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THE AGRICULTURAL CREDIT SYSTEMS IN SIERRA LEONE: ITS EFFECTIVENESS IN AGRICULTURAL DEVELOPMENT IN THE YONI CHIEFDOM

by

Alusine Mohamed Tarawalie B.S., Southern Illinois University, 2015

A Research Paper Submitted in Partial Fulfillment of the Requirements for the Master of Science

> Department of Agribusiness Economics in the Graduate School Southern Illinois University Carbondale December 2019

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RESEARCH PAPER APPROVAL

THE AGRICULTURAL CREDIT SYSTEMS IN SIERRA LEONE: ITS EFFECTIVENESS IN AGRICULTURAL DEVELOPMENT IN THE YONI CHIEFDOM

By

Alusine Mohamed Tarawalie

A Research Paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Master of Science

in the field of Agribusiness Economics

Approved by:

Dr. Altman Ira J., Chair

Graduate School Southern Illinois University Carbondale November 20, 2019

AN ABSTRACT OF THE RESEARCH PAPER OF

Alusine M. Tarawalie for the Master of Science degree in Agribusiness economics, presented on November 20, 2019 at Southern Illinois University Carbondale

TITLE: THE AGRICULTURAL CREDIT SYSTEMS IN SIERRA LEONE: ITS EFFECTIVENESS IN AGRICULTURAL DEVELOPMENT IN THE YONI CHIEFDOM

MAJOR PROFESSOR: Dr. Altman Ira J.

This research paper assesses the Agricultural financial services that provides agricultural credits to the small holder farming community in Sierra Leone and it impacted the development of agriculture in the Yoni chiefdom. Rural sierra Leone is dominated by small holder subsistence Agriculture. About four million people or precisely 60 percent of the population lived in the rural community and farming is their source of income. The residents grow rice, cassava, some vegetables and groundnuts for their own consumption with sometimes sell the surplus. The average farm size cultivated by a farm family is averagely 2.74 hectares, typically made up of on upland, inland sites, inland valley swamps, riverain grassland and Bolilnds.

Agricultural credits system is their source of financial services that help in providing farm inputs to improve their productivity to the highest level, in turn raise their standard of living and improve their rural communities. To exploit the potentials of credit in the form of financial services and perhaps increase the resource productivity and output growth in agriculture is particularly justified when farmers

realize low productivity and savings capacity, poorly developed rural financial markets, and availability of appropriate farm technologies whose adoption is constrained by shortages of funds. Based on the needs to promote an innovative, commercially -oriented and modern agriculture, Agricultural credits as the key limiting factor facing the farmers in food production

i

was chosen for this study.

Government effort to financial inclusion through the Bank of Sierra Leone was very minimal to reach the rural small holder farmers. The commercial banks and the community banks realized the fact that agricultural investment is very risky and not bankable. Also, the Ministry of agriculture develop a small holder commercialization program (SCP is the government initiative for the development of agriculture in Sierra Leone. The vision of the SCP is to make agriculture the engine for socioeconomic growth and development through commercial agriculture and to promote farming as a business. Agriculture demands different forms of inputs to be productive, among which, credit is indispensable. The farmers view the SCP as a mechanization program because the government provide tractors that cannot help small holder farmers.

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DEDICATION

Dedicating this work to my late Father Alpha Amadu Tarawalie, my late mother Ya Yeabu Conteh and my late only guardian and Nany, Ya Iye Bangura, all of whom passed away long time ago. May this work reflect their wonderful job of having and bringing me up. Also dedicating this wonderful job to my Children and friends both retired and active workers at the Ministry of Agriculture, Forestry and food Security (MAFFS) in Sierra Leone and around the world.

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CHAPTER 1

INTRODUCTION

Credit is an important element in agricultural production systems. It allows producers to satisfy the cash needs prompted by the production cycle which describe agriculture: land preparation, planting, management and harvesting of the crops. These phases are typically done over a period of several months in which very little revenue is earned, while expenditures on materials, purchased inputs and consumption need to be made in cash. Cash income is received a short time after the harvest. In the absence of credit markets, farmers would have to maintain cash reserves so as to facilitate production and consumption in the next cycle. The availability of credit allows both greater consumption and greater purchased input use, and thus increases welfare of the farmers.

Agriculture continues to be a fundamental instrument for sustainable development, poverty reduction and enhanced food security in developing countries. Agriculture is therefore central to the achievement of the National Sustainable Agricultural Development Plan (NSADP Vision of 2010 to 2030) consistent with Sierra Leone participation in the Comprehensive Africa Agriculture Development Program (CAADP) whose goal will be realized partly by the promotion of an innovative, commercially-oriented and modern agriculture.

After Sierra Leone had gained an independence from Britain in 1961, they device a development strategy in the late 1969 to 1970 in the agricultural sector. The reason for an emphasis in agricultural development is to provide foreign exchange savings through import substitution and expansion of export. Past efforts were made by the government in 1967 to encourage small holder farming through cooperative societies have been unsuccessful because of inadequate management and the failure of the sierra Leone cooperative marketing federation.

The primary responsibility of government support in agricultural development, research and extension services lies with the Ministry of Agriculture and Natural Resources (MANR). Its impact on the sector has not been very significant so far, largely owing to the dispersal of its limited staff and financial resources and its lack of planning and management capability.

The most important obstacle hindering agricultural development has been the past failures of agricultural credit schemes in the country. At present there is no official source of agricultural credit, and farmers are forced to depend either on their own savings or borrow from non-institutional or informal sources of credit. New development projects in agriculture, therefore, will have to include full provisions for credit facilities in order to be effective.

The proposed Integrated Agricultural Development project (IADP's) was based on a plan prepared for Government by the Commonwealth Development Corporation (U.K.) under contract to the 'Bank.in 1970. It was' recommended in February/March 1971, but was delayed by the Government's financial difficulties. By early 1972, measures taken by the Government brought about considerable improvement to the establishment of the first I.A.D. Project in Kenema. This project made some significant progress of assisting small holder net income of 15 percent economic Rate of Return (ERR). See below:

Table 1: Small Holder Net Income

Smallholder Net_Income:	Year 1	Year 5	- US\$ - <u>Year 10</u>	Year 15
2 acres or cocoa	-	50	100	170
3 acres of swamp rice	125	135	185	185
10 acres of oil palm	-	110	310	600
Economic Rate of Return:	15%			

Source: IDA report on IADP's; June 1972

Table 2: List of Integrated Agricultural Development Project (IADP's)

NAME OF IADP	YEAR OF ESTABLISHMENT	FUNDING BODY
1. Eastern Area Project (EAP)	1972	International Development Association (IDA)
2. Northern Area Project (NAP)	1976	
3. Koinadugu IAD Project (Kabala Project)	1978	European Economic community(EEC)
4. Maghosi IAD Project (Maghosi Project)	1980	International Fund for Agricultural development (IFAD)
4. Movamba IAD Project (Movamba Project)	1980	Afriican Development Bank Fund (ADBF)
 North western IAD project (PortLoko - Kambia Project) 	1981	EEC and West German Government
6. Bo - Pujehun Project	1981	EEC and West German Government

Source: Project planning center for Developing countries, University of Bradford, West Yorkshire, UK.; By John Cursworth

1.1 Statement of Research Problem

This study is concerned with the overall aspect of agricultural credit systems in Sierra Leone

where the level of reach by financial services providers is less low than the normal for the sub

Saharan African countries.

Agriculture in Sierra Leone is eminently risky. It is exposed to price fluctuations on

inputs and products and threaten by crop failure from pests and diseases, weather events, and climate change. Farmers and agricultural typical businesses have variable and seasonal income streams and often face long maturation periods before investments in livestock, soil improvements, and tree plantations produce revenue. "Despite these difficulties, rural and agricultural finance, if delivered through sustainable institutions and appropriate products, can be an important catalysts for economic growth, for alleviating poverty and bridging the divide between urban and rural residents in Sierra Leone (BMZ/GIZ, March 2011, p,)

Lack of access to finances is largely seen as one of the factors causing poverty in developing economies. Moreover, the cost of screening and monitoring the activities of the poor small holder farmers and the cost of enforcing their contract, are too high of the banking sector. The only option left for the poor small holder farmer is the Informal financial services. The Government of Sierra Leone recognized this as a result of many of such institution have been established.

For this strategy not to suffer the same fate of previous strategies (which have failed to solve the problems of poverty in sierra Leone) there is need for a comprehensive assessment of the influence of the informal finance in poverty reduction. Making new financial services and contract forms available can be viewed as a form of opening to trade. Agents in a financially isolated rural economy have little choice but to transform one set of variable and uncertain cash flows into another using available production and storage technologies and local financial instruments (Connin &Uday 2007)

1.2 Research Study Questions

a. Have smallholder farmers has limited access to formal and informal credit facilities

impacted household food security?

b. What is the level of access to extension information by smallholder farmers and what, if any, its effect on house hold food security

c. What is the farmers' level of adoption of inputs and practices recommended by the extension services and what, if any, is its effect on household food security?

1.3 Justification of The Research Study

Access to credits has become a critical factor in supporting small holder agriculturist and enhances their production and thus their expectations for everyday lives (Farats and Sao, 2015). Enhancing the rural credit money framework is in this manner is very important for alleviating poverty among the rural people. This research's aim is to contribute to the discussion of determinant of access to credit finances. This study may contribute to a body of knowledge on the role of credit in increasing agricultural productivity as a way out of chronic rural poverty and household food security in Sierra Leone. The lack of input credit and the absences of investment opportunity is considered to be a reason behind adequate economic development in many developing countries. To encourage capital formation as well as the supply of financial means in the form of credits through financial institution.

The agricultural sector in Sierra Leone is constrained by several factors including lack of input supply, labor shortages, and limited Agricultural Extension services. These limitations are major hurdle preventing production increases and undermine sustainable agricultural development in the country. Improvement in terms of yields is also hampered by limited access to knowledge and technologies resulting from scarce or no extension services and trainings. Only 5 percent of farmers have access to proper storage. Value addition is low in the absence of modern processing equipment and rural infrastructure constrains farmers' access to market. More broadly, farmers suffer from limited rural services, including financial services which prevent investments in modern inputs, as well as rural enterprises development. It is estimated that only 5 percent of the farmers have access to rural financial services.

Rural poverty is widespread in Sierra Leone. Nationwide three-quarters of people live in poverty, and a quarter cannot afford a basic diet. Improving agriculture and ensuring food security has been the most important economic and political issue facing the country (Ibrahim J. Sannoh Statistician Statistics Sierra Leone (SSL).

Understanding the role of financial intermediation in household decisions is important for identifying the underlying factors of economic growth and for designing effective policy in the developing world. A large body of evidence has shown that the availability of financial tools has considerable impacts on households' ability to smooth consumption, make long-term investments and manage risk, (Conning and Udry 2007).

In view of the above, smallholder farmers deserve special attention with no doubt and Agricultural policies that can serve as incentives and increase their productivities would be worthwhile. In other words, major efforts have to be directed in Agricultural institutions in the field as it use to be during the IADP's era that can assist smallholders to increase the productivity of their farms. In particular, financial institutions can play a key role in this context since the other support institutions such as research stations and extension are working closely with farmers. The knowledge and skills therefore exist as far as production is concerned and what farmers lack are the resources to support production.

1.4 Organization of Research

The rest of the research paper is organized in the following manner: Chapter Two explains the review of past studies on definition and concept of rural credit, the concept of small holder farmer, access to credit for agricultural productivity, review of rural credit mechanism, financial inclusion in Sierra Leone, as well as possible determinants of demand for and access to credit, Chapter three presents the methodology which include the conceptual framework, the study area, data collection procedure and research design. Chapter Four describe the discussion processes Chapter Five explain the summary, conclusion and recommendation of the study.

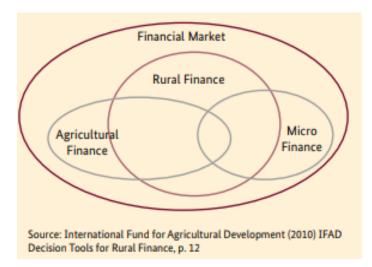
1.5 Agricultural Finance

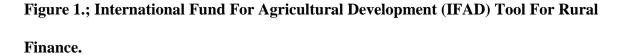
This refers to financial services ranging from short-, medium- and long-term loans, to leasing, to savings, to crop and livestock insurance, covering the entire agricultural value chain – input supply, production and distribution, wholesaling, processing and marketing. The agricultural and financial sector is basically to make finance work for agriculture and as well for rural areas, where the majority of the population engages in subsistence agriculture. Rural and agricultural financial services may be provided by formal financial institutions, such as banks and regulated micro finance companies as well as through informal channels. Informal financial services occur in the family or community context and are provided by savings clubs or small village banks. Often, we find formal or informal supplier credit among nonfinancial agents in the agricultural supply chain.

1.6 The Financial Market

• Microfinance: Financial services for poor and low-income people

- Rural finance: Financial services used in rural areas by people of all income levels
- Agricultural finance: Financing of agriculture-related activities, from production to marketing in rural and urban areas.





Economic activity in Sierra Leone is dominated by natural resource extraction and subsistence agriculture, compare Value added industry, agri-processing and the service sectors are grossly underdeveloped. Private sector business activity outside of mining remains very weak. Government and the international development 'industry' are the most important sources of formal employment. The challenge remains to entrench this growth more broadly across the economic spectrum, to share its benefits across the urban/rural gap and to integrate the ever-growing number of unemployed young Sierra Leoneans. In order to 'make finance work' for Sierra Leone, the financial services industry must become an engine for broad-based equitable growth. Under the economic realities of the country today, the challenge is first and foremost in

rural and agricultural finance.

1.7 Agricultural Development in The Yoni Chiefdom

The Yoni chiefdom is a chiefdom of Sierra Leone located in the Tonkolili District, Northern province of Sierra Leone. Yoni-bana town is the chiefdom headquarter town of the Yoni chiefdom and it lies approximately 28.2 Miles to the district headquarter town of Magburaka, and approximately 90.4 miles north-east of Freetown, capital city of Sierra Leone.

Over the last three decades, the Sierra Leone government's efforts to direct credit to its rural population have been through formal channels namely; the National Development Bank, commercial banks, the Cooperative Development Bank and the Integrated Agricultural Development Projects (IADP's).

In accordance with its goal of promoting agricultural and rural development by directing credit to the rural populace through formal channels, the Sierra Leone Government established five pilot rural banks in the mid to late 1980's. The first of these banks is the Yoni Rural Bank (YRB), which started operating in 1985 (two years before the others). The purpose of this paper is to review the YRB's operational performance and highlight its operational problems, in an effort to throw light on the typical problems of formal rural financial markets in Sierra Leone (Jabati and Heidhues; vol. 19, no. 4 1995).

1.8 Purpose of The Study

The purpose of this paper is to assess the effectiveness of agricultural credit system in Sierra Leone. Its operational performance and highlight its problems, in an effort to throw light on the typical problems of formal rural financial markets, especially in the Yoni-chiefdom of the Tonkolili district of Sierra Leone. This will be done through a mixed methods design, using qualitative data surveys.

1.8.1 Objectives

To accomplish the overall purpose of determining the effectiveness of agricultural development in the Yoni Chiefdom, the following objectives will be a guide to the study:

1. To assess the scale of reaching the small borrowers/farmers as well as the credit allocation and rationing criteria

2. To determine the level of smallholder farmers' accessibility to credit and its effect on food security.

3. To consider the role of institutional structures such as farmer-based organizations (FBO's) in developing the agricultural sector in Sierra Leone

4. To identify the role of Extension services in needs assessment and administration of farmers credit systems

5. To determine the farmers' level of adoption of inputs and practices as recommended by the extension services and its effect on household food

1.9 Rationale of the study

The importance of agricultural credit in rural development is widely acknowledged, particularly in developing countries where the majority of small holder farmers lives. Agriculture is the main source of livelihood, and access to farm credit is generally important. since Sierra Leone gained independence from Great Britain in 1961, agricultural credits were largely provided by government through banks or Non-governmental Organizations (NGO's) or informal sectors like traders, local money lenders or OSUSU procedures. In the mid 1980's, government introduce access to rural credits by establishment of rural banks and loans were provided in group system. This method is also unsuccessful because the loans were administered by the banks with high interest rates without any Agricultural Extension Services to guide the farmers in the delivery system.

1.10 Definition of Terms

Development - Development is building up the people so that they can build a future for themselves

Sustainability- To Ensure that the plans of programs and solutions are relevant to the local economic, social, and administrative situation and continued on that path.

Chiefdom – chiefdoms in Sierra Leone are the third-level units of administration in Sierra Leone. It is an area controlled by a paramount Chief (Traditional Tribal head) with distinct boundaries.

Sub-tropical – This is the parts of the world that are immediately south or north of the tropics and have very hot weather at some times of the year:

Hectare – Is a metric unit of square measurement = 2.471 acres or 10,000 square meters **Acre** - An acre is = 43560 sq. ft. (0.405 hectare); or 4,840 square yards.

Agricultural extension services - Is an ongoing process of getting useful information to farmers or rural people and assisting them to acquire the necessary knowledge, skills and attitudes to utilize effectively this information or technology to improve productivity and rural development. **Rural poverty** – Rural poverty refers to poverty in rural areas, including factors of rural society, rural economy, and rural political systems that give rise to the poverty found there.

GDP – Gross Domestic Product, it measures the value of economic activity within a country. It also accounts for spending on exports and imports in the country.

Food Security - the state of having reliable access to a sufficient quantity of affordable, nutritious food.

Osusu - Is a form of Micro financial capital accumulation found in Africa. Osusu "known as Tontine in Francophone countries and Tanda (association) in Latin American countries are small groups like in Sierra Leone. Participants in the osusu must pay the thrift collector a participation fee depending on the rate to which they contribute money".

Land Tenure – In Sierra Leone, land tenure is the legal regime in which land is owned by an individual, family or the community who is said to "hold" the land. It determines who can use land, for how long, and under what conditions. Tenure may be based both on official laws and policies, and on informal or customs.

Climate Change – Climate change may refer to a change in average weather conditions, or in the time variation of weather within the context of longer-term average conditions.

Paramount Chief – A paramount chief is the English-language designation for the highest-level political leader in a regional or local polity or country administered politically with a chief-based system

Subsistence Agriculture – farming or a system of **farming** that provides all or almost all the goods required by the farm family usually without any significant surplus for sale.

Yoni - The name of a chiefdom where the study is based on

Agricultural finance - This refers to financial services ranging from short-, medium- and longterm loans, to savings, to crop and livestock, covering the entire agricultural value chain – input supply, production and distribution, wholesaling, processing and marketing.

1.11 Limitation

- Lack of access roads- This is referred to the slow movement of formal financial services into rural areas, and the high cost of reaching out to widely dispersed rural residents.
- Lack of basic infrastructure like road network, the perceived riskiness of agricultural production and the rural economy in general
- Land Tenure System Communal land tenure and property rights can be difficult to verify in rural areas, posing problems in the use of collateral.
- Technology- lack of mobility like vehicles motorcycles and bicycles, lack of an efficient research data base for assessing the credit needs and credit worthiness.
- Distance Travelling in and out of the country made it difficult to interview group leaders and members, agricultural extension agents and loans officers.

1.12 De-limitations

- Limit to the Yoni Rural Bank operations and NGO activities in the Yoni Chiefdom?
- Parameters for the study?
- Limit the sample to bankers only?

CHAPTER 2

LITERATURE REVIEW

In all economies, agriculture has a key role in development and poverty reduction (Yadev & Sharma, 2015; Soubbotina & Sheram, 2000). Access to financial services plays a critical role in sustainable agricultural development and poverty reduction. Since the 1980s, efforts to liberalize financial sectors across developing countries were observed (Ilara,M, 2018).

Liberalization policies were implemented as part of International Financial Institution's (IFI''s) structural adjustment programs as well as the push to expand access to formal financial services, especially credit (Nissanke, 1999). The rationale being, informal finance providers like local money lenders are deemed to have predatory lending techniques including charging high interest rates and harsh loan recovery methods such as land seizures and long labor hours in exchange for loan payments. Adams and Von Pischke (1992) argue that informal finance was seen as "*an evil that should be eliminated*" (p. 3). Mahdi (2018) suggested that such practice with undesired informal finance practices could be eliminated "through increased access to formal finance" (p. 2).

Agriculture is an essential economic sector of all world economies- be it developed, developing or underdeveloped, but it is the most important sector of a developing economy in terms of output and employment generation as compared to other sectors. (Soubbotina & Sheram,2000). Agriculture plays a predominant role in economic development of developing economies. The Agriculture sector not only fosters the growth process of these economies but also provide food to their ever-growing population and provides employment to larger part of their workforce. It is the backbone of an economy which supports the rest of other sector. While the manufacturing sector needs direct input from agriculture in the form of raw material, Service sector is indirectly dependent on agriculture. (Yadev, Priyanka; and Sharma, Anil K., 2015)

However, in spite of the prominent role of the financial sector in influencing economic growth, Sierra Leone is still characterized by underdeveloped financial markets which constrain resource mobilization and hinder economic growth. Financial sector reform policies were adopted in the 1990s as part of a structural adjustment program to ensure a competitive and efficient financial sector to support development of the economy. Despite the gradual improvement in the mobilization of financial savings following the reform process and the end of the decade long civil war, the level of mobilized financial savings and hence private sector credit allocation have not been enough to stimulate private investment and growth. However, in spite of the prominent role of the financial sector in influencing economic growth, Sierra Leone is still characterized by underdeveloped financial markets which constrain resource mobilization and hinder economic growth. (Kargbo and Adamu (2009)

Over the last three decades, the Sierra Leone government's efforts to direct credits to its rural population have been through formal channels namely; the National development Bank, commercial Banks, the Cooperative development Bank, and the Integrated Agricultural Development Projects (IADP's). This supply led approach is found in many Local District Councils LDC's) and often with little success.

In accordance with its goal of promoting agricultural and rural development by directing credit to the rural populace through formal channels, the Sierra Leone Government established five pilot rural banks in the mid to late 1980's. The first of these banks is the Yoni Rural Bank (YRB), which started operating in 1985 (two years before the others). The purpose of this paper is to review the YRB's operational performance and highlight its operational problems, in an effort to throw light on the typical problems of formal rural financial markets in Sierra Leone. (Jabati S. & Heidhue, F)

Addressing income disparities in transforming countries requires a comprehensive approach that pursues multiple pathways out of poverty—shifting to high value agriculture, decentralizing nonfarm economic activity to rural areas, and aiding help move people out of agriculture as has been highlighted in the world Development report in 2008 (World Bank, 2007c). In Doing this calls for innovative policy initiatives and strong political commitment.

Agricultural extension is critical to agricultural and rural development. It provides the channel for addressing farmers' problems by identifying research and policy modifications that benefit rural communities (Spielman & Birner, 2008). Christoplos (2008) adds that the extension system provides a framework through which farmers are organized in functional groups in order to gain access to production resources such as credit, inputs, marketing services and information on government development programs.

For effective delivery of extension services, various extension approaches / methods have been put in place and these are but not limited to the demand-driven, the pluralistic extension system, training and visit (T & V), Non - governmental organization (NGO) extension system, commodity based extension, farmer field schools, and farmer to farmer (Benor & Baxter, 1984; URT, 2009; Phelen et al., 2011) Msuya, Annor-Frempong, Magheni, Agunga, Igodan, Ladele et al. (2017)

According to the World Bank Report (2007), communication is crucial for addressing

extension problems related to participation, integration, capacity building, decentralization, and sustainability as human dimension.

The role of Agricultural extension in national agricultural development is pertinent. It has been established that no nation will have real growth in the agricultural sector without effective extension service. The Agricultural Extension Organization (extension workers and services) have an important role to play in order to actualize the crucial role of agricultural extension in national development. Anaeto , Asiabaka , Nnadi, Ajaero, Aja, Ugwoke.....et al. (2012)

Agricultural and rural financial markets remain constrained by geography and growth in agriculture and rural areas remain affected by location of specific supply of credit; thus, these markets remain somewhat separate type of financial market (Kilkenny and Jolly, 2005). According to Kilkenny (2010), agricultural economists' understanding of what factors (including access to finance) benefit rural areas remains limited for a variety of reasons including data limitations and inadequate methods of analysis.

In the neoclassical theory of economic growth, finance has no role because growth depends only on capital stock, labor, and the level of technological progress. Higher level of capital accumulation (with better financial system) can only have a temporary effect on growth while long-term growth is only affected by technological progress. Hartarska,V; Nadolnyak D;, Shen D.; (2015)

Lucas (1988) also argued that economists overemphasize the role of finance in economic growth (the "irrelevance of finance" hypothesis) while Modigliani and Miller (1958) famously show that with perfect markets, informational symmetry, and no transaction costs, real economic decisions are independent of the financial structure.

However, financial markets are characterized by asymmetric information; agricultural financial markets in particular are subject to (local) monopoly, have high transaction (screening and monitoring) costs and, therefore, the neoclassical models do not reflect the realities in these markets. Historically, market failures in agricultural financial markets led to excessively high interest rates, unfavorable terms on loans, and unnecessary foreclosures forced by lenders unfamiliar with the risk characteristics of agricultural production (Collender and Erickson, 1996; Lee and Irwin 1996).

Market failures such as local monopoly and asymmetric information between borrowers and lenders continue to be relevant in agricultural financial markets and could cause private lenders to reassess their commitment to agriculture during periodic downturns (Freshwater,1997).

The Agricultural situation in Sierra Leone from the point of view of the smallholders who are the majority, not only the of the agricultural sector but of the entire population were marginalized. According to the population of Yoni chiefdom in 2015 population census was 111,932 to be specific (Livelihood Zones, October 2016). These people can only be able to cultivate a land of 0.5 to 1 hectare by poor household and 4 to 5 hectares by better household.

According to the country director for Ghana, Liberia and Sierra Leone for World Bank, Mr. Henry G. R. Kerali, the Sierra Leone economy continue its expansion in 2018 but output is still below potential. There is an urgent need to develop a comprehensive strategy for deepening the financial sector in Sierra Leone. This deepening is required for poverty reduction, job creation, investment and growth (Kerali, H. G. R.; world Bank, June 2019.

CHAPTER 3

METHODOLOGY OF RESEARCH

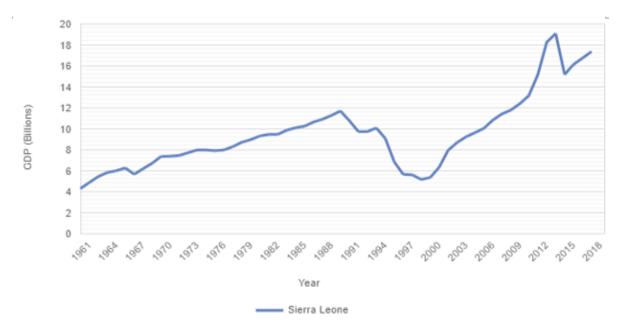
Introduction

Sierra Leone is made up of four regions i.e. Northern region, Southern region, eastern region and the Western Area. The sampling structure for this study consist of rural and semiurban farmers for the whole country with a particular focus on the Yoni chiefdom, to assess the impact of agricultural credit systems on their productivity and development.

3.1 Sources of Data Collection and Analysis

The information presented in this research document are primary data that was collected from statistics Sierra Leone (SSL), the world Bank data base, Food and Agriculture organization (FAO), Bank of Sierra Leone (BoSL) and Rural community banks. This data set will reflect way back from the time Sierra Leone as a country gained its independence from Britain colonial rule -1961 to the present 2019. This data set also covers the 2015 *Population census on Household*

The Gross Domestic Product (GDP) in Sierra Leone expanded to 3.50 % 2018 from the previous year. GDP annual growth rate averaged 2.63% from 1961 until 2018, reaching an alltime high of 20.7% in 2013 and a record low of -20.50% in 2015. The economy of Sierra Leone grew by 7.8 % on average during 2003 to 2014 but contracted by 21% in 2015 following the Ebola outbreak and a decline in the price of iron ore, the main export product.



GROSS DOMESTIC PRODUCT (PPP IN 2011 PRICES)

Figure 2:Sierra Leone GDP: 10 Billion International Dollars (2018)

3.2 What is GDP?

GDP means Gross Domestic Product. This measures the value of economic activity within a country. It represents the monetary value of all goods and services produce within a nation's geographic boarders over a specific period of time. GDP is calculated as: Private consumption + gross investment + Government investment + government spending + (Export import).

3.2.1 Sierra Leone GDP

In 2018, GDP for Sierra Leone was 3.91 Billion US dollars. The GDP by then increased from 0.98 billion US dollars at an average annual rate of 8.20 %.

DATE	VALUE	CHANGE %
2018	3.91	4.22 %
2017	3.75	-1.00 %
2016	3.79	-10.96 %
2015	4.25	-15.08 %
2014	5.01	1.85 %
2013	4.92	29.30 %
2012	3.80	29.23 %
2011	2.94 14.12 %	
2010	2.58 5.05 %	
2009	2.45	-2.27 %
2008	2.51	16.30 %

Table 3: GDP Percent Changes And Values

Source: IMF World Economic Outlook Database, April 2019

The GDP per capita of Sierra Leone in 2018 was \$523, \$17 less than 2017 when it was \$506. To view the evaluation of the GDP per capita, it is interesting to look back a few years and compare theses data with those of 2008 when the GDP per capita in Sierra Leone was \$419. Sierra Leone's macroeconomic situation remains challenging even with the bold and aggressive policy measure taken by the new government, that took office a year ago. Growth is still low (3.7%); inflation and exchange rate depreciation are high (16.8 and 7.3 percent, respectively).

The fiscal and current deficits are high ((6.6 and 13.8 percent) and the increase in debt has resulted in the country being downgraded from moderate to high risk if the debt continues. The medium-term outlook is promising, with economic growth expected to reach 5.2 percent by 2021 anchored primarily by supply side factors, including favorable agricultural output (World Bank update; June 2019).

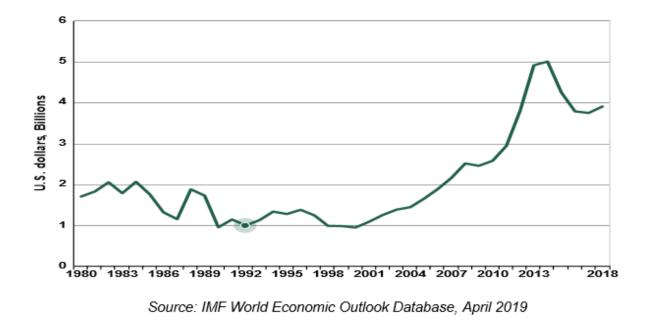


Figure 3: Medium Term outlook of GDP in Sierra Leone

Agriculture is essential to Sierra Leone's economic and social development. while the agricultural population (about 5 million) represent roughly two thirds of total population, the agricultural sector in Sierra Leone in recent years has contributed less than 50 percent of GDP.

3.3 What Is Agricultural Credit

Agricultural Credit is defined as a type of financing used to provide funding

for agricultural producers.

This may be in the form of letters of credit, loans or banker's acceptance documents. This is generally used to provide investment from outside resources to the farming sectors.

3.3.1 Agricultural Credit System in Late 1960'S to 1985

Sierra Leone's agricultural credit system is two-fold:

- a. The formal credit system and;
- b. The informal credit systems

a. The Formal Credit system: The formal credit sector here includes the government policy strategy applied to provide a way of reaching the rural population that form the vast majority of farmers in local communities. This formal sector will include Integrated agricultural Development projects (IADP'S) designed by government policy strategy, Banks, Non-governmental organizations (NGO) and local NGO's, Community Based Organization (CBO'S) and religious bodies that focus on addressing the problems affecting their communities.

In 1969, Sierra Leone had a dual economy with an enclave export oriented mining sector and a large under-developed agricultural sector. The mining sector contributes 17 percent to GDP (at factor cost), and about 78 % to exports, while agriculture contributes 34% to GDP but sustained 75 to 80 % of the population. However, the government of Sierra Leonean developed economic policy statement that emphasized the high priority need for agricultural development.

It was against this background that the government of Sierra Leone prepared proposals to introduce the Integrated Agricultural Development projects (IADP's) in accordance with the goal of promoting agricultural and rural development by directing credits to the rural populace through this formal channel. The table below shows the IADP's in Sierra Leone.

NAME OF IADP	YEAR OF ESTABLISHMENT	FUNDING BODY
1. Eastern Area Project (EAP)	1972	International Development Association (IDA)
2. Northern Area Project (NAP)	1976	
3. Koinadugu IAD Project (Kabala Project)	1978	European Economic community(EEC)
4. Magbosi IAD Project (Magbosi Project)	1980	International Fund for Agricultural development (IFAD)
4. Movamba IAD Project (Movamba Project)	1980	Afriican Development Bank Fund (ADBF)
5. North western IAD project (PortLoko - Kambia Project)	1981	EEC and West German Government
6. Bo - Pujehun Project	1981	EEC and West German Government

 Table 4: Lists of Integrated Agricultural Development Project (IADP)

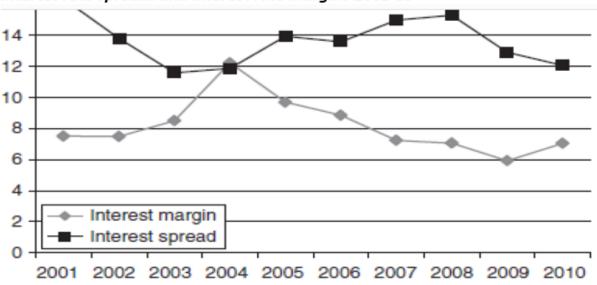
Source: Project planning center for Developing countries, University of Bradford, West Yorkshire, UK.; By John <u>Cursworth</u>

The Integrated Agricultural Development projects (IADP) delivered a great benefit to small holder farmers with the help of the establishment of an agricultural Extension department that work closely with rural farmers, to address the high needs of farming inputs technology transfer and increase export earnings from cocoa, coffee etc., at the end of the phases of IAD projects in the late 1980's,

3.3.2 Agricultural Credits Through Banking Systems in The Mid 1980's to 90's

The Bank of Sierra Leone was established through the enactment act of 1963 to assume all central banking responsibilities. A wave of new commercial banks then emerged, including Bank of Credit and Commerce International (BCCI) in 1976), International Bank for Trade and Industry (IBTI) (in 1983), Meridian Biao Bank (in 1990), Union Trust Bank (UTB) in 1995, the first Merchant Bank now known as Guaranty Trust Bank Ltd (GTB) in 1999 and the First International Bank Ltd (IBL) also in 1999. According to Leigh (2004), one such feature was the banks objective of making profits for its shareholders in relation to its required liquidity ratio. The amount of liquid assets held by banks during this period was high owing to the liquidity ratio stipulated by the central bank.

There has been continued expansion of the commercial banking sector in Sierra Leone. Total banking assets stood at 20% of GDP in 2007 (IMF 2007) and it increased to Le 2.8 trillion (\$650 million) or 24% of GDP in 2012 (Sesay 2012). As at end December 2016 total assets of the banking sector stood at Le 6.33 trillion or 26% of GDP (Bank of Sierra Leone, March 2017). However, the interest rates are still in excess of 20%, similar to 2006 levels. Commercial bank lending rates as of December 2011 were between 21-29% (Sesay 2012). The commercial banking system finds it risky to provide credits to small holder farmers.



Interest rate spreads and interest rate margins 2001-10

Figure 4: Interests Rates Spreads in Commercial Banks And Margins.

3.4 Community Banks

Source: Decker, 2012

In accordance with the aim of the Government of Sierra Leone to redirect agricultural credits to its rural population, the bank of Sierra Leone (BoSL) is charge with the responsibility of establishing the Community Rural banking system. This was the time when the Integrated Agricultural Development Projects were about to phase out. The first community bank established was the Yoni rural bank (YRB), in1985. The purpose of establishing community banks is to make sure that small holder farmers realized formal financial services for the sake of agricultural development to rural communities. The Yoni Rural Bank (YRB) was established to service three sister chiefdoms that include Yoni, Kholifa Mabang and Malal/Mara chiefdoms.

Table 5: Lists of Commercial Banks in Sierra Leone	Table 5	5: L	ists o	of (Commercia	l Ba	nks	in	Sierra	Leone
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COMMUNITY BANKS IN SIERRA LEONE			
1. Marampa-Masimera Community Bank			
2. Yoni Community Bank			
Segbwema Community Bank			
4. Mattru Community Bank			
5. Zimmi Community Bank			
6. Kabala Community Bank			
7. Nimiyama Community Bank			
8. Sandor Community Bank			
9. Pendembu Community Bank			
10. Nimikoro Community Bank			
11. Tongo Field Community Bank			
12. Koindu Community Bank			
13. Simbaru Community Bank			
14. Taiama Community Bank			
15. Sumbuya Community Bank			
16. Madina Community Bank			
17. Kamakwie Community Bank			

LIST OF COMMUNITY BANKS IN SIERRA LEONE AS OF 2016

Source: Bank of Sierra Leone (http://www.bsl.gov.sl/financial_institutions.html)

The data in Table below will clearly show how the YRB has on average failed to reach

most of the rural households as well as potential borrowers in its operating areas. At the time of

this survey (1991), 0.8% of rural households as well as potential borrower were receiving credit

in the YRB operating area as compared to 3.1% in 1987.

Table 6: Outreach Performance of Yoni Rural Bank (YRB) from 1985 - 1991

Table 1: Outreach Performance of YRB as measured by the Share of Rural Households and Potential Borrowers Reached in the YRB Operating Areas

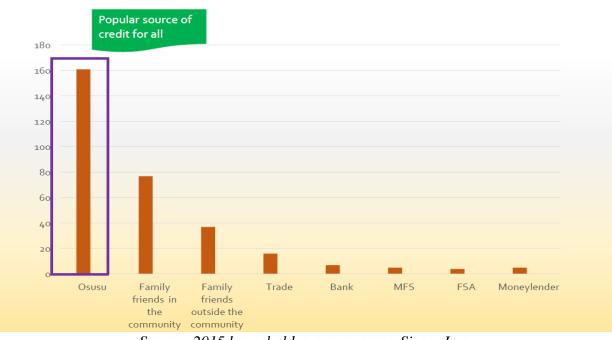
Year	(1) Area Population (in thousand)	(2)* Number of Rural Households in the Area (2) = (1)/8.0	(3) Number of YRB Borrowers	(4)** Number of Potential Borrowers in the area (4) = (2) X 3	(5) Share of Potential Borrowers Reached (%) (5) = (3)/(4)
1985	85,666	10,453	n.a.	31,359	n.a.
1986	86,698	10,703	n.a.	32,109	n.a.
1987	88,779	10,960	1,012	32,880	3.1
1988	91,087	11,245	1,349	33,735	4.0
1989	93,455	11,538	1,149	34,614	3.3
1990	95,885	11,838	654	35,514	1.8
1991	98,378	12,145	303	36,435	0.8

This is just an example of how Banks failed to deliver credits to the rural community.

In 1991, all rural banks collapsed because the civil war disrupted their activities. The civil war ended in 2002 and the Bank of Sierra Leone (BoSL) however restarted rural banking mainly through the setting up of community banks across the provinces. Two community banks were established in 2002 and by 2012 there were nine such banks in the country and this increased to seventeen at the end of 2014 (Bank of Sierra Leone).

b. The Informal Credit systems: The lack of access to financing is reflected in the very low use of formal credit. Personal savings and inheriting a family business are the main sources of start-up capital. Only about 4% of farmers used a formal loan in 2005-2006. Informal loans are much more popular, at 31%. The main sources of these loans were

friends, relatives and Osusu. The top reasons for using informal loan mechanisms are easily available but have high interest rates, since there is no other source available. This could explain why access to financing is one of the top constraints for small holder farmers experienced in Sierra Leone



SOURCES OF CREDIT

Osusu is the choicest source of credit for farming households

Source; 2015 household survey census - Sierra Leone

Figure 5. Sources of Informal Rural Credits in Sierra Leone

The Government of Sierra Leone make sure to connect transfers with phones to informal credit launches the Digital Financial Services (DFS) Assessment of 609 smallholder farming households across five value chains selected based on their potential for the greatest improvements in the lives of smallholder farmers. 60% own or have access to a phone in the household. Over 60% of those without access to a phone cite cost as the primary barrier.

About 25% more males reported to be in possession of an active SIM card than women. Inactive SIMs were also most popular among women. Active SIM cards were also most popular among rice and vegetable farmers. Most farming households have access to a phone.

3.5 Gender and Age Consideration

Women are 48% of smallholders, and youth represent a significant segment of smallholders at 43%. Almost all smallholders saved with Osusus, representing an important avenue to formalize access to finance, leveraging the group network and trust

3.6 Sources of Income

Smallholders have to supplement their incomes with other jobs. For over 50% of the smallholders we engaged, trading was considered the most important source of income. With the exception of vegetables, for all the value chains assessed, agriculture ranked the second most important source of income (DFS Ecosystem Assessment for Smallholder Farmers in Sierra Leone August 2018).

CHAPTER 4

DISCUSSION ON AGRICULTUIRAL CREDIT SYSTEMS IN SIERRA LEONE

The agricultural sector in Africa consists mainly of rain-fed, low-technology, low-input, non-mechanized smallholder farming (IFAD 2011) and food production has been insufficient largely due to conflict, natural disasters, crop failure and food prices. Africa has the highest proportion of rural poor and the greatest potential for smallholder agriculture led poverty reduction (Hawkes and Ruel, 2006). Smallholder farming is the dominant mode of agriculture in sub-Saharan Africa with 80% of its farms comprising of 2 hectares or less.

Sierra Leone is a low-income post-conflict country with a population of 7.56 million people. People living in the urban centers have increased significantly in recent years, with a share of the population living in urban areas doubling from 21 percent in 1967 to 40 percent in 2015. The country is also growing rapidly, with 45.8 percent of the population under the age of 15 and 74.8 percent below 35 years.

The following are issues that, in the past, have constrained the sector and kept a large majority of the population from realizing gains from the sector that could potentially address issues of rural poverty and economic prosperity.

- Incomplete input and output markets;
- Market distortions/poor market pricing resulting from poor information systems;
- Lack of competitive advantage in the face of international competition;
- Lack of adequate processing technology and infrastructure;
- Poor access to markets;
- Poor maintenance of aging plantation especially in the tree crop sector.

The lack of access to financing is reflected in the very low use of formal credit. Personal savings and inheriting a family business are the main sources of start-up capital. Only about 4% of farmers used a formal loan in 2005-2006. Informal loans are much more popular, at 31%. The main sources of these loans are friends, relatives and Osusu. The top reasons for using informal loan mechanisms are easier formalities, more favorable interest rate and no other sources available. This could explain why access to financing is one of the top constraints for farmers.

Considering all the above risk factors, it would seem that lending to smallholder agricultural producers in Sierra Leone is quite correctly perceived as an extremely risky proposition. However, we wonder why most bankers in Sierra Leone feel compelled to adopt an all-or-nothing approach in agricultural lending. In our discussions with banks and microfinance institutions, the conversation seemed to gravitate immediately towards the most complex and riskiest of all lending propositions in agriculture, i.e. to provide unsecured cash loans with long grace periods for farm inputs or equipment with collections based on the spot sale of the harvest. With such an approach, the bank must simply hope that:

1) the loan value is indeed spent on the stated productive purpose or investment,

2) the farmers actually apply their best efforts towards the production plan,

3) the weather will cooperate and that there will be no pests or diseases,

4) the farmer will manage to bring in and store the harvest in good time,

5) prices will hold up and that after meeting immediate family cash needs, the farmer will be inclined to actually come to the bank and pay off the loan with interest.

4.1 Suggestions for Agricultural Credit Products and Interventions that will Work Today

Rural and agricultural financial services may be provided by formal financial institutions,

such as banks or regulated microfinance companies, as well as through informal channels. Informal financial services occur in the family or community context and are provided by savings clubs or small village banks. Often, we find formal or informal supplier credit among nonfinancial agents in the agricultural supply chain to be of an efficient tool to help rural small holder farmers in rural communities.

Despite the multitude of potential products and channels, actual availability of financial services in rural areas and in agricultural supply chains is often constrained. This limits the economic integration and welfare of rural populations. The lack of access to agricultural credits system is often explained by the slow and uneven roll-out of formal financial offerings into rural areas, the high cost of reaching out to widely dispersed rural residents, the lack of basic infrastructure and the perceived riskiness of agriculture and the rural economy in general. Land titles and property rights can be difficult to verify in rural areas, posing problems in the use of collateral. Previous subsidized lending programs for agriculture have also made it difficult for self-sustaining, commercial financial services to take hold. The paper also discusses some of the real and perceived constraints to financial access for agriculture and rural populations at the meso and micro levels:

- land titles, security of tenure,

- lack of a credit bureau, financial literacy etc

Here, the imperfections are many, but these factors rarely are the immediately binding constraints that prevent finance from flowing to rural populations. The real bottlenecks at this time are all about the underlying economics and the layers of risks, real and perceived, that come with it. With a fresh look and a creative mindset, a lot is possible in financing rural Sierra Leone today Success in rural finance is about careful identification of financially robust opportunities. Some activities may simply be held back by excessive risk that could be managed better, so that they become financially feasible transactions. Others simply don't add up with any amount of financial engineering and cannot be financed at this time. For example, agricultural asset finance or agri-leasing can be a feasible way to reduce risks in smallholder agricultural production. Industrial-scale poultry and egg production, however, just do not make sense in Sierra Leone. Sourcing the chicken feed compound (40% maize, 60% soybean or pigeon peas plus additives etc.) comes out over double the price per kg of imported chicken meat, for the feed alone.

These factors discussed are amongst some of the challenges faced and limitations of formal agricultural finance which has impacted on outreach to marginalized groups in Sierra Leone. Therefore, informal finance still remains relevant and continues to provide for the financial services needs of the millions of Sierra Leoneans who are still yet to be served by the formal financial system.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 Summary

The study of this research paper is basically to investigate the impact of access to agricultural credit systems in Sierra Leone through formal and informal channels or services. As we realized the importance of credits to agricultural development, Credit is the back bone for any business and more so for agriculture which has traditionally been a non-monetary activity for the rural population in Sierra Leone. Agricultural credit is an integral part of the process of modification of agriculture and commercialization of rural agriculture. As Conning & Udry 2007 stated that " a large body of evidence has shown that the availability of financial tools has considerable impacts on house holds' ability to smooth consumption, make long term investment and manage risk.

Based on the predominance of small-scale farming among the rural communities in Sierra Leone and Yoni chiefdom and the need to modernize farming to meet the food and income needs of the farmers, availability of agricultural credit as a key factor affecting the productivity of small-scale farms was chosen for this study. It is recognized that, while farming has the potential to alleviate poverty and create the much-needed employment opportunities, farmers have been neglected by financial institutions

Many of the commercial and rural community banks in Sierra Leone considers farming as a high-risk business, yet farmers require financial support to meet the ever-increasing costs of production and adopt modern technology in order to increase productivity of their farms and realize profits. This study shows, that agricultural credits has the capacity to enhance the income of farmers who utilize it by more than 100 percent and this clearly defines the role of credit in the farming sector.

5.1 The Role of Agricultural Extension Credit Delivery Service System

Agriculture has a key role in development and poverty reduction. But beyond its role in producing food, it should also generate activities, income, and employment to facilitate rural transformation and structural change. Agricultural Extension could play a central role in fostering sustainability through its educational programs but there has been a growing realization that traditional extension models have not been sufficiently effective in promoting adoption of sustainable agricultural practices.

All the formal financial services fail to employ agricultural extension agents whom can help in both credit delivery services and help farmers to reach their maximum production points. This has led to the failures of the formal financial services like commercial banks, rural community banks, the NGO's etc. Since sustainable agriculture is a knowledge intensive system, it requires a new kind of knowledge which differs forms on the basis of conventional agricultural practices.

5.2 Conclusion

In Sierra Leone, Agriculture is basically practice by poor smallholder households, where there are really other significant assets or other or alternative revenues that could compensate for the failure of the farming activity and provide security to the lender.

One among the main constraints observed by formal financial credit providers is the land tenure systems. All agricultural lands in Sierra Leone are collectively owned by communal land tenure systems, which means the land is owned by the communities and are allocated to local residents through the traditional chieftaincy leadership. The system of traditional land right in Sierra Leone is frequently cited as a major bottleneck to deepening access to finance in rural areas. The two main reasons are as follows:

1, There is no ownership titles to the land and agricultural producers cannot pledge their lands as collaterals and are unable to obtain the low-cost and long-term finance needed to commercialize the operations.

2, As land use right are awarded and possibly revoked under the customs of traditional leadership, the security of the tenure on the land is never certain. Insecurity of tenure discourages long term investment.

Also, taking into consideration the existing theoretical explanations for the existence of informal finance, this study set out to discover the specific reasons for the continued existence and embracement of the informal finance in the rural communities as to the formal finance systems in Sierra Leone today.

The analysis of the development in the formal financial system in sierra Leone has provided some relevant implications and reasons for the existence of informal finance in the past and presently, despite efforts and steps to modify the financial sector and other financial sector reforms aimed at increasing access to agricultural credits.

From an (FAO) report stated that agriculture is too risky and just not bankable in all discussions with bank managers and loan officers, the spontaneous intuition to our questions about lending to smallholder farmer was very similar. Everyone sees the need and would like to do more to develop the agricultural foundation of the country's economy. But it is just too risky and not bankable, this seemed to be the consensus across the commercial banks, the rural

community banks and the micro finance institutions.

The findings of this study also revealed that, development credit had the greatest impact on productivity and had long term effects compared to the other types of credit. However, informal credits were the easiest to access and therefore most sought after and had the highest uptake whilst the banks credit was very poor. It can therefore be concluded that, credit has a positive impact on productivity.

Finally, the role of Agricultural extension in national agricultural development is pertinent. It has been explained that no nation will have real growth in the agricultural sector without effective extension service. Agricultural extension is an educational process and brings about desired behavioral change in farmers and other stakeholders. However, agricultural extension workers (AEW) have an important role to play in order to actualize the crucial role of agricultural credits in national development.

These findings are in line with Carter (1989) who opines that, Agricultural credit can move farmers along the production surface more efficiently: firstly, credit influences the efficient resource distribution by overcoming constraints to purchase inputs and use them optimally which shifts the farmer along a given production surface to a more intensive input use; secondly, credit may help to purchase a new technological package (including high yielding hybrid seeds, etc.) that will shift the production surface; and thirdly it may help to use more intensively the use of fixed inputs

5.3 Recommendations

Based upon my research findings, it is recommended among other things that the Government of Sierra Leone should provide attractive incentive system to farmers so as to boost the production from the smallholder sector. Along with this, "soft Loans" should be advance to farmers in a very generous term. The findings of this studies suggest that agricultural credits is productive, but its outreach is limited to a small proportion of the population. Its outreach should therefore be expanded and collaterals requirements relaxed so that credit requirement has its desired impact. There is little doubt that, agricultural credit channeled in the right direction can have significant anti-poverty effects, and that broadening the outreach of formal lending institutions can be a step forward in the right direction.

In a perfectly competitive market, credit is allocated according to the prices (Interest rates); borrowing farmers are willing to pay. Interest rates influence the movement of credit among the various sectors of the economy. The factors that affect the structure of interest rates include the availability of collateral to obtain credit, the supply and demand conditions which produce change in interest rates, the opportunity costs and availability of credit to farmers, the scope of competition among, and the services, if any, provided by lenders such as marketing of agricultural commodities.

Low interest rates are defended on the grounds of being a special incentive to farmers to use purchased productive inputs, especially when this means a change from traditional practice

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