

**RURAL FARMING AND DEVELOPMENT IN
BUKWA DISTRICT EASTERN UGANDA**

BY

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**A RESEARCH DISSERTATION SUBMITTED TO THE COLLEGE
OF HUMANITIES AND SOCIAL SCIENCES IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE
AWARD OF THE BACHELORS DEGREE IN
DEVELOPMENT STUDIES OF KAMPALA
INTERNATIONAL UNIVERSITY**

JULY, 2013

DECLARATION

I CHEBET LILIAN, declare that the work presented in this Research Dissertation is my original work and has never been submitted in any University for the award of any academic degree.



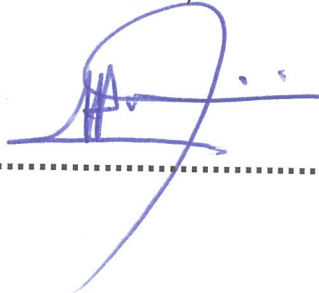
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APPROVAL

This Research dissertation has been submitted under my supervision and guidance as the University examination supervisor and I do certify that it is ready for submission to the college of humanities and social sciences of Kampala International University.

Signed..........Date.....26/07/2013.....

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DEDICATION

I would like to dedicate this work to my beloved mum for her unending support granted to me towards the success of this work, also to my sisters and brothers for their patience when this work was made a priority may the good lord grant those unending blessings.

ACKNOWLEDGEMENT

I would never have been able to finish my dissertation without the guidance of My supervisor Dr. Ogwel Patrick Bernard, help from my dear friends Simon, David, Ogen, Foresta, Annet and Mariam, also support from my mum Chesang Janet, Sabila James, and Sabila Nelson is highly appreciated.

I would like to express my deepest gratitude to my Supervisor, Dr. Ogwel Patrick, for his excellent guidance, patience, and providing me with an excellent atmosphere for doing research.

ACRONYMS

NAADS.....	National Agricultural Advisory Services
SAP.....	Structural Adjustment Program
GDP.....	Gross Domestic Product
ISI.....	Import Substitution Industrialization
ECLA.....	Economic Commission for Latin America
UK.....	United Kingdom
USA.....	United States of America
JFPM.....	Johannesburg Fresh Produce Market
IES.....	Income and expenditure Survey
AISP.....	Agricultural Input Subsidy Program
CGE.....	Computable General Equilibrium
ERHS.....	Ethiopian Rural Household Survey
USAID.....	United States Agency for International Development
NUSAF.....	Northern Uganda Social Action Fund

TABLE OF CONTENTS

	Page
Declaration	ii
Approval.....	iii
Dedication	iv
Acknowledgement.....	v
Acronyms	vi
Abstract	x
CHAPTER ONE: INTRODUCTION	
1.1 Background Of The Study	1
1.2 Statement Of The Problem.....	5
1.3 Purpose/General Objective Of The Study	5
1.3.1 Specific Objectives Of The Study	5
1.4 Research Questions.....	6
1.5 Scope Of The Study.....	6
1.5.1 Geographical Scope	6
1.5.2 Time Scope.....	6
1.5.3 Hypothesis	6
1.6 Significance/Justification Of The Study	7
1.7 Conceptual Framework Showing Rural Farming And Development.....	7
CHAPTER TWO: LITERATURE REVIEW	
2.1 Theoretical Framework	9
2.1.1 Modernization theory.....	11
2.1.2 Sociological and anthropological modernization theory.....	12
2.1.3 Linear Stages of Growth Model.....	12
2.1.4 Structuralism.....	14
2.1.5 Dependency theory	15
2.2 Basic Needs	17
2.2.1 Neo-liberalist Theory	17
2.2.2 Structural adjustment	18

2.3 Post development theory	18
2.3.1 Sustainable development	19
2.4 Human development theory	20
2.4.1 How rural farming affects individual income?	21
2.4.2 Food access and institutions.....	23
2.5 South African agricultural markets.....	25
2.6 Relationship between rural farming and development.....	30
2.7 Effects of education on rural farming.....	32
2.7.1 Empirical Evidence on the Effects of Education in Agriculture	33

CHAPTER THREE: METHODOLOGY

3.1 Research design.....	39
3.2 Study population	39
3.3 Selection of study sample	39
3.4 Sample size	39
3.4.1 interviews	40
3.4.2 Observation	40
3.5 Data collection methods	40
3.5.1 Primary sources.....	40
3.5.2 Secondary sources	41

CHAPTER FOUR: PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction.....	43
4.2 Demographic characteristics of respondents	43
4.2.1 Table 1: Gender of respondents	43
4.2.2 Table 2. Age distribution of respondents.....	44
4.2.3 Table 3. Marital status of respondents	45
4.2.4 Table 4. Level Of Education Of Respondents	46
4.2.5 Table 5. Occupation of respondents.....	47
4.3 Meaning Of Variables (Rural Farming And Development)	48

4.3.1 Table Showing The Familiarity Of People With The Effects Of Rural Farming.	48
4.3.2 Familiarity of the contribution of rural farming.....	50
4.3.3 Familiarity of the challenges experienced in the area	51
4.4 Challenges the community is experiencing	51
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	
5.1 Summary Of Findings	55
5.2 Conclusion	56
5.3 Recommendations.....	57
5.5 Suggested Area of Further Studies	57
REFERENCES	58
APPENDICES	61
APPENDIX A: Questionnaire Schedule	61
Appendix: B Questionnaire Schedule	65
APPENDIX C: Map Showing Bukwa District In Eastern Uganda.....	68

ABSTRACT

The study investigated, "rural farming and development in Bukwa district, Eastern Uganda. The main reason of study was to establish the effect of rural farming on development and how it can be transformed to improve the wellbeing of the population. The study mainly targeted the farmers. Questionnaires (Self-Administered Questionnaires) in-depth interview observation methods were used to get the required information in which 350 respondents were interviewed in the whole study. Primary and secondary data sources were used to analyze and present the data in respective ways. Qualitative and quantitative data collection and analysis methods were used. The research study was descriptive in nature. The greatest number of respondents was females with the percentage of 61.4, the dominant age group was adults (20.0%), 61.7% of the population dropped out of primary, 79.7% of the respondents were married. The study findings revealed that existence of high rates of illiteracy or low levels of education has led to low productivity in a sense that the people are ignorant of the better methods of farming, improved quality seeds to grow, therefore with such in place development in the area has become a wild dream. The study concludes that governments, development partners and other stakeholders should take an extensive role in thorough sensitization of the local farmers on the essence of improved agriculture like use of hybrid seeds, fertilizers, improved technology for example use of tractors and others and spell out their contribution to the increased and quality products which will lead to both rural and national development. The study recommends that Bukwa District (through the district agricultural officers and planning units) should engage in support of farmers in a spectrum of activities. For instance; under the NAADS programme, the districts undertake sensitization of farmers on NAADS promotion of technology and food security establishment of technology demonstration sites and agribusiness. The researcher recommends further research to be carried out on rural farming and individual income.

CHAPTER ONE

INTRODUCTION

1.1 Background Of The Study

According to World Bank report 2007, most countries of the world depend on farming for survival. An example is in Vietnam where ninety percent of the poor, or three quarters of the population, live in the rural areas which are why rural development and agriculture are critical to Vietnam's development.

Agriculture accounts for 22 percent of GDP, 30 percent of exports and 60 percent of employment. The majority of the rural population makes its living by growing and selling crops (rice accounts for 45 percent of agricultural production), raising and selling livestock and fish, and from forest products.

Because the poorest populations are dependent on the land and water for their livelihood, it is critical that these natural resources are maintained, that the people are able to grow a variety of crops, so that they are not dependent on a single crop in case of crop failure or lack of market demand, and able to access markets to sell their products.

The World Bank's rural development and agriculture activities in Vietnam have focused on ensuring (a) agricultural productivity growth and diversification; (b) improved access of farmers to markets and market information; and (c) natural resource management, to ensure that these can support people's livelihoods.

According to World bank report 2009 Poverty in Africa is predominantly rural. More than 70 per cent of the continent's poor people live in rural areas and depend on agriculture for food and livelihood, yet development assistance to agriculture is decreasing. In Sub-Saharan Africa, more than 218 million people live in extreme poverty. Among them are rural poor people in Eastern and Southern Africa, an area that has one of the world's highest concentrations of poor people. The incidence of poverty in Sub-Saharan Africa is increasing faster

than the population. Overall, the pace of poverty reduction in most of Africa has slowed since the 1970s.

Rural poverty in many areas of Africa has its roots in the colonial system and the policy and institutional restraints that it imposed on poor people. In recent decades, economic policies and institutional structures have been modified to close the income gap. Structural adjustments have dismantled existing rural systems, but have not always built new ones. In many transitional economies, the rural situation is marked by continuing stagnation, poor production, low incomes and the rising vulnerability of poor people. Lack of access to markets is a problem for many small-scale enterprises in Africa. The rural population is poorly organized and often isolated, beyond the reach of social safety nets and poverty programmes. Increasingly, government policies and investments in poverty reduction tend to favor urban over rural areas.

Agriculture is the most well-done activity in Uganda that the majority of the population depends on agriculture for survival. Despite all these facts, farming in Uganda has drastically deteriorated due to climatic factors, poor technology, limited market for the products, poor quality seeds grown and limited government support. This has let down so much the development of the country to the extent that majority of the population lives in rural areas with extreme poverty. At the present government is trying its level best to make farming or agriculture a priority through sensitization, programmes like NAADS and many others. These will increase productivity and food security.

Bukwa District is in Eastern Uganda which is named after its main political, administrative and commercial center where the district headquarters are located. Bukwa District is bordered by Amudat District to the north, the Republic of Kenya to the east and south and Kween District to the west and northwest. Bukwa, where the district headquarters are located is approximately 83 kilometers (52 mi), by road, northeast of Mbale, the nearest large city. The

coordinates of the district are: 01 16N, 34 44E. The district was created on 1 July 2005. Bukwa District was part of Kapchorwa District prior to July 2005. It was created out of Kongasis county. The district has many well-educated native sons and daughters, but many of these educated people have sought for greener pastures in the neighboring country of Kenya.

The district's roads are in the majority inaccessible or impassable. There is widespread lack of electricity and telecommunication services throughout the district. Subsequent Ugandan Governments have not developed this part of the country, starting with the colonial governments in the early part of the 20th century, through the Obote I, Idi Amin, Obote II and NRM regimes. Many of the inhabitants of Bukwa District live in abject poverty. The district is also plagued by persistent insecurity due to cattle raids and cattle rustling by ethnic groups from Karamoja located in North Eastern Uganda and the Turkana and Pokot from neighboring Kenya. These challenges date as far back as the 1950s and 1960s.

The national census in 2002 estimated the district population to be approximately 49,900, the national census in 2003 estimated the district population to be approximately 50,800, the national census in 2004 estimated the district population to be approximately 51,800, the national census in 2005 estimated the district population to be approximately 52,800, the national census in 2006 estimated the district population to be approximately 53,900, the national census in 2007 estimated the district population to be approximately 55,000, the national census in 2008 estimated the district population to be approximately 56,100, the national census in 2009 estimated the district population to be approximately 57,200, the national census in 2010 estimated the district population to be approximately 58,300,

In Bukwa district the population is densely populated in sub counties of Bukwa and Suam because there are different tribe's which occupy these areas due to the fact that Bukwa is a town and Suam being on the boarder has many tribes.

unlike in other sub-counties of Riwo muimet and Chekwasta which are sparsely populated due to the locational reasons for example in Chepkwasta sub county, it is a very mountainous place and Riwo on the other side is risky in terms of security hence it scares away people from settling there. Within the headquarters' of the district majority of the population speak Sabiny and Swahili while on the borders a variety of languages are spoken like in boarder of Uganda and Amudat, Pokot, karamojong, Swahili and Sabiny are spoken.

Most of the people from the northern part of the district have been internally displaced by cattle rustlers and have since not been resettled back in their original land. Some of these people opted to purchase land from areas that appeared secure while others who could not afford to purchase new land continue to exist as squatters on well-wishers' land. Majority of this population are the Sabinys though other tribes also live in this area which includes Bagisu who live in Suam boarder of Uganda and Kenya among others.

The area with the fact that it is on the slopes of mount Elgon, it has four rainy months that is to say from April to July and favors the growth of crops like maize, beans, bananas, Irish potatoes, wheat and vegetables like sukumawiki among others. Due to the type of climate, majority of the population practice agriculture in which it's the growing of crops and rearing of animals but surprisingly they do it only for home consumption (rural farming). With this practice, it earns them very little or no income at all hence affecting the development in the place. the Sebei farmers are closed community meaning that they are locked into their local traditions and have stubbornly failed to use all the possible available opportunities to improve on their farming levels which can push for innovations for example national agricultural advisory services (NAADS). Despite all these opportunities put across, there is no development due to the failure of the people to improve on their farming systems.

1.2 Statement Of The Problem

Rural farming in Bukwa district and development are often associated by force of logic. This farming system is believed to be irrational and underdeveloped mode of production. Despite the fact that rural farming is the only practice which is practice by the Sebei people, there is still a problem of famine (people lack food). It is therefore warring to see that people in Bukwa cannot feed themselves, they cannot provide housing, access to medical care and education services which have affected the development of the area. Underdevelopment is still heating the area to a larger extent due to the fact that people are still using the rudimentary tools like hand hoes, pangas, slashers and others which have affected the productivity of agriculture.

There is therefore urge to address such problems for example through sensitization of the community on the use of modern technology like tractors, combine harvesters ant others .this will increase on the productivity and also improve on the quality of the produce. When this is achieved development will be realized because the quantity and quality of the products will attract consumption even from outside the area and therefore earning the people income which will help them improve on services like housing, education, clothing and others in which all will lead to development.

1.3 Purpose/General Objective Of The Study

The main reason of carrying out this study or search was to establish the effect of rural farming on the development of Bukwa district and how it could be transformed to improve on the wellbeing of the population.

1.3.1 Specific Objectives Of The Study

- (i) To find out the profile of the respondents
- (ii) To find out the effect of education on rural farming
- (iii)To examine the effect of rural farming on peoples incomes.

- (iv) To find out the relationship between rural farming and the development of the area.

1.4 Research Questions

- (i) What was the profile of the respondents?
- (ii) How has rural farming affected the development of Bukwa district?
- (iii) What were the effects of rural farming on people's incomes?
- (iv) How rural farming was related to development?

1.5 Scope Of The Study

This covers the time, geographical and population scope as explained in below;

1.5.1 Geographical Scope

The study took place in Bukwa district eastern Uganda. It consists of sub counties like Suam, Kabei, Chesower, Bukwa, Senendet, Muimet and so many others. The area experiences heavy rains in months of April, May, June and July. It is located on the slopes of Mount Elgon. The area is very mountainous hence it makes accessibility of many areas difficult the roads are very poor, inaccessible and impassible, no telecommunication services which has made the district very underdeveloped and remote.

1.5.2 Time Scope

This research study took a period of three month for it to reach its completion stage from the day of approval.

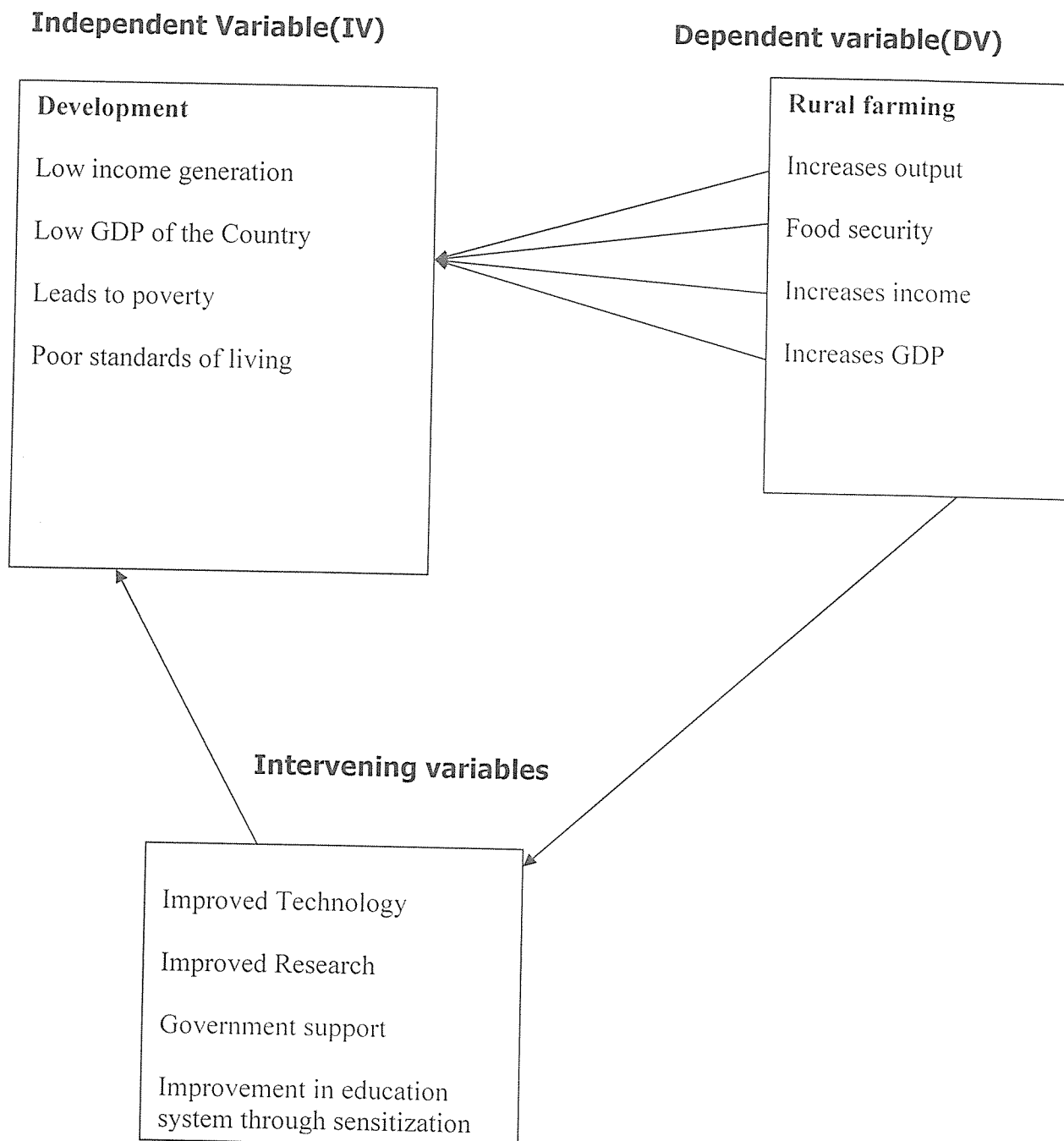
1.5.3 Hypothesis

According to my own understanding of finding the effect of rural farming and development in Bukwa district, if the people can change the methods of farming they practice like from small scale to large scale, the tools they use if provided by the stakeholders like NAADS and the government, the attitudes towards the agricultural practices through sensitization of the farmers, development would definitely be achieved.

1.6 Significance/Justification Of The Study

The result shall be used by the policy makers and the other stakeholders like non-governmental organizations, rural farmers to know the effects of rural farming and how it has hindered development, also the fellow students who will carry out their research.

1.7 Conceptual Framework Showing Rural Farming And Development



CHAPTER TWO

LITERATURE REVIEW

This chapter summarizes the literature of the study. it will cover different views on various authors who have written in the subject area and will include various arguments arrived at from different studies in line with the research problem.

2.1 Theoretical Framework

According to Tony Waters (2007) rural farming is a self-sufficiency farming in which the farmers focus on growing enough food to feed themselves and their families. The typical rural farm has a range of crops and animals needed by the family to feed and clothe themselves during the year. Planting decisions are made principally with an eye toward what the family will need during the coming year, and secondarily toward market prices. Waters defined "rural peasants as people who grow what they eat, build their own houses, and live without regularly making purchases in the marketplace" However, despite the primacy of self-sufficiency in rural farming, today most rural farmers also participate in trade to some degree; though usually it is for goods that are not necessary for survival, and may include sugar, iron roofing sheets, bicycles, used clothing, and so forth. Most rural farmers today live in developing countries. Although their amount of trade as measured in cash is less than that of consumers in countries with modern complex markets, many have important trade contacts and trade items that they can produce because of their special skills or special access to resources valued in the marketplace. Rural grain-growing agriculture (predominantly wheat and barley) first emerged during the Neolithic Revolution when humans began to settle in the Nile, Euphrates, and Indus River Valleys. Rural farming also emerged independently in Mexico where it was based on maize cultivation, and the Andes where it was based on the domestication of the potato. Rural farming was the dominant mode of production in the world until

recently, when market-based capitalism became widespread.

Subsistence horticulture may have developed independently in South East Asia and Papua New Guinea. Rural farming continues today in large parts of rural Africa, and parts of Asia and Latin America. Subsistence agriculture had largely disappeared in Europe by the beginning of World War I, and in North America with the movement of sharecroppers and tenant farmers out of the American South and Midwest during the 1930s and 1940s. As recently as the 1950s, it was still common on family farms in North America and Europe to grow much of a family's own food and make much of its own clothing, although sales of some of the farm's production earned enough currency to buy certain staples, typically including sugar; coffee and tea; petroleum distillates (petrol, kerosene, fuel oil); textile products such as bolts of cloth, needles, and thread; medicines; hardware products such as nails, screws, and wire; and a few discretionary items such as candy or books.

Blacksmith argued that many of the preceding items, as well as occasional services from physicians, veterinarians, and others were often bought with barter rather than currency. In Central and Eastern Europe subsistence and semi-subsistence agriculture reappeared within the transition economy since about 1990.

According to Moseley, Malcolm J (2003) Rural development: principles and practice (1. publ. ed.). London [u.a.]: Rural development generally refers to the process of improving the quality of life and economic wellbeing of people living in relatively isolated and sparsely populated areas. Rural development has traditionally centered on the exploitation of land-intensive natural resources such as agriculture and forestry. However, changes in global production networks and increased urbanization have changed the character of rural areas. Increasingly tourism, niche manufacturers, and recreation have replaced resource extraction and agriculture as dominant economic drivers. Ward, Neil; Brown, David L. (1

December 2009)."Placing the Rural in Regional Development". The need for rural communities to approach development from a wider perspective has created more focus on a broad range of development goals rather than merely creating incentive for agricultural or resource based businesses. Education, entrepreneurship, physical infrastructure, and social infrastructure all play an important role in developing rural regions. Rural development research: a foundation for policy (1. publ. Ed.). Westport, Conn. [u.a.]: Greenwood Press. 1996.

Rural development is also characterized by its emphasis on locally produced economic development strategies. Moseley, Malcolm J. (2003). Rural development: principles and practice (1. publ. ed.). London [u.a.]: In contrast to urban regions, which have many similarities, rural areas are highly distinctive from one another. For this reason there are a large variety of rural development approaches used globally.

Development theories are conglomeration of theories about how desirable change in society is best achieved. Such theories draw on a variety of social science disciplines and approaches.

2.1.1 Modernization theory

According to Adam Przeworski and Fernando Limongi January 1997 modernization theory is used to analyze in which way modernization processes in societies take place. The theory looks at which aspects of countries are beneficial and which constitute obstacles for economic development. The idea is that development assistance targeted at those particular aspects can lead to modernization of 'traditional' or 'backward' societies. Scientists from various research disciplines have contributed to modernization theory.

2.1.2 Sociological and anthropological modernization theory

The earliest principles of modernization theory can be derived from the idea of progress, which stated that people can develop and change their society themselves. Marquis de Condorcet was involved in the origins of this theory. This theory also states that technological advancements and economic changes can lead to changes in moral and cultural values. The French sociologist Émile Durkheim stressed the interdependence of institutions in a society and the way in which they interact with cultural and social unity. His work 'The Division of Labor in Society' was very influential. It described how social order is maintained in society and ways in which primitive societies can make the transition to more advanced societies.

Other scientists who have contributed to the development of modernization theory are: David Apter, who did research on the political system and history of democracy; Seymour Martin Lipset, who argued that economic development leads to social changes which tend to lead to democracy; David McClelland, who approached modernization from the psychological side with his motivations theory; and Talcott Parsons who used his pattern variables to compare backwardness to modernity.

2.1.3 Linear Stages of Growth Model

The Linear Stages of Growth Model is an economic model which is heavily inspired by the Marshall Plan which was used to revitalize Europe's economy after World War II. It assumes that economic growth can only be achieved by industrialization. Growth can be restricted by local institutions and social attitudes, especially if these aspects influence the savings rate and investments. The constraints impeding economic growth are thus considered by this model to be internal to society.

According to the Linear Stages of Growth Development Model, a correctly designed massive injection of capital coupled with intervention by the public

sector would ultimately lead to industrialization and economic development of a developing nation.

The Rostow's stages of growth model is the most well-known example of the linear stages of growth model.[4] Walt W. Rostow identified five stages through which developing countries had to pass to reach an advanced economy status: (1) Traditional society, (2) Preconditions for take-off, (3) Take-off, (4) Drive to maturity, (5) Age of high mass consumption. He argued that economic development could be led by certain strong sectors; this is in contrast to for instance Marxism which states that sectors should develop equally. According to Rostow's model, a country needed to follow some rules of development to reach the take-off: (1) The investment rate of a country needs to be increased to at least 10% of its GDP, (2) One or two manufacturing sectors with a high rate of growth need to be established, (3) An institutional, political and social framework has to exist or be created in order to promote the expansion of those sectors.

The Rostow model has serious flaws, of which the most serious are: (1) The model assumes that development can be achieved through a basic sequence of stages which are the same for all countries, a doubtful assumption; (2) The model measures development solely by means of the increase of GDP per capita; (3) The model focuses on characteristics of development, but does not identify the causal factors which lead development to occur. As such, it neglects the social structures that have to be present to foster development.

Economic modernization theories such as Rostow's stages model have been heavily inspired by the Harrod-Domar model which explains in a mathematical way the growth rate of a country in terms of the savings rate and the productivity of capital. Heavy state involvement has often been considered necessary for successful development in economic modernization theory; Paul Rosenstein-Rodan, Ragnar Nurkse and Kurt Mandelbaum argued that a big push model in infrastructure investment and planning was necessary for the

stimulation of industrialization, and that the private sector would not be able to provide the resources for this on its own. Another influential theory of modernization is the dual-sector model by Arthur Lewis. In this model Lewis explained how the traditional stagnant rural sector is gradually replaced by a growing modern and dynamic manufacturing and service economy. Because of the focus on the need for investments in capital, the Linear Stages of Growth Models are sometimes referred to as suffering from 'capital fundamentalism'.

Critics of modernization theory

Modernization theory observes traditions and pre-existing institutions of primitive societies as obstacles to modern economic growth. Modernization which is forced from outside upon a society might induce violent and radical change, but according to modernization theorists this is generally worth it. Critics point to traditional societies being destroyed and slipping away to a modern form of poverty without ever gaining the promised advantages of modernization.

2.1.4 Structuralism

Structuralism is a theory which was founded by Edward B. Titchener, based on loose interpretations of the writings of Wilhelm Wundt. It is a development theory which focuses on structural aspects which impede the economic growth of developing countries. The unit of analysis is the transformation of a country's economy from, mainly, subsistence agriculture to a modern, urbanized manufacturing and service economy. Policy prescriptions resulting from structuralist thinking include major government intervention in the economy to fuel the industrial sector, known as Import Substitution Industrialization (ISI). This structural transformation of the developing country is pursued in order to create an economy which in the end enjoys self-sustaining growth. This can only be reached by ending the reliance of the underdeveloped country on exports of primary goods (agricultural and mining products), and pursuing inward-oriented

development by shielding the domestic economy from that of the developed economies. Trade with advanced economies is minimized through the erection of all kinds of trade barriers and an overvaluation of the domestic exchange rate; in this way the production of domestic substitutes of formerly imported industrial products is encouraged. The logic of the strategy rests on the Infant industry argument, which states that young industries initially do not have the economies of scale and experience to be able to compete with foreign competitors and thus need to be protected until they are able to compete in the free market. The ISI strategy is supported by the Prebisch-Singer thesis, which states that over time, the terms of trade for commodities deteriorate compared to manufactured good. This is because of the observation that the income elasticity of demand is greater for manufactured goods than that for primary products.

Structuralists argue that the only way Third World countries can develop is through action by the state. Third world countries have to push industrialization and have to reduce their dependency on trade with the First World, and trade among themselves.

The roots of structuralism lie in South America, and particularly Chile. In 1950, Raul Prebisch went to Chile to become the first director of the Economic Commission for Latin America (ECLA). In Chile, he cooperated with Celso Furtado, Anibal Pinto, Osvaldo Sunkel and Dudley Seers, which all became influential structuralists.

2.1.5 Dependency theory

According to Immanuel Wallerstein 1974, Dependency theory is essentially a follow up to structuralists thinking, and shares many of its core ideas. Whereas structuralists did not consider that development would be possible at all unless a strategy of delinking and rigorous ISI was pursued, dependency thinking could allow development with external links with the developed parts of the globe. However, this kind of development is considered to be "dependent development", i.e., it does not have an internal domestic dynamic in the

developing country and thus remains highly vulnerable to the economic vagaries of the world market. Dependency thinking starts from the notion that resources flow from the 'periphery' of poor and underdeveloped states to a 'core' of wealthy countries, which leads to accumulation of wealth in the rich states at the expense of the poor states. Contrary to modernization theory, dependency theory states that not all society's progress through similar stages of development. Primitive states have unique features, structures and institutions of their own and are the weaker with regard to the world market economy, while the developed nations have never been in this follower position in the past. Dependency theorists argue that underdeveloped countries remain economically vulnerable unless they reduce their connectedness to the world market. Dependency theory states that poor nations provide natural resources and cheap labor for developed nations, without which the developed nations could not have the standard of living which they enjoy. Also, developed nations will try to maintain this situation and try to counter attempts by developing nations to reduce the influence of developed nations. This means that poverty of developing nations is not the result of the disintegration of these countries in the world system, but because of the way in which they are integrated into this system.

In addition to its structuralist roots, dependency theory has much overlap with Neo-Marxism and World Systems Theory, which is also reflected in the work of Immanuel Wallerstein, a famous dependency theorist. Wallerstein rejects the notion of a Third World, claiming that there is only one world which is connected by economic relations (World Systems Theory). He argues that this system inherently leads to a division of the world in core, semi-periphery and periphery. One of the results of expansion of the world-system is the commodification of things, like natural resources, labor and human relationships.

2.2 Basic Needs

The basic needs approach was introduced by the International Labour Organization in 1976, mainly in reaction to prevalent modernization- and structuralism-inspired development approaches, which were not achieving satisfactory results in terms of poverty alleviation and combating inequality in developing countries. It tried to define an absolute minimum of resources necessary for long-term physical well-being. The poverty line which follows from this is the amount of income needed to satisfy those basic needs. The approach has been applied in the sphere of development assistance, to determine what a society needs for subsistence, and for poor population groups to rise above the poverty line. Basic needs theory does not focus on investing in economically productive activities. Basic needs can be used as an absolute measure of poverty.

Proponents of basic needs have argued that elimination of absolute poverty is a good way to make people active in society so that they can provide labor more easily and act as consumers and savers. There have been also many critics of the basic needs approach. It would lack theoretical rigour, practical precision, be in conflict with growth promotion policies, and run the risk of leaving developing countries in permanent backwardness.

2.2.1 Neo-liberalist Theory

According to Clarke 2005, Neoclassical development theory has its origins in its predecessor: classical economics. Classical economics was developed in the 18th and 19th centuries and dealt with the value of products and on which production factors it depends. Early contributors to this theory are Adam Smith and David Ricardo. Classical economists argued - as do the neoclassical ones - in favor of the free market, and against government intervention in those markets. The 'invisible hand' of Adam Smith makes sure that free trade will ultimately benefit all of society. John Maynard Keynes was a very influential classical economist as

well, having written his General Theory of Employment, Interest, and Money in 1936.

Neoclassical development theory became influential towards the end of the 1970s, fired by the election of Margaret Thatcher in the UK and Ronald Reagan in the USA. Also, the World Bank shifted from its Basic Needs approach to a neoclassical approach in 1980. From the beginning of the 1980s, neoclassical development theory really began to roll out.

2.2.2 Structural adjustment

One of the implications of the neoclassical development theory for developing countries was the Structural Adjustment Programmes (SAPs) which the World Bank and the International Monetary Fund wanted them to adapt. Important aspects of those SAPs include:

1. Fiscal austerity (reduction in government spending)
2. Privatization (which should both raise money for governments and improve efficiency and financial performance of the firms involved)
3. Trade liberalization, currency devaluation and the abolition of marketing boards (to maximize the static comparative advantage the developing country has on the global market)
4. Retrenchment of the government and deregulation (in order to stimulate the free market)

These measures are more or less reflected by the themes which were identified by the Institute of International Economics which were believed to be necessary for the recovery of Latin America from the economic and financial crises of the 1980s. These themes are known as the Washington consensus, a term coined in 1989 by the economist John Williamson.

2.3 Post development theory

Post development theory is a school of thought which questions the idea of national economic development altogether. According to post development

scholars, the goal of improving living standards leans on arbitrary claims as to the desirability and possibility of that goal. Post development theory arose in the 1980s and 1990s.

According to Wolfgang Sachs 1992, the idea of development is just a 'mental structure' (Wolfgang Sachs) which has resulted in an hierarchy of developed and underdeveloped nations, of which the underdeveloped nations desire to be like developed nations. Development thinking has been dominated by the West and is very ethnocentric, according to Sachs. The Western lifestyle may neither be a realistic nor a desirable goal for the world's population, post development theorists argue. Development is being seen as a loss of a country's own culture, people's perception of themselves and modes of life. According to Majid Rahnema, another leading post development scholar, things like notions of poverty are very culturally embedded and can differ a lot among cultures. The institutes which voice the concern over underdevelopment are very Western-oriented, and post development calls for a broader cultural involvement in development thinking.

Post development proposes a vision of society which removes itself from the ideas which currently dominate it. According to Arturo Escobar, post development is interested instead in local culture and knowledge, a critical view against established sciences and the promotion of local grassroots movements. Also, post development argues for structural change in order to reach solidarity, reciprocity, and a larger involvement of traditional knowledge.

2.3.1 Sustainable development

Sustainable development is economic development in such a way that it meets the needs of the present without compromising the ability of future generations to meet their own needs. (Brundtland Commission) There exist more definitions of sustainable development, but they have in common that they all have to do with the carrying

capacity of the earth and its natural systems and the challenges faced by humanity. Sustainable development can be broken up into environmental sustainability, economic sustainability and sociopolitical sustainability. The book 'Limits to Growth', commissioned by the Club of Rome, gave huge momentum to the thinking about sustainability. Global warming issues are also problems which are emphasized by the sustainable development movement. This led to the 1997 Kyoto Accord, with the plan to cap greenhouse-gas emissions.

Opponents of the implications of sustainable development often point to the environmental Kuznets curve. The idea behind this curve is that, as an economy grows, it shifts towards more capital and knowledge-intensive production. This means that as an economy grows, its pollution output increases, but only until it reaches a particular threshold where production becomes less resource-intensive and more sustainable. This means that a pro-growth, not an anti-growth policy is needed to solve the environmental problem. But the evidence for the environmental Kuznets curve is quite weak. Also, empirically spoken, people tend to consume more products when their income increases. Maybe those products have been produced in a more environmentally friendly way, but on the whole the higher consumption negates this effect. There are people like Julian Simon however who argue that future technological developments will resolve future problems.

2.4 Human development theory

Amartya Sen and MahbubulHaq Nov 2010 argued that Human development theory is a theory which uses ideas from different origins, such as ecology, sustainable development, feminism and welfare economics. It wants to avoid normative politics and is focused on how social capital and instructional capital can be deployed to optimize the overall value of human capital in an economy. Amartya Sen and MahbubulHaq are the most well-known human development theorists. The work of Sen is focused on capabilities: what people can do, and be. It is these capabilities, rather than the income or goods that they receive (as

in the Basic Needs approach), that determine their well-being. This core idea also underlies the construction of the Human Development Index, a human-focused measure of development pioneered by the UNDP in its Human Development Reports. The economic side of Sen's work can best be categorized under welfare economics, which evaluates the effects of economic policies on the well-being of peoples. Sen wrote the influential book 'Development as freedom' which added an important ethical side to development economics

2.4.1 How rural farming affects individual income?

There is a general consensus that households access food mainly through three sources. These are the markets, subsistence production and transfers from public programmes or other households (Ruel et al., 1998). These sources are also referred to as entitlements categories: production, exchange (barter or purchase) and transfers (Sen, 1982). Historically, rural households produced most of their own food, whereas urban households purchased most of their food (Ruel et al., 1998). Recent studies have shown substantial increases independence on market purchases on the part of both urban and rural households (Maxwell et al., 1998; Ruel et al., 1998). As a result food expenditures can be as much as 60–80% of the total income of low-income households (Ruel et al., 1998).

In most of sub-Saharan Africa, food insecurity affects the urban poor more severely as they are mostly dependent on the market, unlike their rural counterparts who are able to exploit natural resources to provide for food or to generate income (Ruel et al., 1998; Frayne & Pendleton, 2009). In urban areas, two crucial components affecting household food security are the ability to earn cash income, and prices of food (Ruel et al., 1998). The efficiency of marketing and distribution systems, household purchasing patterns, ability to produce own food, and access to public transfers (food subsidies or food aid) or private

transfers (exchange with rural relatives) are some of the most important factors affecting the cost of food, especially for urban households.

While farming still remains important for rural households, people are looking for diverse opportunities to increase and stabilize their incomes. Therefore rural livelihoods are based not solely on agriculture but on a diverse array of activities and enterprises (Chapman & Tripp, 2004). The extent of dependence on non-farm income sources varies across countries and regions. Evidence from a sample of rural villages in Tanzania (Ellis & Mdoe, 2003; Chapman & Tripp, 2004) shows that, on average, half of household income came from crops and livestock and the other half from non-farm wage employment, self-employment and remittances. The proportion of non-farm income was higher for upper income groups than for the lowest income groups. The poorest households were therefore more reliant on agriculture; a reliance which decreased as non-farm activities increased.

In a study of 11 Latin American countries, Reardon et al. (2001) found that non-farm income accounted for 40% of rural household incomes. The extent to which households, especially rural ones, are able to feed themselves depends on non-farm income as well as on their own agricultural production (Chapman & Tripp, 2004), since non-farm income is used by many households to purchase their staple grain. Subsistence agriculture should therefore be understood in this context of diversified income sources.

According to Jayne et al. (1999), 61% of maize-growing households in Kenya were found to be net buyers of maize. Such households may be more interested in lower food prices than in investments to increase subsistence production. However, surpluses from off-farm income may provide farmers with the financial security that would enable greater on-farm innovation. This is largely dependent on whether the households diversified out of agriculture due to a lack of

opportunities for on-farm innovation or whether they are exploiting a particularly high demand for their labor off-farm (Chapman & Tripp, 2004).

Furthermore, on-farm investment is likely to occur when non-farm work is of short duration and the home farm has not been neglected.

According to Bryceson (2000; 2002), based on a case study of seven countries (Nigeria, Ethiopia, Tanzania, Congo-Brazzaville, Malawi, Zimbabwe and South Africa), the countries were all undergoing “de-agrarianisation” and “depeasantisation”. This was driven mostly by, restrictions on access to land (South Africa), urbanization (Congo, Brazzaville and Nigeria) and the removal of agricultural subsidies with the enforcement of structural adjustment policies in the other four countries. During this period, peasant agriculture, with its subsistence orientation and relatively low yields, was discouraged in favor of agro-industrial production. Despite the abovementioned changes, African rural-dwellers value the pursuit of farming activities (Bryceson, 2000) thus subsistence production of food is still a major component of livelihoods in sub-Saharan Africa. The use of improved input packages is declining since effective input packages have not yet been developed, especially for the drier parts of the region. In addition, the input packages that exist for the higher rainfall areas need to be supplemented with expansion of intermediate and appropriate technology to improve returns to labor (World Bank, 2007; CAADP, 2009). Peasant farmers have the potential to play an important role in reducing sub-Saharan Africa’s food deficit. Subsistence production and/or smallholder production can increase food supplies and thus cushion households from food price shocks, thereby improving household food security.

2.4.2 Food access and institutions

Amartya Sen’s seminal work on food insecurity in the 1980s (Maxwell & Slater, 2003) reoriented and expanded insights into food security, with greater prominence given to access to food. Some earlier researchers gave marginal and

fragmented attention to issues of food consumption and nutritional intake. Before Sen, the most influential research on food security was almost exclusively concerned with food availability and production. Naturally, the importance of these supply-side issues in the food security debate could not be ignored. The sharp dichotomy between supply-side and demand-side perspectives on food security impeded holistic and in-depth assessments of food insecurity. Virtually all economists had upheld a supply-side view, in which they focused on national-level food production, availability and access.

Nutritionists, on the other hand, paid closer attention to food demand or consumption at the household level. However, over time the emerging consensus was that sufficient agricultural output did not automatically result in reduced food insecurity, either transitory food shortages or chronic hunger (Maxwell & Slater, 2003; Webb et al., 2006).

The debate opened by Amartya Sen and his co-workers, most notably Jean Dréze moved the debate from 'food availability decline' to 'entitlements failure'. This brought to the fore the roles that institutions, markets and states have in food trading and improving access to food. Although food access is a main focus in modern food security debates and prominently influences food security, Webb et al. (2006) have noted with concern that there is no precise measurement of access. Webb and Thorne-Lyman (2006) specifically note that food access is 'embedded in markets, prices and legal systems'. Access to food is thus determined by how developed institutions are and how well institutions function (Dorward et al., 2005). Recent developments in agro-food value chains that affect smallholder farmers in South Africa highlight the importance of agro-food markets in food security.

2.5 South African agricultural markets

There are typically three most common marketing destinations for smallholder farmers, namely fresh produce markets, informal markets and supermarket chains.

The Johannesburg Fresh Produce Market (JFPM) is the largest fresh produce market in Southern Africa and an important outlet for smallholders from Limpopo and elsewhere. The JFPM board has been active in expanding access to its trading facility to smallholders as well as informal traders. The JFPM is conducting targeted extension officer training programmes to enable them to better transmit market information (such as prices, packaging, quality, storage and delivery times, market agents, etc.) , to farmers in localities as far as 300km away. It regularly runs open days during which small farmers and informal traders tours the JFPM facilities to better understand the workings of fresh produce markets and how they can benefit. More recently, the JFPM has worked together with selected municipalities (e.g. Vhembe District Municipality) to build decentralized pack-houses and grading point facilities in order to better integrate small and emerging farmers into large fresh produce markets. These 'satellite' facilities aim to significantly reduce the transport costs for smallholders and, with modern cold storage facilities, will enable smallholders to deliver better quality produce to the JFPM and capture the benefits.

Informal markets in which large numbers of small traders participate are common across the agro-food value chain. In their study of the Tshakhuma and Khumbe informal markets in the Vhembe district, Nesamvuni et al. (n.d.) found that both markets trade mainly in sub-tropical fruits. Women comprise roughly two-thirds of the sellers, with another 30% mainly being children.

Fifty-six percent of women respondents reported income from trading as their only source of livelihood. Of greater relevance to this study is the extent to which these informal traders use smallholder farmers as their sources of supply.

Smallholders supply a limited range of fruits with low input intensity as well as some indigenous varieties. However, most of the fruits sold in the market have been bought in relatively larger volumes from large-scale commercial farmers in the Levubu Valley, transported and delivered to Tshakhuma and Khumbe by hawkers. To raise the supply of fruits from smallholders to these markets, Nesamvuni et al. (n.d.) recommended downstream contract arrangements between smallholders and informal traders. But complementary investments in storage facilities and transport may be needed to improve the absorption capacity of these informal traders, as well as to reduce the rapid deterioration of produce on display that forces traders to sell at huge discounts and often at a loss.

Downstream linkages of smallholder farmers with large retail chains (or supermarkets) have received increasing attention in recent research because supermarkets attract a mass consumer market. As a result of the growth of South African supermarkets and their movement into smaller rural towns, the farming market space has become radically altered. Alongside this development, rural poor households (including many smallholder farmers) are increasingly net consumers rather than net producers of foods, and they tend to purchase their food from the expanding network of supermarkets in nearby rural towns and cities. These expanding trends in the sources of local food purchases in communal villages have been observed in Limpopo, Eastern Cape and KwaZulu-Natal in the post-1994 era (D'Haese & Van Huylenbroeck, 2005; Louw et al., 2007).

The 2005/2006 Income and Expenditure Survey (IES) (Stats SA, 2007) reveals just how severe this phenomenon is: for grain products, 92% of rural black households report that they make most of their purchases in chain stores or other formal sector retailers.³ For meat, dairy and vegetables, the figures are 94%, 94% and 72%, respectively. Supermarkets are making foods available at

lower prices than informal vendors in local markets because of the economies of scale advantages this type of 'networked retailer' enjoys in procurement.

Their competitors for the local demand, especially informal traders, have often been forced out of business because they are unable to compete against the pricing of these large retailers. While the implications for consumers may appear to be positive, the consequences for smallholder farmers are, on the whole, more negative than positive. The claim that consumers have benefited from the proliferation of supermarkets is contentious. Over the period covered by the survey, South African consumers have experienced at least two rounds of rapid food price inflation. A case could be made that the pervasiveness of supermarkets has aggravated food price inflation rather than attenuated it.

Supermarkets generally specialize in supplying a targeted group of customers with niche products of relatively high value. As such, they offer a potential market to smallholders that produce high-value agricultural foods, usually produced in smaller volumes. To explore ways in which smallholders can realize the advantages to be derived from access to this market, Louw et al. (2007) distinguish between two major types of supermarkets: 1) large supermarket chains that serve mainly high-income groups; and 2) decentralized supermarket chains that procure their fresh agro-foods from local suppliers. The first type of supermarket chain operates a centralized procurement and distribution system which is designed to reduce transaction costs. Within such a system, separate and once-off transactions with scattered smallholders increase transaction costs and lower efficiency (Louw et al., 2007). To qualify as a supplier to large high-value supermarkets, smallholders need to comply with a host of standards, such as organic farming certificates, food quality and safety regulations and packaging criteria. As a consequence, most smallholders are not able to take advantage of opportunities offered by these agro-food chains.

By contrast, localized supermarket chains often rely on small-scale farmers in close proximity to supply the fresh produce needs of their customers. Louw et al. (2007) report on the case of the Thohoyandou Spar, the largest supermarket in Limpopo, as an example of a success story of the linkages smallholders have managed to forge with a local supermarket in a specific area. Smallholders supply up to 30% of this outlet's fresh vegetable sales, such as cabbages, spinach, carrots and beetroot. Prices and quality are verbally negotiated when farmers deliver the products to the store, following the inspection of a sample of the produce. Recent interviews with the manager indicate the numbers of smallholders participating in this arrangement fluctuates over time. In 2004, the number of smallholders participating had grown to approximately 23, but it then declined to a more recent average of 15 farmers per year. Spar initially provided interest-free loans and training programmes to ensure the supply of better quality produce, but this no longer seems to be the case.

Better and sustainable market access of smallholders to the opportunities offered by supermarkets turn on the strategies adopted to reduce transaction costs. To lower the transaction costs for both the smallholders and supermarkets, Louw et al. (2007:548) advocate strengthening forms of collective action among smallholders to promote equity and competitiveness.

More specifically this should facilitate co-ordinated efforts to: train farmers in product quality and marketing; enable farmers to comply with delivery schedules; overcome transport problems; and access cheaper inputs.

Access to improved inputs and technologies

Recent research indicates that subsistence food production is increasing in importance in some countries, mainly as a fallback against a backdrop of inflation and proliferating cash needs (Bryceson, 2002). Rural family farmers in sub-Saharan Africa continue to value pursuing farming activities for home consumption. This is even more important in South Africa against the backdrop of food price differentials between urban and rural households.

South African studies have shown that the number of households engaging in subsistence agriculture as a main source of food and income is declining, while there is a rise in the number of households engaging in subsistence production as an extra source of food (Aliber, 2005; 2009). However, there is evidence of agricultural resources (especially communal land in former homeland areas) being under-utilized (Aliber, 2005; 2009).

In the context of rising food prices, Smale et al. (2009) propose improving agricultural production through the use of targeted subsidies in favorable environments (e.g. with good soils and moisture) and market infrastructure. The above can be achieved through the delivery of improved varieties of seed, Fertilizers and other inputs coupled with targeted subsidies in order to realize higher yields. This will result in the expansion of domestic staple food production in order to improve food security and reduce dependence on food imports.

According to Bryceson (2002), low domestic food production has a negative impact on the country's general standard of living, so there is reason to move towards improved agricultural production. However, the productivity of staple food production is low, due mainly to the decline in the use of improved input packages by farming households. This is partly due to the reduction in support for farmers to continue taking up the improved input packages as a result of structural adjustment programmes. The use of improved input packages could be increased by reinstating some 'smart or targeted' input subsidies (Bryceson, 2002; Smale et al., 2009). These inputs should be made available at affordable prices and tailored to the local climate and soil conditions. It should be noted that smallholder farmers in most parts of sub-Saharan Africa rely heavily on informal channels to access inputs (Smale et al., 2009). Some of these channels for seed access include on-farm seed saving, farmer-to-farmer exchange and unregulated sales. In the case of

Southern Africa, smallholder farmers' access only 10% of their seeds from the formal markets. Therefore, informal or village markets are important channels

that may need to be improved or developed in order to improve smallholder farmer access to inputs.

In Southern Africa, Malawi, Zambia and Mozambique have provided this kind of 'smart' subsidy. The commonly cited example is the Malawi government's Agricultural Input Subsidy Programme (AISP), with significant development aid support, from 2005 (Dorward et al., 2008; SOAS et al., 2008).

The main objectives of the programme were to improve smallholder agricultural productivity, improve food and cash crop production, and reduce vulnerability to food insecurity and hunger. The programme resulted in increased crop productivity during the two years of its implementation, especially increases in maize, which is a staple food for Malawians. In addition, the country was able to realize surpluses in maize production, allowing it to export to other countries in the region like Botswana, Zimbabwe, Lesotho and Namibia (FANRPAN, 2008).

2.6 Relationship between rural farming and development

The debate on the relationship between subsistence agriculture and rural development in Nigeria has gone through a complete circle (Spencer, 2002; Poulton et al, 2005; Lipton, 2005). Evidence from literature and past studies have identified this region as one of the world's poorest, and the region's economies are heavily depended on agriculture as the primary source of income and food.

Researchers have also shown that most of the poorest households in SSA are found in agriculture (Ikpi, 1989; Okunmadewa, 2002; Spencer, 2002; Alayande and Alayande, 2004; Poulton et al, 2005; Apata, 2006). However, these subsistence farmers play an important role for food security with an average farm size ranges between 0.7-2.2 hectares. In spite of the existence of a well-articulated agricultural policy document for Nigeria since 1988 and transitional processes put in place by successive governments, the country has never established a systematic focus in her agricultural planning history that shows a

conscious effort to purposely prioritize her agricultural and rural development based on the generally identified components that constitute modern agriculture (Sanusi, 2010, ANAP, 2006). A substantial share of agricultural production was produced in small-scale production units. During the transitional period of Structural Adjustment Programme (SAP) and post SAP the production share of the small-scale agricultural producers were mainly subsistence (CBN, 2008). It is evidenced that in the transition process this sector has played a buffer role against food insecurity and thus prevented households from falling into absolute poverty. This study examined the role of subsistence-oriented agriculture in Nigeria in the 1990s to 2000s. The study start out by discussing the diverging economic effects of the growth of subsistence agriculture in Nigeria since the transition process started. In addition, the study presented an applied Computable General Equilibrium (CGE) model to simulate two Structural Adjustment Programme (SAP) adopted by government, which has been tailored to address the diverging role of subsistence agriculture in Nigeria's transition process. The originality of the model is to distinguish various agricultural sectors not by production but by institutional characteristics. One of these farm sectors explicitly represents Nigeria's vast number of subsistence plots.

The economy-wide models such as CGE models have been identified by past studies to analyze macroeconomic policies and strategies for the development of agriculture in developing countries where subsistence agriculture plays an essential role (Hassine, et al, 2010; Nwafor et al, 2005; Wobst, 2001; Bautista and Thomas, 2000). Though, there are few such CGE models for transition countries thus far. For instance, the work of Beckmann and Pavel (2001) developed a stylized CGE model for Bulgaria agriculture with 2 production sectors and a household sector producing food. Wehrheim and Wobst, (2005) work represents subsistence agriculture as a separate model in an applied CGE model. These studies examined the competitiveness of small-scale farms and the relative importance in the transitional process in rural development. In Nigeria, CGE

models have been widely used to analyze the macroeconomic policies and strategies. Nwafor et al, (2005) used micro simulations in a CGE model to capture the impacts of trade liberalization on poverty in Nigeria. Also, the work of Omoke (2007) used CGE model to analyze trade policy reforms and rural development in Nigeria. However, no study in Nigeria (to the knowledge of the authors) that have applied CGE model to analyze the macroeconomic policies and strategies for the development of agriculture where subsistence agricultural plays a pivotal. The uniqueness of this article is to disaggregate agriculture not by production sector but by different types of farms. In so doing, we will be able to analyze quantitatively the role of subsistence agriculture in Nigeria's transition process.

2.7 Effects of education on rural farming

Education may enhance farm productivity directly by improving the quality of labour, by increasing the ability to adjust to disequilibria, and through its effect upon the propensity to successfully adopt innovations. Education is thought to be most important to farm production in a rapidly changing technological or economic environment (Shultz 1964; 1975). Since farming methods in Ethiopia are largely traditional, there appears to be little economic justification for Ethiopian farm households to invest in education. However, new, higher yield crop varieties are available in some areas, and some farmers in many areas have adopted certain modern inputs, primarily chemical fertilizers. As technological innovations spread more widely within the country, the importance of formal schooling to farm production ought to become more apparent.

Admassie and Asfaw (1997) note that Ethiopian farmers have faced frequently changing input and output prices under the new government. In addition, unpredictable weather, pests and crop disease all contribute to an environment in which farmers must adapt frequently in order to survive. As a result, there may be an efficiency advantage for farmers who are better prepared to

anticipate and cope with disequilibria. Thus, even in the absence of innovation, farm productivity may be enhanced by investments in education. The aim of this paper is to identify the possible benefits of schooling for households engaged in agricultural production and to quantify the effects of education upon farm output in rural Ethiopia. Section 2 surveys the literature on returns to schooling in agriculture. Section 3 covers the availability and suitability of data on rural Ethiopia. The empirical methodology is set out in Section 4. Results are presented in Section 5. Section 6 concludes the paper with a summary of the main findings and the implications for enrolment in rural areas.

2.7.1 Empirical Evidence on the Effects of Education in Agriculture

Since wage data is seldom available in the context of agricultural production in the developing world, most studies on the effects of schooling in rural areas employ production function methodology. An advantage of the production function approach is that it provides evidence on the marginal product of the farmer in terms of real output, whereas wages may be subject to institutional constraints and not reflect accurately marginal productivity.

Developing World Evidence

The production function approach has produced evidence of a link between education and Agricultural output in the developing world literature. Hussain and Byerlee (1995) note that evidence is mounting (for Asia at least) that returns to schooling in agriculture may be as high as for urban wage earners. Lockheed, Jamison and Lau (1980) reviewed 18 studies representing 37 data sets (primarily in Asia) and found that most reported a significant positive effect of education upon output, though the results were mixed. They noted that a significant positive relationship was more likely to be found in areas where farmers are modernizing. On average for the studies considered, the increase in production associated with having four years of schooling was 8.7 percent. However, for the group of studies concerned with the effects of education in traditional

agriculture, the increase in output owing to four years of schooling was only 1.3 percent on average, as compared with a mean increase of 9.5 percent for studies of modernizing regions.

Phillips 1994 reviewed an additional 12 studies using 22 data sets (with more recent data and greater representation of Latin America), and was able to confirm the general trends noted above. The average increase in output owing to an additional four years of schooling in the studies he considers is 10.5 percent, with the relevant figures for traditional versus modern farming systems at 7.6 and 11.4 percent, respectively. However, his survey was sufficiently geographically diverse to show that (under certain conditions) the effects of schooling are stronger in Asia than in Latin America, irrespective of the degree of modernization. This may have implications for the assumed applicability of Asian findings to Africa, though too few studies using African data were included to draw strong conclusions. Appleton and Balihuta (1996) point out that these surveys included only two African studies (both on Kenya) and that education was not found to be significant in either. They review several additional African studies and find that the effect of schooling on agricultural output is usually not significant, though in some cases it can be large, indicating that there is substantial variation in returns to schooling both within and between the areas surveyed. The authors suggest several possible reasons for the lack of significance of education in the African studies, including small sample sizes (for a few of the studies), errors in measurement of farm production, and wide variation in the actual effects of education on agricultural output in different areas and under different farming systems. These reviews illustrate the need for further investigation of the effects of education on farm productivity in Africa.

Ethiopian Evidence

Until recently, very little empirical evidence was available to illuminate the effects of Education in Ethiopian agriculture. Much of the recent research may be criticized on the Grounds of poor measurement of education variables and small

sample size. However, a Variety of data sets and methods have been used in this context, providing some insight into the effects of education on productivity and efficiency in Ethiopia.

Mirotchie (1994) investigates technical efficiency in cereal crop production in Ethiopia using aggregate data for the period 1980-86. The data on education are weak. Although conclusions must be drawn with caution, he reports that primary schooling tends to increase productivity, while secondary schooling has no effect.

Croppenstedt and Muller (1998) examine the effects of various forms of human capital upon agricultural productivity using data from the first round of the Ethiopia Rural Household Survey (ERHS), but do not find a relationship between their measure of education¹ and agricultural output. Croppenstedt, Demeke and Meschi (1998), using data from a 1994 USAID fertilizer marketing survey, find that literate farmers are more likely to adopt use of fertilizers than those who are illiterate, though the quantity of fertilizers demanded does not depend upon literacy.

Croppenstedt and Demeke (1997) use data from the ERHS, selecting eight sites dominated by oxen-plough cultivation, to estimate efficiency using a mixed fixed-random coefficients regression model. They include four alternative education variables: a dummy indicating that the household head has the adult literacy programme certificate; a dummy indicating that another household member can read and write a letter (self-report); a dummy indicating that the household head has completed primary school; and an estimator of the number of years of schooling attained by the household head, calculated based on the highest education level. Note that the measure of education used was possession of an Adult Literacy Programme certificate. This is not an ideal proxy for education, since literacy skills may have completely deteriorated by the time of the

Survey and because no account is taken of numeracy, which may be equally important. They find that literacy has a positive effect upon productivity, and that education is weakly correlated with farm efficiency.

Admassie and Asfaw (1997) estimate a stochastic frontier profit function to investigate Technical and allocative efficiency of farmers. Their data are also drawn from the ERHS. However, only four of the 15 sites are considered, and within those four sites, only those Households who used fertilizers and hired labor were included (120 households in total). Education is measured in two ways: (1) a dummy variable equal to one if at least one Household member reports being able to read and write or has the ALP certificate; and (2) a dummy variable set equal to one if at least one household member has completed primary school. They estimate average inefficiency over their sample of 46 percent. Educated farmers were found to be relatively and absolutely more efficient than those without education. However, their sample selection methodology is unsatisfactory and casts doubt upon the Reliability and generalizability of their findings.

Finally, Dercon and Krishnan (1998), using panel data on six sites covered by both the ERHS and a 1989 IFPRI survey, found that the decline in poverty between 1989 and 1994 was greater for household heads who had completed primary schooling than for those who had less (or no) education. Poverty reduction is defined by a headcount measure in terms of greater consumption per adult equivalent across the two periods. The decomposition results suggest that the educated were able to take better advantage of opportunities to increase consumption over this period.

In sum, this body of research is suggestive of the possible benefits of schooling in agricultural areas in terms of increasing efficiency and the adoption of innovations as well as in reducing poverty. However, there is at present no

convincing direct evidence to quantify the magnitude of the effect of education upon crop output in rural Ethiopia. That is the aim of this paper.

The Role of Schooling in Farm Production: A Few Fundamentals

From Schooling to Education

Education may have both cognitive and non-cognitive effects upon labor productivity.

Cognitive outputs of schooling include the transmission of specific information as well as the formation of general skills and proficiencies. Education also produces non-cognitive changes in attitudes, beliefs and habits. Increasing literacy and numeracy may help farmers to acquire and understand information and to calculate appropriate input quantities in a modernizing or rapidly changing environment. Improved attitudes, beliefs and habits may lead to greater willingness to accept risk, adopt innovations, save for investment and generally to embrace productive practices (Appleton and Balihuta 1996; Cotlear 1990).

Education may either increase prior access to external sources of information or enhance the ability to acquire information through experience with new technology. That is, it may be a substitute for or a complement to farm experience in agricultural production.

Schooling enables farmers to learn on the job more efficiently (Rosenzweig 1995). Education may directly influence agricultural productivity via one or more of the routes Described above. Education may also indirectly increase output through its interaction with other institutional variables. For example, schooling may substitute for access to credit by providing the skills necessary to obtain waged employment, thereby generating cash to finance agricultural investments (Appleton and Balihuta 1996). Collier and Lal (1986) note the importance of non-agricultural income for farm productivity. Remittances from migrants educated by the household may also serve this function. Furthermore, Phillips and Marble (1986) note that educated farmers are able to interact more effectively with

credit agencies, because they can understand financial transactions and keep records, increasing the likelihood of obtaining credit.

Types of Education

Cotlear 1990 describes three different types of education: formal, non-formal and informal. Formal schooling is what is usually meant by the term education. Non-formal education includes agricultural extension contacts and apprenticeships as well as adult literacy training. Informal education may refer to a wide range of experiences, including 'learning by doing' and migration or other activities which provide exposure to new ideas and facilitate learning. Formal education tends to promote formation of cognitive skills and abstract reasoning ability as well as changes in attitudes. Non-formal education most often serves to transmit specific information needed for a particular task or type of work. Informal education may serve mainly to shape attitudes, beliefs and habits.

Internal versus External Returns to Schooling

Benefits of investment in schooling may accrue not only to the person who has acquired the education, but also to other members of that person's household or village. Internal (or private) benefits of schooling include enhanced income-generation capacity as well as other quality of life improvements. External (or social) effects of schooling include the diffusion of new farm inputs and productivity-enhancing techniques.

Ironically, the presence of externalities may obscure evidence that education affects Productivity at the household level (Phillips and Marble 1986). Jamison and Lau (1982) suggest that external effects of education upon farmer productivity may not be apparent when the household is the unit of analysis, since less educated farmers may copy the agricultural practices of their more educated (more productive) neighbors. As well as presenting an empirical consideration, this point is highly relevant from a policy perspective.

CHAPTER THREE

METHODOLOGY

3.1 Research design

Explanatory design was used which helped the researcher to know the reasons why things happen the way they were. Thus the researcher came to know about this by interviewing the respondents from area of study (Bukwa district) on how/why they rely much on subsistence agriculture and the various ways through which they could achieve rural development effectively.

3.2 Study population

The study population included women, men and youth or generally individuals of 18years and above in their respective capacities who the researcher believed to be the most productive age of the economy in various sectors. This enabled the researcher to achieve the set objectives.

3.3 Selection of study sample

Using the simple random sampling in which every individual in the population under study had equal opportunities to be included in the sample under study, the research then arrived at the needed findings.

Purposive sampling also helped the researcher to arrive at the target population for a particular purpose, such as the farmers.

3.4 Sample size

The sample size of the study was 350 respondents of which 180 were female, 100 male and 70 were youth whom the researcher perceived to have had enough experience in the field of production. The sampling technique that was used was the random sampling.

3.4.1 interviews

Interviews were used in collecting data from respondents who could not read and write. Interviews also gave an opportunity to the researcher to observe on non-verbal behaviors' of the respondents verbatim.

3.4.2 Observation

Direct observation was employed in order to observe and confirm some of the obvious data required like noticing contributions in terms of what respondents believed she or he had achieved through education.

3.5 Data collection methods

3.5.1 Primary sources

In-depth interview

The in-depth interviews were conducted to collect in-depth information face to face; interviews were also engaged with open ended questions that allowed the respondents to exploitatively elaborate the issues under study. Notes from such interviews were taken after for purposes of reviewing.

Focused group discussion

This was used by the researcher to ensure that the target number of people between 8 -12 in each group was got. This ensured that the researcher was able to eliminate a crowd and fewer ideas. And dew to some of the illiteracy levels as the study took place in the village, this method was appropriate at arriving at the targeted objectives of the study.

Self-administered questionnaires (SAQ)

The researcher set and took formalized questions to the respondents; they were later collected after some time from the respondents by the researcher for presentation and analysis. This served the respondents who could read and write, this was convenient for both the researcher and the respondents since

was simpler to use and covered a large number of respondents in a relatively short time.

3.5.2 Secondary sources

This is what referred to as the documentary analysis is usually. The information collected from the field was supplemented by secondary sources like the text books, newspapers, internet and other related information about the topic under study. This explained where literature is often reviewed from.

Data analysis

Both the qualitative and quantitatively approaches were used single handedly in the research to present the findings obtained from the field. Data that was collected and presented using the statistical tabulation through the statistical package for social scientists (SPSS), other statistical tools that were used to interpret and analyze the data. These included direct interpretations (that will be done through interpretation of the information that will be availed to the researcher in the process of the interview).

Possible limitations of the study

There were several limitations that were met by the researcher in the process of executing her research study among which included the following;

- (i) Inadequate finances which were of great importance in conducting the research
- (ii) Unfavorable weather conditions like a lot of wind and too much rainfall while in the field which affected the health of the researcher thus retarding her capabilities in carrying out thorough interviews and distribution of the questionnaires.
- (iii) Limited cooperation from the respondents in the process of data collection.
- (iv) Time barrier to fully complete the report that was beating the deadline.

Ethical consideration

An introductory letter was acquired first from the Head of Research in the university and then presented to the chairperson of the area under study and respondents before the interviews were carried out. This created a good rapport between the researcher and locals of the area.

It is here that the researcher installed ethical values of confidentiality to herself (the principle that the interest of the participants should be protected) and ensured that she did not interfere with the norms and values of the community in which the study was centered.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This research was carried out on rural farming and development in Bukwa district eastern Uganda. It is presented into two sections; section one which presents the biographical characteristics of respondents which include sex, age, marital status, level of education and occupation.

Section two presents the discussion of the information given by the respondents who were interviewed during the study. It shows the objectives (specific) of the study that is; meaning of the variables (education and poverty alleviation), types of poverty, factors that have prompted the existence of poverty, values attached to education, challenges in education and the possible solutions.

Relevant information from the questionnaire set was also considered in this section.

4.2 Demographic characteristics of respondents

4.2.1 Table 1: Gender of respondents

Gender	Frequency	Percentage
Male	135	38.6
Female	215	61.4
Total	350	100

Source: primary data, 2013

Out of the 60 respondents interviewed during the study, 61.4% were female, 38.6% male as shown in the table above.

According to the discussions carried out during the study, the percentage of women was generated because they are the ones who stay at home most of the time to look after the families as well as cater for the family welfare as the

husbands look after the animals though a few of them move on for their official duties like farming which is the source of all their income hence most of them have resorted to rural farming.

Sample size: 350

4.2.2 Table 2. Age distribution of respondents

Age	Frequency distribution	Percentage
15-20	06	1.7
21-25	26	7.4
26-30	18	5.1
31-35	29	8.3
36-40	61	17.4
41-45	35	10
46-50	40	11.4
51-55	71	20.3
56 and above	64	18.3
Total	350	100

Source: primary data, 2013

From the research findings, 1.7% of the respondents ranged between 15-20, 21-25(7.4%), 26-30(5.1%) , 31-35(8.3%), 36-40(17.4%), 41-45(10%), 46-50(11.4%), 51-55(20.3%) and then 56 and above (18.3%). The groups were important in the view that, they helped the researcher a lot in knowing the age group that was a key and productive age as far as rural farming was concerned, and in this case, the moderate and old age groups were much involved (17.4%, 18.3%, 20.3%).

According to the research findings, the most groups involved were those between 51-55, in which most of them have retired from their jobs with no other option of survival followed by 56 and above who also have no option apart from rural farming and 36-40 who are in their youthful stage and even more productive in all aspects of life.

4.2.3 Table 3. Marital status of respondents

Marital status	Frequency	Percentage
Married	279	79.7
Single	42	12
Widowed	23	6.6
Divorced	06	1.7
Engaged	00	0,0
Total	350	100

Source: primary data, 2013

From the statistical information given, 12% were single, 6.6% were widows 79.7% married, 1.7% were divorced and finally 00.0% were engaged.

It was therefore observed that out of the 350 respondents who were interviewed, majority of them were married, followed by single, widows and the minorities are divorced and widowers as reflected above. This implies that among the people who carry out rural farming they are married and they involve themselves so much in this kind of activity because they have families that they have to cater for as compared to the youth who in most cases spend a lot in luxuries

4.2.4 Table 4. Level Of Education Of Respondents

Education level	Frequency	Percentage
Primary	216	61.7
Secondary	87	24.8
Tertiary	31	8.8
University	11	3.1
None	05	1.4
Total	350	100

Source: primary data, 2013

Sample size: 350

The findings revealed that most of the villages in sub-counties like suam, Bukwa , and Muimet had attained a given level of education and this was got after the discussions which were got during the interviews on the respondents. However, it was noted that there were still some individuals that had never been at school and this is justified by the data collected from the field. It was revealed that 61.7% of the respondents had gone through primary level, 24.8% had attained secondary level, 8.8% for tertiary, 3.1% for university and 1.4% had never enrolled at any level or never been at school.

The respondents that presented the highest number were those who had attained primary education than those who attended tertiary and university level of education. This is the reason as to why the people do not have enough knowledge and skills to improve on the farming practices hence have resorted to the local form of agriculture like rural farming.

sample size:350

4.2.5 Table 5. Occupation of respondents

Occupation	Frequency	Percentage
Business persons	12	3.4
Civil servants	28	8.0
Farmers(peasants)	180	51.4
Student	11	3.1
Unemployed	36	10.3
House wife	83	23.7
Total	350	100

Source: primary data, 2013

Majority of the respondents with the highest percentage of 51.4% were the farmers who engaged much in rural farming and its related activities. Most of the farmers own small plots of land due to the high population in the area with its high growth rate.

Among the respondents, 8% were the civil servants. Given the less education requirements, their level of employment is still less. Through the political movement system of government that civil servants are not allowed to join politics thus hindering them to sensitize their masses about the importance of agriculture in reference to development.

Some of the respondents (3.4%) are engaged in business and are virtual in that they drew goods and other commercialized services to the people and as well contributed to national revenue through paying taxes to the government-they engaged in retail trade and through such activities, they are able to sustain their families and the economy.

The other percentages of 3.1% student, 10.3% unemployed and 23.7% house wives formed the other portion of respondents.

The above percentages did not have their own sources of income nor land for them to practice modernized agriculture. This justifies the reason why they have resorted to simple rural farming for their survival like for food and to also maintain their family's needs and to help them against hunger.

4.3 Meaning Of Variables (Rural Farming And Development)

Rural farming was defined as the growing of crops and rearing of animals on a small scale in the rural area. it is the farming system which has just helped them to earn a living like food and just very little or nothing even for sell , development was defined as the gradual process whereby all aspects progress like social, political, cultural, economic and environmental aspects .

These definitions were revealed from individuals who had attained a given level of education. (8.8% tertiary, 24.8% secondary, 3.1% university and a very small portion of people who have ever attended primary education.)

4.3.1 Table Showing The Familiarity Of People With The Effects Of Rural Farming.

Views/knowledge	Frequency	Percentage
Yes	298	85.1
No	52	14.9
Total	350	100

Source: primary data, 2013

With the table above therefore, it shows that most of the respondents are very familiar with the effects of rural farming on development in which out of the discussions during the interview some of the effects of rural farming are as follows;

Low incomes; these were got from the discussions from the interviews carried out during the study. From the above statistics the respondents revealed that one of the major effect of rural farming on the development of the area is that it earns them very little income and sometimes not at all with the reason that the skills applied are very poor and backward and this has yielded very little output only for food and nothing for sell.

Little revenue; Uganda's economic backbone is in agriculture therefore with this form of farming in place it has led to very little for sell hence has limited the revenue to the government and this has affected the social development of the area like poor infrastructure.

Low levels of education; Rural farming according to some respondents have hindered the education of their children. This is with the fact that ma child can study primary level free of charge and when he or she reaches secondary the parents fail to get school fees just because they just depend on rural farming which only helps them with food.

Familiarity of how these effects are sources of underdevelopment.

According to the discussions conducted with the respondents during the interview, most of them revealed that the above effects of rural farming have led to underdevelopment in the following ways;

Due to the fact that this farming practice only involves growing of crops only for home consumption moreover in the rural areas there are no cops for sell and therefore making people poor to the extent that they cannot pay even taxes to the government which can otherwise help the country to meet the citizens needs like infrastructure hence leading to underdevelopment.

Most of the respondents mostly students also revealed that little revenue has led to underdevelopment in a sense that when they do not sell their crops to the neighboring countries like Kenya then it does not earn a country enough revenue

which could otherwise be used by the district and the country for developmental activities and this has led to underdevelopment.

It was also noted that rural farming has led to low levels of education which in turn leads to underdevelopment in a sense that where people do not know how to read and write then it means that they cannot adopt to any other skill or technology to improve on their farming practices and this leads to underdevelopment.

4.3.2 Familiarity of the contribution of rural farming

Knowledge/views	Frequency	Percentage
Yes	76	21.7
No	274	78.3
Total	350	100

Source: primary data, 2013

According to the statistical information obtained during the interviews, 78.3% of the respondents do not know or have never realized the contribution of rural farming to their community due to the facts like;

Despite the fact that they do grow some crops and rear animals on a small scale in rural areas, they still face the problem of hunger because they harvest very little.

Rural farming according to the respondents does not allow them to earn any income through selling of the output therefore they cannot meet their basic needs like education for their children, clothing. though they can at least get little to eat.

On the other hand, 21.7% of the respondents admitted that there is some contribution of rural farming to their community. This information was got from

the age group 56 and above in which they have to just cater for only food leaving out the rest of the needs which they term to be

4.3.3 Familiarity of the challenges experienced in the area

Views	Frequency	Percentage
Yes	348	99.4
No	02	0.6
Total	350	100

Source: primary data, 2013

According to the figure above, 99.4% of the respondents knew very well the problems or challenges that they face in Bukwa district. This information was obtained during the discussions held during the interviews while the 0.6% of the respondents was like they don't notice any challenge that their community is experiencing mainly because observation showed that they were too old like above 70 years of age.

4.4 Challenges the community is experiencing

This was part of the designed questionnaire and it was achieved through the discussions held during the interviews. in their order below the top are the most pressing challenges respectively;

Poor infrastructures; during the discussions carried out ,it was found out that poor infrastructures affect the community so much like roads, railways, hospitals, schools and even telecommunication networks. This has affected especially the farmers because they cannot transport their agricultural produce to the market or even export it to the neighboring country Kenya

Corruption which is much pronounced among politicians who facilitate the government programs for example NAADS, NUSAF and others but then end up

swindling the funds to meet their selfish needs as opposed to the aspirations of the local population. The effect is that corruption has created confusion between fulfilling manifestations, functions and promoting individual interest. The idea of corruption is still on course following Uganda's weak policies on corruption in which the accumulation of wealth is seen as a normal item.

Low levels of technology: The locals of the region are much engulfed by poverty in that they cannot afford the use of modernized tools of agriculture and the relevant technologies for example irrigation systems for times of water scarcity, tractors fertilizers and other related technologies needed to necessitate the practice of commercialized agriculture. This challenge is broadened by the limited research to boost the sustenance of the required commercialized agriculture although the region (eastern) is blessed to have an agricultural research institute; the local population is not put as priority in various trainings that are usually undertaken.

Insecurity is yet another pressing issue that has halted poverty alleviation in the sub-county. An example the rampant assaults from the karamojong warriors (pastoralists) over cattle. This scenario has made individuals to spend most of their time to guard against attack than invest in productive activities that would ensure the realization of sustainable rural development.

Pests and diseases is also a very big challenge that is facing the community especially the farmers. this happen especially during dry season where the rains delay, this causes losses to the farmers in the area and they end up harvesting very little or even nothing at all.

4.4.1 Views of the community on the solutions to the above challenges

Views	Frequency	Percentage
Yes	346	98.9
No	04	1.1
TOTAL	350	100

Source: primary data, 2013

From the table above it clearly shows that majority of the respondents had an idea on how to Solve the above challenges though how to solve them was found to be their problem. During the discussions, the solutions which were revealed include the following;

Government support. The respondents had a suggestion that the government should support them in areas like fighting against corruption through setting up strong and working policies and also take care of the national security and this will help the farmers to be stable and carry out their activities.

Sensitization of the masses. The respondents revealed that they m are even ignorant with the skills and technology which is to be applied in order to improve on their farming methods like irrigation, use of tractors and others. They believe that if this is done then they will somehow improve on their outputs.

Improvement in research; due to the changing technologies, there is need for more research especially among the youth. This will make them to keep on discovering new technologies.

Modernization of agriculture: this can be through initiatives for Agricultural Business Development Component (ABDC) that comprises the Danida-foundation Agricultural sector program Support (ASPS). The other few components of this Agricultural sector program support, a multi prolonged response to the government plan for the modernization of agriculture which has how undertaken various phases spanning 9years from july2004, are the agricultural research

components, the agricultural advisory services component, the district training and information centers component, the national reform process component, and the restoration of agricultural livelihoods in Northern Uganda component. All these components aim at breaking the substance choices of agriculture with more output and of rather high quality to meet the ever increasing demands of the individuals.

Provision of credit facilities (offering loans): This can be through the microfinance in institutions that are licensed to carry on business of providing microfinance services such as collection of savings, loans and provision, insurance money transfers services and others non-financial services that are needed by the poor as well as the micro enterprise. The clients to these microfinance institutions are typically self-employed low income entrepreneurs in both urban and rural areas; they include farmers, subsistence farmers, street vendors, service providers (hair dressers, motorcycle riders), black smith and artisans.

The various microfinance institutions that have survived and played their expected role in rural areas are FINCA, pride microfinance limited, MP Uganda, platinum credit, Uganda women's finance trust and partly centenary Rural Development Bank.

They offer credit services and to some extent savings facilitate to micro-scale entrepreneurs and poor households who cannot obtain these services from the formal financial sector. Finance products are loans for the larger period of time and structured to match flows produced by the asset borrowed for. By taking advantage of a longer period pay back and grace period for times the asset is not producing income, the community members can benefit from enhanced labor productivity and earn greater income. Further if the loan is paid, the client enjoys massive increase in income and has the advantage of owning fixed assets.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary Of Findings

Profile of respondents

From the research study retrieved, it was revealed that the greatest number of respondents were females with the highest percentage of 61.4, the age group that were greatly attained in the process of questionnaires distribution were adults (20.0%) for the level of education the highest group were those who dropped out of primary school(61.7%), marital status that was dominant in the filling of the questionnaires was the married(79.7%) and for the occupation of respondents, it was dominated by the farmers who contributed to a percentage of 51.4%.

The above summary has its base on section A of chapter four that gives the demographic characteristics of the respondents.

The existence of high rates of illiteracy or low levels of education has led to low productivity in a sense that the people are ignorant of the better methods of farming, improved quality seeds to grow, and even they do not have the knowledge to carry out more research on better agricultural practices therefore with such in place development in the area has become a wild dream.

Due to the fact that most people in Bukwa and Uganda as a whole mostly depend on agriculture it mostly affects them where the productivity is very low. With this kind of farming in place therefore it only earn the population with what to eat and very little or even nothing at all to sell and this earns them very little income which cannot sustain their standards of living like good clothing, food, shelter education and others.

Out of the study carried out realities have revealed that rural farming and development are directly related because when the environment is clearly observed it only favors agriculture in which it is the only source of development because when the output is much then it can be sold or exported to the neighboring country(Kenya) which will earn the country with revenue and foreign exchange which can be used for on social economic transformations like infrastructure, security, industries and others.

Similarly, when people are harvesting much their incomes increase and they can be able to invest and this will expand the tax base and with these taxes, the government can be able to carry out developments like infrastructure and others.

5.2 Conclusion

From the research study carried out, it can therefore be concluded that there is still too much to be done in the field of agriculture or farming in order for the development of Bukwa district to be realized. Local stakeholders for example NAADS, NUSAF and other bodies should also take time to impart and sensitize people on the skills and knowledge on how to work on their farming practices for example use of irrigation in order for them to register achievements like increased productivity, increased incomes which will eventually lead to improved standards of living hence the result will be development.

Amidst all, governments, development partners and other stakeholders should take an extensive role in thorough sensitization of the local farmers on the essence of improved agriculture like use of hybrid seeds, fertilizers, improved technology for example use of tractors and others and spell out their contribution to the increased and quality products which will lead to both rural and national development.

The government should also make agriculture a priority given the fact that it has its backbone of Uganda therefore its one of the sectors which if given serious

attention will make Uganda be among the top distributors of food not only to Kenya but also to countries like south Sudan, Sudan, Somalia and many others. Not only that it will also lead to industrial growth due to the availability of raw materials from agriculture and many other benefits which can be realized from agriculture.

5.3 Recommendations

From the research findings, the study recommendations are drawn:

Attempts have to be made to move in the direction away from rural farming (extensive sensitization of farmers on the essence of commercialized agriculture with the aim of driving them away from rural farming and its related activities). Restructuring the production output of the people and identifying a potential market for free trade, as a key to successful small-scale industrialization, thereby improving rural living conditions and diminishing poverty rates.

Bukwa District (through the district agricultural officers and planning units) should engage in support of farmers in a spectrum of activities. For instance; under the NAADS programme , the districts undertake: i) sensitization of farmers on NAADS through radio talk shows; ii) promotion of technology and food security in all the lower local governments; iii) establishment of technology demonstration sites, and iv) agribusiness, among other things.

5.5 Suggested Area of Further Studies

The researcher recommends to carry out further study on the relationship between rural farming and individual income in Suam sub county Bukwa district.

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APPENDICES

APPENDIX A: Questionnaire Schedule

Dear Respondent,

I am Chebet Lillian, a student of Kampala International University pursuing a bachelor's degree in Development studies. I am pledging for your kind participation in this research on the topic, "Effects of rural farming on development in Bukwa district Eastern Uganda". I am privileged to have you as my respondent. All the information availed to me will be treated with maximum confidentiality. Please help by answering the following questions as honest as possible. Tick where appropriate and explain where necessary. You are free to use additional paper if your information is large.

SECTION A

Social and demographic characteristics of the respondent (tick the most appropriate)

1. GENDER

i) Female ☐ ii) Male ☐

2. AGE

i) 15-20 ☐ ii) 21-25 ☐ iii) 26-30 ☐
iv) 31-35 ☐ v) 36-40 ☐ vi) 41-45 ☐
vii) 46-50 ☐ viii) 51-55 ☐ ix) 56 and above ☐

3. MARITAL STATUS

i) Married ☐ ii) Single ☐ iii) Widowed ☐
iv) Divorced ☐ v) Engaged ☐

4. LEVEL OF EDUCATION

i) Nursery ☐ ii) Primary ☐ iii) Secondary ☐
iv) Tertiary ☐ v) University ☐ vi) Never been in school ☐

5. OCCUPATION OF THE RESPONDENT

i) Peasant ☐ ii) Farmer ☐ iii) Civil servant ☐
iv) Politician ☐ v) Student ☐
vi) Others specify

.....

SECTION B; impact of rural farming to the lives of the people in this community

1.

a) What do you understand by the term rural farming?

.....

b) As a community member what are the effects of rural farming on the development of your community?

.....

c) How are these effects a source of under development?

.....

2

a) As a member of this community do you think there is any developmental contribution of rural farming to your community?

i) Yes ☐ ii) No ☐

b) If yes, what are those benefits you are now experiencing in your community?

.....

C) If no, what do you think are the reasons of your community not benefiting from rural farming?

.....

SECTION C; Challenges faced by the people of Bukwa district.

a) As a person of this community do you experience challenges in your community?

i) Yes ☐ ii) No ☐

b) If yes, what are those challenges your community is experiencing?
.....

c) If no, explain
.....

d) Do you think your community can overcome the above challenges?

i) Yes ☐ ii) No ☐

e) If yes, what are some of those measures you think can be done to overcome the above challenges?
.....

Thanks so much for your positive response

Appendix: B Questionnaire Schedule

Interview Questions for the People Who Do Not Know How To Read And Write

SECTION A; Social and demographic characteristics of the respondents **Questions**

1. What is your name? (Optional)
2. How old are you?
3. Are you married?
4. What is your level of education?
5. What is your occupation?
6. Which religion do you belong?

SECTION B; effect of rural farming on the lives of people in this community

- a) What do you understand by the term rural farming?
- b) As a community member, which kinds of farming practices are common in your community?
- c) How these practices are affect development in your area?
- d) Are these people in the community considering these practices as priority?
Yes ☐ No ☐
- e) If yes, give examples
- f) If no, explain
- g) As a member of this community do you think there is any developmental contribution of rural farming to the community?
Yes ☐ No ☐
- h) If yes what are those benefits you are now experiencing in your community?
- i) If no what do you think are the reasons of your community not benefiting?

SECTION C; Challenges faced by the people of bukwa district

Questions

- a) As a member of this community do you think your community is experiencing some challenges in respect to rural farming?
- i) Yes ☐ ii) No ☐
- i) If yes what are those challenges your community is experiencing?
-
- c) If no explain
-
- ii) Do you think your community can overcome the above challenges?
- i) Yes ☐ ii) No ☐
- iii) If yes, what are some of those measures you think can be done to overcome the above challenges?
-
- Mention some of the challenges you're facing in overcoming the underdevelopment?
-
- iv) What could be the possible solutions to the above challenges?
-

QUESTIONS FOR GOVERNMENTs AND NGOs WORKERS

SECTION A

Social and demographic characteristics of the respondent (tick the most appropriate)

1 .GENDER

- i) Female ☐ ii) Male ☐

2. AGE

- i) 15-20 ☐ ii) 21-25 ☐ iii) 26-30 ☐
iv) 31-35 ☐ v) 36-40 ☐ vi) 41-45 ☐
vii) 46-50 ☐ viii) 51-55 ☐ ix) 56 and above ☐

3. MARITAL STATUS

- i) Married ☐ ii) Single ☐ iii) Widowed ☐
iv) Divorced ☐ v) Engaged ☐

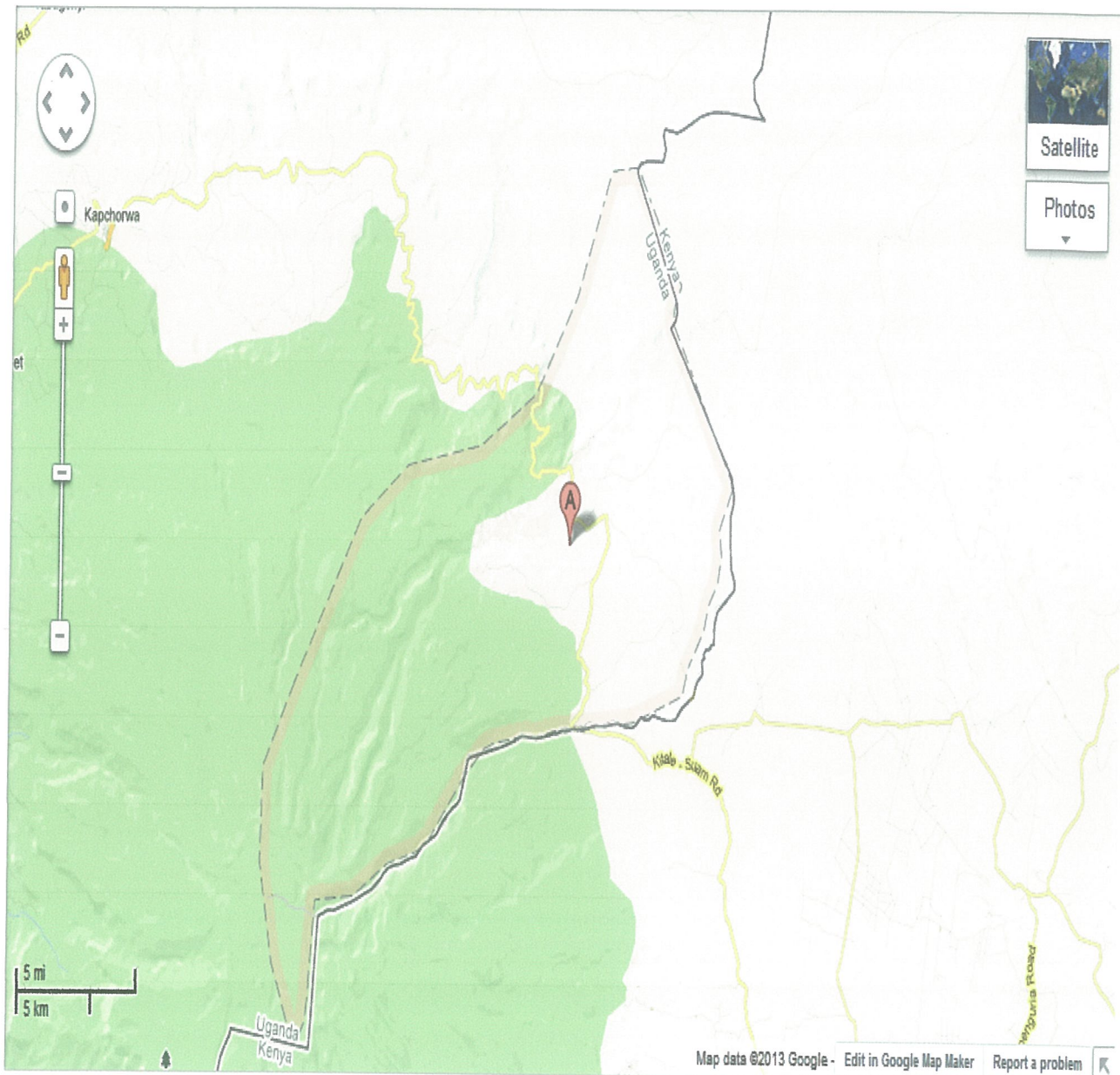
4. LEVEL OF EDUCATION

- i) Nursery ☐ ii) Primary ☐ iii) Secondary ☐
iv) Tertiary ☐ v) University ☐ vi) Never been in school ☐

5. OCCUPATION OF THE RESPONDENT

- i) Peasant ☐ ii) Farmer ☐ iii) Civil servant ☐
iv) Politician ☐ v) Student ☐
vi) Others specify

APPENDIX C: Map Showing Bukwa District In Eastern Uganda



KEY



Bukwa District



Major roads

**COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
DEPARTEMENT OF DEVELOPMENT STUDIES**

Date:

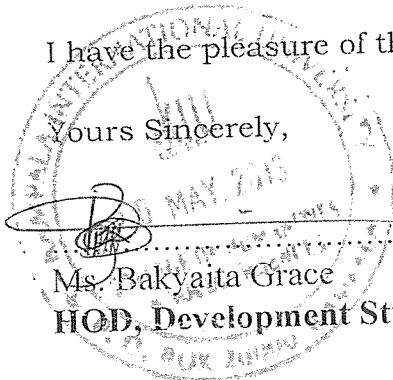
To: WILSON IT MAY CONCERN
.....
.....

RE: INTRODUCTORY LETTER FOR RESEARCH

This is to introduce to you CHABET LILIAN
Reg. No. BSC/32908/1000 who is a bonafide student of Kampala
International University. She is working on a research project for a
dissertation, which is a partial requirement for the award of a Degree. I here by
request you, in the name of the University, to accord him/her all the necessary
assistance he/she may require for this work.

I have the pleasure of thanking you in advance for your cooperation!

Yours Sincerely,



Ms. Bakyaite Grace
HOD, Development Studies and Conflict Resolution