THE ROLE OF MICROFINANCE BANK CREDIT ON AGRICULTURAL DEVELOPMENT IN NIGERIA: (1980-2010)

BY

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EC/2009/680

DEPARTMENT OF ECONOMICS

FACULTY OF MANAGEMENT AND SOCIAL SCIENCES,

CARITAS UNIVERSITY

AMORJI-NIKE, ENUGU STATE

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc.) DEGREE IN ECONOMICS

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APPROVAL PAGE

This is to certify that this project work was carried out by Onamah Ernest Eneojo with registration number EC/2009/680 of the Department of Economics, Faculty of the Management and Social Sciences, Caritas University, Amorji-Nike.

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DEDICATION

This project is dedicated to God Almighty and my parents Mr and Mrs Godwin onamah for all their Love, Support and Encouragement.

ACKNOWLEDGEMENT

I certainly owe a debt of gratitude to God almighty with all sincerity of my heart for his grace and endless mercies he bestowed upon my life throughout my university education also making it possible for this piece of work to be completed.

Despite the puzzles and hurdles of my work, I wish to acknowledge my supervisor, Mr Odo who dimmed it necessary to bring out his time to go through my work to see that it is a successful work. I am dizzied with his intelligent and kind gestures.

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My sincere gratitude also goes my wonderful course mates Eze Chika, Oyeudo Francis and isioma Isibor, and many others may God in his kindness reward you all.

ABSTRACT

This research work tries to investigate the role of microfinance bank on agricultural development in Nigeria using Nigeria as a case study. Using ordinary least square method, data collected were secondary data and the durbin-watson t-statistics were used in the regression analysis. The study shows that Microfinance bank loans have a positive impact on agricultural development in Nigeria. Based on these findings some recommendations were made, interest rate should be reduce to encourage farmers in borrowing and The federal government should give a directive through microfinance bank that will encourage the farmers by giving them incentives. This will automatically increase the efficiency of farmers and thereby attract more youths to the agricultural sector.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Nigeria is endowed with natural resources, large fertile farmland, wide range crops, and river amongst others. Despite its abundant natural resources it is faced with poor food situation. The poor food situation is traceable to the decline in the agricultural sector. The problem of feeding and provision of natural resources is increasing by the day. However several efforts are being made to improved the standard.

Prior to the discovery of petroleum in Nigeria agriculture used to be the highest foreign exchange resources earner and contribution to gross domestic product GDP has been estimated to about 62.63% in 1960, 48.08% in 1970s, and 20.63% in 1980. Recently due to the growing awareness of the role of agriculture, the various governments have intensified efforts aimed at transforming from its present subsistence level to a market oriented production. One of those efforts was the ban made on importation of agricultural products like palm oil, maize and rice. This was done to encourage improvements on our production standard.

Due to the fall in the level of production from decade to decade, the country could no longer feed the large population, provide raw material for domestic-industries,

engage in export of agricultural produce and employ the labor force of the country despite the abundance of human and material resources.

In spite of growing urbanization, Nigeria is known to be predominantly rural in natural and majority of population is dependent directly or indirectly on agriculture for their live hood. Credit delivery is perhaps one of the most important roles of microfinance banks, as the loans extended are used to expand existing businesses and in some cases to start new ones. According to CBN (2008) microfinance loans granted to clients is increasing from 2007 to date and most of it goes to financing micro-enterprises in rural areas.

Ketu (2008) observed that Microfinance banks have disbursed more than eight hundred million micro-credits to over 13,000 farmers across the country to empower their productive capacities. As such it is expected that agricultural output will increase with the increase in finding. The entrepreneurial capacity of the farmers we thus improve.

1.2 STATEMENT OF RESEARCH PROBLEM

According to Anyanwu etal (1997:14) “the agricultural sector has been recognized for a long time as an important sector to Nigeria economy and development is one of the crucial requirements for the overall economic growth.

He noted further that the declined in agricultural activities might appear natural in any development process, it is obvious that in Nigeria agricultural activities would remain the most important single sector for some time to come. He emphasized that in the past, development planners have introduce programs such as national accelerated food production project **(NATPP)**, green revolution programs (GRP), In search for all appropriate technique in order to increase farm output and productivity and such program have at one time been implemented.

Based on these, a number of problems one facing the agricultural sector and they are as following. Inadequate finance or credit facilities, inadequate farms input, lack of storage facilities, lack of basic amenities, Lack of technical know-how, lack of research and illiteracy of the farmers.

The questions to which this research will provide answers to one, is the credit advanced to farmers through microfinance adequate to have a significant impact on agriculture? All these problems can be solved or rather reduce when there is adequate financing.

1.3 RESEARCH QUESTIONS

This study revolved around the answering of the following research question.

- What extent does microfinance loans influences the agricultural output in Nigeria economy?

- What policy actions can be implemented to boost the agricultural productivity in Nigeria through microfinance?

1.4 OBJECTIVES OF THE STUDY

In this study therefore, the researcher hope to accomplish the following objectives:

- To determine how microfinance loans/credit granted to the farmers can influences the agricultural output in Nigeria economy.
- To determine policy actions in which agricultural output can be improved through microfinance bank credit.

1.5 HYPOTHESIS OF THE STUDY

- Microfinance banks loans have no significant impact on agricultural development in Nigeria.

1.6 SIGNIFICANCE OF STUDY

Microfinance services, particularly those sponsored by the government have adopted a traditional supply led subsidized credit approach mainly directed to the agricultural sector and other non-farming activities, but the effect has short lived.

The Nigerian economy stands to derive lot of benefits if concrete steps are taken to salvage the agricultural sector opinions are divided as the actual benefit of microfinance policy, regulatory and supervisory framework and how it can develop economy, most especially the agricultural sector because it has grasps of the challenges facing agriculture.

To the researcher, this work will serve as an avenue to broaden my knowledge, as it places a challenge that will expand my intellectual horizon by and applying various economic tools analysis draw conclusion for future analysis. It is also expected to serve as an impetus for further researchers in this area of study. It should not be considered as an end to research and policy making but as a guide taking into consideration of its limitation.

To the government and its agencies, it looks at earlier policies designed and why they failed. Therefore it is hoped that it will provide a useful guide to policy makers in agriculture for steady and consistent policies and programmes in terms of funding.

To the society, this researcher's work will create awareness of the microfinance services that enables them engage in economic activities to be self-reliant, increase employment opportunities, wealth creation, growth and development. Finally, the salient findings of the study will also make the farmers to be more oriented in agriculture.

1.7 **SCOPE OF THE STUDY**

The scope of this research covers the period from 1980 to 2013. The period is significant because a lot of measures were adopted following the advert of crude oil and its collapse. That is pre-sap and implementation and role in financing the agricultural sector.

CHAPTER TWO

LITERATURE REVIEW

1.1 THEORETICAL LITERATURE

Microfinance refers to the entire flexible structures and processes by which financial services are delivered to micro-entrepreneurs as well as the poor and low income population on a sustainable basis. It recognized poor and micro-entrepreneurs who are excluded denied access to financial services on account of their in ability to provide tangible assets collateral for credit facilities (Jamil, 2008).

Microfinance can be seen as a supply of loans, savings and other financial services to the poor. It is the practice of delivery those services in a sustainable manner so that, poor households will have access to financial services so that they can build sustainable micro-enterprise while micro-enterprise is a business that is independently owned and operated by its owners and does not meet certain standards size which in most cases operated as informal business. Currently microfinance banks are of two forms, as all licensed community banks in Nigeria that met CBN guidelines have been transformed to microfinance Bank.

The two forms of microfinance Banks (MFBS) are, 1. Microfinance Banks (MFBS) licensed to operate as a unit. These are hitherto community Banks

licensed to operate branches and cash centre subject to meeting the prescribed prudential requirements and availability of free funds of opening branches/cash centre. The minimum paid-up capital for this category of banks is #20 million for each branch. The branching should be gradual within a council local before it spreads to other local council and state. 2. Microfinance banks licensed to operate in a state. These are MFBS licensed to operate in all part of the state at once without recourse to gradual coverage (spread) as in unit MFBS.

Branches are opened subject to meeting the prescribed prudential requirements and availability of free funds.

The minimum paid-up capital for this category of banks is #1 billion. About 600 community banks have migrated to microfinance banks by January 1st 2008 and there are several others that have been licensed to operate CBN, 2008.

The ministry of finance and central bank of Nigeria (CBN) have been advised to stop the bank of agriculture (BOA) from setting up microfinance banks. The development follows the decision of the banks of agriculture to establish microfinance banks in the 776 local government councils giving the advice, the national association of microfinance Banks (NAMB) said is tantamount to the aduictrain of duties and responsibilities on the part of bank of agriculture . NAMB's chairman, Lagos state chapter, Mr. Olufemi Babajide, said the bank of

agriculture would lose focus if it goes ahead with the decision to set up microfinance banks. He said the policies of setting up microfinance banks and the banks of agriculture are different. While the former was setup to reduce poverty to a minimal level, the letter was established to provide loans to small and medium scale farmers at a more flexible and lower rate. The inability to stop the bank of agriculture on the issues that would affect the operations of the microfinance industries. If the bank of agriculture loses its focus, what would happen to the farmers?

He said the development is going to have spillover effects on operations of microfinance banks, adding that the goals of setting up the banks would be defeated, "we have over 900 microfinance banks in Nigeria today, what the federal government agencies need to do is to support the microfinance institutions financially, instead of trying to duplicate the efforts of the banks."

Babajide (2011) said agencies, such as defunct people's bank, directorate for food roads and rural infrastructure (DFFRI), better life programs among others were set up in the past to render microfinance services without making any success, advising the bank of agriculture to learn from history.

"Where are DFFRI and the people's bank today? They have gone. All these agencies set up microfinance banks in the past. But they have failed to tackle the

issue of poverty in Nigeria", he added that access to loans also failed. The CBN owns 40percent in the Bank of agriculture, while the ministry of finance owns 60percent. Under the regulation, the two agencies are required to monitor and control the affairs of the bank. Besides, they are mandated to ensure the bank keeps to its goals of promoting agriculture, via providing facilities to the farmers

Grace Azubuike (2011), she said that, as part of efforts to facilitate increase lending to the agriculture sector of the economy, the Bank of Agriculture (BOA),has given the sum of #1 billion to rural microfinance banks. Speaking in Abuja at the financial linkage forum held by Rural Finance Institution building programme (RUFFIN), the National programme coordinator RUFIN, Mallam Musibu Azeez, said that financial linkage was a good tool which provides the needed refinancing window for the agricultural and rural transformation in the in the country. According to him, locus management strategy manual already developed by the national programme for agriculture and food security (NPFS), should be widely circulated in order to help microfinance banks develop best practices in in-lending arrangements.

He, however recommended that credit facilities to farmers and the rural populace should be channeled through MFBS across the country and that the existing cooperative lending institutions should be knowledge and built upon in the design and implementation of rural financing programmes. In his words, "in terms

of disbursement of funds under the linkage programme, the existing cooperative farmers groups under the on going donor projects namely: NPFS and FADAMA 111, should be used to pilot the scheme and there should be need for capacity building training for MFBS on designing partnership and linkage service agreement "Azeez (2011)".

Ochi, 2007 owing to the subsistence nature of production, Nigeria farmers who are mainly poor can, therefore, hardly save. Such a situation underscores the importance external microfinance bank credit as part of the strategy to support expansion of the scope and scale of their operation.

Adera (1995), the rules and regulations of the formal financial institution have tagged poor small-holders famers as unbankable.

Braveerman and Guash (1986) stated that despite efforts to overcome the widespread lack of financial services amongst small-holder in developing countries and expand credits in rural areas of these countries, only the majority still has limited access to bank services to support their private initiatives.

Rok (1994), opined that improving the availability of credit facilities by the microfinance bank to the agricultural sector is one of the incentives that has been proposed for stimulating its growth and the realization of its potential contribution to the economy.

CERAM (2007) stated that, microfinance banks credits is one of the essential prerequisites for agricultural development. Money is needed to employ labour as well as for consumption for household members. In addition, it is required for improvement in farming technique, such as the use of fertilizers and pesticides, farm supply, storage, marketing and processing.

CERAM (2007) further categorized microfinance bank credit into three types namely, short term credit to finance the current cropping season's operation, seeds, fertilizers and farm family expenses until the crop is sold, medium-terms loans(longer than one crop year and less than three years) which is needed for the purchase of breeding stock and equipment, and long-term credit needed to purchase machines and embark on major improvement of farmland and buildings.

Atsuko Toda (2011) stated that access to finance could play a crucial role in the agricultural transformation agenda, because farmers have always been looking for credit for the adoption of technologies. She also emphasis the importance of microfinance credit to agricultural development, saying it was necessary to fuel the growth of value chains and creation of job opportunities for the unemployed youths, adding that access to microfinance was crucial for small-hold farmers.

THE ROLE OF MICROFINANCE BANKS IN PROMOTING AGRICULTURAL DEVELOPMENT IN NIGERIA

1. **CREDIT DELIVERY**

This is perhaps one of the most important roles of microfinance banks, as the loans extended are used to expand existing business as the loans and in some causes to start new ones. According to CBN (2008) microfinance loans granted to clients is increasing from 2007 to date and most of it goes to financing micro-enterprises in rural areas.

Ketu (2008) observed that microfinance banks have disbursed more than ₦800million micro-credit to over 13000 farmers across the country to empower their productive capacities. As such it is expected that agricultural output will increase with increase in finding. The entrepreneurial capacity of the farmers will thus improve.

2. **BOOSTING SMALL SCALE ENTERPRISES/AGRICULTURE.**

About 60 percent of the poor people in the country live in the rural areas and 80percent of them are farmers and artisan (NBS 2005). Microfinance banks have therefore groups. Rural people are empowered through microfinance loans and services, and hence small scale agricultural practice and micro-enterprises is developed.

Governments go into cooperatives to partner with the microfinance banks to raise bulk loans to be disbursed to the beneficiaries, in so doing the

banks are increasing and sustaining the number of people going into small businesses.

3. EMPLOYMENT GENERATION

Agriculture and micro-enterprises contributes immensely to job creation, and which particular interest to all microfinance bank in rural areas. Microfinance banks have so far engaged in extending credits and other services to making many rural enterprises and hence generating employment in rural areas by microfinance banks covers the follow in areas, blacksmithing, goldsmitting, watch repairing, bicycle repair, basket weaving, barbing palm wine tapping, cloth weaving, dye, food selling, carpentry, bricklaying, pot-making, leather works and drumming.

It has, therefore been acknowledged that the rural setting is an area of many industries, which could be developed to contribute significantly to the national economy, just as rural people are more frequently self-employed than urban people (2008).

4. IMPROVEMENT IN SKILL ACQUISITION

Improvement of the conditions of women through the provision of skills acquisition and adult literacy is another role played by microfinance banks. This is done through building capacities for wealth creation among enterprising poor people and promoting sustainable livelihood by strengthen rural responsive banking methodology and the introduction of simple cast-benefit analysis in the conduct of business. In most cases a profit sharing agreement is entered between a bank and an entrepreneur and new methods and innovation are passed to the prospective entrepreneur by the banks professionals, while at the end of the productive period the proceed in being shared and the entrepreneur if so wishes can continue on his own after the necessary skills and production technique are acquired (Umar, 2005).

5. FACILITIES POVERTY ALLEVIATION.

Employment and increase generation are important aspect of poverty alleviation efforts microfinance banks have accelerated the operate of government poverty alleviation programmes and in doing that promising entrepreneur are supported and new ones emerged. The federal government National Poverty Education programme (NAPEP) and National Economic Empowerment and development Strategy (WEEDS) to mention a few aimed at achieving the limited Nations millennium institutions for success. The success of these programmes and projects

for advancement of the MDGs are linked with the promotion of entrepreneurs in rural areas and subsequent reduction in the level of poverty (Ketu 2008).

As Thomas Malthus stated that, food is necessary to the existence of man. An economy cannot develop well if its populace is stared as the productivity of the labour force will be below optimum. Agriculture makes important contributions to national food security and macro economics stability. At the macro level, inadequate and irregular access to food reduces labour productivity and decreases investment in human capital (Bless and Sterm 1978). **.**

CHALLENGES FACED BY DEPOSIT MONEY BANKS AND MICROFINANCE BANKS IN THE DELIVERY OF MICRO CREDIT PROGRAMMES

The inability of deposit money banks and microfinance banks to meet the credit needs of small holders has been occasioned by challenges faced by the lending institutions and the borrowers. Most of the lending institutions are yet to accept agricultural lending as a profitable business. While they venture into lending to other equally risky sectors, agricultural activities have always been tagged as fraught with uncertainties of weather, natural hazards, and possible attack from pest and diseases. This is further compounded by the dearth of skills in agricultural

credit appraisal, monitoring and administration in most of the banks. The credit officers of the banks are traditionally accustomed to lending to commerce, trading, services and industrial, oil and gas sectors. In most of the institutions, there are no specialized departments or agricultural experts to take charge of agricultural loan portfolios, while at the same time, there are no special trainings on agricultural lending to update staff on the technicalities involved. Another major challenge faced by the banks is the lack of rural branches, a situation which impedes outreach to widely-dispersed customers.

BORROWERS-RELATED CHALLENGES

Aside from the challenges faced by lenders, the borrowers are also faced with several constraints. First, their small-holdings and scattered nature presents technical and market diseconomies, as it require huge costs of loan administration. Also important, is the fact that many farm holdings operate under diverse cultural and agronomic practices, and this creates huge extension challenges which loan officers are ill-equipped to address.

Second, most of the farming population lacks the understanding and the competence/ appreciation of the importance of keeping farm records. This makes it difficult for them to take appropriate economic decisions and, thus, constitute

serious hurdles to loan officers in assessing their credit worthiness and risks. Third, the subsistence nature of farming hampers savings, investment and asset accumulation. The farmers can scarcely afford to provide tangible security, as a requirement for lending from banks. The communal land tenure system with shared land rights/ownership adversely affects the acceptability of land as alternative security. In rural areas and villages, land values are abysmally low and might not offer easy foreclosure processes. Finally, lack of good cultural and economic practices coupled with ineffective extension machinery, predispose borrowers to inefficiencies that affect productivity, storage and, thus, occasion defaults amongst them.

SUGGESTED STRATEGIES FOR ADDRESSING THE CHALLENGES FACED BY BANKS IN MICRO CREDIT PROGRAMMES

Addressing the challenges would go a long way to removing the bottlenecks on the part of lenders and borrowers. This paper posits that, for increased agricultural production in Nigeria to be achieved in order to meet the needs of the populace, guarantee food security, reduce local imports and promote non-oil exports, there would be need for innovative policy changes on various fronts:

FINANCIAL LITERACY

Field experience reveals that the poor farmers lack basic knowledge with regards to finance/financial services. An average farmer does not know how to keep records, manage credit, savings and other financial opportunities. There is need to provide specially crafted educational programmes which can develop their capacity in record-keeping, simple farm management principles, loan usage and repayment.

CREATION OF WELL-EQUIPPED AGRICULTURAL FINANCE DEPARTMENTS IN LENDING BANKS

Lending banks need to have full-fledged agricultural finance departments manned by staff with training in relevant fields. Agricultural economists, rural sociologists, agricultural extension specialists, economists and business management specialists would be handy for such specialized agricultural finance department. Agricultural experts are more likely to understand the dynamics of agricultural production, adopt appropriate risk mitigation strategies, loan monitoring and recovery procedures than non-experts.

There should be training and capacity building through classroom and attachment programmes for loan officers of banks. A loan officer should be able to understand the peculiarity of agricultural production, properly assess agricultural loan

proposals and effectively determine the credit worthiness of borrowers using techniques that are applicable to the sector. Training should be a continuous exercise and this would enable them to disburse loans at appropriate times, monitor loan utilization and give simple advice during their interactive visits with borrowers.

AGRICULTURAL CREDIT FUND/INCENTIVES

Special wholesale funding arrangements should be put in place from which agricultural lenders; particularly microfinance banks could draw resources for on lending to farmers. Some eligibility criteria should be set for deciding the institutions that would access these funds. These would include proven record of previous channeling of certain portion of their portfolio to performing agricultural/agro allied activities, and that such credit disbursement would be structured to meet the production cycle of the farmers. Such proviso will encourage the microfinance institutions not only to lend to the sector but to innovate ways to better improve agricultural finance and production.

CREATION OF ENABLING ENVIRONMENT FOR AGRICULTURAL LENDING

There is need for stakeholders to collaborate in order to create an enabling environment that will attract young school leavers and graduates into the agricultural sectors. This can be achieved through provision of basic infrastructure such as pipe-borne water, road network, electricity and working tools and equipment. Government should channel subsidies to areas that demonstrate potentials for increasing the efficiency of agricultural production and, hence, its profitability. Incentives such as tax holidays for profits on agricultural lending could also be an added advantage to the financial institutions. Agricultural financing at the grassroots require peculiar products; for instance, while tangible collaterals are essential and effective in urban credit delivery, small-holder lending cannot provide such securities, and as such would require the promotion of appropriate products and methodologies.

IMPROVEMENT IN EXTENSION SERVICES/DONOR COORDINATION

A good number of donor agencies in Nigeria are active in various agricultural activities. While some are focusing on functional demand-driven programmes, others, especially new entrants are still on the supply side. There is need to coordinate these activities not only to share experiences but for optimum delivery of intervention with reduced duplication of efforts. To improve extension services, extension workers must be regularly and properly trained and be supervised to ensure they are active, efficient and innovative. More so, sharing experiences with others in the same field would help in disseminating valuable information at minimum cost.

DELIBERATE FOCUS ON INVESTING IN LARGE-SCALE FARMING

Nigerian agricultural population is basically rural and should be capacitated to achieve the objective of food security. Efforts should also be made to develop a new crop of properly trained agricultural practitioners that have capacity for managing big agricultural plantations, adopt improved technologies and interlink with research institutes, and markets as well as sources of raw materials. It is suggested that while efforts are being made by development agencies to meet the needs of small-holders such as through Fadama 2, the time is now ripe for strategic

steps to be taken in favour of large-holders. In addition, specialization and large-scale production of identified crops should be encouraged.

FORWARD INTEGRATION AND FUNDING OF VALUE-ADDED PROCESSING ACTIVITIES

Most successful large-scale farm businesses are integrated projects with backward and forward linkages. Bank support to agriculture should pursue the twin objectives of primary production and processing, either in one unit farm or linked with a firm that processes the primary farm products. This will not only guarantee market for the producers but put the products in forms that will improve shelf life, market and export potentials.

REORGANIZATION OF LENDING STRATEGIES FOR BETTER EFFICIENCY

Lending to agriculture under the current dispensation should be strictly market driven. The Federal and State governments should create enabling environment that will attract young people, particularly school leavers and graduates to take agriculture as a profession. This can be achieved through systematic commitment

to the provision of social amenities such as pipe-borne water, road network and electricity in rural areas. For instance, improved roads will ease the evacuation of products to the market on time and possibly bring about cheaper prices, while provision of electricity could enhance value-added processing opportunities that might increase the revenue of farmers. Also important, is the provision of working tools for agricultural extension staff to support the dissemination and application of research findings by the farmers. Support for research and extension would lead to increased output and, consequently, increased returns on investment, profitability and higher debt capacity/ repayment. Subsidies by government should be applied in areas that can increase the efficiency and profitability of agricultural activities. Micro borrowers should be the targeted area of the microfinance banks while the deposit money banks should concentrate on large borrowers.

The Bank of Agriculture (BOA) (formerly the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB)) should provide wholesale funds for on-lending activities of microfinance banks. Government subsidized credit to the agricultural sector should be channeled through the microfinance banks or other market based financial institutions so as to promote harmony, market discipline as well as avoid market distortion in the financial sector.

2.2 EMPERICAL LITERATURE

Chirwa (1997) specified a probit model to access the determinants of the probability of credit repayment among small-holders in Malawi. The model allows for analysis of borrowers as being defaulters or non-defaulters. Various specifications of the x-vector were explored by step-wise elimination. However, only five factors (sales of crops, size of group, degree of diversifications, income transfer and the quality of information) were consistently. Significant determinants of agricultural credit repayment the explanatory power of the model is plausible with the log likelihood statistically significant at 1-percent four independent variable gender amounts of loan, club experience and household size were put statistically significant in various specifications.

Oni (1999) studied the proportion of loans repayment by small-holder farmers in Osun state. His explanatory variables were amount of loans collected, expenditure on farm, interest rate, and extent of farmers contact with bank disbursement log, cultivated land area and years of experience in farming. The result of linear and log form equations showed that the regression coefficient associated with amounts of loan (+), disbursement of loan by microfinance log (-) and extent of farmers contact with banks (+) had expected-signs and were statistically significant at 5percent.

Ogwuma (1981) studied on microfinance bank credit in agricultural sector using econometric analysis. Based on his report, agricultural financing in Nigeria

shows a positive relationship between interest rate and loan able funds on the level of agricultural sector ended up with faster industrial growth than those that focused on industries alone. Hence, agriculture may therefore be the fastest road to industrialization.

Sohali et al (1991: 38) in the study on the relationship between microfinance bank credit and agricultural development in Pakistan found out that a statistical significant relationship existed between microfinance bank credit in Pakistan and agricultural development.

2.3 LIMITATION OF THE LITERATURE REVIEW

Given that this research depend on existing literature and data on the theme of the subject (microfinance), its availability to a great extent limits the comprehensiveness and reliability of this study, coupled with the limited time frame and the unwillingness of the microfinance institutions to release data to the researcher.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 THE ORDINARY LEAST SQUARE (OLS)

The ordinary least square method shall be used in estimating the specified models, since parameters under this method of estimation have the blue property i.e. best linear unbiased estimators. The model will be subjected to the economic a prior theoretical as well as the statistical and economic criteria.

3.2 MODEL SPECIFICATION

In this research we have focused on secondary type of data. All data is collected from the different official publications of respected banks and state bank of Nigeria. In this study we are going to adopt three variables namely, gross domestic product, and micro finance bank loan agricultural output. After selection of the above variables we can describe the economic growth function of Nigerian in the following way:

Agri.output= f (loan, GovExp, fso) ----------1.1

Above the equation shows a positive relationship between agriculture output and microfinance bank and the financial sector output, this means that a change in microfinance, government expenditure and financial sector output brings about a

significant change in the agricultural output. The model is further designed to make it amenable for statistical verification.

$$Agrioutput = a_0 + a_1\,loan + a_2 GovExp + a_3 fso + e \text{ ----------2}$$

Agrioutput=Agricultural output dependent variable

Loan=microfinance bank loan

GovExp=Government Expenditure

Fso= financial sector output

a_o =intersect parameter of the equation

a_1= the slope of the equation

e= stochastic variable or error terms.

3.2.1 STATISTICAL TEST (FIRST ORDER TEST)

3.2.2 ECONOMIC APRIORI CRITERIA

The economic criteria involve examining the economic significance of the model with regards to meeting the “a priori” expected sign of the parameters to ensure

that the model conforms to economic theoretical expectation. For instance for economic theory it is broken that ceteris paribus can increase in the interest rate will decrease the demand for loan. Therefore, loan and interest rate are negatively related and as such, the expected sign of interest coefficient should be negative. Thus employment and agricultural development are expected to be positive.

3.2.3 STATISTICAL TEST

The statistical test would be based on the individual and the overall significant of the model using the t-test statistics and the f-test statistics respectively. The R^2 would also be used to determined the level at which the depended variable explain the variable in the endogenous variable.

3.2.4 ECONOMETRIC TEST (SECOND ORDER TEST)

The econometric test would be performed to see if the underlying assumptions of (O L S) are violated. These tests include durbin-watson test static for auto-correlation, test for multicollinearity, heterodasticity test, and argument-dickfaller test for stationary etc

3.3 AUTOCORRELATION TEST

Following the classical regression model (CLRM) assumption of no autocorrelation among the disturbances m;

i.e. E(M,MI)=0 where i=i

the durbin-watson t-statistics would be used to check for the presence of autocorrelation. One of the advantages of t-statistics is that, t is based on the estimated residual which are routinely computed in regression analysis (Gujarati, 2003)

3.4 HETEROSCEDASTICITY TEST

Based on the assumption, four of the classical linear regression model, the disturbances m_1 all have the same or equal variance,0^2 if these assumption is not satisfied, it is assumed that there is heteroscedasticity. While general test will be used in order to check interoscedasticity in the model.

3.5 DATA AND THEIR FEATURES

The study makes use of secondary data obtained from CBN annual statistical bulletin volume 9 2009 owing to the availability of data interpolation technique was in order up for some variable, which were incomplete. The variable used for these are presented in their log linear form in order to capture elasticity. The interest rate for microfinance was not available at such commercial banks into rates used as proxy.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 PRESENTATION OF RESULT:

In this chapter we are going to present the result of the estimate model as well as interpret and analyze it.

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Dependent variable: LDGP
Number of obs = 76
F(  3,    72) = 165.80
Prob > F      = 0.0000
R-squared     = 0.8735
Adj R-squared = 0.8683
Root MSE      = .42739
```

lgdp	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
loan	.0000364	.0000312	1.17	0.248	-.0000259	.0000987
fso	.0000155	2.80e-06	5.51	0.000	9.87e-06	.0000211
govexp	2.20e-07	1.23e-07	1.78	0.079	-2.60e-08	4.65e-07
_cons	14.13101	.0808344	174.81	0.000	13.96987	14.29215

4.2 INTERPRETATION OF REGRESSION RESULTS

4.2.1 ANALYSIS OF REGRESSION COEFFICIENTS:

From the above regression results it was observed that the coefficients of microfinance bank loan, financial sector output and government expenditure are all positive. This shows that a positive relationship exists between LOAN and GDP, FSO and GDP, and GOVEXP and GDP.

The result shows that a 0.0000364 increase in the gross domestic product is caused by a unit increase in the microfinance bank loan.

Also, the result shows that a 0.0000155 increase in the gross domestic product is influenced by a unit increase in financial sector output.

The result shows further more that a 2.20 increase in the gross domestic product is as a result of a unit increase in government expenditure.

Finally, if all independent variables are held constant, the value of the gross domestic product will be 14.13101.

4.2.2 EVALUATION BASED ON ECONOMIC A PRIORI EXPECTATION:

Under this section, the obtained result is compared with the a priori sign to check if it confirms to economic theory. The table below illustrates the situation.

Table 4.2: Economic a priori signs

Variable	**Expected signs**	**Obtained signs**	**Conclusion**
LOAN	+	+	Conforms
FSO	+	+	Conforms
GOVEXP	+	+	Conforms

The table above shows that all variables (i.e. LOAN, FSO, GOVEXP) conform with economic theory.

4.2.3 EVALUATION BASED ON STATISTICAL TEST

The tests are estimated by statistical reliability of the estimated parameters of the model (Koutsoyiannis 1977). From the sample observation, the first order test is carried out based on the following: R^2, t-test and F-test.

1. COEFFICIENT OF DETERMINATION (R^2):

The computed R^2 will be used to judge the explanatory power of the regression, and also measures the goodness of fit of the regression the.

From the regression result, the R^2 was observed to be 0.8735, showing that about 87.35% of the variation in the dependent variable is caused by the explanatory variables (i.e. microfinance bank, financials sector output, and government expenditure). However about 13% was left unexplained.

2. THE T-STATISTICS

In this section, the t-test is used to judge the statistical reliability of the estimates of the regression coefficients.

The hypothesis is thus stated as:

H_0: $\beta_1 = 0$

H_1: $\beta_1 \neq 0$

Where: β_1 is the coefficient of the parameter estimate

Decision rule:

Reject H_o, if $t^* > t\ \alpha/2$, otherwise accept i.e. if $t^* < t\ \alpha/2$

Where t* = Computed or calculated

t α/2 = tabulated value of t

n = number of observation

k = number of parameter estimates

Degree of freedom (df): n – k = 76 – 4 = 72.

From the t-distribution table, for a two tailed test at 5% level of significance with 72 degrees of freedom, the tabulated t(0.025) = ±1.9935.

Table 4.2: t-test

Variables	**t-value**	**t-tab**	**Conclusion**
LOAN	1.17	±1.9935	Not significant
FSO	5.51	±1.9935	Significant
GOVEXP	1.78	±1.9935	Not significant
CONS	174.81	±1.9935	Significant

From the above table, FSO and CONS were revealed to be statistically significant, while LOAN and GOVEXP were statistically insignificant.

3. F-TEST

The F-test was conducted to capture the overall significant of the model. It follows a distribution with degree of freedom (df) k-1(vi) and m-k (V_2)

Ho: the model is not statistically significant (F-cal < F-tab)

Hi: the model is statistically significant (F-cal > F-tab)

Testing at 5% levels of significant,

F-cal = 165.80

F-tab (3, 72) = 2.732

From the result above, F-cal = 165.80 > F = 2.732, we accept Ho and say that all the coefficients in model are jointly significant.

4.2.4 ECONOMETRIC CRITERION

1. AUTOCORRELATION TEST:

Durbin –Watson statistics was conducted to test for the presence of first order autocorrelation.

Table 4.4: SUMMARY OF DURBIN WATSON TEST

NULL HYPOTHESIS	**DECISION**	**IF**
No positive Autocorrelation	Reject	**O < d < dL**
No Positive Autocorrelation	No Decision	**dL ≤ d ≤ du**
No Negative Autocorrelation	Reject	**4-dL < d < 4**

No Negative Autocorrelation	No Decision	**4-du ≤ d ≤ 4-dL**
No Autocorrelation (positive or Negative)	Do not Reject	**du < d < 4-du**

Where d = d calculated or computed

du = upper limit of Durbin- Watson for the corresponding values.

dL = lower limit of Durbin- Watson for the corresponding values

From the regression result, we can see that the Durbin Watson Statistic (d) = 0.442716. With n = 76 and k = 3, where;

n = number of observation.

K = number of estimated independent variable.

From the Durbin Watson table dL = 1.56112 while du = 1.67507.

Thus we have O < d < dL

Therefore, 0 < 0.442716 < 1.56112

From the result above, we can see that 0 < 10.442716 < 1.56112, therefore, we conclude that there is positive serial correlation. Thus we reject the null hypothesis.

2. NORMALITY TEST

The null hypothesis for the test is H_O $\mu_i = 0$ (The error term follows a normal distribution against the alternative).

Hi: $\mu_i \neq 0$ (The error term does not follow a normal distribution).

At 5% with 2 degree of freedom;

X^2-cal = 5.97

X^2tab = 5.991

Since X^2-cal < X^2tab, we accept Ho and conclude that the error term does follow a normal distribution.

3. TEST FOR MULTICULLINEARITY

The test was carried out using correlation matrix. According to Barry and Feldman (1985) criteria "multicollinearity is not a Problem if no correlation exceeds 0.80"

TABLE 4.4.

	LOAN	**FSO**	**GOVEXP**
LOAN	1.000		
FSO	0.6850	1.000	
GOVEXP	0.6363	0.9347	1.000

From the above table, only the pair-wise GOVEXP and FSO have values in excess of 0.8. Therefore, we can conclude that multicollinearity exists between them.

4. HETEROSCEDASTICITY TEST:

This test is basically on the variance of the error term. The test helps to ascertain whether the variance of the error term is constant.

Ho: Homoscedasticity

Hi: Heteroscedasticity

Decision rule;

If x^2 –cal >x^2 –tab, reject the null hypothesis Ho, and accept if otherwise.

Under 9 degree of freedom

X^2 -cal= 34.02

X^2–tab= 16.919

Thus, 34.02 > 16.919, it shows that there is heteroscedasticity in the errors. Thus the study concludes that the conditional variance of the error terms is not equal.

4.3 EVALUATION OF HYPOTHESIS:

The hypotheses have earlier been stated as:

Ho: Microfinance bank loan to agriculture has no impact on economic growth in Nigeria.

H1: Microfinance bank loan to agriculture has an impact on economic in Nigeria.

Going strictly by the result of the table in 4.1, microfinance bank loan to agriculture had a positive but insignificant impact on the gross domestic product (which is a measure of economic growth), thus we accept the null hypothesis and conclude that microfinance bank loan to agriculture has no significant impact on economic growth in Nigeria.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND POLICY RECCOMENDATION

5:1 SUMMARY

From the analysis and interpretation of results in chapter four, some findings were made during the process and they are summarized as follows

1. There is a positive relationship between microfinance bank loans and gross domestic products which means that an increase in microfinance bank loans will bring about an increase in GDP.
2. There is a positive relationship also between the financial sector output (FSO) and gross domestic product(GDP), which implies that an increase in financial sector output will result to an increase in GDP
3. A positive relationship also exist between government expenditure and gross domestic product which means an increase in government expenditure will bring about an increase in GDP

Since microfinance bank loans, financial sector output, and government expenditure has a positive impact on gross domestic product, therefore microfinance bank loans will promote agricultural productivity and development.

5:2 CONCLUSIONS

In conclusion, microfinance bank loans have a vital role to play in the agricultural sector in Nigeria. Because of this, microfinance bank loan serve as a catalyst for agricultural development in Nigerian economy.

5:3 POLICY RECOMMENDATIONS

From the findings that were made the following recommendations include

1. Microfinance banks in Nigeria should increase the rate at which they lend loans to farmers which would enable farmer to purchase sufficient equipment, machineries, storage facilities and farming tools for agricultural activities
2. The federal government should reduce the interest rate so that agriculturalist would be able to borrow sufficient money from microfinance bank.
3. The central bank of Nigeria (CBN) should make sure that the funds mobilized for loans are effectively disbursed to the farmers through microfinance banks.
4. The federal government should give a directive through microfinance bank that will encourage the farmers by giving them incentives. This will automatically increase the efficiency of farmers and thereby attract more youths to the agricultural sector

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Appendix

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   11.0   Copyright 1984-2009
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
                                      College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
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Notes:
     1.  (/m# option or -set memory-) 10.00 MB allocated to data

. use "C:\data\onama.dta", clear

. reg lgdp loan fso govexp

      Source |       SS       df       MS              Number of obs =      76
-------------+------------------------------           F(  3,    72) =  165.80
       Model |  90.8551265     3  30.2850422            Prob > F      =  0.0000
    Residual |  13.1517962    72  .182663835           R-squared     =  0.8735
-------------+------------------------------           Adj R-squared =  0.8683
       Total |  104.006923    75  1.38675897           Root MSE      =  .42739

------------------------------------------------------------------------------
       lgdp |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       loan |   .0000364   .0000312     1.17   0.248    -.0000259    .0000987
        fso |   .0000155    2.80e-06     5.51   0.000     9.87e-06    .0000211
     govexp| 2.20e-07      1.23e-07     1.78   0.079    -2.60e-08    4.65e-07
      _cons|   14.13101    .0808344   174.81   0.000     13.96987    14.29215
------------------------------------------------------------------------------

. tset quarter,quarterly
```

```
        time variable:  quarter, 2458q1 to 2462q3, but with a gap
              delta:  1 quarter

. estat dwatson

Number of gaps in sample:  1

Durbin-Watson d-statistic(  4,    18) =  .4427165

. estat imtest,white

White's test for Ho: homoskedasticity
         against Ha: unrestricted heteroskedasticity

         chi2(9)      = 34.02
         Prob > chi2  = 0.0001

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |     chi2     df      p
-------------------+-------------------------------
Heteroskedasticit |34.02       9      0.0001
        Skewness |   26.25       3      0.0000
          Kurtosis |   1.70         1       0.1918
-------------------+-------------------------------
             Total |     61.97     13    0.0000
---------------------------------------------------

. predict residual,res

. sktest  residual

                    Skewness/Kurtosis tests for Normality
                                                  ------- joint ------
    Variable |    Obs   Pr(Skewness)   Pr(Kurtosis)  adj chi2(2)    Prob>chi2
-------------+-------------------------------------------------------------
    residual |     76      0.0147         0.5439         5.97         0.0505

. corr loan fso  govexp
```

(obs=76)

```
             |     loan      fso   govexp
-------------+---------------------------
        loan |  1.0000
         fso |   0.6850   1.0000
      govexp |0.6363   0.9347   1.0000
```

.

Quarter	loan	fso	Gdp	govexp
1992_1	52.925	1041.725	570427.8	128049.7

1992_2	131.25	2009.35	737868.1	215578.2
1992_3	141.2	19588.93	1158200	182861.9
1992_4	131.3	53887.6	2125589	270880.5
	263.9	9250.15	2727533	359967
	516.225	13897.6	2778588	442939.8
	973.825	16863.22	2829827	602257.6
	1067.488	26276.05	3541043	886032.4
	1048.105	44203.4	4617867	780300.9
	702.455	54466.07	5271910	1018058
	1948.1	67073.38	7306044	1070108
	3508.347	92485.7	9218041	1276025
	5325.413	101440.1	1.22E+07	1525176
	3865.58	98672.3	1.14E+07	1426201
	9704.91	109743.5	1.46E+07	1822100
	505.23	120624.7	1.86E+07	1938003
	701.8	129727.4	2.07E+07	2450897
	3354.3	141238.9	2.43E+07	3240819
	1248.35	41318.5	4582127	701059.4
	3746.502	96610.1	1.07E+07	1376143
	6785.245	104207.9	1.30E+07	1624151
	2551.95	84171.95	1.70E+07	2097110
	139.3	2353.8	791866.5	197349.8
	7404.99	112463.8	1.56E+07	1851076
	1007.2	21261.9	3194015	947690
	1364.925	132605.3	2.16E+07	2648377
	813.875	14897.2	2731817	472388.8
	652.6575	127451.7	2.01E+07	2322673
	3827.425	126257.4	2.55E+07	3145664
	164	38547.6	2317966	292992.8
	1212.625	57682.02	6365557	1018123
	847.86	47088.3	4653607	859542.5
	603.515	125176	1.96E+07	2194450
	1188.063	36304.35	4235099	762717.1
	4736.9	149684.2	2.48E+07	3456926
	8245.077	106975.7	1.38E+07	1723125
	4919.9	159013.6	2.94E+07	3825572
	155.4	3042.7	899863.2	160893.2
	2908.88	82640.13	8093369	1174013
	112.8	52681.38	1674875	226799.4

	3699.95	143350.2	2.44E+07	3294845
	196.7	23207.6	2510342	315105.2
	229.4	7867.6	2702719	337217.6
	3627.425	94547.9	9949050	1326084
	4828.4	154348.9	2.71E+07	3641249
	147.35	2698.25	845864.9	179121.5
	2428.49	74856.75	7699707	1122061
	447.37	52858.1	4725086	1018026
	2028.05	135483.2	2.25E+07	2845858
	5102.9	168342.9	3.40E+07	4194218
	98.6	69227.6	1933212	248768.1
	5105.07	115184.1	1.66E+07	1880051
	554.3725	122900.4	1.91E+07	2066226
	2805.15	117904.4	1.76E+07	1909027
	123.2	1664.9	683869.8	233806.5
	298.4	10632.7	2752346	382716.4
	996.075	19795.68	3072619	832545.9
	1276.475	42086.48	8496189	1048555
	99.775	1457.175	646055.8	198554.2
	367.4	13397.8	2801973	428215.2
	665.05	14397.4	2755202	457664.3
	647.615	49973.2	4689346	938784.1
	29.5	834	532613.8	92797.4
	3389.27	90423.5	8487032	1225966
	984.95	18329.45	2951223	717401.7
	127	36135.15	1416538	204830.7
	957.54	56074.05	5818734	1018091
	4045.6	145461.6	2.45E+07	3348872
	2691.175	138361	2.34E+07	3043338
	1127.775	31290.2	3888071	824374.7
	1467.71	59290	6912381	1018156
	76.35	1249.45	608241.8	163302
	962.7	15397	2708431	487113.4
	332.9	12015.25	2777160	405465.8
	5011.4	163678.2	3.17E+07	4009895
	4391.25	147572.9	2.47E+07	3402899