

**DETERMINANTS OF CREDIT ACQUISITION AND ITS
EFFECT ON OUTPUT OF FARMERS IN IKOLE LOCAL
GOVERNMENT AREA, EKITI STATE, NIGERIA.**

BY

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DEDICATION

This project work is dedicated to the Almighty God for his grace and infinite mercy and to my loving parents Mr. and Mrs. Ajiniran.

ACKNOWLEDGEMENT

I am most grateful to the Almighty God for his grace and infinite mercy upon me since the beginning of my study in this institution of learning to the completion of this study


I greatly appreciate my supervisor: Prof. R.A Omolehin who painstakingly guided me through the various stages of this study and made meaningful critique of my work despite his very tight schedule. I also appreciate the head of department: Prof O.B Adeniji for his fatherly love and advice.

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My profound gratitude goes to my parents: Mr. and Mrs. Ajiniran, my siblings for their love and support and to all my friends and colleagues, I couldn't have done it without you. Thank you.

DECLARATION


I hereby declare that this project was carried out by me under the supervision of Prof. R.A Omolehin of the Department of Agricultural Economics and Extension, Federal University Oye Ekiti as part of the requirement for the award of bachelor degree in Agriculture. Sources of Information are specifically acknowledged by means of reference. I solemnly declare that this work has not been submitted elsewhere for the award of any Degree.



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CERTIFICATION

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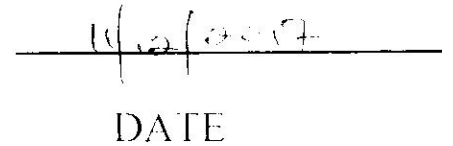


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ABSTRACT

The purpose of this study was to examine the determinants of credit acquisition among farmers in Ikole local government area and its effect on their output. Specific objectives are: to describe the socio-economic characteristics of the farmers, identify the sources of credit available to the farmers, identify problems that constrain farmers from agricultural credit acquisition, evaluate the effect of using credit on farmers output. Data were collected from 100 respondents using structured questionnaire. Data collected were analyzed using descriptive statistics, multiple regression analysis, gross margin analysis and the study hypothesis was tested with the independent t-test. The result showed that majority (84%) of the respondents were males with a mean age of 47 years. 98% of the farmers have formal education, 89% were married with majority having large households of above 5 persons. Majority (79%) are fulltime farmers while the rest are secondary farmers. Majority (48%) could source for credit from friends and relatives, 33% from cooperative societies, 6% from money lenders and 13% from formal sources. The result of the multiple regressions indicated that age, household size, marital status, education level, occupational status, farm size at varied signs and levels as significant predictors of amount of agricultural credit acquired by farmers. The constraints to credit acquisition as perceived by farmers include; mode of repayment, non-membership of cooperative society, high interest rate, lack of collateral security, complex processing procedure and lengthy time to process loan. The result shows the mean profit margin of users as ₦138930 and ₦126412 for non-user with a t-value of 18.417 and 9.639 respectively. This implies that credit use would best determine the profit margin of farmers in the study area.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Agriculture 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 (Food and Agriculture Organization, 1998). 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, 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, 2014). Alfred (2005) opined that acquisition and utilization of credit for agricultural purposes promote productivity and consequently improve food security status of a community.

Agricultural credit is very important 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). Agricultural credit enhances productivity and promotes standard of living by breaking vicious cycle of poverty among small

scale farmers (Nwaru *et al.*, 2006). Adegeye and Dittoh (1985) described agricultural credit as the means of obtaining control over the use of money, good 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 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, 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 accounted 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 area 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.

1.2 Statement of the problem

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 (Agriculture and rural development 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 established how socio-economic characteristics of farmers, lack of collateral, basic loan requirements by financial institutions and interest on loans etc. has hindered farmer's access to credit. For this reasons this paper seek to give answers to the following research questions:

1. What are the socio-economic characteristics of farmers in the study area?
2. What are the sources of credit available to farmers in the study area?
3. What are the socio economic determinants of credit use among farmers in the study area?
4. What are the constraints faced by farmers in the acquisition of credit?
5. What is the effect of credit acquisition on farmers output?

1.3 Objectives of the study

The general objective of this study is to examine the determinants of credit acquisition by farmers in Ikole Ekiti local government area of Ekiti State.

The specific objectives are to;

- i. describe the socio-economic characteristics of the rural farmers in Ikole Local Government Area;
- ii. identify the sources of credit available to the respondents;
- iii. identify problems that constrain farmers from agricultural credit acquisition;
- iv. evaluate the effect of using credit on farmers' output.

1.4 Hypothesis of the study

Ho- There is no significant difference between the profit margin of farmers that use credit and those that do not use credit.

Ha- There is a significant difference between the profit margin of farmers that use credit and those that do not use credit.

1.5 Justification for the study

Nigeria is a country blessed with good cultivable land for agriculture but for the country to be able to attain and sustain national food security there will be need to improve agriculture greatly at the rural level. In order to achieve massive food production which will save the country from expending its foreign exchange on importation of foods, there is a need to provide the rural

farmers which is where the food products come from with credit facilities that will increase their input level and thus increase their productivity. The farmers require credit for production purposes: Credit is required for the payment of wages, procurement of inputs, like fertilizers, herbicides and improved seeds; Credit is needed for marketing of produce like transportation, storage, processing and other marketing related functions especially during the off seasons.

This study will provide useful information on the status of farmers and various factors that determines their use of credit from commercial banks and other financial institutions. This information will be vital for policy makers in taking appropriate actions toward facilitating the establishment of comprehensive and sustainable credit products for the development of agriculture in the rural areas. The study results will also benefit development partners and civil society organizations involved in the provision of credit facilities to farmers in modifying the lending measures and conditions to better serve the specific credit needs of their clients. In general, it is hoped that the end result of this study will provide a thrust to explore the possibility of providing credit facilities that directly support farmers to increase productivity.

CHAPTER TWO

Literature review

2.1 Concept of credit

The word 'credit' has been given several and varying number of meanings. Some people refer to it as 'loan' while others use the term 'borrow' to qualify credit. Pischie *et al.* (1983), defined credit as a loanable fund which permits the purchasing of services, money or goods in the present, based upon the promise to pay for time at some time in future. From this it can be inferred that credit provides the means for the temporary transfer of assets or the use of such assets from a man or organization that has them, to a man or organization that has not.

Baker and Hopkins (1979), however, made a clear distinction between credit and loan. He referred to credit as an asset or a financial reserve which the farmers can call upon when needed provided he has not used his credit 'asset' by exchanging it for a loan. When a farmer makes the exchange of his credit for a loan, then he starts incurring an interest charge, also he uses up part of his capacity and hence part of his ability to acquire additional liquidity in the future by borrowing.

Olajide (1981), defined credit as 'monetary' or financial aspect of capital resources; capital resources being broadly defined as goods employed but necessarily used up to the course of production. They went further to indicate that, it can take the form of: Money in cash or bank over drafts.

Adegeye and Dittoh (1985) defined credit as the process of obtaining control over the use of money, goods and services in exchange for a promise to repay at a future date. A credit

transaction often requires the provision of some evidence of debt obligation in return for a loan, except in case of transaction between friends or relatives where loans were given based solely on good relationship.

2.2 Agricultural credit in Nigeria

The role of agricultural credit as a factor of production to facilitate economic growth and development as well as the need to appropriately channel credit to rural areas for economic development of the poor rural farmers cannot be over emphasized (Okumadawa, 1997). Agriculture contributes immensely to the Nigerian economy in many ways, namely: in the provision of food for the increasing population; supply of adequate raw materials to a growing industrial sector; a major source of employment generation, foreign exchange earnings, and provision of a market for the products of the industrial sector (Food Agricultural Organization, 2006). The agrarian sector has a strong rural base; hence, generating concern for agriculture and rural development. Support for agriculture is widely driven by both Government and the public sector, which has established institutional support in form of agricultural research, extension, commodity marketing, input supply, and land use legislation, to fast-track development of agriculture and rural economic empowerment (CBN, 2007). Over the years, the inability of this sector to expand and as well contribute meaningfully to the growth of Nigerian economy was due to inadequate financing to improve on the situation that is, facilitating agricultural credit (World Bank, 1998).

Also, the problem of rapid agricultural development in Nigeria indicates that efforts directed at achieving expanded economic base of the rural farmers were frustrated by the scarcity of and restrictive access to loanable fund. One of the reasons for the decline in the contribution of

agriculture to the economy is lack of formal National credit policy and paucity of credit institutions which can assist farmers (CBN, 2010). The role of financial capital as a factor of production to facilitate economic growth and development as well as the need to appropriately channel credit to rural areas for economic development of the poor rural farmers cannot be over emphasized. Credit (capital) is viewed as more than just another resource such as labour, land, equipment and raw materials (Raji, 2008). Shepherd (2002) opined that 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). The low volume of business in the rural areas where poverty is most prevalent cannot guarantee sustainable business activities to encourage the establishment of commercial banks to provide the needed finance for agricultural production. Moreover, the cost implication of processing agricultural loans in the rural economy makes it unattractive for conventional banks to channel their resources to farming. Although, the commercial banks finance agricultural activities but their credits are urban based and so small that their impact cannot be felt in the rural areas where farming actually takes place. Lack of priority attention to rural population in credit delivery by commercial and other banks in the economy contributed to the depressed economic conditions in the rural economy, and this situation also affects the overall economic growth and development of the nation (Bamisile, 2006).

Banking sectors in developing countries lend a much smaller share of their loan portfolios to agriculture compared to agriculture's share of GDP. This limits investment in agriculture by both farmers and agro-enterprises. It also demonstrates that the barrier to lending isn't due to a lack of

liquidity in the banking sectors, but rather a lack of willingness to expand lending to agriculture. Even when available, much of the agriculture funding tends to be informal and short-term, precluding longer-term investments. This informal funding only partially covers the financial needs of farmers and small agribusinesses, and usually at a high cost.

According to Olagunju and Adeyemo (2008), the challenges financial institutions face when offering financial products to agriculture are threefold:

- a) The transaction costs of reaching remote rural populations
- b) Higher perceptions of non-repayment due to sector-specific risks, such as production, price and market risks.
- c) Financial institutions' lack of knowledge in how to manage transaction costs, agriculture-specific risks and how to market financial services to an agricultural client.

Also, government policies often prove to be ineffective and could in fact create impediments to offering financial services to the agricultural sector. Policies like concessional lending practices, interest rate caps, and loan forgiveness programs create disincentives for private sector lending while creating problems for government lending to agriculture.

Agricultural finance needs to focus on the following four areas:

- a) Segment the smallholder farmers and identify their financial needs. Smallholder farmers are heterogeneous and have different needs. It is important to identify various smallholder sub-segments and assess their needs and constraints before designing solutions and products. Also, smallholder farmers don't just need credit for agricultural activities but they also need credit for other household needs/activities, savings, payment systems and insurance.

- b) Find ways to de-risk agricultural finance by addressing both idiosyncratic (or individual) risks as well as important systemic risks. Individual risks are often linked to credit risk assessment, and information and systems to help. Information can assist financial institutions in credit risk assessment by promoting credit bureaus and linkages with value chain companies, etc. Finding a good collateral, for example, moveable collateral, and not just rely on titled land, could also help. On the systemic risk, agricultural insurance, catastrophic risk programs, price hedging through commodity exchanges or value chains, can also provide some solutions.
- c) Identify appropriate institutions and delivery channels that would reduce the costs to better serve agricultural clients. A variety of institutions can provide agricultural finance, depending on the types of clients they serve. MFIs and cooperatives can serve sub-segments of small holder farmers through their local presence and expertise. Commercial banks can also provide solutions through value chains and for better organized groups of smallholders. New technologies and advancements in mobile banking solutions as well as increasing integration of farmers into better organized value chains can promote solutions and delivery channels that reduce the cost of serving disperse populations in rural areas.
- d) Address issues in the enabling environment and specific government policies that limit the flow of financial services to small holders. Government policies can restrict lending but also can crowd in private sector.

2.3 Institutions, programmes and schemes by the federal government aimed at providing the financial needs of the rural farmers

The major institutions established to provide credit facilities for agricultural growth and development in Nigeria were the defunct

- a) Nigerian Agricultural and Co-operative Bank (NACB), 1973.
- b) River Basin Development Authority (RBDA), 1977.
- c) Directorate of Food and Rural Infrastructure (DFRRI), 1986.
- d) Nigerian Agricultural Insurance Corporation (NAIC), 1987.
- e) The Nigerian Agricultural Co-operative and Rural Development Bank (NACRDB) 2001

The above institutions were complemented by the following programmes:

- i) Agricultural Development Programme (ADP), 1975.
- ii) Operation Feed the Nation (OFN) 1976.
- iii) Rural Banking Programme (1977).
- iv) Green Revolution, 1980.
- v) Family Economic Advancement Programme (FEAP), 1997.
- vi) National Poverty Eradication programme (NAPEP), 1999.

The major agricultural financing schemes were the

- a) Agricultural Credit guarantee scheme fund (ACGSF), 1978.
- b) Agricultural Credit Support Scheme (ACSS), 2006. (World Bank, 2009).

The vast majority of these programmes and institutions have disappeared without leaving traces, with the exception of two, viz. the Agricultural Credit Guarantee Scheme Fund managed by the CBN, and the NACB, which has become the NACRDB in 2001. The main

reasons why these several dozens of programmes have failed, from the point of the view of the CBN, comprise:

- (i) Lack of adequate skills to deliver services effectively.
- (ii) Unwillingness of conventional banks to support micro enterprises.
- (iii) Paucity of loanable funds.
- (iv) Absence of support institutions in the sector, legal, infrastructure, training, etc.
- (v) Incompetent management, poor corporate controls, poor credit administration and asset quality and low management capacity of clients. One might add to this list a few more, such as:

- (a) Over emphasis of credit against self-financing modes for small scale farmers.
- (b) Over emphasis on the political connotation of agricultural finance, which has tended to create, reinforce and cement a perception that such loans coming from government sources do not need to be paid back.
- (c) Over-emphasis on mere disbursement against sustainability, viability and loan recovery.
- (d) Over-emphasis on quantitative aspects as against qualitative ones, such as sustainability of the handling institutions, impact on borrowers, and integration of agricultural finance into other important development aspects.

2.4 The need for Agricultural credits

Credits are borrowed funds with specific terms for repayment. People borrow when they do not have sufficient accumulated savings to finance their projects. They also take into consideration if the return on borrowed fund exceeds the interest rate charged on the loan and if it is

advantageous to borrow rather than postpone the business operation until when it is possible to accumulate sufficient savings, assuming the capacity to service the debt is certain (Waterfield and Duval, 1996). Loans are usually acquired for productive reasons; that is to generate revenue within a business. World Bank Report (2009) states that agriculture has since the 1970s played a highly important and political role in Nigeria. Most governments have constantly emphasized that agricultural credit is highly important and necessary. Ololade (2013) listed the impact of credit as seen by the rural farmers as below:

1) Impact on purchasing of agricultural input

The purpose of crop loan is to meet the working capital requirement of small and marginal farmers especially for purchase of input such as seeds, fertilizers, pesticides, hired labour etc

2) Impact of credit on production

High purchase and use of input will translate to high production which is always the main target of every farmer.

3) Impact of credit on employment

Bank finance (credit) for agricultural activities will lead to an increase in cropping intensity, irrigated areas and particularly labour intensive high yielding variety of crops. These changes will lead to greater use of both family and hired labour and will result in employment generation among households and rural dwellers.

4) Impact of credit on income

Increased agricultural production and employment generation will translate into additional income to enjoy the benefit of the institutional credit to agriculture.

5) Impact of credit on savings

Credit utilization will definitely have impact on savings made by farmers and this form the basis for capital formation and further investment in agriculture.

2.5 Classification of Agricultural credit

Agricultural credit can be classified based on purpose, time (repayment period), security, generation of surplus funds, creditor and number of activities for which credit is provided.

i) PURPOSE: Based on the purpose for which loan is granted, agricultural credit is categorized into:

a) Development credit or Investment Credit: This is provided for acquiring durable assets or for improving the existing assets. Under this, credit is extended for:

- i) purchase of land and land reclamation.
- ii) purchase of farm machineries and implements.
- iii) development of irrigation facilities.
- iv) construction of farm structures.
- v) development of plantation and orchards.
- vi) development of dairy, poultry, sheep goat, fisheries, sericulture, etc.

b) Production credit: This is given for production purposes. The loan is used for purchasing inputs and for paying wages.

c) Marketing credit: It is essential to carry out the marketing functions and to get higher prices for the produce.

d) Consumption credit: It is the credit required by the farmer to meet his family expenses.

ii) REPAYMENT PERIOD

Based on the period for which the borrower requires credit, it is divided into:

a) Short-Term Credit: It is given to farmers for periods ranging from 6 to 18 months and is primarily meant to meet cultivation expenses viz, purchase of seed, fertilizer, pesticides and payment of wages to labourers. It serves as the working capital to operate the farm efficiently and is expected to be repaid at the time of harvesting / marketing of crops. It should be repaid in one installment.

b) Medium-Term Credit: Repayment is for the period of 2 to 5 years. It is for the purchase of pump-sets, farm machineries and implements, bullocks, dairy animals and to carry out minor improvement in the farm. It can be repaid either in half yearly or annual installments.

c) Long-Term Credit: It is advanced for periods more than 5 years and extends even unto twenty five years against mortgage of immovable property for undertaking development works viz., sinking wells, purchase of tractor, and making permanent improvements in the farm. It has to be repaid in half-yearly or annual installments.

iii) SECURITY: Credit is provided to farmers based on the security offered by them.

a) Farm Mortgage Credit: It is secured against mortgage of land.

b) Collateral Credit or Chattel Credit: It is given against the security of livestock, crop or warehouse receipt.

c) Personal Credit: It is given based on the character and repaying capacity of the person and not on any tangible assets. In general, LT credit is usually advanced against security of land while MT and ST loans are sanctioned against personal and collateral security.

iv) GENERATION OF SURPLUS FUNDS

Based on generation of surplus funds, credit can be classified as self-liquidating and non-self-liquidating credit.

a) Self Liquidating Credit: In this case, loan amount gets absorbed in the production process-in one year or production period and the additional income generated is sufficient to repay the entire loan amount.

b) Non-Self Liquidating Credit: Here the resources acquired with the borrowed funds are not consumed in the production process during the project period. The investment is spread over a period of several years. The additional income generated in one year is not sufficient to repay the entire loan amount and hence the repayment is spread over to number of years.

v) CREDITOR OR LENDER WISE CREDIT

Credit can be classified from the point of view of creditor.

a) Non - Institutional Agencies: They include money lenders, traders, commission agents ,friends and relatives. This kind of loan is generally exploitative.

b) Institutional Agencies: They include co-operative's, commercial bank and regional rural bank.

vi) NUMBER OF ACTIVITIES SERVED

Based on the number of activities for which amount the loan can be used, credit can be categorized into:

a) single purpose loan

b) composite loan

2.6 Agricultural credit and its socio-economic impact

Agricultural credit and its socio-economic impact on the lives of the farmers has been a major policy issue in the arena of public policies especially in the underdeveloped and developing economies. In such economies, agriculture sector occupies a significant slice of the pie in Gross Domestic Value Added and employment. As such, it has enticed a vast pool of researchers. A short review of some of the studies carried out at national and international level is presented below.

Dong *et.al.* (2010) observe that production inputs, farmers' capabilities and education cannot be fully employed under credit constrained situation. Based on a survey of 511 households from Heilongjiang Province of Northeast China and employing endogenous switching regression model, they conclude that agricultural productivity in the study area can be increased by 31.6% with the removal of credit constrained situation. The study further shows that productivity and income of the credit unconstrained farmers are higher than the credit-constrained farmers.

Ayaz and Hussain (2011) observe that credit availability to farmers is much more important than any other factors to improve the resource use efficiency in agriculture sector. Their study is based on the 300 cross section sample farmers from Faisalbaad District of Pakistan. By employing Stochastic Frontier Production Analysis (SFA), they conclude that credit to agricultural sector has more constructive and significant impact on the farmers' technical efficiency than other factors like farming experience, education, herd size and number of cultivation practices.

Duy (2012) has analyzed the impact of agricultural credit on farm productivity taking a sample of 654 farmers from Mekong Delta region of Pakistan by using quintile regression and Stochastic Frontier Analysis(SFA) techniques. The study concludes that technical efficiency and rice yield were positively influenced by access to credit, education level and farm technology. It also demonstrates that access to formal credit sector had a larger effect on rice production than access to informal credit.

Devi (2012) found that agricultural credit not only helped to increase the productivity but also develop the process of cultivation as a whole in Andhra Pradesh, India. She argues that there was an enormous increase in the usage of modern seeds, modernized inputs, fertilizers and pesticides after receiving the agricultural credit, which increased yield per acre and thus the income of the farmers. She further observes that the impact of agricultural credit was more significant in non-irrigated and semi-irrigated villages than the irrigated villages.

Akram *et al.* (2013) observe that access to credit results in a higher level of technical efficiency of farmers. Their study is based on a sample survey of 152 farmers from Sargodha District of Punjab Province of Pakistan. Using stochastic frontier analysis (SFA), the study concludes that agricultural credit in the study area helped the farmers obtain the farm inputs in time, resulting in a higher level of technical efficiency.

Ayegba and Ikani (2013) observe that unregulated private money lenders are still a major source of financing agricultural sector in Nigeria. The main obstacles for agricultural credit from formal sector include high interest rates, bureaucratic bottlenecks, late approval of loans, and unnecessary request for collateral, among others. They recommend that banks and financial institutions should create credit instruments and services that are tailored to the risks and cash

flow patterns in the agricultural sector. The banks should open up new branches in rural areas and avoid unnecessary credit conditionality that discourages farmers from borrowing.

Ibrahim and Bauer (2013) have analyzed the impact of micro-credit on rural farmers' profit taking a case of Dry land of Sudan employing the Heckman Selection Model to analyze the responses from 300 samples. The findings from the study affirm the fact that farmers with access to credit are better off compared to those who do not have such access. The study recommends that by increasing the size of the loan, efficient and sustainable technology can be made available to farmers to increase farm profits.

Sharma (2014) has analyzed the impact of agricultural credit from commercial bank on GDP growth by using the time series data of Nepalese economy covering the period 2002-2012. This study has found that agricultural credit has positively and significantly impacted agricultural GDP of Nepal. However, use of fertilizer and improved seeds has not shown any significant impact on agricultural GDP. He recommends the extension and deepening of financial service system in the rural area and facilitating the agricultural lending.

Rahman *et.al.* (2014) emphasizes agricultural credit as a major determinant of farm productivity. Their study utilizes logistic regression method on the 300 samples from Bawalpur, Pakistan. With the positive association between credit and agricultural productivity, they conclude that timely provision of appropriate amount of loan to farmers is helpful for the enhancement of agricultural productivity as it enables them to purchase high yielding variety seeds, fertilizers and pesticides.

CHAPTER THREE

3.0 Methodology

3.1 Study area

The study was carried out in Ikole Ekiti local government area of Ekiti State. It has an area of 321 km² and a population of 168,436 at the 2006 census. The postal code of the area is 370. Ikole is situated in the deciduous forest area of the State with latitude 7.7897 °N; Longitude 5.5106 °E. Altitude 461. Figure 1 shows the location of Ikole Local Government Area on the Map of Ekiti State. Rainfall is about 70 inches per annum. Rain starts in March and peters out in November. The good drainage of the land makes it very suitable for agricultural pursuits. It is a common feature that trees shed their leaves every year during the dry season which begins in November and ends in February. The two seasons – Dry Season (November - February) and Rainy Season (early March - mid November) are quite distinct and they are very important to the agricultural pursuits of the people.

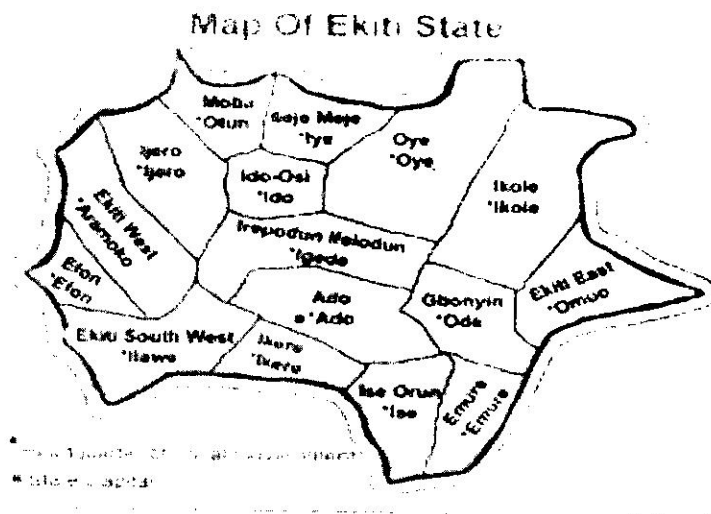


Figure 1: Map of Ekiti State showing the 16 Local Government Area and their headquarters.

The people of Ikole ekiti are predominantly farmers. About 80% of the male adult population engage in farming. The male adults have large plantations of food crops such as yams, cocoyam, cassava, maize, beans, rice and plantains. Some male adults have and maintain plantations mainly through hired labour. The farmers also plant cash crops such as cocoa which used to be the mainstay of the economy of this area. kolanuts, palm produce, coffee, cotton and tobacco are planted in smaller scales.

In addition some of the residents are Tailors, Traders, Carpenters, Mansions, Bricklayers, Goldsmiths, Blacksmiths, Shoe-makers etc by profession. The women-folk engage in various trades – selling of cloths, food stuffs etc.

3.2 Sampling procedure

Ikole Local Government Area consist of four districts/area viz Ikole, Ayedun, Ijesa-isu and Oke ako (Wikipedia, 2017). Given the four districts, a simple random sampling was adopted to select 25 household farmers across each of the districts making a total 100 respondents. The farmers were interviewed through the use of structured questionnaire.

3.3 Data collection

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

3.4 Method of data analysis

The analytical models that were used during the course of this research include:

3.4.1 Descriptive statistics

This was used to achieve objectives 1, 2 and 4. This involves the use of descriptive measure such as frequency distribution table and percentages to describe parameters such as age, gender, household size, educational qualification, farm size, farming experience and sources of capital.

3.4.2 Ordinary least square multiple regression model (OLS)

Ordinary least square regression model was used to achieve objective 3 using the SPSS software. 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:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e_i$$

Semi-log function:

$$Y = a + b_1\ln X_1 + b_2\ln X_2 + b_3\ln X_3 + b_4\ln X_4 + b_5\ln X_5 + b_6\ln X_6 + b_7\ln X_7 + b_8\ln X_8 + e_i$$

Double-log function:

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

Exponential function:

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

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, \dots, b_8 = the coefficient corresponding to x_1, \dots, x_8 ;

ei = stochastic error.

3.4.3 Gross margin analysis.

Gross margin analytical tool was used to achieve objective 5. 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. Olukosi and Erhabor (1998) defined gross margin analysis (GM) as the difference between the gross farm income (GI) and the total variable cost (TVC). The formula is given as: $GM = GI - TVC$. Where;

GM = gross margin

GI = gross farm income

TVC = total variable cost.

3.4.4 Independent t-test

The independent t-test was used to test the study hypothesis; to determine the effect of using credit on farmers output, gross income and net farm income and making comparison between farmers that uses credit and those that do not use credit based on their mean income value in Naira(N) and their t-value.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Socio-economic Characteristics of the Respondents

Table 1 Socio-economic characteristics of respondents.

Variable	Frequency	Percentage (%)	Mean
Sex			
Male	84	84.0	
Female	16	16.0	
Age			
31-40	13	13.0	47.3
41-50	33	33.0	
51-60	40	40.0	
61-70	14	14.0	
Marital status			
Single	11	11.0	
Married	69	69.0	
Widowed/separated	20	20.0	
Household size			
1-5	32	32.0	7
5 and above	68	68.0	
Education level			
No formal education	2	2.0	
Primary	21	21.0	
Secondary	66	66.0	
Tertiary	11	11.0	
Occupation			
Part time	79	79.0	
Full time	21	21.0	
Farming experience			
Below 20	4	4.0	45
20-30	19	19.0	
31-50	71	71.0	
Above 50	6	6.0	
Annual income			
Below 50,000	10	10.0	160,000
50,000-100,000	15	15.0	
110,000-150,000	42	42.0	
160,000-200,000	18	18.0	
200,000 and above	15	15.0	
Farm size (hectares)			
0.1-2.0	28	28.0	2
2.1-4.0	48	48.0	
>4.0	24	24.0	
Total	100	100	

Source: Field study, 2017.

Table 1 revealed the sex distribution of the respondents. 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 female and male. Although, this study is not sex 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 table revealed that majority of the respondents (40%) fell within the range of 51 and 60 years of age, (33%) fell within 41 and 50 years of age, 14% were within the ages of 61 and 70 years, 13% fell within 31 and 40 years of age and the mean age was 47.3 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 (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

The table shows that majority (69%) were married, while 20% were said to be separated/widowed while the remaining 11% were single. This indicates that farming activities in the study area are carried out in a larger percentage (89%) by people with responsibilities: married individuals.

The table revealed that the respondents had large members in each household being represented. Out of 100 farmers, majority (68%) has above 5 members while 32% of the respondents have a household size of within 1 and 5 members. This result is in agreement with Osondu *et al.* (2014) who stated that in the presence of constraints to farm labor availability, large households tend to use family members as sources of labor. Large households, whose labor is fully employed for agricultural production, would contribute to labor input for increase and sustainable production. In this case, credit obtained could be efficiently utilized.

The table shows majority (66%) of the respondents attained secondary school educational qualification, 21% had primary certificate, 11% possess tertiary school qualification while 2% had no formal education. This implies that literacy level attained by the respondents was high having a greater percentage (98%) possessing formal education.

The table revealed the farming status of the farmers, majority (79%) of the respondents were primarily farmers while 21% were said to engage in farming as a secondary occupation

The table further revealed that majority (71%) of the respondents had farming experience falling within 31-50 years, 19% had farming experience within 20-30 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 table shows the annual income earned by the farmers where majority (42%) earned within ₦110,000 – ₦150,000, 18% earned within ₦160,000 and ₦200,000, 15% earned within ₦50,000 and ₦100,000 and 15% also earned ₦200,000 and above annually.

It was also observed that 28% of respondents had between 0.1 ha and 2.0 ha of farmland, 48% had between 2.1 ha and 4.0 ha of farm land, and 24% of the respondents had above 4.0 ha of farmland. The result implies that most of the farmers in the study area had relatively small farm holdings and hence were small scale farmers. This result lends further credence to an assertion by Olawepo (2010) that over 90% of the country's local food production comes from small scale farms and about 60% of the population earns their living from small farms which are usually of the size of about 0.10-5.99 ha.

4.2 Sources of credit available to respondents

4.2.1 Source of Credit

Table 2: distribution of the respondents based on sources of credit

Source	frequency	percentage
Friends / Relatives	48	48.0
Cooperatives / Association	43	43.0
Financial Institutions	13	13.0
Money lenders	6	6.0
Total	100	100.0

Source: Field Study, 2017

Table 2 revealed that 48% of the respondents could source credit from friends and relatives, 43% of the respondents could source from cooperatives and professional association they belong to, 13% from financial institutions and 6% from money lenders.

The implication is that the major sources of credit among the respondents were friends and relatives, co-operative societies, which are non-formal and semi-formal credit sources respectively. 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.

4.2.2 Existence of Financial Institution in the study area

Table 3: distribution of the respondents based on existence of financial institution

Response	frequency	percentage
Yes	94	94.0
No	6	6.0
Total	100	100.0

Source: Field Study, 2017

It was reported in table 3 that majority (94%) of the respondents acknowledged the existence of financial institution in the study area while 6% gave a response of no financial institution.

4.2.3 Types of Institution available in the study area

Table 4: distribution of the respondents based on type of institution

Response	Frequency	Percentage
Conventional bank and ROSCAS	33	33.0
Conventional, Cooperative, Micro finance banks and ROSCAS	22	22.0
Rotary Savings and Credit Association (ROSCAS)	25	25.0
Micro finance bank	10	10.0
Cooperative bank	6	6.0
Conventional bank	3	3.0
Local money lenders	1	1.0
Total	100	100.0

Source: Field Study, 2017

The respondents reported that various financial institution exist in the study area ranging from convention banks to cooperatives banks, local money lenders, microfinance banks e.t.c. The result in Table 4 revealed that 3% and 6% acknowledged the presence of conventional and cooperative banks respectively while 10% for micro finance bank 1% is for local money lenders, 25% acknowledged Rotary savings and credit association (ROSCAS) in addition, 22%

acknowledged conventional, cooperative, micro finance banks and ROSCAS while majority acknowledged both conventional bank and ROSCAS.

4.2.4 Meeting of all Financial Demands

Table 5: distribution of whether financial demands was met or not.

Response	Frequency	Percentage
Yes	68	68.0
No	32	32.0
Total	100	100.0

Source: Field Study, 2017

Table 5 presented above revealed that majority 68% of the respondents acknowledged meeting up with the financial demands accrued to them while 32% did not meet their demands.

4.2.5 Supplement of Deficit

Table 6: distribution on how deficits were supplemented when financial demands were not met.

Response	Frequency	Percentage
Friends/Relatives	15	46.86
Cooperatives	11	34.38
Financial institutions	5	15.63
Money lenders	1	3.13
Total	32	100.00

Source: Field Study, 2017

As regarding whether all financial demands was met or not, response was also given on how deficit from this demand were being supplemented. It was revealed that 46.86% borrowed from friends/relatives, 34.38% from cooperative societies, 15.63% from financial institutions and 3.13% from money lenders.

4.2.6 Do you obtain credit for farming activities?

Table 7: distribution of the respondents based on obtaining loan for farming

Response	Frequency	Percentage
Yes	42	42.0
No	58	58.0
Total	100	100.0

Source: Field Study, 2017

In view of the statement on acquisition of credit it was reported that majority (58%) of the respondents do not obtain loan for farming activities while 42% obtain loan for farming purpose.

4.2.7 Method of Land Acquisition of the Respondents

Table 8: Distribution Based on Land Source

Source	Frequency	Percentage
Inheritance	92	92.0
Hired	4	4.0
Purchased	4	4.0
Total	100	100.0

Source: Field Study, 2017

Land as a factor of production may be acquired in different methods which may vary from one farmer to another. Table 8 presents that about 92 percent of the respondents acquired their land through inheritance, while 4 percent each for hired and purchased. This implies that, with greater percentage of land being inherited by the respondents, fragmentation of farm lands would be very common in the study area thereby leading to low productivity in the area.

4.2.8 Labour Source

Table 9: Distribution Based on Labour Source

Response	Frequency	Percentage
Family	6	6.0
Hired	12	12.0
Both	82	82.0
Total	100	100.0

Source: Field Study, 2017

The result revealed that 12% of the respondents used hired labour only for the farming business while 6% used family labour only and the remaining which represented majority (82%) of the respondents used both family and hired labour.

4.2.9 Distribution of respondents according to cooperative society membership

Table 10: Distribution Based on Cooperative Society Membership

Response	Frequency	Percentage
Yes	34	34.0
No	66	66.0
Total	100	100.0

Source: Field Study, 2017

The result indicated that majorities 66% of the respondents were not a 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.

4.3 Socio-economic determinants of agricultural credit acquisition by farmers in the study area.

Table 11: Regression estimates of the socio-economic determinants of volume of credit obtained.

Variable	Linear	Exponential +	Double log	Semi-log
Constant	62.376 (2.32)***	3.236 (9.72)***	4.196 (8.60)***	153.188 (2.72)***
Age (X_1)	-0.613 (-3.30)***	-0.008 (-3.54)***	-0.351 (-4.53)***	23.581 (-3.21)***
Sex (X_2)	-5.061 (-1.22)	-0.017 (-0.21)	-0.29 (-0.56)	6.352 (4.59)***
Marital status (X_3)	6.242 (3.83)***	0.779 (1.67)*	0.112 (4.35)***	8.470 (4.65)***
Household size (X_4)	4.567 (4.07)***	0.059 (3.23)***	0.453 (2.75)***	23.34 (2.59)***
Education level (X_5)	1.103 (2.13)**	0.021 (2.97)***	0.232 (-4.51)**	12.357 (2.19)**
Farming experience (X_6)	1.545 (1.50)	0.022 (1.37)	0.175 (1.61)*	10.200 (1.43)
Occupational status (X_7)	-16.332 (-2.93)***	0.154 (3.17)**	-0.237 (-3.49)***	-22.526 (-5.025)***
Farm size (X_8)	25.208 (1.73)*	0.421 (2.18)**	0.832 (8.57)***	14.178 (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)***

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.

Table 11 shows the regression estimate of socio-economic determinants of credit obtained by farmers in Ikole local government area of Ekiti State. 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 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 priori 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 priori 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.

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 inputs and subsequently increased profit and more quests for loan. This conforms to priori expectations and corroborates that increase in farm size increases amount of acquired loan according to Essien (2009).

4.4 Problems that Constrain Farmers from Agricultural Credit Acquisition.

Table 12: Distribution on constrain to farmers on agricultural credit acquisition

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 th	0.0900	0.90000
Farm Size	8 th	0.0800	0.80000
Farming Experience	9 th	0.0700	0.70000

Source: Field Study, 2017

The distribution of respondents' responses according to the constraints faced by farmers on agricultural credit acquisition is presented in Table 12. The result showed mode of repayment (x: 4.36; sd= 1.977) as the highest affected constraint to agricultural credit acquisition while farming experience was the least of the constraints (mean = 0.07; sd = 0.7).

4.5. Effect of Using Credit on Farmers Productivity.

Table 13: descriptive statistics on impact of credit on farmers yield and productivity

Variables	Users of credit n=42 (mean value)	Non-users of credit n=58 (mean value)	Difference (in mean value)	% Change
Productivity (₦)	252,870.40	231,136.40	(21,734)	8.6%

Source: Field Study, 2017

Table 22 revealed the effect of credit on farmer's productivity. Mean production level of the farmers that made use of credit was valued as ₦252,870.40 while non-credit user was ₦231,136.40 with a percentage change of 8.6%. This implies that credit use have a slight effect on farmers productivity. 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.

4.6. Gross Margin Analysis of farmers in the Study Area.

Table 14: gross margin analysis of the farmers

Variables	Minimum (₦)	Mean (₦)	Maximum (₦)
Total Revenue	100000.00	243112.2449	400000.00
Variable Cost	19000.00	107214.0000	384000.00
Fixed Cost	30.00	373.9000	12000.00
Gross Margin	18,000.00	134363.2653	351000.00
Net Income	14,000.00	133996.0204	348800.00
Rate of Return	-0.92	0.5999	0.92

Source: Field study, 2017.

Variable costs includes, the cost of land clearing, cost of ridging, cost of weeding, cost of harvesting, transportation cost, cost of inputs such as seed, herbicides, pesticides, fertilizers.

Table 14 shows the estimated annual total revenue of ₦243,112.25, total variable costs amounted to ₦107,214 and the determined gross margin was ₦134,363.27 per annum per respondent which represent 59.99% of the total variable cost of production. The implication is that for every one naira invested in the farming activities, the farmers gained ₦0.6.

Table 15: gross margin analysis for credit user and non-users.

	Users	Non-users
n(observation)	42	58
Total Revenue (₦)	255232.41	232345.76
Variable Cost (mean) ₦	105659.83	100675.54
Gross margin (Mean) ₦	138930.1244	126412.0573
Net income (Mean) ₦	135679.72	121879.43
Std. Deviation	80848.15391	57451.40404

Source: *Field study, 2017.*

The table shows 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 while non-users of credit have a mean gross margin of ₦126, 412. 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.

4.7 Testing of Hypothesis

H_0 : There is no significant difference between the profit margin of farmers that uses credit and those that do not use credit.

Table 16: t-test table on hypothesis testing

Profit Margin	t-value	Df	Mean difference	Sig	Remark
Users of credit	18.417	41	₱138,930.12	0.000	Reject H_0
Non-users of credit	9.639	57	₱126,412.06	0.000	

S- significant at 0.05. Source: *Author's Computation (2017)*.

Table 24 revealed the difference in profit earned by both farmers said to be users of credit and non-users. It was revealed that users had mean profit value of ₱138, 930.12 while non-users of credit realized mean profit value of ₱126, 412.06 with t-value of 18.417 and 9.639 respectively which is being significant at 5% level. The implication of these findings is that profit realized by farmers had a difference (₱12, 518.06) between users of credit and non-users which is said to be significant. It was also seen that t-value for users was higher than non-users and the decision rule of rejecting H_0 is hereby followed and it implies that credit use would best determine the profit margin of farmers in the study area (since the t-value: $0.00 < 0.05$).

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.1 Summary

The purpose of this study was to examine the determinants of credit acquisition among farmers in Ikole local government area and its effect on their output. Specific objectives are: to describe the socio-economic characteristics of the farmers, identify the sources of credit available to the farmers, identify problems that constrain farmers from agricultural credit acquisition, evaluate the effect of using credit on farmers output. Data were collected from 100 respondents using structured questionnaire. Data collected were analyzed using descriptive statistics, multiple regression analysis, gross margin analysis and the study hypothesis was tested with the independent t-test. The result showed that majority (84%) of the respondents were males with mean age of 47 years. 98% of the farmers have formal education, 89% were married with majority having large households of above 5 persons. Majority (79%) are fulltime farmers while the rest are secondary farmers. Majority (48%) could source for credit from friends and relatives, 33% from cooperative societies, 6% from money lenders and 13% from formal sources. The result of the multiple regressions indicated that age, household size, marital status, education level, occupational status, farm size at varied signs and levels as significant predictors of amount of agricultural credit acquired by farmers. The constraints to credit acquisition as perceived by farmers include: mode of repayment, non-membership of cooperative society, high interest rate, lack of collateral security, complex processing procedure and lengthy time to process loan. The result shows the mean profit margin of users as ₦138930 and ₦126412 for non-user with a t-value of 18.417 and 9.639 respectively.

5.2 Conclusion

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 from informal sources, while 28% of the farmers could source 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 procedures, and lengthy time to process loan. Farmers that use credit make more than farmers that do not use credit. This implies that credit use will best determine the income of farmers in the study area.

5.3 Recommendations

In line with the research findings, the following recommendations are made;

1. 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.
2. 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.

3. Membership to cooperative societies increased 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.
4. 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.
5. The government should encourage commercial banks and other financial banks to provide non-collateral loans to farmers.
6. 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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APPENDIX

DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION,

FACULTY OF AGRICULTURE, FEDERAL UNIVERSITY OYE-EKITI,

**DETERMINANTS OF CREDIT ACQUISITION AND ITS EFFECT ON OUTPUT OF
FARMERS IN IKOLE LOCAL GOVERNMENT AREA, EKITI STATE, NIGERIA.**

FARMERS QUESTIONNAIRE

Instructions: Please tick or fill where appropriate.

SECTION A: SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

1. Village
2. Age
3. Sex : male () female ()
4. Marital status : single () married () separated () widowed ()
5. Household size:
6. Level of education attained: primary () secondary () tertiary ()
adult education () others (specify)
7. Are you a member of any cooperative society? Yes () No ()
8. If yes to 7, specify
9. What is your primary or major occupation?
10. Do you have other (secondary) occupation? Yes () No ()
11. If yes to 10, specify

SECTION B: ACCESS TO CREDIT

12. Are there any financial institutions in your locality? Yes () No ()
13. Please indicate the type of financial institution available in your locality
 - a) Conventional banks ()
 - b) Cooperative banks ()
 - c) Local money lenders ()
 - d) Rotating savings and credit association (ROSCAS) ()
 - Others (specify)

14. Do you have access to credit? Yes () No ()
15. Do you obtain credit/loan for farming activities? Yes () No ()
16. If yes to 15, from which financial institution?
17. What is the volume of loan obtained in Naira?
.....
18. How long does it take to process the loan?
.....

SECTION C: CONSTRAINT TO CREDIT ACQUISITION

19. What are your years of experience in farming?
20. Have you ever received credit in those past years? Yes () No ()
21. If yes to 20, what is the source?
22. Please put the following constraints in order of rank of 1-9 as they seem important to you.

Constraints	Rank
Complex processing procedure	
Lengthy time to process loan	
Lack of collateral security	
High interest rate	
Mode of repayment	
Age	
Farming experience	
Farm size	
Non membership of a cooperative society	

SECTION D: BUDGETARY ANALYSIS

23. How much did you realize per hectare in your last production season?

24. Do you meet all your financial demand in terms of farm input and consumption expenditure during your last production season? Yes () No ()

25. If no to 24, how do you supplement the deficit? credit () borrow from friends ()
 Others (specify)

26. How do you acquire your land? Inheritance () Hire () Purchase ()
 Cooperatives ()

27. If land is hired, how much do you pay per hectare (Naira)?

28. What type of labor do you use on your farm? Family labor () hired labor () both ()
 others, specify

29. What are the costs of the following activities you carry out on your farm/ha?

Operations	No of labour used	Hectares worked	Cost/labour	No of times/season	Total cost
i Land clearing					
ii Ridging					
iii Weeding					
iv Harvesting					
v Transportation					

30. What are the cost of these inputs you use on your farm/ha?

Type of inputs	Quantity used/hectare	Cost
i Seeds		
ii Fertilizer		
iii Herbicides		
iv Pesticides		

31. Do you pay any transportation cost from the source of input to your farm? Yes () No ()

32. If yes to 31, how much do you pay per distance? (Specify)

.....