

**EFFECT OF INSTITUTIONAL CREDIT ON  
INCOME OF SMALL-SCALE RUBBER FARMERS  
IN EDO STATE, NIGERIA.**

**AN M. TECH RESEARCH PROJECT**

**BY**



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**TO**

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## CERTIFICATION

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## DEDICATION

This project work is dedicated to my parents: Yustus Kumlai Cham and Mrs. Liatu Yustus Cham for the love, kindness and encouragement they gave me in all my life's pursuit.

I also dedicate this project work to my darling wife, Mrs. Yustus, Nanyi Sunday for her love and support during the work. May God continue to bless her.



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## ABSTRACT

The study investigated the effect of institutional credit on income of small-scale rubber farmers in Edo State, Nigeria. Agricultural credit programmes designed and implemented in the country are at variance with the objectives. Most of the small-scale rubber farmers who dominate the industry in terms of numbers and total land area under rubber are not benefiting from these programmes. The public credit agencies design tend to discriminate against rubber farmers because funds are always inadequate and the cost of administration of dealing with numerous small-scale rubber farmers scattered all over the state is very high.

One hundred and eighty (180) respondents were interviewed, including ninety (90) borrowers and ninety (90) non-borrowers. Six local government areas that are dominantly noted for rubber farmers in the three (3) senatorial districts out of the eighteen (18) Local Government Area in the state were purposely selected for this study.

Data collected were analysed, using frequencies, percentages and means to explain the age, marital status, educational attainment, household size, farming experience, occupation, leadership role, method of land ownership, farm size, farm income per annum, period of credit collection, problems encountered in credit collection, previous experience in credit collection. Regression analysis using linear, semi-log and double-log functional forms were used to examine the effect of the credit on income of the rubber farmers.

The study thus revealed that 63% of the borrowers were within the age bracket of 35 – 60 years which could be considered as the active age bracket. The study also showed that 93% of the respondents were found to be literates while the remaining 7% were non-literate.

The t-test statistic used between the means of the amount requested and the amount disbursed showed that there is a significant

difference that is  $t = 10.164$  at 5% level of significance between amount requested and amount disbursed can have a meaningful effect on farmers income if used effectively.

It was observed that the lending institutions were slow in releasing the loan to the respondents, only 46.7% collected their loan at pre-planting period. About 72% of the respondent said that shortage of fund and delay in payment of approved loans were the limiting factors in their production. Among the borrowers, 71% complained that untimely credit disbursement and the poor market situation at harvest period resulted in farmers late repayment.

The regression analysis regressed between income (dependent variable) and age, educational attainment, farm size, volume of credit and leadership role (independent variables) in case of borrowers indicated that farm size, volume of credit and leadership role were positively significant at 5% level of significance, while with non-borrowers, only farm size was found to be positively significant.



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## CHAPTER ONE

### 1.0 INTRODUCTION

Agriculture has traditionally been considered as the mainstay of the Nigerian economy with assigned roles to perform in the course of the country's economic development. Among the roles ascribed to the agricultural sector in a growing economy are those of providing adequate food for increasing population, supplying adequate raw materials to a growing industrial sector, constituting the major sources of employment, generating substantial foreign exchange earnings and providing a market for the products of the industrial sector. An evaluation of the performance of the agricultural sector will reveal that the above mentioned roles have not been achieved due to the fact that small land holders with low levels of technology dominate Nigeria's agricultural production.

Nigeria is blessed with human and natural resources which aid agricultural production and because of this, Nigeria like most developing countries has recognized the potential for improving its economy by more fully utilizing its agricultural resources. At present natural rubber ranks among the most important of these resources. It is Nigerians fourth most valuable agricultural export commodities after cocoa and palm kernel (FMANR, 1974). However, for sometimes now, there has been a continuous decline in the production of rubber in Nigeria. A number of plantations have been abandoned, matured rubber trees have been left untapped even in large operating estates because there are no rubber tappers to tap those trees (Waziri, 1979). Nigeria which used to be the leading rubber producer in Africa is overtaken in 1968 by Liberia. It is also lamentable to note that Nigeria's contribution to the world production of natural rubber fell from 2.1% in 1967 to 0.02% in 1978.

The Federal Government of Nigeria in an attempt to increase rubber production, set up, the Rubber Research Institute of Nigeria (RRIN). The

Institute has since 1963 made available to farmers high-yielding varieties (clones) of rubber which it developed in various plantations and are now matured, but untapped because of decline in the demand for natural rubber which is being replaced by synthetic rubber and farmers seemingly disinterested in growing rubber because of the low income from it.

The global production of natural rubber from 1993 – 1998 showed an increase of 15.47% from 5.3 to 6.12 million tones. Thailand, Indonesia, and Malaysia alone contributed 72.6% of the world total while Nigeria in spite of its enormous potential production only 1.4% of this world output. Interestingly, the world consumption of natural rubber showed a rising trend, from a total of 5.440 million metric tones (mt) in 1993 to 6.580 million mt in 1997 between the years 1994 to 1996, the demand was lower than supply, but exceeded supply in 1997. In the same manner, there was a gradual build-up of the buffer stock from 1.58 million mt in 1993 to 1.85 million mt tonnes in 1996 by the defunct International Natural Rubber Organisation (INRO) which liquidated in 1999. According to a study carried out recently by the International Rubber Study Group (IRSG), the price of natural rubber in the international market is expected to appreciate from 2001 with a likely peak by 2009, when price would reach levels (about U.S. \$ 4,000/mt) never experienced in the history of the industry. Since projection is already manifesting in the increase of farm gate price of rubber lumps from N25/mt in 1999 to the current rate of N64/mt.

It is important to note that the Rubber Research Institute of Nigeria has developed rubber clones which yield between 2,500 and 3,500kg of dry rubber per hectare per year as compared to the exotic clones which yield between 900 and 1,500kg/ha/ year and the unimproved local planting materials which yield 300 to 400kg/ha/year of dry rubber. Infact, the potential yields of the RRIN developed clones, named NIG. 800 and NIG. 900 series, are currently the highest in the world. In the last five years, RRIN has been producing about 200,000 high yielding planting materials annually for distribution to farmers.

The Federal Government in conjunction with the state government attempted to boost rubber production through such programmes like

Agricultural Development Projects (ADP's) which has started operation since 1974 with programmes aimed at providing improved services in terms of technological packages to the farmers. And also with the objective of increasing productivity, raising farming income and bringing about overall development in the rural areas through technological change that occurs through the adoption of the technologies introduced.

Finance is very crucial in the development of agriculture because it determines the extent to which agricultural projects and programmes could be executed. Federal and State governments can be identified with four main sources which directly have resulted in increased financing of agricultural sector. The first is the direct expenditure programme of the Federal and State Government on their agricultural development programmes and other services. The second was the setting-up of the Agricultural Credit Guarantee Scheme (ACGS) by the Central Bank of Nigeria for the financing of marketing of selected agricultural commodities through direct credit. The third source touches on package of financial and fiscal incentives such as those given to commercial banks and foreign investors to increase their funding of agricultural sector. Finally, a source of agricultural financing which the government has actively promoted in the public credit agencies/funded by the government and through which credit is provided for agricultural purposes.

Traditionally, the farmers have always been good customers of the money lenders and the village shopkeepers from whom they had to borrow during their farming operations period, not only for their subsistence needs but at times for various social and religious purposes as well. The credit requirement of farmers have increased partly because of rising costs. They combine their labour with more capital in the form of simple machines, improved planting – materials, fertilizer and agro-chemicals. Because of the farmers weak and poor financial base, the need for external assistance in the form of loans becomes paramount.

One of the policy actions directed towards ameliorating the situation was the liberation of agricultural loans to enable the rural farmers enjoy loans

without collaterals and at subsidized costs. Imoudu and Onosakponome (1992) identified agricultural loans as a crucial input in small-holder agriculture as the loans is used to establish and expand farm sizes.

In 1973, the Nigerian Agricultural and Cooperative Bank (NACB) now Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB) was established and in 1977, the Agricultural Credit Guarantee Scheme (ACGS) was set-up. Various state governments established their own Agricultural Credit Corporation/Agency to cater for the needs of the farmers. With increased flow of Institutional credit to small-holder farmers in the rural communities, capital shortages will be relieved and farmers will be able to adopt modern farming technologies to increase food production or cash crops.

The need to provide agricultural credit facilities to farmers is universal even in highly developed countries. Agricultural credit has been an important production in a country like Nigeria where the bulk of the farmer produce at subsistence level, there is need to inject capital into agriculture so as to raise production per farm worker and per hectare, thereby increasing farm income.

Credit removes financial constraint and may accelerate the adoption of more efficient technologies in agriculture, it is a unique resource, since it provides the opportunity to use additional inputs and capital items and to pay the cost from future earnings. Provision of credit facilities is an integral part of the process of commercialization of the rural economy. Thus, the role of credit in the transformation of Nigerian's agriculture becomes more critical.

However, credit even at reasonable rates may not guarantee high productivity among rural farmers; success in these regard rests on many other factors, such as the availability of complementary inputs and services, very sound credit policies and well-managed credit institutions.

### **1.1 PROBLEM STATEMENTS**

Many problems can be said to be responsible for the low production of rubber in Nigeria. The rubber industry is dominated by peasant small holders who own about 85% of the rubber growing areas in the country. Production of natural in concentrated in Edo State where about 90% of the country's output

is obtained. Of this output, about 75% was from the small holdings. Most of the small-scale rubber farmers have little or no access to credits may be because they are not organized into recognizable entities for the purposes of attracting credit. For rubber farmers, the situation is even worse because of the fact that rubber seedling and even budded stumps take about five to seven years to come to maturity. Because of this, no credit organization or commercial bank is normally willing to extent loan repayment for that length of time.

Poor maintenance further reduces yields. The poor maintenance is as a result of lack of credit and non-availability of cheap labour.

## **1.2 OBJECTIVES**

The broad objective of this study is to study the effect of Institutional credit on income of small-scale rubber farmers in Edo State. The specific objectives are to examined:

1. The socio-economic characteristics of the small-scale rubber farmers in Edo State.
2. The sources and adequacy of credit disbursed to the respondent.
3. Problems encountered in loan administration.
4. The effect of institutional credit on income of borrowers and non-borrowers in rubber production in the state.

## **1.3 SIGNIFICANCE OF THE STUDY**

The performance of agriculture in the economy of the country has been on the decrease in recent times. And several factors are responsible for this. One major factor is the lack or inadequacy of credit for small-scale farmers who form the bulk of agricultural producers in the country. In realization of the importance of agricultural credit in improving agricultural production and productivity, Osakwe and Ojo (1986) asserted that adequate funding of agricultural development is necessary to raise the level of agricultural performance in the economy.

Before the oil boom of the 1970 natural rubber ranked fifth in the nations exports. Over reliance on oil may result to over exploration and over exploration will not only later affect the economy of the country but will also lead to land degradation and environmental hazards to the communities in various areas where this oil are explore. As a result of that, there is need to revitalize the agricultural sector of the national economy for the purpose of earning the much needed reliable and foreign exchange for the country. The high prices of imported rubber products which are a source of drain to Nigeria's meager foreign exchange reserve could be checked when these rubber goods are produced locally. Since the export of natural rubber in decreasing and the internal consumption of the commodity is increasing from time to time, there is need to examine the effect of institutional credit on income of small holder farmers who are the major producers and recommend on ways farmers can break even and even make profit.

#### **1.4 JUSTIFICATION FOR THE STUDY**

The research work will bring about how the socio-economic characteristics of rubber farmers in the study area may affect the credit disbursed to them for their production, adequacy or inadequacy of the credit disbursed, the problems encountered that might have militated against the effective use of such credit disbursed, the effect of such credit on farmers income would be discovered in the course of the research work while policy recommendations based on findings would be made so as to improve the efficient use of such credit granted to the small-scale rubber farmers.

## 1.5 SCOPE OF THE STUDY

The study was restricted in Edo State which produces about 90% of the country's rubber output and the greater percentage comes from small-scale holders. The survey was carried out between July and October the period at which tapping is at its peak.

The exigencies of resources and time were the major limitations of this study. Out of the eighteen (18) local government areas in the state, six (6) local government areas dominantly known for rubber farming were selected for the study and small-scale rubber farmers were my respondents.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 ORIGIN AND HISTORY OF NATURAL RUBBER IN NIGERIA

Natural Rubber (NR) was first discovered by Christopher Columbus during his visit to South America in about 1493. Mr. Austine Coate, in about 1500, first defined NR as a milk – like juice, which is found in the bark of Hevea tree that becomes golden brown and thicker on exposure to air. He called the tree a "CAOUTCHOUC", meaning weeping wood (Ogowewo, 1986).

Between the years 1511 and 1530, people started creating awareness of the plant through publications. This was more emphasized in 1735 by a French scientist, de, la Condamine (an Astronomer), who sent sample of the mysterious elastic substance (Rubber) to France for analysis. His report and suggestions for possible uses of the substance (rubber) created an immediate demand. One of the first uses of rubber was to "rub" off graphite or charcoal marks on paper and parchment; hence the name "RUBBER" was coined to the substance (Uraih, 1980).

Cultivation and domestication of NR is believed to have started in about 1876 and spread round the world by 1913. Sir Henry Wickham was among the first planters of NR, in 1876, he selected about 70,000 rubber seeds from Brazil and introduced it in his garden in Singapore. At about 1903, there were many established rubber estates and small rubber farm holders in the world.

The history of rubber production in Nigeria began about 1894 with the exploitation of indigenous wild rubber "*Funtunia elastica*" (preuss) stapf. The wild trees that yielded rubber were however soon ruined by poor tapping system and the export of wild rubber produce dropped sharply. In search of other sources of natural rubber to supply the demand of a rapidly expanding, automobile industry, '*Hevea brasiliensis*' (KUNTH) MULL was found to be the best source plant because of its singular ability to renew its bark and thus ensure sustained harvest.

The rubber plant 'Hevea brasiliensis' was introduced into Nigeria from Brazil around 1895, about the same time it was introduced into South East Asia. The first rubber estate was planted near Sapele in 1903 and a second one at Nkisi in the then Eastern Region in 1912. By 1925, 1,000 hectare of European owned estates existed in the South Western Nigeria in former Bendel State (now Edo and Delta States). Gradually the planting of rubber spread across the rainforest belt of Nigeria.

Up to the time of Nigeria's political independence in 1960, export agriculture was the main stay of the Nigerian economy and the primary source of foreign exchange, providing employment for the bulk of the population and bearing the fiscal brunt of Nigeria's economic development. Up to the middle of the 1960's Nigeria was the biggest producer of natural rubber in Africa. In 1966, a total of about 77,000 tonnes of rubber was produced representing about 3.2% of total world output of this amount, a total of 71,024 tonnes was exported again representing 3.2% of total world export. The balance of 5,976 tonnes or 7.8% of total production was consumed locally.

At present, Nigeria occupies a position second to Liberia among the African Rubber producers. Between 1954 and 1964, the production of natural rubber in Nigeria increased almost 4 folds from 20,000 tonnes in 1954 to 73,254 tonnes in 1964. This represented an increase of 320.7%. After 1964 production began to decline and Nigeria's output as a percentage of total production has remained rather small, ranging between 1.8% in 1971 and 0.7% in 1979.

Natural rubber perform three main functions in our national economy. Firstly, it provides raw materials for our rapidly growing agro-based industries; secondly, it provides some of the foreign exchange and places Nigeria in the world map as net exporter of rubber, and lastly, it offers employment to a sizeable segment of the Nigerian farming rural population. It is an obvious fact that the natural rubber industry in Nigeria is faced with very serious problems of survival. It is therefore necessary to identify some of the problems that

threaten the survival of rubber industry with a view to finding both immediate and permanent solutions to these problems.

In 1980, the Nigerian Rubber Board organized the first National Symposium on rubber to draw public attention to the worsening state of affairs in the rubber industry. The board has also gone ahead to provide subsidy to the tune of 50% for certain farm inputs needed by rubber farmers including cash payments for the rehabilitation of 2,000 ha of abandoned rubber plantations. Since 1977, the Federal Government has raised the produce price of rubber from N780/mt in 1977 to N1,200/mt in 1983 in an effort to encourage production. On her part, the Rubber Research Institute of Nigeria has produced some high yielding clones of rubber capable of doubling or even tripling the present national yield average for rubber, and has also continued to train the manpower needed to pursue more vigorous research on rubber problems at the Institute.

However, inspite of these commendable efforts being made by the two agencies charged with the promotion of rubber in Nigeria, the rubber industry has continued to decline. Therefore it has become very necessary to inquire more deeply into the cause of the decline, to identify some of the problems that threaten the survival of rubber industry with a view to finding both immediate and permanent solutions.

It is against this background that the Governing Board of Rubber Research Institute of Nigeria, Iyanomo near Benin City, set up a 13 – man National committee or personnel, drawn from natural rubber production organizations including farmers, their Research Institute, the produce inspection service, the universities and polytechnics to examine critically the problems of the Rubber Industry and suggest ways of arresting the continued decline in natural rubber production in Nigeria.

## **2.2 ECONOMIC IMPORTANCE OF *HEVEA BRASILIENSIS***

After cocoa, groundnuts and palm kernel, natural rubber is the fourth most valuable agricultural export commodity in Nigeria (Agricultural

Development in Nigeria, 1973-1985) F.A.O. Nigeria is known to be the second largest producer of natural rubber in Africa and currently rank tenth in the world. Nigeria contributed 1.17% of world natural rubber, which was estimated to be in the neighbourhood of 50,000 tonnes of dry rubber in 1984 (I.R.S.G, March 1983); Nigerian Rubber Board) valued at N22.5 million.

The coagulated and processed block rubber is used for the manufacture of various rubber products such as fabricated rubber materials, transmission, convey or elevator belts and other belting of rubber, tyres, inner tubes, solid outer covers for bicycles, motor cycles, cars, trucks, lorries, buses, tractors, earth-movers, aircrafts etc.

The liquid latex is used for the manufacture of hygiene and pharmaceutical articles of unhardened rubber such as surgical gloves, and toy balloons. Other latex products consumed in the Nigerian economy but most of which are denied from imported raw materials are flexible foams used widely in the upholstery industry, adhesives (expecting some of the carpet backing adhesives) and polychloro-sopreme rasin for marine, road making and chemical resistant paints (Fasina and Smart, 1985).

The rubber wood itself has been reported to be a source of timber, which could provide enormous raw material potentials for a variety of industrial processes. This means that the wood from rehabilitated old plantations could be used for pulp and paper; as sawn timber it could be used for the manufacture of such furniture as folding chairs, rocking chairs, setters, dining sets. It is used for radio grammar-phone carbinet, paneling, parquest and strip flooring (Amobi, 1985).

Glue laminated products such as toys, ash traps, fruits bowls souvenirs are made from rubber wood.

Rubber wood was traditionally used as a cheap source of thermal energy for domestic cooking and baking of bread, for drying bricks in kilns for curing tobacco leaves and it is also used in smoke house for preparing ribbed sheet rubber (Amobi, 1985)

Rubber wood can be converted into charcoal and is preferentially used over imported coke, at the Malaywata steel mill despite both similar calorific values of about 13,000 British Thermal units per pound (Sung and Cheang, 1977). Rubber wood could be used for the manufacture of medium density particle boards, for internal use. Although the board has high water absorption rate, the thickness swelling is low (Amobi, 1985; Odozi 1985).

A semi drying oil, which is extractable from, the rubber seeds contain a high percentage (42.63%) of unsaturated fatty acids, such as Oleic, Linoleic, and Linoclenic acids (Uzu et al; 1985). The chemical and physical properties of the oil make it suitable as raw materials for the manufacture of a wide range of products including glazing putty chemicals, cosmetics, links and adhesives.

The cake which remains after the extraction of the oil contains about 29.36% protein, 56.57% carbohydrate, 0.20% fibre and 2.90% minerals. The cake contains tolerable quantities of cyanogenics glucocide and can be used as livestock concentrate after drying and toasting (Uzu et al 1985).

### **2.3 HISTORY OF AGRICULTURAL CREDIT IN NIGERIA**

The first time the government of Nigeria intervened in the provision of public credit was in 1930 in the then Northern Region when the native administration gave loans for the purpose of mixed farming to replace shifting cultivation. Between 1946 and 1949, a nationwide credit institution known as Nigerian Local Development Board was established. This was found inadequate and was succeeded by the Regional Development units in 1949. This intervention brought about a significant range when the number of farmers under mixed farming rose from 20,000 to 40,000 between 1962/63 and 1965/66 (Yusuf, 1982). Later the Ministry of Agricultural and Natural Resources took over the coverage to other agricultural sectors like fisheries and horticulture and subsidize for supply of chemical fertilizer (Bakori, 1998 personal communication).

Asika and Wachukwu (1985) pointed out that before 1970, direct institutional financing of Agriculture in Nigeria was rare. Nigerian farmers benefited financially indirectly from produce and purchased cash crops on behalf of Nigeria based international corporation and from the Nigerian government through the Nigerian Produce Marketing Company Limited. Nigerian governments, in successive development plans, have made substantial financial allocations to the agricultural sector in order to encourage farmers and subsequent boost agricultural output.

The NACB was set up in 1973. The NACB functions to provide short, medium and long terms financing of various forms to agricultural projects, out of dissatisfaction with prevailing credit system and for the sake of providing sound pre-season credit and investment loans to agricultural community, the Agricultural Credit Guarantee Scheme Fund was set up in 1977. The fund exists to help agencies like banks, stipulate lending target as well as see that the beneficiaries use the credit disbursed for the intended purpose (Ike, 1986).

According to Famoriyo (1980), although the small holding utilizes services provided by money lenders, produce buyers, friends and neighbours, on the whole, the Nigerian small holders tend to prefer government institutions and co-operative as sources of credit rather than any other such sources because of low interest rate.

Yusuf (1982) pointed out that inadequacy of informal restrictions in terms of providing an adequate quantity of loans collected by farmers and the problems of high interest rates cause government intervention by establishing formal credits institutions in the country.

Yakubu (1991) reported that policies that grant credit to small farmers can be traced to the early post-independence era. In Northern Nigeria, for example, there were institutions like the Agricultural Scheme Fund and Northern Nigerian Development Fund. They attempted to solve the problems of rural cash strains.

As pointed out by Ojo (1998), Agricultural credit programmes can be summed up thus:-

- (i) Credit programme is identified with the Public Sector Credit Institutions wholly involved in Agricultural Credit Operations and these include the NACB and the Agricultural Credit Corporations in the state.
- (ii) Agricultural credit programme come under the financing arrangements for the industrial and commercial aspect of agricultural production.
- (iii) Agricultural credit programme comes under the operations of the commercial and Merchant banks which are basically Private Institutions and,
- (iv) Agricultural credit programme comes under the operations in the Central Bank of Nigeria (CBN).

#### 2.4 THE CONCEPT AND ROLE OF AGRICULTURAL CREDIT.

In finance the words "credit", "loan", "borrow" are often used interchangeably in referring to the process of obtaining control over the use of money goods or services in the present in exchange for a promise to repay at some future date.

The word credit is said to have been derived from the Latin word "credo" which means "I believe". Although "credit" and loan frequently are used as synonyms, Baker (1968) makes a clear distinction between the two. He prefers to think of credit as an asset of a financial reserve, which the farmer can call upon when needed, provided he has not used his credit "asset" by exchanging it for a loan.

Singh (1976) discovered in one of his studies that all classes of farmers (large, medium and small) really demand for credit, but also found out that the society seems to react more favourably to the demands of the large scale farmers than to those of the small scale farmers because of their credit worthiness. He strongly argued that the potential to improve net farm income should be one of the determining factors in the decision of whether or not to use credit.

The low productivity, which characterizes Nigeria agriculture stems in part from the state of poverty of rural farmers which constitute about 80.78% of the Nigerian farmers (Olayide, 1980).

Various authors have defined credit in different ways;

Abe (1981) stated that agricultural credit comprised all loans and advances for production activities of agricultural business.

Credit can contribute to the improvement of net farm income in the following ways:

- (i) Creating and maintaining adequate size of expanding the operation, to take advantage of economics of size.
- (ii) Increasing efficiency through the use of credit, which may make it possible to substitute one resource for another.
- (iii) Credit may be use to adjust to economic or market or technological development and also protect against adverse conditions.
- (iv) Credit helps to provide continuity of farm business and is used for investment in research and development for the acquisition of farm technology (Nwankwo, 1981)

Agricultural credit according to Palmer and Ojo, (1981) is a tool required for achieving agricultural development and so must be used in conjunction with measures aimed at solving financial problems especially in food production. A timely and adequate supply of agricultural credit will not only satisfy the provision of adequate food for even-growing population.

Jekanyinfa (1981), in line with others, mentioned that the farmers require production credit to expand the scope of operations by purchasing improved inputs and engaged in orderly marketing through storage of product. He hammered on credit being an important tool in modern agriculture.

Odekunbi (1982) re-emphasized that credit plays an important role in agricultural finance both in terms of the amount and conditions under which terms it is extended. He noted that credit serves as a marginal capital employed in the business of individual farmers and this is used to supplement equity capital and other capital they may be rented.

Awoemi (1983) in study foresaw growth of small-scale farmers to large-scale farmers and in his work noted that if the small-scale farmer is to grow to become medium and eventually large-scale farmer, he must have among short, medium and long terms.

Oyatoye (1984) re-echoed the findings of Galbraith (1952) that "At a certain stage in agricultural development, agricultural credit clearly does become a strong force for further development and improvement when a man with energy and initiative who lacks only the resources for more and more efficient production is enabled by the use of credit to eliminate the one block on his part to improvement.

A vicious cycle of low level of output, low level of income, low level of saving and low investment resulting again in low level of output is common among farmers in Nigeria (Adegeye, 1985). To break this poverty cycle, credit is needed among other things to make the adoption of new ideas and technology by farmers possible, for transportation purpose and in the expansion of farm size.

Awelo (1984) said that the word credit was derived from Latin word "Credo" meaning "I believe" which implies the believe of the borrower to fulfill his financial obligations.

Ross, (1984) defined agricultural credit as the acquisition and management of capital in the farm business. The need for credit is particularly great when a man becomes either a tenant or an owner. At such periods, he must usually rely heavily on credit and assume abnormal risk to achieve change in position.

Ewuola (1985) in his own view defined credit explicitly in agriculture as the present and temporary transfer of purchasing power, wealth, asset, in form of goods and services and money from one person to another or body who owns another persons capital for agricultural purpose but with confidence in his willingness and ability to repay at a specified later date as dated in the agreement.

To produce sufficient food for credit, growing population at reasonable prices, raw materials for the growing industries and to improve the lots of rural-dwellers, it calls for greater credit facilities, (Salazer, 1989).

Credit is a device for facilitating the temporary transfer of purchasing power from one individual or organization to another (Meller, 1966). The role of credit in agricultural development has been widely emphasized both by agriculturist and policy – makers. Two different views are held. While Miller 1977 argued that it is not lack of credit per se that is responsible for slow growth rate of agricultural sector, but rather the non-inclusion of certain pre-conditions for agricultural modernization, Osuntogun (1978) argue that lack of credit is generally recognized as an important constraint on expanding food production and modernizing agriculture. However, both parties agreed that credit plays a great role as it enables a further use of agriculture's capital and labour resources, the adoption of innovating technologies, the diversification of agriculture and the expansion of the scale of production.

## **2.5 ATTITUDE OF FARMERS TOWARDS CREDIT SCHEME**

Akuazoaku (1981) held the view that small holders as not been financed. But the institution and approaches so far adopted would ensure releasing of loans to the small farmers in question could simply move from seeking self sufficiency and aim at market oriented operation.

He stated that this group of farmers cares little for the future in terms of riches instead; they only cared to meet their immediate consumption.

The rather store some of their harvested stock for future planting than buying improved planting cultivars or fertilizers from the markets.

In essence, Akuazoaku's view was that, if such a farmer is given credit, he would still take to the less intensive farming methods.

These claims have been supported by the proposition, which holds, if credits are given to small farmers who do not have genuine profitable uses. The farmers are indebted without relative increase in production.

Majority of the small scale farmers misuse credit granted to them, because they shifted from productive activities such as investing in a more profitable farm business to non-productive activities like seeking chieftaincy, marrying new wife and consequently obtaining no increase in income from the farm source.

## 2.6 SOURCES OF CREDIT

The sources of credit to Nigerian farmers can be broadly classified as Institutional (Formal) and Non-institutional (informal) source.

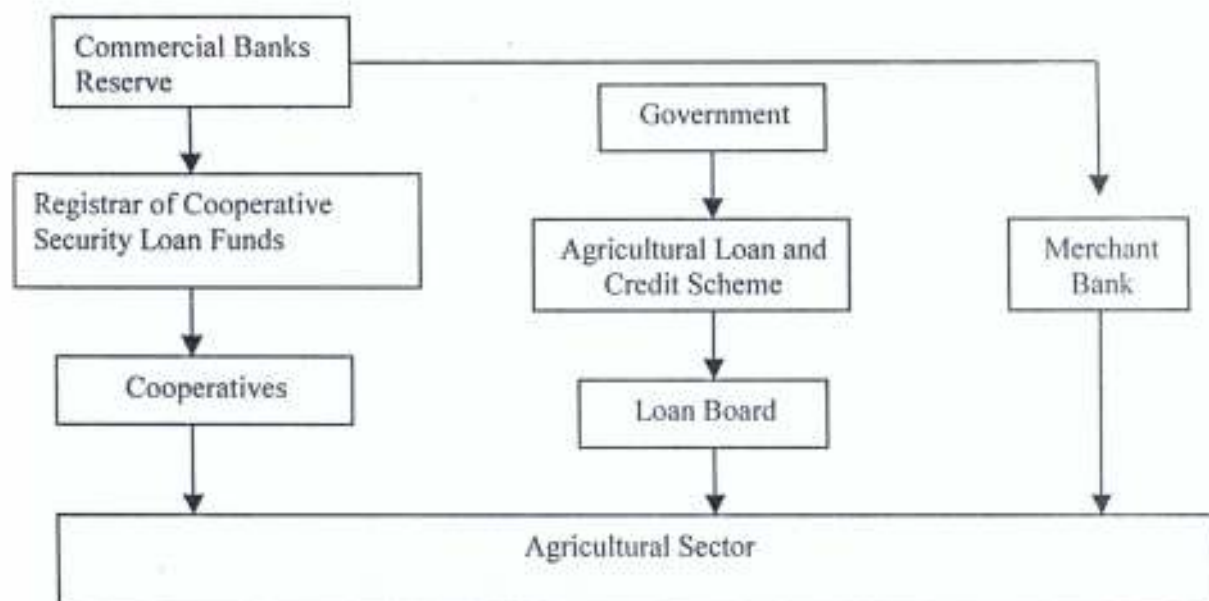
The needs of large-scale farmers are mostly met by Institutional Sources while non-institutional sources usually meet small scale farmers need. This is because the Institutional credit source tends to take the rate of interest into prime consideration and is highly impersonal and as a result, the small-scale farmers prefer to borrow from non-institutional sources. Famoriyo (1980) observed that these sources lend to farmers more as a social obligations rather than pecuniary benefit. These loans are made directly to the farmers and are devoid of administrative delays.

Of the two sources available to farmer, the informal source is more expensive and popular. This is shown in the survey Nigerian Agricultural credit system conducted jointly in 1985 with the CBN and the World Bank reported by Famoriyo and Imoudu, (1986) which revealed that 14.3% of the farmers use institutional credit sources which 26.9% use informal credit sources. The report stated that farmers were constrained from obtaining institutional credit and that those who obtained it were not satisfied. The Nigerian farmers still relied on non-institutional credit. Regrettably, therefore, the average farmer still relies on the money lenders, traders, friends, relatives etc. However, from the economic point of view, institutional credit sources are more advantageous to Nigerians farmers in spite of those cumbersome and delayed procedures.

The institutional (formal) sources include cooperative societies, Agricultural Credit Guarantee Scheme (ACGS), the Nigeria Agricultural Cooperative Rural Development Bank (NACRDB), Commercial and Merchant

Banks, the Agricultural Development Programme (ADP) and recently Industrial Banks which gives credit more in kind rather than in cash (Imoudu and Onosakponneme, 1992). They are usually established by law and guided by laid down regulation.

Figure 1 shows the flow of funds to agriculture through the institutional lenders, which includes agricultural loan and credit scheme, merchant bank etc.



**Fig 1: Flow of Funds from Institutional Source to Agriculture**

Source: Imoudu and Onosakponneme, (1992)

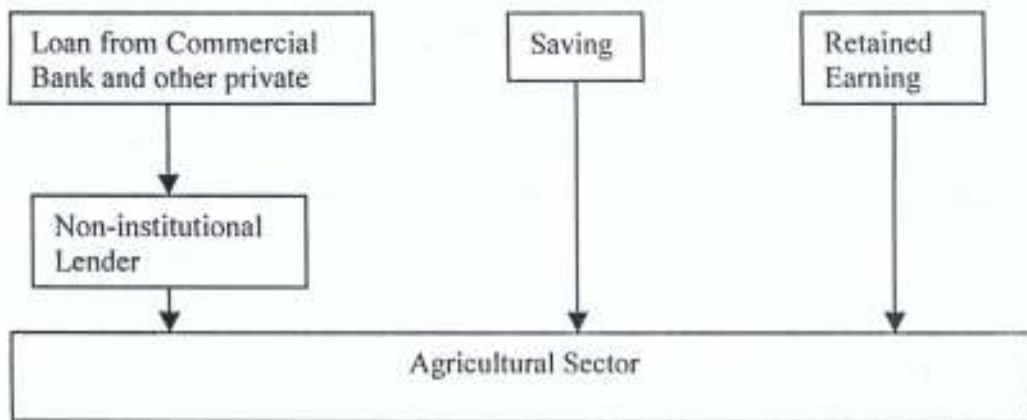
The contribution of commercial banks loan to agricultural sector has increase steadily over the years; banks have been actively involved in agricultural lending and developments over the last decade. Hitherto, banks have played significant role in the activity of marketing boards by making credit available to licensed buying agents who in turn makes credit available to small-scale farmers.

The non-institutional (informal) credit sources include relatives, friends, local money lenders and such arrangements like "Esusu" credit institutions, pledging of crops and or land which represents a kind of indigenous mortgage whereby owner or occupiers of land use possession and use of land as a pledge to creditors in turn for a cash advance (Famoriyo and Nwagbo, 1981).

The "Esusu" is an arrangement in which a fund is created by a group of individuals who make fixed contributions of money at fixed intervals, with the total amount contributed by all members at a time being handed over to each member on a rotational basis (Famoriyo and Nwagbo, 1981).

In line with above examples of informal credit sources, informal sources of credit are usually non-governmental.

Figure 2 shows the flow of funds to agriculture through non-institutional lenders



**Figure 2: Flow of Funds from Non-Institutional Source to Agriculture**

**SOURCE:** Imoudu and Onosakponnome, 1992

## 2.7 CLASSIFICATION OF AGRICULTURAL CREDIT

There are many different types of agricultural credit, and proper classification will facilitate communication and financial analyses. Five major classifications are summarized below:

### 2.7.1 Time Classification

With respect to time, credit can be classified into three (3) groups i.e. short, intermediate and long, according to the time of loan.

- (i) **Short Term Credit:** This refers to credit of less than a year maturity, it extend from three to six months such as bank over draft.
- (ii) **Intermediate Credit:** This is defined as that in which repayment will not be made within one year, but usually between one to five years.

- (iii) Long Term Credit: It stretches from one year to several years: it is used for purchasing real estate.

### **2.7.2 Purpose Classification**

Credit is also classified according to the purpose of the loan. This classification therefore gives information on loan, which is for Investment credit and those, which are for operating credit.

- (i) Production Loan (short term and intermediate loans); used to buy seeds, feeds, fertilizer, pay operating expenses, buy feeder livestock, carry or buy range livestock, buy diary cattle, buy machinery (Equipment/tractor) etc.
- (ii) Real Estate Loan (long term loan): Used to purchase farm, additional land, financed buildings, drainage, refinance anyone or a combination of the above.

Long term loans are usually for investment purposes whereas short term loans usually for operating purposes. This shows the relationship between time classification and purpose classification of agricultural credit (Warren, 1980).

### **2.7.3 Security Classification**

The security obtained provides another classification system. The three major classifications are as follows:

- (i) Secured Short Term and Intermediate Term Loans: May be secured by tangible personal properties (store crops, livestock, machinery, equipment etc.), in tangible personal properties (Government bonds, stocks, life insurance policies etc) or warehouse receipts.
- (ii) Secured Long Loans: May be secured by real estate or mortgage loan land contracts etc.
- (iii) Unsecured loans; has no security attached to it or it can also be called clean credit.

### **2.7.4 Lender Classification**

It is based on the period or time in which the lender will specify for the borrower. It involves:

- (i) Short Term and Intermediate Term Loans: Which may be provided by commercial Banks, production credits associations, commodities credit cooperation, merchant (moneylenders); individual e.g. friends, relatives and others.
- (ii) Long Term Loans: May be provided by commercial banks, insurance companies, development banks e.g. Nigerian Agricultural Rural Development Banks (NACRDB)

#### 2.7.5 Borrower Classification

According to Imoudu (1986); this is usually based on the type of business or type of farming activities of the borrower. Therefore, classification is based on whether the borrower is a crop farmer, a livestock farmer or general-purpose farmer i.e. one who combines various farming activities together.

Ewuola, (1985) classified agricultural credit under the following:

- (i) Purpose of loans
- (ii) Time allowed for Repayment
- (iii) Security required for granting loans
- (iv) Enterprise for which loan will be used
- (v) Characteristics of the potential borrower.
- (vi) Source of loan
- (vii) Repayment arrangements made
- (viii) Form of disbursement of loan
- (ix) Amount of follow-up made
- (x) Rate of interest charges
- (xi) Size of loan

#### 2.8 PROBLEMS OF AGRICULTURAL CREDIT ADMINISTRATION IN NIGERIA

The major problem of Agricultural credit to the farmers in Nigeria is the failure of repayment.

Adeyemo, (1981) and Osuntogun (1984) analysed the causes of default as follows;

- (i) Lack of appropriate and adequate man-power
- (ii) Political intervention of the agencies coordinating the programmes
- (iii) National disaster like drought, incidence of disease, insect and pest attack.
- (iv) Risk and uncertainties like flood, fire and weather hazard.
- (v) Poor selection of borrower
- (vi) Diversion of funds to other uses than agricultural purposes.
- (vii) Over-ambitious programme that result in failure.

Obnoxious believe by some farmers that Agricultural loans were governmental largesse which can be regarded as their own share of National Cake which normally referred to as "Udoji – Agbe" among them.

Adewumi (1984) and Osayame (1985) classified these reasons under the various stages of lending at which they occur thus:

**A. Pre – lending stage:-**

- Insincerity on the part of the farmer as per their personal information to the bank.
- Poor analysis of financial data by the bank
- Over – reliance on the financial data.

**B. Post – lending stage: -**

- Managerial incompetence
- Failure of the project due to natural disaster
- Diversion of funds.
- Lack of appropriate equipment and machinery
- Inadequate funds to enable take off in time of project.

Oludimu, (1985) in his own submission stated that Agricultural credit is not simply a banking business, there is more to it than granting loans to farmers especially when the amount required by each borrower may be small and yet in aggregate, represents a considerable risk.

Orafichya and Osuntogun (1987) assented that the history of institutional credit Administration in Nigeria has not been impressive when evaluated on the basis of their disbursement and repayment performance. In

the past, many credit were heavily subsidized in order to keep them alive. These actions become necessary because of high default rates amongst the borrowers

To prevent, if not to solve totally, these problems associated with Agricultural credit Administration, there is the need for effective and adequate supervision and monitoring of credit.

According to Abe (1988) agricultural credit problem arises as a result of the following;

- (i) Inadequate extension personnel and research facilities.
- (ii) Inconsistency of government policies which vary from time to time. For example, the removal of agricultural subsidy has become a political problem resulting in one government canceling the programme and another reintroducing it.
- (iii) Lack of awareness on the use of credit facilities among the rural farmers is also a formidable problem. Most farmers as a result of their physiological belief of being called a debtor would rather prefer not to use credit. Part of the problem can be socio – cultural as most men in Africa especially in Nigeria, want to be applauded for what they can do for themselves and by themselves.

Some other problems include cumbersome loan procedures, unwillingness of the agricultural sector, absence of solid collateral on the part of the farmers and the risk and uncertainty surrounding farming.

All these make it difficult for farmers to obtain institutional credit. The report also confirmed that those who obtained the loan among the farmers were not fully satisfied. This is because the amount granted to them cannot fully cover their productive and consumption expenses.

Balogun *et al* (1988) defined loan default as the inability of borrower to fulfill obligation as at when due. As they rightly emphasized, default does not only act as deterrent to credit programmes in West Africa but it is essentially unjust with the exception of Japan where default rates were recorded to be less than 5% majority of small scale farmers, credit programmes in Africa, the

middle-east and Latin America as reported by Sanderate, (1989) has experienced high default rates ranging from 50 – 90%.

## 2.9 EFFECTS OF CREDIT ON INCOME OF SMALL – SCALE RUBBER PRODUCTION

Specifically, agricultural sector in Nigeria is still being dominated by peasant farmers who by their characteristics of low level of farm income and hence low saving capacity. The only means of improving farm capital investment of the farmers is for them to have access to credit with minimum bottleneck. Credit has assumed a dominant role in agricultural finance since credit extended to agricultural sector had significantly influence the rate at which farmers adopt innovations (Gatlok, 1960, and Von – Pischicke, 1970).

Farmers requirement for credit have direct implication on innovation. Most of the improved technologies (like hybrid seeds, chemicals etc.) extended to farmers demand that they have the means by which they will procure them. Credit will therefore facilitate innovation adopted by farmers, which will eventually lead to higher output from the agricultural sector (Ogunfowora 1972 and Nwoko 1981). Credit is equally needed by farmers to expand their farm size, hire more labour to supplement the limited and fixed supply of farm Labour, transporting inputs to the farm and evacuating of farm produce to the market and stores and for processing of produce to other forms desired by the people. In fact, credit to farmers would ensure reduction in produce spoilage and wastage.

Small-scale farmers who constitute about 90% of the producers of the national agricultural produce are responsible for about 95% of total production in agriculture. A small-scale farmer can be defined as one whose limit of farm is limited to 0.1 – 5.99 hectares, who invariably requires small equity to run the farm, his tools are simple and his labour force is limited due to the large population of these categories of farm in Nigeria (Abalu *et al* 1981).

According to Adegeye and Dittoh (1985) the demand for agricultural credit is high in small farmer community. Mainly because of the poverty cycle

for which credit is needed to help in removing. They maintained that there is a potentially high demand for credit by farmers in Nigeria and many other countries, mainly because money or capital is required for the improvement on land, purchase of implement, machinery and improved seeds.

When farmers were able to utilize the credit given to them definitely there will be improvement in agricultural production and rural development.

Investigations from the people revealed that if credit beneficiaries were able to increase their farm size and use better chemicals, improved variety, it can lead to increase in rural farmers' income.

## 2.10 USES OF CREDIT

The uses of credit can be analysed in terms of how much lenders are likely to loan and of the amount owner – operated farmers could safely use. Considerations involved in determining how much credit can be safely used logically fall into three groups:

- (i) Returns on capital
- (ii) Repayment capacity
- (iii) Risk bearing ability

This is commonly referred to as the 3R's of credit. Each R has its own role to play in the analysis of use and extension of credit. The first 'R' refers to the optimum amount it will pay to borrow while the second 'R' indicate how much credit can be repaid under average conditions. Risk – bearing ability – the third 'R' provides the last line of defence in the use of credit. If a promising venture progress unprofitable risk – bearing ability must bear the load.

Miller (1973) reported that credit plays an important role in the economic life of food crop farmers and that the largest single stated use of credit among the farmers was borrowing to pay for hired labour. Essentially all farm work is done by hand, so lack of labour at seasonal peaks become a major constraint on production. Hired labour, fertilizer and chemicals together accounted for close to 90 percent of all borrowed funds used for farm purposes.

Baker (1973) argued against excluding credit for consumption from small farmer credit programme. He said "in the organization of the small farm

it is difficult and perhaps unrewarding to separate the household from the farm consumption. Input requirements for the household are just as demanding as are input requirements for the farm. Here too there are not only the predictable deficits and surpluses already noted, but also unpredicted events like weddings, funeral and other ceremonies, so abhorred in statements outlining the Small Farmer Credit Programmes (SFCPs), are viewed by the small farmers. If the SFCP does not allow for them, the small farmer is left to meet these requirements elsewhere. This means the use of the informal lender or holding reserves at high cost for such contingencies. It was submitted that this argument supports the inclusion of consumption within the scope of SFCPs.

Oyatoye (1975) reported that only about 30 percent of loans taken were used for consumption purposes which include school fees, family up keep, festivals and other social expenditure and that borrowing for ceremonial purposes did not feature prominently among cooperative farmers in Oyo, Ogun and Ondo States of Nigeria. When all farmers are considered as a group, the three categories of religion, naming and burial ceremonies accounted for only 7.8 percent of the total funds used for non-farm purposes.

Mc Arthus (1989), in analyzing farm credit management pointed out that credit – acquisition is not as serious a problem as credit utilization and management. Many farmers use too little credit, some use too much and most don't use the credit to the best advantage. It is therefore the question of when, what purpose, how much, what source and terms that determine the efficiency of credit use. To encourage the use of credit, loans must be made available through procedure that are timely and compatible with small farmers customary ways.

## CHAPTER THREE

### 3.0 RESEARCH METHODOLOGY

#### 3.1 STUDY AREA

The study was carried out in Edo State. The state is located in the south – south states of Nigeria, the state has between latitudes  $4^{\circ} 50'$  East and  $5^{\circ} 45'$  North of the equator. Edo state is bounded by Kogi State in the North, Anambra State in the East, Delta State in the South and Ondo State in the West. The vegetation consists of rain forest in the Benin low lands and Esan plateau, savannah in Etsako and Akoko-Edo uplands. The soil, which is red-yellow kind of feral soils, permits large-scale farming of arable and cash crops. Edo State is characterized by two distinct seasons. The wet season occurs between April and October with average rainfall of 150cm in the North and 250cm in the South. The dry season lasts from November to April with cold harmattan spell between December and January.

Edo State has a population of 2.16 million (1991 census) spread over the eighteen (18) local government areas under the three senatorial districts (Edo North, Edo South and Edo Central).

The mainstay of the state's economy is agriculture with about 60 percent of its population engaged in farming of food crops.


#### 3.2 SAMPLING PROCEDURE AND SAMPLE SIZE


The multi-stage sampling procedure was used to select the respondents. Six Local Government Areas (LGAs) that are dominantly noted for rubber production in the state were purposively selected. Thirty (30) rubber farmers (15 borrowers and 15 Non – borrowers were randomly selected in each of the six local government which gave a sample size of one hundred and eighty (180) small scale rubber farmers in the study area.

#### 3.3 DATA COLLECTION AND INSTRUMENTS

Primary and Secondary data were employed in this study. Secondary data were the information obtained from project reports, official documents, publications and library materials among others.

# REFERENCE

 DOMINANT LOCAL GOVERNMENT AREAS OF RUBBER PRODUCTION IN EDO STATE / LOCAL GOVERNMENT AREAS QUESTIONNAIRE ADMINISTERED.

 OTHER LOCAL GOVT AREAS OF EDO STATE.

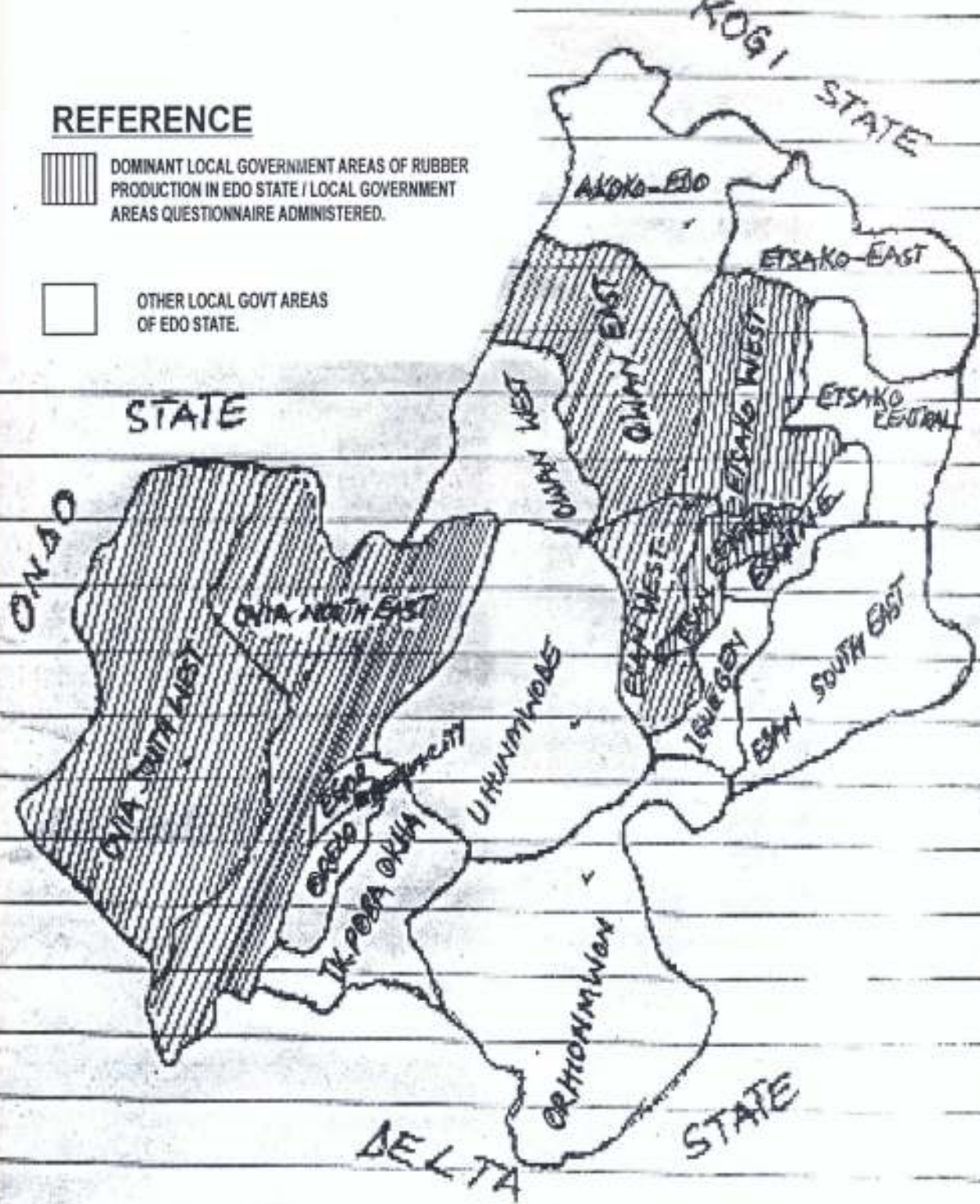


FIG. 3: MAP OF EDO STATE SHOWING THE EIGHTEEN LOCAL GOVERNMENT AREAS

The primary data were collected through the use of structured and validated questionnaire consisting of both open and closed – ended questions to elicit information from the targeted respondents. Trained enumerators from Edo State Agricultural Development Programme (ADP) who had the knowledge of the local clientele were used in the collection of information required from the farmers on rubber production.

### **3.4 MEASUREMENT OF VARIABLES**

The dependent variable in this study is the farm income per annum of respondents while the Independent variables are the socio-economic characteristics of the farmers such as Age of the farmers, Farm size, volume of credit, Educational attainment of respondents and leadership role.

The variables are measured as follows

Age of Farmers – in years

Farm Size – in hectares

Volume of Credit – in Naira (borrowers).

Access to credit – in Naira (non borrowers).

Educational Attainment – formal or non-formal.

Leadership Role – whether they are leaders or not in their locality

Farm income per annum – (Dependent Variable) – Requested to state their actual income realized from sales of farm produce as well as their farm output per annum.

### **3.5 METHOD OF DATA ANALYSIS**

The analytical techniques used in the study were as follows:

1. Descriptive Statistics – This involved the use of frequencies and percentages to explain the socio-economic variables of the respondents, farming activities, etc.
2. T-test statistic – To find the difference in means of the amount requested and the amount disbursed to borrowers.

3. Production Function Analysis – This involved the use of multiple regression function for borrowers and non-borrowers and is given by:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + U$$

For borrowers where,

Y = Farm income per annum in Naira (Dependent variable)

X<sub>1</sub> = Age of the farmers (years)

X<sub>2</sub> = Farm size (hectares)

X<sub>3</sub> = Volume of credit (N)

X<sub>4</sub> = Educational attainment

X<sub>5</sub> = Leadership role

U = Error term

For non-borrowers,

For borrowers where,

Y = Farm income per annum in Naira (Dependent variable)

X<sub>1</sub> = Age of the farmers (years)

X<sub>2</sub> = Farm size (hectares)

X<sub>3</sub> = Access to credit (N)

X<sub>4</sub> = Educational attainment

X<sub>5</sub> = Leadership role

U = Error term

Three functional forms of the production function were fitted for the analysis of the data; these were Linear function, Semi-log function and Double-log function with assumption that data collected fulfilled the assumption of the multiple regression model.

## CHAPTER FOUR

### 4.0 RESULTS AND DISCUSSION

#### 4.1 SOCIO-ECONOMIC CHARACTERISTICS OF THE FARMERS

These explain the socio-economic variables that influence production behaviour. Olomola, (1988) reported that the combination of socio-economic characteristics and economic variables would give fuller explanations of the technical aspects of the production behaviour of the farmers including techno-economic variables. The socio-economic factors are the age, marital status, educational standard, family size, farming experience, method of land acquisition, leadership role, farm size, occupation and income. This section deliberated on socio-economic characteristics.

##### 4.1.1 AGE OF RESPONDENTS

The data in Table 1 has shown that 85% and 80% of the respondents for borrowers and non-borrowers respectively were in the middle age bracket who can contribute much to agricultural production, while 15% and 20% were old, they may not be willing to borrow money for farming activities. They might have had enough experience in rubber production. However, there is the need to mobilize the younger generation to embrace rubber production for the sake of continuity.

**TABLE 1: AGE DISTRIBUTION OF RESPONDENTS**

Age(Years)	BORROWERS		NON-BORROWERS	
	Number	Percentage	Number	Percentage
21 – 30	10	11.1	3	3.30
31 – 40	18	20	13	14.4
41 – 50	29	32.2	31	34.4
51 – 60	19	31.7	29	28.1
> 60	14	15	18	20
	90	100	90	100

Source: Survey Data, 2004

#### 4.1.2 MARITAL STATUS OF RESPONDENTS

The data in Table 2 has showed that for both borrowers and non-borrowers 94.4% and 90% of the respondents were married. In this regard, it is expected that more family labour might be employed and would provide more hands for production and marketing in rubber production.

**Table 2: Distribution of Respondents According to Marital Status**

MARITAL	BORROWERS		NON-BORROWERS	
	Number	Percentage	Numbers	Percentage
MARRIED	85	94.4	80	90
SINGLE	5	5.6	10	10
	90	100	90	100

Source: Survey Data, 2004

#### 4.1.3 EDUCATIONAL ATTAINMENTS OF RESPONDENTS

Education makes farmers more receptive to technical change and responsive to new opportunities and consequently increases agricultural productivity. But lack of education retards innovation, promote helplessness, fails to inspire faith in new scientific activities and perpetuates stagnation.

From Table 3 below findings on educational attainment for borrowers and non-borrowers showed that 61.1% and 47.7% had one level of formal education or the other. This, to an extent, is a highly literate area, this is in addition to 32.2% of the borrowers and 22.2% of the non-borrowers with adult education with an expectation of being able to read and write. This constitute a good advantage for extension activities among the people. In addition, this attribute could translate into higher level of excess to credit institutions to obtain credit to increase production as a result of high level of enlightenment.

**Table 3. Educational Attainment of Farmers**

Educational Attainment	BORROWER		NON-BORROWER	
	Number	Percentage	Number	Percentage
No formal Education	6	6.7	27	30
Non-formal Education	29	32.2	20	22.2
Primary School	5	5.5	10	11.1
Secondary School	25	27.8	30	33.3
Tertiary	25	27.8	3	3.3
	90	100	90	100

Source: Survey Data, 2004

#### 4.1.4 HOUSEHOLD SIZE OF RESPONDENTS

In Nigeria, family labour is one of the major sources of labour supply in agriculture however, of late, due to rural-urban drifts, agriculture has been robbed of the young virile population. All the farmers with school age children put them in school irrespective of their labour supply. This implies that labour would be hired by peasant farmers when the need arises to complement available labour.

From Table 4 below the distribution of respondents according to household size shows that the majority of borrowers and non-borrowers have between 6 – 10 members in the family. This means that the farmer will have to be responsible for the feeding, clothing, education and other expenses. This accounts for their low income at the end of each harvest season, which automatically deprives them of savings. The farmers thus need credit to supplement their personal savings in paying for farm expenses, more so that, a large percentage of them 59% borrowers and 48% of non-borrowers had middle size household (6 – 10). This phenomenon would provide more hands for production, marketing in rubber production.

**Table 4: Distribution of Respondent by Household Size**

HOUSEHOLD Size	BORROWERS		NON-BORROWERS	
	Number	Percentage	Numbers	Percentage
1 – 5	31	34	38	42
6 – 10	53	59	43	48
11 – 15	5	6	9	10
> 15	1	1	-	-
Mean = 6.63				
	90	100	90	100

Source: Survey Data, 2004

#### 4.1.5 FARMING EXPERIENCE OF RESPONDENTS (YEARS)

Olomola (1988) reported that experience may count in terms of risk taking; it is apt to have considerable influence on production efficiency.

From Table 5, it was found that 78% of the borrowers and 67% of the non-borrowers had given rubber for over ten years, such could be efficient in rubber production due to experience.

**Table 5: Distribution of Farmers According to Rubber Farming Experience**

MARITAL Years	BORROWERS		NON-BORROWERS	
	Number	Percentage	Numbers	Percentage
1 – 5	9	10	12	13
6 – 10	10	11	18	20
11 – 15	30	33	25	28
16 – 20	25	28	21	23
> 20	16	18	14	16
Mean = 13.66				
	90	100	90	100

Source: Survey Data, 2004

#### 4.1.6 OCCUPATION OF RESPONDENTS

According to Table 6, 64.4% of the borrowers and 67.8% of the non-borrowers had farming as their primary occupation while 35.5% and 32.2% of the borrowers and non borrowers combined farming with some other enterprises. Farmers that had farming as their major occupation would likely be interested in improved practices that are germane to rubber production. Higher production could be expected from that category. As a result of that they need capital to support their production.

**Table 6: Distribution of Respondents by Major Occupation**

OCCUPATION	BORROWERS		NON-BORROWERS	
	Number	Percentage	Numbers	Percentage
Farming as primary	58	64.4	61	67.8
Farming as secondary	32	35.6	18	32.2
TOTAL	90	100	90	100

Source: Survey Data, 2004

#### 4.1.7 LEADERSHIP ROLE OF RESPONDENTS

Leaders are well-respected and influential persons in the society. Hence, they have the advantage of getting information on new innovation in farming more readily than the other members of the community. They can also be opinion leaders therefore a tool in the hands of the extension service.

From table 7, 50% and 33.3% of the borrowers and non-borrowers respectively play no leadership role in the society while 50% and 66.7% of the borrowers and non-borrowers play leadership role. This observation can partly explain why majority of the respondents that obtained loan got the loan from the formal sources. Since leaders are well respected in the society, they may be given "preferential treatment" in obtaining loan from the formal sources

**Table 7 Leadership Role of Respondents**

LEADERSHIP ROLE	BORROWERS		NON-BORROWERS	
	Number	Percentage	Numbers	Percentage
Yes	45	50	60	66.7
No	45	50	30	33.3
	90	100	90	100

Source: Survey Data, 2004

#### 4.2 METHODS OF LAND OWNERSHIP OF RESPONDENTS

The various methods through which the respondents acquired their farmland are listed in Table 8. According to table 9, a larger percentage 73.3% and 77.8% for borrowers and non-borrowers used the family land for production. While they could stay for long as they will, it may however result in the fragmentation of the land in the future.

**Table 8: Distribution of Respondents by Land Ownership**

METHOD OF LAND OWNERSHIP	BORROWERS		NON - BORROWERS	
	Number	Percentage	Number	Percentage
Family land only	66	73.3	70	77.8
Rented only	10	11.1	3	3.3
Family land + Rented	7	7.8	9	10
Family land + purchased land	4	4.4	8	8.9
Family land + purchased land + Rented	3	3.3	-	-
	90	100	90	100

Source: Survey Data, 2004

### 4.3 FARM SIZE OF RESPONDENTS

According to Olayide *et al* (1982), farmers could be classified into three categories based on the hectarage of land cultivated, thus we have small-scale, i.e. those who cultivate 0.1 to 5.99 hectares, medium scale those who cultivate 6 to 9.99 hectares and large scale those who cultivate above 10 hectares.

From table 9, it could be seen that 72.2% of the borrowers cultivated between 2 and 4 hectares of farmland as against 34.4% for the non-borrowers. Also 20% of the borrowers cultivated greater than 4 hectares while only 2.3% of the non-borrowers cultivates greater than 4 hectares.

The above illustration indicated that borrowers cultivated more farmland than non-borrowers. As a result of that they generate more income than those that did not borrow and with the availability to credit, borrowers can cultivate above 5.99 hectares that is above small-scale range as stated by Olayide.

**Table 9: DISTRIBUTION OF RESPONDENTS BY HECTARAGE CULTIVATED**

LAND RANGES (hectarage)	BORROWERS		NON - BORROWERS	
	Number	Percentage	Numbers	Percentage
Less than 2	7	7.8	57	63.3
2.1 – 3.9	65	72.2	31	34.4
4 – 5.99	18	20.0	2	2.3
	90	100	90	100

Source: Survey Data, 2004

### 4.4 ANNUAL INCOME OF RESPONDENTS

In table 10, the result gave N146, 316.67 as the mean income. However, 63.3 percent of the borrowers earned less than the mean income while 36.7% earned above but for non-borrowers 98.9% earned less than the mean income while only 1.1% earned above. This indicated that borrowers are better off than non-borrowers. The amount is not enough to meet the demands of the practices of rubber production which range from land

preparation to marketing because about 37% of the borrowers could not even meet the mean income. If farmers must make progress from being small scale category to large scale category, sourcing for funding particularly, through the credit institutions become imperative, especially to the non-borrowers who needed to be encouraged.

**Table 10: Income Distribution of Respondents**

INCOME (N)	BORROWERS		NON - BORROWERS	
	Number	Percentage	Numbers	Percentage
0-30,000	1	1.1	27	30
30,001-60,000	5	5.6	34	37.8
60,001-90,000	12	13.3	8	8.9
90,001-120,000	27	30	15	16.7
120,001-150,000	12	13	5	5.5
150,001-180,000	10	11.1	1	1.1
180,001-210,000	15	16.7	-	-
> 250,000	8	8.9	-	-
Mean income =				
(N146316.67)	90	100	90	100
< Mean	57	63.3	89	98.9
≥ Mean	33		1	1.1
		36.7		
Total	90	100	90	100

Source: Survey Data, 2004

#### 4.5 SOURCES AND ADEQUACY OF AMOUNT GRANTED AS LOAN TO RESPONDENTS

The sources used by the borrowers were formal sources which include government credit institutions, like Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB), Cooperative and Commercial Banks, like First Bank, Union Bank etc., which are formal in the sense that their operating

procedures and loan terms tend to be standardized and subject to Central Bank control.

The paired t-tests for mean for amount applied and the loan collected, the computed t-test has shown that there is a significant difference at 5% confidence interval ( $t = 10.164$ ) existed between the two (amount applied and amount collected) ₦122,277.78 and ₦100,333.33 respectively. The difference between the mean amount applied for and mean amount collected was (₦21,944.45), it should be noted that the amount collected can have a meaningful effect on farmers income if used effectively.

#### **4.6 BORROWERS REPAYMENT PATTERN AND ACCESSIBILITY TO FARM CREDIT**

Despite the importance of agricultural credit to economic development and as it affects the daily lives of millions of Nigerians, less attention is given to actual changes created by institutional credit at the farm levels. The accessibility to credit usage, time of credit collection.

##### **4.6.1 Accessibility To Farm Credit And Reason For Borrowing Of Respondents**

Most of farmers interviewed stated that agricultural credit was accessible to them and that farm operations were the reasons for their borrowing.

##### **4.6.2 Period of Credit Collection of Respondents**

The timing of credit disbursement could affect the production pattern of farmers and can also lead to unnecessary expenditure on the side of the farmers. Late release of loans (not coinciding with the critical period funds were needed) was essentially the fault of the lender.

Table 11, shows that 46.7% of the farmers reported that the credit approved for them was only disbursed at the pre-planting period, with 53.3% receiving their loan at post-planting stage while none were given at the post-

harvesting period. This shows that most of the loans given to small-scale rubber farmers may be utilized for unproductive purpose and this could affect their income.

The lending institutions were accused of wasting too much time on loan processing and production of relevant accounting information. The efficient credit operations reduce borrowers profitability and give rise to delinquency. Boakye (1979) stated that late release of credit by lenders associated with loan processing procedures was a cause of much delinquency of credit found among developing nations. Early or lately released loans favour diversion of agricultural loans to delinquency.

**Table 11: PERIOD OF CREDIT COLLECTION OF RESPONDENTS**

PERIOD	NUMBER	PERCENTAGE
Pre-planting	42	46.7
Post planting	48	53.3
Post harvest	0	0
	90	100

Source: Survey Data, 2004

#### 4.6.3 Problems Encountered In Credit Collection Of Respondents

There were many problems encountered by small-scale farmers who wanted to obtain loan from institutional sources. Table 12 shows that 35.6% of the farmers stated that shortage of fund was one of their limiting factors. About 36.6% of the respondents complained of delay in payment of approved loans while 27.8% did not encounter any problems.

Making enough funds available at the farm level. Availability of funds of farmers, through agricultural credit facilities is important, not only because it enable the to expand the scope of their operation and adopt new production technologies. However, it enables them market their produce in a more orderly manner through the adoption of new technologies for processing and storage,

as well as generate high bargaining power associate with greater liquidity (Okorie, 1998).

Most of the small-scale farmers lack collateral required by the banks and who high population scattered all over the country makes it difficult for commercial and agricultural development banks to lend to majority of them. In adequate flow of funds into agriculture has been identified as critical factor in accelerating incremental food production in Nigeria (Olieh, 1980).

**Table 12 DISTRIBUTION OF RESPONDENTS ACCORDING TO PROBLEMS ENCOUNTERED IN CREDIT COLLECTION**

PROBLEMS	NUMBER	PERCENTAGE	CUMULATIVE PERCENTAGE
Shortage of fund	32	35.6	35.6
Delay in payment	33	36.6	72.2
No problem at all	25	27.8	100
	90	100	

Source: Survey Data, 2004

#### 4.6.4 Previous Experience In Credit Collection Of Respondents

The number of times a farmer had previously collected loans will determine his efficiency in the utilization of the credit in a productive manner.

Table 13 below shows that 55.3% of the farmers were either for the first or second times and 30% were borrowing for the third or fourth times. In the study, the average number of times each borrower had taken a loan on three occasions. It could therefore be concluded that the borrowers as a group were experienced in the use of credit.

**Table 13: DISTRIBUTION OF RESPONDENTS ACCORDING TO NUMBER OF TIMES THEY COLLECT CREDIT (LOAN)**

CREDIT	NUMBER	PERCENTAGE	CUMULATIVE
≤ 2 times	48	53.33	53.33
3 – 4 times	2	30.00	83.33
≥ 5 times	15	16.67	100
	90	100	

Source: Survey Data, 2004

#### 4.7 EFFECT OF AGRICULTURAL CREDIT ON FARM INCOME OF RESPONDENTS

Regression analysis of individual variables on the borrowers farm income from the credit collected was carried out to determine the effect of the credit on their income. The variables considered for the study were;

$$Y = f(X_1, X_2, X_3, X_4, X_5, e)$$

Where,

Y = Farm income per annum of respondents in Naira.

X<sub>1</sub> = Age of Respondents in years

X<sub>2</sub> = Farm size of Respondents in hectares

X<sub>3</sub> = Volume of credit collected by the Respondents in Naira/Access to Credit for non-borrowers.

X<sub>4</sub> = Educational attainment of Respondents measured by number of years of formal schooling.

X<sub>5</sub> = Leadership role of Respondents

e = Error term.

Among the three statistical regression models designed for the study for both borrowers and non-borrowers, double-log functional form was chosen as the lead equation for borrowers and semi-log for non-borrowers based on statistical and econometric criteria.

The result of both Double-log and semi-log analysis for borrowers and non-borrowers respectively for small-scale rubber farmers are represented in Table 14 and Table 15 respectively.

For the borrowers, the lead regression equation among the three functional forms specified was double-log, used to interpret the analysis on the impact of institutional credit collected by them. From the regression equation, it could be seen that of all the variables used for this analysis, farm size, volume of credit and leadership role were significant at 5% level of significance indicating farm size, volume of credit and leadership role do play an important role in determining the level of farmers in the study area.

The data in Table 14 implies that as farm size ( $X_2$ ) increase by one unit, the farm income ( $Y$ ) of the borrowers increased by 0.270 that is increase in farm size leads to an increase in farmers income. Also volume of credit ( $X_3$ ), when increased by one unit, the farm income ( $Y$ ) of the farmers will increase by 0.693, which means that as volume of credit increases, farm income also increases, so farmers are thereby advise to borrow more to increase their farm income. The result also indicated that leadership role had an impact to increase the farmers income by 0.0984. Which means that if leaders can give more of their time to farm work because of their influence they can easily get loan and their farm income will also increase.

On the other hand Age ( $X_1$ ) and Education level ( $X_4$ ) were insignificant, which means that Age of the farmer and educational level of the farmers has nothing to do with securing credit and cannot affect farmers income.

In Table 15 in the other hand, for non-borrowers, the lead equation semi-log was used for the analysis, it was chosen because of its  $R^2$  and the number of independent variables found significant at 5% level of significance. The result indicated that farm size ( $X_2$ ), access to credit ( $X_3$ ) and leadership role ( $X_5$ ) were significant, which implies that a unit increase in farm size will increase the farmers income, as such farmers which to borrow in order to increase the farm size and earn more income.

Access to credit ( $X_3$ ) has a negative impact because farmers here refused to borrow or they were not opportuned to obtain credit as the case may be. So any unit increase in the independent variable ( $X_3$ ) access to credit, the income of the farmer will decrease equal to the value of the coefficient of the variable.

Leadership role ( $X_5$ ) was also significant but negative, this may be possible because leaders are not using the opportunity they had in obtaining loan to invest on their farms, rather give more time to their functions in the society like attending meetings, settling cases and also pride of leadership and also underrating farm work as a business.

In general, the results indicated that borrowers were better-off as the volume of credit was positive and significant, unlike non-borrowers whom their inability to collect credit resulted to a negative effect on their farm income.

**Table 14** REGRESSION COEFFICIENT AND SIGNIFICANCE OF INDEPENDENT VARIABLES IN RELATION TO FARM INCOME FOR BORROWERS.

VARIABLE CODE	VARIABLE NAME	REGRESSION COEFFICIENT	STANDARD ERROR	T-VALUE
	Constant	1.740	0.314	5.542
X <sub>1</sub>	Age of Respondents in years	0.0736	0.109	-0.673
X <sub>2</sub>	Farm size of respondents in hectares	2.270*	0.085	3.177
X <sub>3</sub>	Volume of credit by the respondents in Naira	0.693*	0.057	12.119
X <sub>4</sub>	Educational attainment of respondents measured by the number of years of formal schooling	0.0888	0.057	1.517
X <sub>5</sub>	Leadership role of respondents	0.0984*	0.046	2.135

$R^2 = 0.836$

Adjusted  $R^2 = 0.826$

F-value = 85.631

\* Significant at 5% level of significance.

Source: Survey Data 2004

**Table 15 REGRESSION COEFFICIENT AND SIGNIFICANCE OF INDEPENDNT VARIABLES IN RELATION TO FARM INCOME FOR NON-BORROWERS**

VARIABLE CODE	VARIABLE NAME	REGRESSION COEFFICIENT	STANDARD ERROR	T-VALUE
	Constant	19716.930	44859.757	0.440
X <sub>1</sub>	Age of Respondents in years	22024.095	26110.062	0.844
X <sub>2</sub>	Farm size of respondents in hectares	133247.6*	15537.080	8.576
X <sub>3</sub>	Access to credit by the respondents in Naira	-60365.5*	18851.600	-3.202
X <sub>4</sub>	Educational attainment of respondents measured by the number of years of formal schooling	-5472.461	10327.799	-0.530
X <sub>5</sub>	Leadership role of respondents	-19721.2*	9387.045	-2.101

$R^2 = 0.666$

Adjusted  $R^2 = 0.646$

F-value = 34.243

\* Significant at 5% level of significance.

Source: Survey Data 2004

## CHAPTER FIVE

### 5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 SUMMARY

The primary objective of the study was to examine the effect of institutional credit on income of small-scale rubber farmers in Edo State, Nigeria.

The study looked at the socio-economic characteristics of the small-scale rubber farmers, their farming activities, the difference in means of the amount requested and the amount disbursed to borrowers, the effect of institutional credit with or without on income of small-scale rubber farmers and problems encountered in loan administration.

Primary and secondary data were employed in the study. The primary source was based on the field data collected from the rubber farmers using multi-stage sampling procedure with the aid of structured questionnaire

Descriptive Statistics such as, mean, standard deviation, frequency and percentages were used to explain the socio-economic variables of the respondents, farming activities of the respondent etc.

T-test statistic was used to determine the adequacy of the amount disbursed to borrowers.

Regression Analysis was used to examine the effect of institutional credit on income of borrowers and those who did not borrow.

The result of the socio-economic analysis showed that the rubber farmers were mostly under the active age brackets because about 63% of them were within the age bracket 36-60 years.

The level of education of both the borrowers and non-borrowers were high as 93.3% and 70% in the two categories were literate either formally or informally.

The household size shows that majority of borrowers and non-borrowers had between 6-10 members in the family with 59% and 48%

respectively. They both had high dependents, which may deprive them from savings.

Both the borrowers and non-borrowers are well experienced in rubber farming activities since 79% and 67% respectively had greater than 10 years experience in rubber farming.

The study revealed that majority of the respondents 64.4% and 67.8% for both borrowers and non-borrowers respectively had farming as their major occupation. The study also revealed that 50% and 66.7% of the borrowers and non-borrowers respectively played leadership role.

Only 46.7% and 47.8% of the borrowers and borrower farmers respectively acquired their farm land through inheritance. With regards to farm size, 72.2% of the borrowers cultivated between 2 and 4 hectares of farm land as against only 34.4% for the non-borrowers.

Income distribution among the respondents showed a great difference between the borrowers 67.4% as against the non-borrowers only 32.2% between the same range of 60,001 and 180,000.

On the effect of amount of credit requested and amount disbursed to farmers the test showed that there is a significant difference between the two, that is amount requested and amount disbursed means of N122,277.78 and N100,333.33 respectively.

On credit collection period the study shows that about 53.3% received their loan at pre-planting stages and 46.7% received their at the post planting period.

On the problems encountered during loan recovery or credit disbursement, 27.8% encountered no problems, 35.6% experience shortage of fund and 36.7% complained of delay.

On the effect of agricultural credit volume of credit is significant at 1% level of significance, on farm income i.e. a unit increase in volume of credit leads to an increase on farm income by N10.562 each.

## **5.2 CONCLUSION**

The purpose of this study was to examine the effect of credit on income of the small-scale rubber farmers in Edo State. There is gross inadequacy of financial resources available to the small-holder farmers who dominate the industry in terms of numbers and total land area under rubber cultivation. Small-holders have little or no access to the institutional lenders due to ignorance on the part of these farmers, lack of collateral security resulting from the small and uneconomic size of their holdings and the long gestation period of the rubber tree.

This study has shown that the high level of education for borrowers and non-borrowers will lead to increase in production. Large household size in the two categories may deprive farmers from savings. Borrowers and non-borrowers were found to be well experienced in rubber farming. Majority of the farmers for both borrowers and non-borrowers had farming as their major occupation. Reasonable number of farmers in both categories play leadership roles in their communities. Most of the farmers, that is the borrowers and non-borrowers obtained land through inheritance. Borrowers cultivated more land than the non-borrowers. Borrowers had more income than the non-borrowers. Most of the farmers collected their credit at the wrong time. That is untimely loan disbursement was the major problem. Farm size, volume of credit and leadership role were positively significant for the farmers that borrowed, while for non-borrowers only farm size was positively significant.

## **5.3 RECOMMENDATIONS**

Based on the findings from the study, the following recommendations are made.

Government should re-enforced the laws on land act reforms which may enable farmers with capital acquire land for expansion. Since most of the land cultivated in the study area was through inheritance which may deprive expansion and also decrease in come.

Government should allocate more funds into farming since borrowers cultivated more lands than non-borrowers and this resulted to their higher income than non-borrowers.

Credit institutions should strive to grant adequate and timely loans under favorable terms and conditions to small-scale farmers.

For positive effect on agricultural productivity, it is suggested that loans should be disbursed to individual farmers through farmers cooperatives, Ministry of Agric, Agric Dev. Project (ADP) and bodies with less bureaucratic procedures than the commercial banks which are directly dealing with farmers.

In order to enhance access to agricultural loans to farmers, it is recommended that farmers should join cooperatives so as to reap other benefits such as easier access to other farm in puts, possible reduction in cost of production, learning of improved farm practices and increased bargaining.



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**APPENDIX 1**  
**QUESTIONNAIRE USED FOR THE STUDY**

**DATA COLLECTION ON EFFECT OF INSTITUTIONAL CREDIT ON  
INCOME OF SMALL SCALE RUBBER FARMERD IN EDO STATE**

Dear Sir/Madam,

I am a postgraduate student in the department of Agricultural Economics and Extension, Federal University of Technology Akure, Nigeria. As a requirement for the postgraduate programme, I have decided to undertake a research project on "Effect of Institutional credit on Income of Small Scale Rubber Farmers in Edo State, Nigeria.

I have therefore prepared a set of questions attached herewith for you to kindly contribute to this research work by answering the questions appropriately. All information's supplied will be very much regarded and treated confidentially.

Your concern and effort is highly appreciated.

Thank you.

**Yustus Sunday Francis**

## SECTION A

To be answered by both Borrowers and Non-borrowers.

Tick ( ) as appropriate.

Borrower ( ) Non-borrower ( )

Local Government Area: \_\_\_\_\_

1. Age (Years): \_\_\_\_\_
2. Sex: \_\_\_\_\_
3. Marital Status: \_\_\_\_\_
4. House Hold Size: \_\_\_\_\_
5. Farming Experience (Years): \_\_\_\_\_
6. Occupation: \_\_\_\_\_
7. Farm Practice: \_\_\_\_\_
8. Leadership Role: \_\_\_\_\_
9. Educational Attachment: \_\_\_\_\_
10. Farm Size (Hectares): \_\_\_\_\_
11. Method of Farmland Acquisition: \_\_\_\_\_
12. Farmers Income (N): \_\_\_\_\_

## SECTION B

To be answered by borrowers from the credit institutions.

13. As a loan beneficiary from credit institution(s) which source(s) did you borrow from?
  - (a) Banks
  - (b) Cooperatives
  - (c) Others (specify).
14. How much did you request from the source(s) you borrowed from? \_\_\_\_\_
15. How much was approved for you? \_\_\_\_\_

16. How much was released for you from the amount approved?  
\_\_\_\_\_
17. At which state of the farm operations was the credit issued to you?
- Pre-planting Stage
  - Post-planting stage
  - Harvesting Stage
  - Post-harvesting Stage
18. Has the time of collection of such loan affected your farm activities and your output? Yes/No.
19. If yes to question 18, how? \_\_\_\_\_  
\_\_\_\_\_
20. What did you suggest as solution(s) to answer to question 19?  
\_\_\_\_\_  
\_\_\_\_\_
21. What is/are the interest rate for the money borrowed from the credit institutions? \_\_\_\_\_  
\_\_\_\_\_
22. Are you comfortable with the interest rate charge on such loan? Yes/No
23. If no, why? \_\_\_\_\_
24. What is/are the factors that may prevent you from further request of such loan \_\_\_\_\_  
\_\_\_\_\_
25. complete the following table based on utilization of the credit collected from the credit institution(s)

Total amount collected (N)	Area of land cultivation (ha)	Cost of farm inputs apart from labour (N)	Cost of farm Hired labour (N)	Others specified (N)

26. What is the duration of repayment of the credit? \_\_\_\_\_

- 
27. Based on your production, how do you carry out your repayments?
- (a) Part-time basis
  - (b) Paid whole payments basis
  - (c) Not at all
  - (d) Others (specify).
28. Why have you decided to repay on any of the basis you mentioned in question 27? \_\_\_\_\_
29. What was your yield (kg) during the period from your rubber? \_\_\_\_\_
30. Comment on the impact of such credit on your rubber production
- \_\_\_\_\_
- \_\_\_\_\_

### SECTION C

#### Questions for Non-Borrowers.

31. As a non-borrower from credit institution(s) how do you raise money for your farm operations
- (a) Self-savings
  - (b) Relatives
  - (c) Friends
  - (d) Produce Buyers
  - (e) Others (specify)
32. If your answer to question 31 is (a), why did you prefer raising fund personally? \_\_\_\_\_
- \_\_\_\_\_
33. If your answer to question 31 is not (a), why have you decided to borrow money from Non credit institution(s) for your farm operations?
- \_\_\_\_\_
- \_\_\_\_\_

34. Why have you decided to borrow from credit institution(s)?
- Bureaucracy in credit institution(s)
  - Not aware that credit institution(s) issue money to small scale rubber for their farm work.
  - High interest rate
  - Others (specify).
35. How much did you raise personally for your farm work? \_\_\_\_\_
36. How much did you borrow from non credit institution(s) for your farm work? \_\_\_\_\_
37. What was the interest rate charged on the amount borrowed from non credit institution(s)? \_\_\_\_\_
38. Are you comfortable with the interest rate charged on the amount borrowed from non credit institution(s)? Yes/No
39. If no, why did you then borrow from them? \_\_\_\_\_
40. Kindly complete the following table base on utilization of the amount used for your farm activities.

Total amount collected (N)	Area of land cultivation (ha)	Cost of farm inputs apart from labour (N)	Cost of farm Hired labour (N)	Others specified (N)

41. What was your total yield in (kg) for the period? \_\_\_\_\_
42. Do you belong to any agric cooperative society? Yes/No
43. If yes to question 42, what are you benefiting from such society been their member? \_\_\_\_\_
44. Suggest those things that will encourage you to collect loan from credit institution(s)? \_\_\_\_\_