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## **Analysis of Peasant Farmers' Access to Agricultural Credit in Benue State, Nigeria**

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### **Authors' contributions**

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

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### **ABSTRACT**

This study analysed peasant farmers' access to agricultural credit in Benue State, Nigeria. Data were collected from 130 randomly sampled peasant farmers in Benue State using a structured questionnaire. Descriptive statistics and inferential statistics were used to analyse data collected. The study showed that majority of the farmers (69.23%) had access to agricultural credit. Majority of the farmers (42.22%) accessed amount of credit ranging between 5,000 and less than 50,000 Naira. The predominant source of credit among the respondents was money lending (44.44%). The result of the binary logistic regression showed that at 5% level of significance, age, farm investment, access to extension services, household size, awareness, education, farm size, membership of cooperative society had significant influence on access to agricultural credit among rural farmers in the study area. Delay in approval/disbursement (supported by 52.31% of farmers), credit and lack of collateral security (supported by 52.31% of farmers) constituted the most limiting constraint to sourcing agricultural credit among the respondents. Efforts should be made to create more awareness about the existence of formal agricultural credits for agricultural production among the peasant farmers. The farmers should also be enlightened on how to go about accessing agricultural credit facilities. There should be a deliberate policy to ensure that peasant farmers have access to adequate credit facilities. Efforts should be made to improve the access of peasant farmers to relevant extension services as this would help increase their access to credit facilities. In addition, more rural farmers should be encouraged to join cooperative associations as this can increase their chances of accessing formal agricultural credit

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facilities because of the comparative advantages associated with membership of cooperative societies. Stringent measures coupled with loan monitoring activities should be put in place to check and reduce the incidence of agricultural credit misappropriation by beneficiaries.

*Keywords: Peasant farmers; access; determinants; agriculture; credit.*

## **1. INTRODUCTION**

Most issues discussed in Nigeria agriculture these days relate to problems associated with agricultural development. It is believed that the agricultural sector of the economy remains the main economic stay of the nation despite the revolution in other sectors of the economy like banking industry, oil industry and communication industry among others [1].

Agriculture provides the greatest avenue for employment, income and food for Nigerian populace (general public). The agricultural sector have 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 this sectors [2].

The Nigerian agriculture is made up of mainly peasant farmers and majority of these rural farmers live in the rural area and operate at subsistence level with land holding average of less than five hectares. Farmers are faced with the problems of low productivity, inadequate access to logistic support and input, crop infestations, pest and diseases and massive loss of crops and animals [3]. Small holder farmers engage mostly in mixed farming and cropping in order to ensure steady flow of income.

The decline in the Nigerian economy particularly in the area of 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 needed to secure loan or credit from financial institutions [4].

Agricultural credit is any of the several credit vehicle used to finance agricultural transaction, including loans, notes, bills of exchange and bankers acceptances. These types of financing are adapted to the specific financial needs of farmers, which are determined by planting, harvesting and marketing cycles. Short term credit finance operating expenses, intermediate term credit is used for farm machinery and long term credit is used for real-estate financing [5]. According to [6], credit is regarded as a major factor in agricultural development and lack of it is usually given as an explanation for many of the problem facing the sector in the developing nations, if credit were made available, the retarded agricultural sector will start moving by their contributions to the modernization of the sector.

However, [7] reported that availability of credit may not be the only answer to Nigerian food production problems. Although, it is a major factor consideration, other constraints contributing to the poor performance of Nigerian agriculture include the problem of pest and diseases, inadequate supply of agricultural inputs, rural-urban migration, inadequate transport facilities and land tenure system. Credit is a necessary ingredient in the various aspect of farming operations, and therefore plays a crucial role in economic development and is indispensable in the process of socio-economic transformation [3].

It has been argued that inadequate level of agricultural credit facilities is a major factor preventing adoption of innovation technologies [8]. Limited access to credits perpetuates poverty and low quality of life among farmers. This is because some of the innovation which the farmers wish to adopt may be too expensive to procure if they have restricted access to credit facilities or don't have access at all [9].

Peasant farming is defined as the cultivation of crops and rearing of animals on a small scale. According to [10], a peasant farmer is anybody whose economy and source of livelihood is based on his entitlement to ownership of land with which he uses to produce food for his family use and who draws his work force from the member of his immediate household.

The peasant farmers operate mainly in the rural environment of the country. They operate on very small holdings using mostly traditional method because, their income is relatively low and the capacity to save is poor. Therefore needs for credit in order to meet the small farmers output and input. The primary objective of farmers' credit program is to help the farmer to increase the volume of his output to enable him fight hunger and earn money for improved living standard.

In an attempt to tackle the problem of access to agricultural credit by peasant farmers, government at different levels in the country resorted to establishing specialized credit institution such as Nigerian Agricultural and Co-operative Bank (NACB), Nigerian Agricultural and Rural Development Bank (NARDB), Agricultural Credit Guarantee Scheme (ACGS) etc, for agricultural purpose and also to make credit acquisition easy for the farmers. In spite of all efforts to make agricultural credit available to peasant farmers, food price have been rising persistently and there have been great shortages of most essential food stuff and raw materials.

Previous study indicates that inadequate supply of credit generally in the form of chemicals and fertilizers and other inputs constitute major constraints, which could cripple agricultural development in Nigeria [11]. The need to find out more about existing constraints in the access of agricultural credit and proffer (offer) solution to avert these constraints informed the decision for this study.

A number of credit institutions have been established to finance small scale industrial and agricultural enterprises in Nigeria. Some of these credit institutions were designed to fund both industrial and agricultural sector of the economy while others are meant to finance just the agricultural sector. Hence this study aimed at finding out the extent to which farmers were having access to the credit facilities in Nigeria.

The broad objective of this study was peasant farmers' access to agricultural credit in Benue State, Nigeria. The specific objectives of the study were to:

- (i) Analyze the socio-economic characteristic of peasant farmers in Benue State;
- (ii) Ascertain farmers access to agricultural credit area;
- (iii) Identify the sources of credit for farmers;
- (iv) Search for the factors influencing farmers access to agricultural credit; and
- (v) Identify farmers' constraints to agricultural credit access and ascertain reasons for any credit misappropriation.

The null hypothesis that age, farm investment, farming experience, access to extension services, household size, awareness, education, farm size, membership of cooperative society and distance have no significant influence on access of peasant farmers to agricultural credit in Benue State, Nigeria was tested.

## **2. LITERATURE REVIEW**

### **2.1 Peasant Farmers and the Economy**

Agricultural system are so diverse, based on farm size, location, crops being grown, socio-economic background among many other factors [12]. These disparities create the room for classification of farmers. According to National Council of Industries (2002), peasant farming business is an establishment with a total capital of over N1.5 million, but not more than N50 million, excluding the cost of land and labor size between 10 and 100 workers. Peasant farmers are otherwise, referred to as small-scale farmers [13].

Peasant farming is characterized by a small capital base. Small-scale farmers in Nigeria are classified as resource poor due to the poor resource-base available to them, especially resources [12]. This causes low productivity due to the fact that they produce purely for subsistence consumption and little marketable surplus. Food production in Nigeria, as in many developing countries is linked with small-scale agriculture [14].

Majority of farmers in Africa are subsistence farmers who have small farm holdings ranging from 0.5 hectare to about 4 hectares. They produce food for their household, plus a little for sale in the neighborhood markets [15]. [14] stated that Nigerian farmers are classified into small scale, medium scale and large scale. About 94.37 percent of all farm holdings in Nigeria are classified as small holdings, while the remaining 5.63 percent are medium scale holdings.

[16] opines that peasant farmers account for 90 percent of total food and fiber production in Nigeria. According to [17], small scale farmers depend on their efficiency in the utilization of basic production resources available to them and make significant and important contribution to the national production, that is, 99 percent of the crop output. Small-scale farmers are the main producers of 98 percent of most crops consumed in Nigeria. They are therefore crucial to the development of Nigeria's economy, and attention should be paid to every of their need.

### **2.2 Concept of Credit and its Role in Agriculture**

Credit, has been the main focus of many research workers in agricultural finance. To some, credit is "all in all" for a farmer to produce (productive input) while others hold different opinions. Whichever way it is looked at, credit is an important instrument in the development of agriculture.

According to [18], credit is defined as the ability to obtain goods and services or money now in exchange for promise of payment in future. [19] looked at agricultural credit as the process of obtaining control over the use of money, goods and services in the present in exchange for promise to pay at a future date for agricultural use.

There are three (3) major roles in the financial intermediation system, saving, intermediation and borrowing. Savings is the part of income reserved for future use, that is, future production and consumption. In the absence of savings, there cannot be a build-up of capital stock to increase production of goods and services. However, savings in a society does not become an investment in capital until it is borrowed and utilized.

Financial intermediaries are an integral part of the broader concept of rural financial markets. It embraces all rural institutions, which affect accumulation and use of savings, allocation of investment capital, the flow and holding of fund and indeed the integration of rural financial market with national and international capital market. The intermediation process is a reversible flow of funds from the savers to users through intermediaries. The borrowers must of necessity provide evidence of a debt obligation to intermediaries for loan. In the same process, the intermediary provides saver a range of products and opportunities for further investment. It is obvious therefore, that financial intermediation has a key role in channeling funds to agriculture.

[20] suggested that credit should be given to peasant farmers in kind rather than in cash, which according to them, will relieve farmers from diverting loans from the intended project. [21] in support of African development report, explained that such credits prompt repayment in the form of deduction from later sales. In a contrary opinion, African Farmers observed that giving credits to farmers in kind will hinder them from using the money from the inputs needed which cannot be supplied by the members of the farm family. That though, credit in kind is considered a safer risk for lenders, it is not always the best for the peasant farmers. Often, a farmer's greatest need is not for seed or for pesticide but for a vehicle to transport produce, money to run the business. In such cases, farmers will borrow from local money-lenders despite the high interest rate in order to have the flexibility of a loan in cash.

[22] summarized credit when they wrote that: "credit may serve as a component to other government activity in facilitating investment or a substitute for it". It may be tied to the provision of specific service and supervision or it may simply funnel loanable funds to promote capital formation in the agricultural sector. It may fulfill a simple need of working capital to cover the period between planting and harvesting or it may represent long term capital formation in the provision of building equipments and establishment of tree crops. In all of its varied form and use, credit is essential to the working and growth of an economic sector involving substantial private enterprise and the development of effective institutions for mobilizing and allocating loanable funds as crucial element in promoting economic growth.

[18] noted that "at a certain stage of agricultural development, agricultural credit thus clearly becomes a strong force for further improvement when a man with energy and initiative who lacks only the resources for more and efficient production is enabled by the use of credit to eliminate the block on his path to improvement"

### **2.3 Sources of Agriculture Credit Facilities**

To move beyond the struggles for mere survival, rural Africans must be able to increase their income. They need available credits, improved marketing and new sources of employment [23]. According to [3], peasant farmers can be financed through the following sources:

- (i) Subsidized loans from commercial banks.
- (ii) Loans from co-operations and companies.

- (iii) Loans from the state financing agency.
- (iv) Direct loans from the federal and state government.
- (v) On-lending funds of the co-operative bank.
- (vi) External loans from agricultural co-operatives.

The peasant farmer's readily available source is from money-lenders or intermediaries who purchase his final products. Of all the available source of agricultural credit to peasant farmers, the informal source supplies the largest portion of the total agricultural credit to small holder farmers.

According to [7], agricultural producers have access to capital markets through two main categories: The Non-Institutional source and the Institutional source.

The Non-Institutional source of credit includes relation, friends, produce-buyers, traders, and private money-lenders. Loans from such source are usually made directly to the borrowers and are prevalent in the area where individuals are quite familiar with and share confidence in one another. [24] noted that the non-institutional source (informal lenders) played a significant role in the supply of credit to peasant farmers. They are however, noted for their promptness in making loans available and sometimes, they charge high interest rates. The institutional source on the other hand include lending agency, farmer's co-operatives, commercial and merchant banks. Institutional credit has been categorized into domestic and foreign sources [25]. Domestic source include the credit from co-operatives like traditional credit groups such as Esusu and friendly societies. The institutional lender constitutes the major supplies of credit to large scale farmers and urban based borrowers. In Nigeria, there are four broad categories of banks, which indeed are committed directly or indirectly to provide credit to farmers. These banks are:

1. The Central Bank of Nigeria (CBN) being at the apex of the Nigeria banking system.
2. The Commercial Banks that are many in numbers, and supply the largest portion of total agricultural credit in the economy especially for short term purpose.
3. The Development Banks which are required to play significant development roles by the long-term financing of agro-allied industry.
4. The merchant banks, which provide medium and long term credits to Nigerian farmers.

One of such Development Banks is the Nigerian Agricultural Co-operatives and Rural Development Bank (NACRDB). Other institutional farm credit sources are the federal and state government, sponsored co-operations, companies, boards and other agencies, insurance companies, privately owned investment and/or finance companies.

## **2.4 Constraints to Agricultural Credit Accessibility**

Different farming households will have different needs for credit but a good sign that indicates some level of credit constraint is the gap between demand and supply of credit. Credit constraints can be defined as a wide gap between demand for credit and supply of credit. [26] defined credit constraint as the situation where the household cannot avail itself of the credit it desires at the prevailing relevant market conditions, thus classifying households into credit constraint and un-constraint household.

In Nigeria, the prevalence of credit constraint and their impact on production efficiency has led to low production on the farmers. Economics of agricultural production at the micro level

is to attain the objective of profit maximization through efficient farm allocation of resources over a period of time or by either maximizing output from given resources or minimizing the resources required for producing a given level of output.

One of the reasons for the failure of most credit institutions in Nigeria is that they have complicated, cumbersome and time consuming procedure which results in delay in approval and in loans not being made available when required, illiteracy on the part of the farmers, high administrative charges, period for advance. Security of advance discourages peasant farmers from commercial bank facility. Several factors militate against efficient procurement and utilization of credits from formal sources of credit. Such factors include the inability of the farmers to provide acceptable collateral demanded by the lending institutions, delay in the disbursement of credit to synchronized with the different farming operations and lack of well planned clear debt repayment scheduled.

[25] also stated that apart from the insistence of credit institutions on the provision of collateral and high interest rate, most farmers also encounter difficulty in complying with the banks demand for feasibility report on the project for which credit is required. While peasant farmers have now been exempted from fulfilling this obligation as far as loans under agricultural credit guarantee scheme is concerned, there is nothing to indicate that banks do not demand such a report from the peasant farmers for loans outside the guarantee scheme. What bothers the farmers is the huge cost of procuring the feasibility report and the attendant delay involved in its presentation.

### **3. METHODOLOGY**

#### **3.1 The Study Area**

Benue State is one of the 36 states of Nigeria located in the North-Central part of Nigeria. The State has 23 Local Government Areas, and its Headquarters is Makurdi. Located between Longitudes 60 35'E and 100E and between Latitudes 60 30'N and 80 10'N. The State has abundant land estimated to be 5.09 million hectares. This represents 5.4 percent of the national land mass. Arable land in the State is estimated to be 3.8 million hectares [27]. This State is predominantly rural with an estimated 75 percent of the population engaged in rain-fed subsistence agriculture. The state is made up of 413,159 farm families [28] and a population of 4,219,244 people [29]. These farm families are mainly rural. Farming is the major occupation of Benue State indigenes. Popularly known as the "Food Basket" of the Nation, the State has a lot of land resources. For example, cereal crops like rice, sorghum and millet are produced in abundance. Roots and tubers produced include yams, cassava, cocoyam and sweet potato. Oil seed crops include pigeon pea, soybeans and groundnuts, while tree crops include citrus, mango, oil palm, guava, cashew, cocoa and *Avengia spp.*

#### **3.2 Sampling Technique**

The population for this study is the entire peasant farmers' who are beneficiaries of agricultural credit in Benue State. Since it was impractical to study the entire population, a sample of the population was taken for the study.

A purposive sampling technique was used to select 10 council wards in Otukpo Local Government Area of Benue State. These council wards house the communities in which the

beneficiaries of agricultural credit reside. From each of the ten council wards, two communities were drawn employing a randomized sampling design. Finally, from each community, 7 households were drawn for the study through a randomized sampling design. A total of 140 peasant farmers were selected for the study using the randomized sampling design. Since information on the number of peasant farmers in each council ward was not available to the researchers as at the time of this research, the researchers had to take equal sample of 7 farmers per council ward, giving a total of 140 respondents.

### **3.3 Data Collection**

Data for this study were obtained mainly from primary sources. Primary source of information were obtained using a structured questionnaire, copies of which were administered to the 140 peasant farmers selected for the study.

### **3.4 Analytical Technique**

Data for the study was analyzed using both descriptive and inferential statistics. Objective i, ii, iii and v were analyzed using simple descriptive statistics such as mean, percentages and frequency distribution. Objective iv was analyzed using a logit regression model. The null hypothesis was tested using the Logit regression result.

### **3.5 Model Specification**

In order to determine the factors influencing access of peasant farmers to agricultural credit in the study area, the Binary Logistic Regression that was used is specified below:

$$Z = \log [P/1-P] = \log Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10}$$

Where Z = probability of access to agricultural credit

Access = 1; No access = 0

$\beta$  = regression coefficient explaining changes caused in Z by changes in the independent variables

$X_1$  = Age (in years)

$X_2$  = Annual Farm investment (in Naira)

$X_3$  = Level of education (in years). Primary =6; secondary =12; diploma = 14; HND =16; B.sc =17; M.sc =19; PhD = 22 year

$X_4$  = Farm Size (in hectares)

$X_5$  = Household size (in number)

$X_6$  = Membership of Co-operative (Member = 1, non-member = 0)

$X_7$  = Access to extension services (Access = 1, No access = 0)

$X_8$  = Awareness (Aware = 1, Not aware = 0)

$X_9$  = Farming Experience (in years)

$X_{10}$  = Household Distance from source of credit (in years)

$\mu$  = Error term



## **4. RESULTS AND DISCUSSION**

### **4.1 Socio-economic Characteristics of Respondents**

The result in Table 1 shows that majority (68.46%) of the farmers were male while 25.83% were female, suggesting that male gender dominates farming in the study area. The male dominance of this rural source of livelihood implies the laborious nature of farming operations right from tillage to harvesting 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 finding of [30] that small-scale farming are being carried out mostly by males, while females involve in light farm operations such as processing, harvesting and marketing.

The Result in Table 1 shows that the age of the respondents ranging between 30 and less than 40 years is predominant with 33.85%. Also 23.08% of the respondents are of the age range of between 20 and less than 30 years. The implication of the foregoing result is that farming in the study area enjoys higher patronage by the young people who are energetic enough to withstand the stress involved in farm operations. This result suggests that majority of peasant farmers in the study area are young farmers who are within the age bracket in which people are innovative and active at work [31]. These farmers therefore can make meaningful impact in agricultural production when adequately motivated with the needed agricultural credit.

The result in Table 1 shows that majority (53.85%) of the farmers had primary education, 30.77% of the respondents had secondary education. This result suggests that almost all the respondents were literate enough to give room for effective communication in doing their farming business in the study area.

The result in Table 1 shows that the society was typically an agrarian society characterized by large family sizes ranging mainly between 6 – 10 children (46.92 %). The high household size of the majority of the respondents suggests that there was abundant supply of family labour in the studied area, which can be harnessed for increased agricultural production. However, this could increase the probability of poverty where household members were not engaged in any income generating activities.

Majority (55.83%) of the farmers had farms sizes ranging between 1 and less than 3 hectares (Table 1). This suggests that the farmers were mostly small scale producers. Those farmers whose farm sizes were more than 3 hectares were those who had some good number of years of experience and had gradually expanded their farm sizes for some number of years as they made profit from efficient utilization of agricultural credit accessed. They were motivated to expand for more profit as human wants are insatiable.

The result in Table 1 shows that 43.08% of the farmers earned an annual farm income of between N50, 000 and less than N100, 000, while 35% of the farmers earned an annual farm income of between N100, 000 and less than N200, 000. These annual incomes of the farmers were too poor for any meaningful economic activity in view of the large household size of the respondents. This could be attributed to ineffective utilization of agricultural credit by majority of the respondents.

**Table 1. Percentage distribution of the socio-economic characteristics of the respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>(i). Sex</b>		
Male	89	68.46
Female	41	31.54
<b>Total</b>	<b>130</b>	<b>100</b>
<b>(ii). Age (years)</b>		
20 < 30	30	23.08
30 < 40	44	33.85
40 < 50	29	22.31
≥ 50	27	20.77
<b>Total</b>	<b>130</b>	<b>100</b>
<b>(iii). Education</b>		
Primary	70	53.85
Secondary	40	30.77
Tertiary	6	4.62
No formal education	14	10.77
<b>Total</b>	<b>130</b>	<b>100</b>
<b>(iv). Household size</b>		
1-5	47	36.15
6-10	61	46.92
11-15	20	15.38
16-20	2	1.54
<b>Total</b>	<b>130</b>	<b>100</b>
<b>(v). Farm size (ha)</b>		
1 < 3	77	59.23
3 < 5	24	18.46
5 < 7	18	13.85
≥ 7	11	8.46
<b>Total</b>	<b>130</b>	<b>100</b>
<b>(vi). Annual income (N)</b>		
10,000 < 50,000	11	8.46
50,000 < 100,000	56	43.08
100,000 < 150,000	42	32.31
150,000 < 200,000	16	12.31
≥ 200,000	5	3.85
<b>Total</b>	<b>130</b>	<b>100</b>

Source: Field Survey, 2013

This mean annual income is grossly inadequate to cater for the economic well-being of the respondents considering the large family size of the respondents. This low annual income is attributable to small-sized farms that most of the respondents operate and their generally low level of education. This is acceptable on the ground that education affects the way farms are managed as well as overall production [32]. Educational level plays a good role in adoption of new policy and undertaking risks.

Furthermore, low annual income is also attributable to low level of total economic efficiency arising from small-sized farms among the respondents. [33] found that improvement in both farm income and non-farm income of rural farmers resulted more from decrease in the cost

of technical efficiency (or allocative inefficiency), which in turn increased the overall economic efficiency and hence increase in per capita income. Furthermore, [34] observed that high levels of cost inefficiency are highly attributable to the low profitability that results from inadequate organization of farmers into collective farmers' institutions that can provide opportunities for risk sharing and improved bargaining power.

[35] observed that greater efficiencies in the use of resources are associated with the large farms than the small farms. They pointed out that the smallness of holdings deters the use of mechanization and does not allow the use of modern inputs due to lack of purchasing power in the hands of small farmers. [36] asserted that in reality, small-scale producers are not always efficient. This can result in low productivity and low income among the farmers. [37] reported that extreme income inequality leads to economic inefficiency. This is partly because at any given average income, the higher the inequality, the smaller the fraction of the population that qualifies for a loan or other credit. When low-income individuals cannot borrow money, they generally cannot adequately educate their children or start and expand a business. [38] found that high degree of inequality exists in the distribution of farm income and non-farm income among the rural and peri-urban farming households in Nigeria.

#### **4.2 Access to Agricultural Credit**

The result in Table 2 shows that majority (69.23%) of the farmers had access to agricultural credit. This result suggests that access to agricultural credit in the study area was moderately high. The implication of this finding is that the production potentials of the peasant farmers in the study area could easily be enhanced by virtue of farmers' access to financial assistance for the acquisition of needed production resources.

The result in Table 2 also shows that 82.22% of the farmers opined that their level of access to credit in terms of quality and quantum was low. It can be inferred from the result that fund received as agricultural credit by individual farmers was grossly inadequate to make meaningful impact in their agricultural production. This could be because majority (44.44%) of the peasant farmers in the study area could only access funds from money lenders. These sources of credit are usually costly as they charge prohibitive interest rates and administrative charges [39].

The result in Table 2 further shows that majority (42.22%) of the farmers accessed amount of credit ranging between 5,000 and less than 50,000 Naira, while 38.89% of the respondents accessed between 50,000 and less than 100,000 Naira of credit. This suggests that the credit facility available to rice farmers in the study area was small.

The result in Table 2 shows that majority (50.77%) of the farmers were not members of cooperative society, while only 49.23% were members of cooperative society. This implies that the individual peasant farmers in the study area might have had the disadvantages of not having the privilege of having their needs satisfied through the cooperative society, which has a higher bargaining power compared to individual farmers.

[40] observed that the greater the extent to which the various farmers' cooperative societies as groups satisfy the needs of their members, the more the farmers get involved with the groups. [41] reported that farmers who did not subscribe to the membership of cooperative societies had to contend with the disadvantages of limited access to extension services, reliance on middlemen for marketing (who also dictate the price) of their produce, high cost of input and lack of opportunity to share experience and ideas.

**Table 2. Percentage distribution of respondents by access to credit**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>i. Access to credit</b>		
Access	90	69.23
No access	40	30.77
<b>Total</b>	<b>130</b>	<b>100</b>
<b>ii. Level of access</b>		
Low	74	82.22
Moderate	15	16.67
High	1	1.11
<b>Total</b>	<b>90</b>	<b>100</b>
<b>iii. Amount of credit received</b>		
5,000 < 50,000	38	42.22
50,000 < 100,000	35	38.89
100,000 < 150,000	4	4.44
150,000 < 200,000	2	2.22
≥ 200,000	11	12.22
<b>Total</b>	<b>90</b>	<b>100</b>
<b>v. Membership of cooperative</b>		
Members	64	49.23
Non-members	66	50.77
<b>Total</b>	<b>130</b>	<b>100</b>

*Source: Field Survey, 2013*

### 4.3 Sources of Agricultural Credit

Table 3 shows that the main sources of credit available to the farmers were money lenders (44.44%), commercial banks (33.33%) and agricultural banks (22.22%). The implication is that the major source of credit among the respondents was money lenders, which is a non-institutional source of credit. Previous studies have confirmed this finding. Loan from non-institutional sources are devoid of administrative delays and there is no insistence on collateral security.

The low patronage of banks may be due inadequate awareness of the existence of formal agricultural credit institutions among the respondents. Furthermore, low patronage of banks could also be attributed to lack or limited presence of banks in the rural areas coupled with delay in approval and disbursement of loan and insistence on collateral security. This finding agrees with the observation of [42].

**Table 3. Percentage distribution of respondents by sources of credit**

<b>Source of credit</b>	<b>Frequency</b>	<b>Percentage</b>
Commercial Bank	30	33.33
Agricultural Bank	20	22.22
Money Lender	40	44.44
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field Survey, 2013*

#### 4.4 Factors Influencing Access of Peasant Farmers to Agricultural Credit

The result of the binary logistic regression in Table 4 shows that at 5% level of significance, the null hypothesis that age, farm investment, farming experience, access to extension services, household size, awareness, education, farm size, membership of cooperative society and household distance from source of credit have no significant influence on access of peasant farmers to agricultural credit in the study area is rejected. There was a significant change in -2 log-likelihood. This suggests that there was a significant cause-effect relationship between peasant farmers' access to agricultural credit and the selected explanatory variables.

**Table 4. Factors influencing access of peasant farmers to agricultural credit**

Variables	B	S.E.	Wald	Exp(B)
Age (years)	-0.610	0.347	3.09*	0.941
Farm investment	0.002	0.001	4.000*	0.804
Farming experience	0.532	0.994	0.286	0.703
Awareness	0.681	0.222	9.410*	0.605
Education	0.746	0.358	4.342*	0.597
Access to extension services	0.615	0.214	8.259*	0.902
Household size	0.556	0.39	2.032*	0.078
Farm size	0.824	0.411	4.019*	0.279
Membership of cooperative society	0.791	0.422	3.513*	0.734
Distance	-0.679	0.852	0.6351	0.455
Constant	0.424	0.514	0.6805	0.000
-2 Log likelihood				30.689
Cox & Snell R square				0.723
Nagelkerke R square				0.841

Source: Field Survey, 2013

\*Wald statistic is significant at 5% level.

\*Change in -2 Log likelihood is significant at 5% level.

The Cox & Snell R square (coefficient of determination) ( $R^2$ ) is 0.723. This indicates that 72.3% variation in peasant farmers' access to agricultural credit is accounted for by variations in the selected explanatory variables, suggesting that the model has explanatory power on the changes in peasant farmers' access to agricultural credit. The Nagelkerke R square (adjusted  $R^2$ ) also supported the claim with a value of 0.841 or 84.1%. This implies that the selected explanatory variables explain the behavior of peasant farmers' access to agricultural credit at 84% level of confidence.

The result in Table 4 shows that farm investment has a significant and positive influence on peasant farmers' access to agricultural credit. This suggests that farmers' access to agricultural credit becomes better as their farm investment increase. It can be inferred from this that farm producers often need credit facilities to boost their farm investment in order to increase their expected income. The implication of this is that the need for financial assistance to acquire sufficient production resources is a critical factor, which could serve as a driving force to seek for agricultural credit for expanding farm production.

The result in Table 4 further shows that the probability of peasant farmers' access to agricultural credit decreases with age. Since producers generally become more risk-averse with age, this parameter estimate suggests that less credit is probably sought for to avoid the

risk of default in repayment. The probability of access to agricultural credit increases with awareness of the existence of agricultural credit facilities. This is because awareness of the existence of agricultural credit facilities places the peasant farmers in a better position to seek for credit facilities.

The probability of access to agricultural credit is shown to increase with education. This suggests that education raises producers' knowledge and awareness of the need for agricultural credit and leads them to seek for agricultural credit facilities. The probability of access to agricultural credit is shown to increase with access to extension services. This suggests that access to extension services imparts on the peasant farmers the capacity to access agricultural credit facilities. This is because interaction with extension agents increases the probability of the farmers being aware of the existence of agricultural credit facilities.

Household size has a significant and positive influence on peasant farmers' access to agricultural credit. This suggests that farmers' access to agricultural credit becomes better as their household size increases. This is because increase in household size implies availability of family labour, which could serve as a driving force to seek for agricultural credit for the purpose of expanding farm production.

Farm size has a significant and positive influence on peasant farmers' access to agricultural credit. Risk and uncertainty increase with farm size (sales). Such increases in production risk are likely to be somewhat offset by producers' ability to manage risk or their willingness to bear risk as size increases. That is, size is undoubtedly related to producers' past success in managing the operation. Additionally, risk is somewhat minimized by the marketing strategies utilized by larger producers. For example, larger producers market through wholesalers, road-side markets, processors, and retailers. Smaller producers, on the other hand, often rely entirely upon a single outlet. Since increased diversification and larger size typically require more and better formal credit facilities, larger producers are expected to have higher drive to seek for more credit facilities and thus have higher access to agricultural credit facilities.

The result in Table 4 also shows that membership of cooperative society has a significant and positive influence on peasant farmers' access to agricultural credit. This suggests that peasant farmers' access to agricultural credit becomes better when they belong to a cooperative society. It can be inferred from this that membership of cooperative society imparts on the peasant farmers the capacity to access agricultural credit facilities. This is because a cooperative society has the capacity to arrange for credit facilities for its members.

#### **4.5 Misappropriation of Agricultural Credit among the Farmers**

The result in Table 5 shows that majority (52.22%) of the farmers did not misappropriate agricultural credit accessed while 47.78% misappropriated agricultural credit accessed. The implication of this finding is that the production potentials of the majority of the peasant farmers in the study area could have been easily enhanced by virtue of appropriation of agricultural credit obtained for the acquisition of the needed production resources. These farmers therefore could make meaningful impact in agricultural production when adequately motivated with the needed agricultural credit.

The result in Table 5 also shows that the most common reason given among the respondents for misappropriating agricultural credit obtained was meeting family needs (31.11%). However, 38.89% of the respondents did not disclose any reason for misappropriation of agricultural credit.

**Table 5. Percentage distribution of respondents by misappropriation of credit**

Variable	Frequency	Percentage
<b>i. Misappropriation of credit</b>		
Misappropriate	43	47.78
Did not Misappropriate	47	52.22
<b>Total</b>	<b>90</b>	<b>100</b>
<b>ii. Reason for misappropriation</b>		
Meeting Family Needs	28	31.11
Low output/returns	12	13.33
Increase in price of input	13	14.44
Loss of the Money to Fraudsters	2	2.22
No response	35	38.89
<b>Total</b>	<b>90</b>	<b>100</b>

Source: Field Survey, 2013

#### 4.6 Farmers' Constraints to Accessing Agricultural Credit

The result in Table 6 shows that majority (76.15%) of the respondents faced one problem or the other that limited or constrained their access to agricultural credit. The result in Table 6 also shows that majority (52.31%) of the respondents faced problem of delay in approval and disbursement of credit as a constraint to sourcing agricultural credit. Furthermore, 52.31% of the respondents faced problem of lack of collateral security as a constraint to sourcing agricultural credit. This implies that delay in approval/disbursement of credit and lack of collateral security constituted the major constraints to sourcing agricultural credit among the respondents. A study by [39] had earlier reported that money lenders generally charged exorbitant rates due to risks involved and in some cases they extract economic surplus provided by peasant labour, capital and possibly land.

**Table 6. Percentage distribution of respondents by constraints to accessing agricultural credit**

Variable	Frequency	Percentage
<b>i. Constraints</b>		
Constrained	99	76.15
Not Constrained	31	23.85
<b>Total</b>	<b>130</b>	<b>100</b>
<b>ii. Constraints Encountered*</b>		
Complicated Procedures	49	37.69
Delay in Approval/Disbursement	68	52.31
High Administrative Charge/Interest	27	20.77
Lack of Collateral	68	52.31

Source: Field Survey, 2013

\*Multiple Responses

## **5. CONCLUSION**

The study showed that majority of the respondents had access to agricultural credit. Level of access to credit in terms of quality and quantum of access to agricultural credit among the respondents was low. The findings of study also showed that majority of the respondents were not members of cooperative society. Furthermore, the major sources of credit among the respondents were non-institutional sources (money lenders).

The result of Logit regression showed that age, farm investment, access to extension services, household size, awareness, education, farm size, membership of cooperative society had significant influence on access to agricultural credit among the farmers in the study area. The most common reason given among the respondents who misappropriated agricultural credit obtained was meeting family needs. Majority of the respondents faced one problem or the other that constrained their access to agricultural credit. However, delay in approval/disbursement of credit and lack of collateral security constituted the major constraints to sourcing agricultural credit among the respondents.

## **6. RECOMMENDATIONS**

Efforts should be made to create more awareness about the existence of formal agricultural credits for agricultural production among the peasant farmers especially in the rural areas. The farmers should also be enlightened on how to go about accessing agricultural credit facilities. This will enable them to obtain financial assistance that would help boost their farm investment thereby expanding production and hence increasing farm income.

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.

Sufficient number of extension agents should be deployed to the rural areas so that more rural farmers can be reached by extension agents. This is important since it will ensure that many rural farmers are offered extension services in their critical areas of needs. In addition, more rural farmers should be encouraged to join cooperative associations as this can increase their chances of accessing formal agricultural credit facilities because of the comparative advantages associated with cooperative societies.

Stringent measures coupled with loan monitoring activities should be put in place to check and reduce the incidence of agricultural credit misappropriation by beneficiaries. Furthermore, deliberate policy to ensure that critical problems that constrained peasant farmers access to agricultural credit should be put in place. The problem of Delay in Approval/Disbursement should be adequately addressed. This will help to improve their access to agricultural credit and further motivate them to increase agricultural production.

## **COMPETING INTERESTS**

Authors declare that no competing interests exist.



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