gender (1 = male, 0 = female).$
- $x_3 = marital status (1 = married, 0 = single);$
- x_4 = household size (number);
- x_5 = education level (number of schooling years);
- x_6 = farming experience (years);
- $x_7 = occupational status (years)$
- x_8 = farm size (hectares)
- a = constant intercept;
- $b_1...b_8$ = the coefficient corresponding to $x_1...x_8$;
- *ei* = stochastic error.

Result and Discussion

Socio-economic Characteristics of the Household farmers

The mean age of the household farmers were 47.3 years (Table 2). Also, 43% of the household farmers are aged below 50 years. This result implies that farming activities in the study area are not in the hands of too old people. The farmers are still active and should be highly productive if they have access to adequate productivity enhancing inputs in form of credit at the right time. This finding agrees with Awotide *et al* (2011) that farming operations require a lot of energy and is labour intensive especially in the rural areas and are carried out by active and agile group of farmers. In terms of gender distribution, the result showed that majority (84%) of the respondents were male while 16% were female which connote that farming in the study area was undertaken by both male and female.

Although, this study is not gender biased, the result underlies the fact that males in the study area had greater access to production resources i.e. the manpower needed for farming activities. The male dominance of this rural source of livelihood implies the laborious nature of farming operations from tillage to harvest, which their female counterparts cannot easily undertake. This is because farming operations require a lot of energy and is labour intensive especially in the rural areas, where crude farm implements are usually used. This agrees with the findings of Asogwa *et al.* (2014) and Olaleye (2000) that small-scale farming is being carried out mostly by males, while females involve in light farm operations such as processing, harvesting and marketing.

The majority of the household farmers (69%) were married, while 20% were said to be separated/widowed while the remaining 11% were single. The marital status of the household farmer has implication on the household size and subsequently on the availability of family labour to assist on the farm. The study further revealed that the respondents had large members in each household being represented with majority (68%) having above 5 members. This result is in agreement with Osondu *et al.* (2014) who stated that in the presence of constraints to farm labour availability, large households tend to use family members as sources of labour. Large households, whose labour is fully employed for agricultural production, would contribute to labour input for increase and sustainable production. In this case, credit obtained could be efficiently utilized. The Majority (98%) of the household farmers had formal education. This implies that literacy level attained by the respondents was high having a greater percentage (98%) possessing formal education will hence the judicial use of the credit acquired by the farmers

Majority (79%) of the sampled household farmers are primarily engaged in farming while the rest (19%) are secondary farmers. This would also contribute immensely to their farming operation because most of the farmers that acquire credit will utilize it majorly in their farming activities which will in the long run lead to sustainable output. This is in conformity with Ali and Byerlee (1991) who reported that farming experience is important in determining the profit levels of farmers in that the more the experience, the more farmers understood the agricultural system, condition, trends and valuation. Furthermore, the results implied that farmers must have gained some level of expertise over the years, which further give them a better understanding of socio-economic factors that affect their farming activities and can make efficient use of credit facilities if extended to them. . The majority (71%) of the farmers had farming experience falling within the range of 31 to 50 years, 19% had farming experience within the range of 20 to 30 years, 6% had farming experience above 50 years while 4% had below 20 years. This revealed that the respondents were vast and experience since majority took it as their major form of occupation in earning a living. This is in conformity with Ali et al. (2008) who reported that farming experience is important in determining the profit levels of farmers in that the more the experience, the more farmers understood the agricultural system, condition, trends and valuation. Furthermore, the results implied that farmers must have gained some level of expertise over the years, which further give them a better understanding of socio-economic factors that affect their farming activities and can make efficient use of credit facilities if extended to them. The study further revealed the annual income earned by the household farmers where 42% earned within $\frac{N110,000 - N150,000}{N150,000}$, while 18% earned within N160,000 and N200,000, 15% earned within N50,000 and N100,000 and 15% also earned N200,000 and above annually.

Variable Frequency		Percentage (%)	
Age			
31-40	13	13.0	
41-50	33	33.0	
51-60	40	40.0	
61-70	14	14.0	
Total	100	100.0	
Mean		47.3	
Sex			
Male	84	84.0	
Female	16	16.0	
Total	100	100.0	
Marital Status			
Single	11	11.0	
Married	69	69.0	
Widow/Separated	20	20.0	

Table 2: Socio-economic characteristics of respondents

Total	100	100.0
Household Size		10000
1-5	32	32.0
Above 5	68	68.0
Total	100	100.0
Mean		7.0
Educational level		
No formal Education	2	2
Primary	21	21.0
Secondary/High School	66	66.0
Tertiary	11	11.0
Total	100	100.0
Occupation		
Full time	79	79.0
Part time	21	21.0
Total	100	100.0
Farming Experience		
Below 20	4	4.0
20-30	19	19.0
31-50	71	71.0
Above 50	6	6.0
Total	100	
Mean		45.0
Annual Income		
Below 50,000	10	10.0
50,000-100,000	15	15.0
110,000-150,000	42	42.0
160,000-200,000	18	18.0
Above 200,000	15	15.0
Total	100	100.0
Mean		160,000
Farm Size		
1.0-2.0	28	28.0
2.1-4.0	48	48.0
Above 4.0	24	24.0
Total	100	100.0
Mean Sources Field Survey 2017		2

Source: Field Survey, 2017.

Farmers Access and Acquisition of Credit

Majority (58%) of the farmers in the study area acknowledged that they do not get access to loan for farming activities while only 42% could access credits for their farming activities (Table 3). Also, 48% of the farmers could source for credit from friends and relatives, 33% from cooperative societies, 6% from money lenders and 13% from formal sources. This is in conformity with the findings of Olaitan (2006) that credit from non-institutional sources is more attractive, because there is little or no insistence on collateral security and interest. On the other hand, formal sources of credit had low patronage from the farmers, which may be due to lack or limited presence of banks and other formal sources of credit in the study area coupled with delay in approval and disbursement of loan, insistence on collateral security, high interest rate and mode of repayment etc. Majority (94%) of the respondents acknowledged the existence of financial institution in the study area while 6% gave a response of no financial institution. The respondents reported that various financial institution exist in the study area ranging from conventional banks to cooperative banks, local money lenders and microfinance banks. Also, Majority (66%) of the farmers were not members of any cooperative society while 34% belongs to a cooperative society. These cooperative organizations could enhance social capital in terms of acquisition of loan from the bank and other social benefits.

Variable	Frequency	Percentage (%)	
Access to Loan			
Responses			
Yes	42	42.0	
No	58	58.0	
Total	100	100	
Available Sources of Credit			
Friends/Relatives	48	48.0	
Cooperatives/Associations	43	43.0	
Financial Institutions	13	13.0	
Money lenders	6	6.0	
Total	100	100.0	
Existence of Financial Institution	ons		
Responses			
Yes	94	94.0	
No	6	6.0	
Total	100	100.0	
Membership of Cooperative			
Society			
Responses			
Yes	34	34.0	
No	66	66.0	
Total	100	100.0	

Table 3: Distribution of Farmers Access and acquisition of Credit

Source: Field Survey, 2017.

Gross Margin Analysis of the farmers in the Study Area

Table 4 revealed a distinction between the gross margin of farmers that use credit and those that do not use credit. The mean values were presented for each class of farmers and it can be observed that users of credit have a larger mean gross margin of \$138,930.12 (385.92 USD) while non-users of credit have a mean gross margin of \$126,412.05 (351.14 USD). This implies that all other things being equal, a farmer that have access to enough capital for farming purpose will make more than another who is limited financially. This result is in conformity with Kimuyu and Omiti (2000) that inadequacy in financing and credit arrangements in the rural areas stands as an impediment to improvement in the standard of living of the farmers and also to the development of agriculture in the country because this is where the bulk of the food products come from.

Table 4: Gross M	/Iargin Analysis	for Credit user a	and Non-Credit Users

Variables	Credit Users	Non-Credit Users
Number of Observers	42	58
Total Revenue (Mean)	255,232.41	232,345.76
Variable Cost (Mean)	105,659.83	100,675.54
Gross Margin (Mean)	138,930.12	126,412.05
Standard Deviation	80848.15391	57451.40404

Source: Field Survey, 2017.

Effect of Utilization of acquired Credit on Farmers Productivity

Table 5 revealed the effect of the utilization of credit on farmer's productivity. Mean production level of the farmers that made use of credit was valued as N255,232.41 (708.98 USD) while non-credit user was N232,345.76 (645.40 USD) with a percentage change of 9.0%. This implies that credit use have a slight effect on farmers productivity and eventual sustainable level of the farmers production. This reveals that if the farmer is self-sufficient in terms of finance, he might produce as much as another farmer who is aided with credit if productive capacity remains the same.

Variables	Users of credit n=42	Non-users of credit n=58	Difference (in mean value)	% Change
	(mean value)	(mean value)		
Productivity (N)	₩255,232.41	₩232,345.76	₩22,886.65	9.0%
	(708.98 USD)	(645.40 USD)	(63.57 USD)	

Source: Field Study, 2017

Socio-economic Determinants of Agricultural credit acquisition and Utilization by farmers in the study area

Table 6 revealed the regression estimate of socio-economic determinants of credit obtained by farmers in Ekiti State, Nigeria. The exponential functional form was chosen as the lead equation based on the magnitude of R^2 , the significant level of the *F*-ratio, the number of significant variables and the conformity of the variables to a-priori expectations. The exponential functional form posted R^2 value of 0.9028, which indicates that 90.28% variation in farmers' acquisition of agricultural credit is accounted for the selected explanatory variables. It suggests that the model has explanatory power on the changes in farmers' acquisition of agricultural credit.

The coefficient of age (-0.008) was negatively signed and significant at 1.0% level. This result implies that the amount of agricultural credit acquired by farmers decreases with age. The result is in agreement with priori expectation. Older farmers are relatively more risk averse and tend to acquire fewer loans to avoid loan default. The coefficient of marital status (0.779) and occupational status (0.154) were positive and significant at 10.0% and 5.0% levels of probability respectively. This implies that any increase in their variables would lead to an increase in level of credit obtained. The posture of this result implies that single farmers in the study area acquired less agricultural credit. Married farmers have relatively larger household sizes, which serves as a drive to obtain agricultural credit in the area. Also lenders view married farmers as being relatively more stable, responsible and capable of repaying borrowed funds. With respect to occupational status, full time farmers obtained more agricultural credit than part time farmers. The need to invest more funds on their farms which is their sole means of livelihood could have accounted for this result.

Household size had a positive coefficient (0.059), which was significant at 1.0% level. This means that the amount of agricultural credit acquired and household size had direct relationship. This result is also in agreement with apriori expectation. As the size of a household increases, the household needs will also increase. In a bid to satisfy the increased household needs, relatively larger amount of loans will be acquired. The coefficient (0.021) of education level was positive and significant at 1.0% level. This result conforms to apriori expectations and implies that amount of agricultural credit acquired increases with education level. Expectedly, educated farmer borrowers have better tendency for loan management and adoption of new productivity enhancing technologies. This positive attribute increases loan repayment potential, which is attractive to lenders. Also, the coefficient of farm size (0.421) was significantly and positively signed at 5.0% level. This means that the greater the farm size, the greater the amount of agricultural credit acquired. This is because increase in farm size will lead to increased farm and sustainable inputs and subsequently increased profit and more quests for loan. This conforms to apriori expectations and corroborates that increase in farm size increases amount of acquired loan according to (Essien, 2009).

Variable	Linear	+Exponential	Double-log	Semi-log
Constant	62.736	3.236	4.196	153.188
	(2.32)***	(9.72) ***	(8.60)***	(2.72)***
Age (X_1)	-0.613	-0.008	-0.351	23.581
	(-3.30)***	(-3.54)***	(-4.53)***	(-3.21)***
Gender (X ₂)	-5.061	-0.017	-0.29	6.352
	(-1.22)	(-0.21)	(-0.56)	(4.59)***
Marital status (X ₃)	6.242	0.779	0.112	8.470
	(3.83)***	(1.67)*	(4.35)***	(4.65)***
Household size (X_4)	4.567	0.059	0.453	23.34
	(4.07)***	(3.23)***	(2.75)***	(2.59)***
Education level (X_5)	1.103	0.021	0.232	12.357
(-5)	(2.13)**	(2.97)***	(-4.51)**	(2.19)**
Farming	1.545	0.022	0.175	10.200
experience(X ₆)	(1.50)	(1.37)	(1.61) *	(1.43)
Occupational status	-16.332	0.154	0.237	22.526
(X ₇)	(-2.93)***	(3.17)**	(-3.49)***	(-5.025)***
Farm size (X ₈)	25.208	0.421	0.832	14.178
	(1.73)*	(2.18)**	(8.57)***	(1.63)*
R^2	0.8759	0.9028	0.8763	0.8667
Adjusted R ²	0.8620	0.8921	0.8738	0.8527
F-ratio	(65.77)***	(73.74)***	(64.52)***	(53.47)***

Table 6: Regression Estimates of the Socio-economic Determinants of Volume of Credit Obtained

Source: Field survey, 2017.

Numbers in parenthesis are the *t*-ratio. ***, ** and * indicate variables are significant at 1.0%, 5.0% and 10.0% risk level, respectively. +Lead equation

Problems that Constraint Farmers from Acquisition of Agricultural Credit

It was observed from Table 3 that even though there are many financial institutions (94%) in the study area, very few farmers (13%) had access to credit from them except for the help of informal sources (77%), this could be as a result of some of the following identified constraints to credit acquisition by the household farmers (Table 7) such as mode of repayment (1st), non-membership of cooperative society (2nd), high interest rate (3rd), lack of collateral security (4th), complex processing procedure (5th) and lengthy time to process loan (6th), age (7th), farm size (8th) and farming experience (9th). Therefore it can be concluded from the result that mode of repayment (x; 4.36; sd= 1.977) was the highest affected constraint to agricultural credit acquisition while farming experience was the least of the constraints (mean = 0.07; sd = 0.7).

Constraints	Rank (Position)	Mean	Std. Deviation
Mode of Repayment	1^{st}	4.3600	1.97724
Non-Membership of Cooperative Society	2^{nd}	4.2400	2.35325
High Interest Rate	3 rd	3.3000	1.61120
Lack of Collateral Security	4 th	3.0000	1.51090
Complex Processing Procedure	5 th	1.5600	1.01822
Lengthy Time to Process Loan	6 th	1.3600	0.82290
Age	$7^{\rm th}$	0.0900	0.90000
Farm Size	8^{th}	0.0800	0.80000
Farming Experience	9^{th}	0.0700	0.70000

Table 7: Distribution on constraint to farmers on agricultural credit acquisition

Source: Field Study, 2017 Conclusion and Recommendation

The outcome of the study revealed that agricultural activity in the study area were carried out mostly by married males who are educated with large household size and still in their productive years. They are mostly full time farmers with small to medium farm holdings, who sourced agricultural credit mainly from the informal sources. Cumulatively, 72% of the respondents could source agricultural credit form informal sources, while 28% of the farmers acquired credit from formal sources.

The result of the multiple regression analysis revealed that age, household size, marital status, education level, farm size, occupational status were significant predictors at varied signs and levels of amount of agricultural credit acquired by farmers. The farmers encountered problems of mode of repayment, high interest rate, lack of collateral, non-membership of cooperative societies, complex processing procedure, and lengthy time to process loan. In line with the research findings, the state government should pass policies aimed at providing free educative seminars to all farmers to teach them possible ways and methods of acquiring credit. To ensure mass attendance to such seminars, little incentives should be given to farmer participants.

The coefficient for farming experience and farm size was positively related to volume of credit obtained. Policies on land redistribution to make more land available to the farmers, especially the experienced farmers, should be promulgated. This calls for full implementation of the land use act of 1978 in the Nigerian constitution. Membership to cooperative societies could increase amount of credit acquired by farmers for agricultural production. Hence, the relevant government agencies should mobilize the rural farmers and encourage them to join cooperative associations, so that they can derive maximum benefit of collective investment of group savings, as well as increase their chances of accessing formal agricultural credit facilities because of the comparative advantages associated with cooperative societies. There should be a deliberate policy to ensure that rural farmers have access to adequate credit facilities. This, no doubt will go a long way to boost the production capacity of the farmers, thereby increasing their farm income. To achieve it, deliberate policy to ensure peasant farmers acquisition of agricultural credit should be put in place. Long term solutions should be provided by government at all levels to solve the recurrent problem of high interest rate and absence of collateral as farmers' constraints to production credit. In line with the finding of this study, it is recommended that financial institutions, such as agricultural and micro finance banks, should be established in the rural areas. The procedures for securing loans should also be streamlined in order to make it simple for the farmers.

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