EFFECT OF NON BANK FINANCIAL INSTITUTIONS CREDIT ON POVERTY IN KENYA: A CO INTEGRATION ANALYSIS

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DECLARATION AND RECOMMENDATION

DECLARATION

This is my original work and to the best of my knowledge has not been presented for an award of degree in this university or any other university.

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RECOMMENDATION

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DEDICATION

I dedicate this research thesis to my parents, Mr and Mrs Koske and to my brother Robert Rono and my sisters Nancy, Emily, Beatrice and Maureen.

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ABSTRACT

In the year 2013, there were 151 registered Non-Bank Financial Institutions (NBFIs) in Kenya controlling about 43% of the country's financial sector. During the past 15 years there has been large amount of empirical studies examining the relationship between NBFIs' credit and poverty reduction. A few of those studies have concentrated on household data to ascertain the effect of NBFI's credit on poverty reduction in Kenya. However, household collected data may not give a clear indication of the performance of the entire economy as far as the effect of NBFI's credit is concerned due to regional imbalances. Therefore it is against this background that this study was carried out to investigate the effect of NBFIs' credit on poverty reduction in the Kenya. The study aimed at examining the effect of NBFI's credit on the population of people living below the poverty line, the effect of NBFIs' credit on per capita income and the effect of NBFIs' credit on GDP growth rate in Kenya. Using annual time series data over the period 1980 to 2013, the study was informed by a credit model based on the vicious cycle of poverty theory. The Phillips-Perron test was conducted to test for stationarity of the variables under study after which the study employed autoregressive distributed lag (ARDL) model to examine the relationship between NBFIs' credit on Poverty reduction. This study found that NBFIs' credit has a negative and statistically significant negative effect on the number of people living below the poverty line. The study also established that NBFIs' credit has a significant positive effect on per capita income and economic growth rate. Regression results also show that increase in private investment and reduction in unemployment rates are crucial in poverty reduction in Kenya. This study recommended that NBFIs should channel more credit to the private sector so as to promote growth of the economy and consequently reduce poverty levels. This can be achieved by reducing the borrowing interest rates and collaterals so as to allow more borrowers to access credit. The results of the study are useful to the Kenyan policy makers in designing effective policies to ensure easier and cheaper access to NBFI's credit so as to raise the growth in investments, income and employment. This will consequently reduce poverty levels.

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LIST OF ABBREVIATIONS AND ACRONYMS

AKRSP	–	Aga Khan Rural Support Programme
CBK	-	Central Bank of Kenya
CBOs	–	Community based Organization
CBP	–	Central Bank of Pakistan
CMFAs	–	Client-Based Microfinance Agencies
FHI	-	Food for the Hungry International
GB	–	Grameen Bank
GoK	–	Government of Kenya
GoP	–	Government of Pakistan
GPDI	–	Gross Private Domestic Investment
IMF	–	International Monetary Fund
K-REP	–	Kenya Rural Enterprise Programme
KWFT	–	Kenya Women Finance Trust
LDCs	–	Less Developed Countries
MFPs	–	Micro finance Providers
MMFAs	–	Member-based micro finance Agencies
MSEs	–	Medium sized Enterprises
NBFI's	-	Non Bank Financial Institutions
NGOs	–	Non- governmental Organization
NRSP	–	National Rural Support Programme
SHGs	–	Self-help groups
USAID	–	United States Agency for International Development
WDI	–	World Development Indicator

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The Kenyan government identified poverty as a major problem immediately after independence (GoK, 1965). Many policies, programs and projects have been designed and implemented with the aim of alleviating poverty. However, poverty continues to afflict a large segment of the Kenyan population. Estimates from the latest Household Budget Survey show that 45.9% of the populations live below the poverty line (KNBS, 2007). Currently 46.8% of the population lives below the poverty line in Kenya (UNICEF, 2014).

Poverty has been a major concern of many governments world over and many poverty reduction programs have been developed over time and across regions. Despite these efforts, poverty continues to be a key impediment to both human and economic prosperity (OECD, 2000). As documented in various policy documents, for instance, the Sessional Paper No. 10 of 1965 on African Socialism and its Application to Planning in Kenya, the Government of Kenya directed its efforts to fighting poverty, disease and ignorance as part of its development objectives. In order to tackle poverty issue then people are advised to access microcredit from non-bank financial institutions because Commercial Banks charge high interest rate on loans and collateral security is required which poor people lack.Pitt and Khandker (2003) and Jean-Luc (2006) argue that the cause of poverty in developing economies among other things is that the low income earners and the vulnerable do not have access to credit for the purpose of working capital as well as investment for their small businesses.

On the other hand, even with growth in the financial sector, Kenya is struggling with high levels of poverty. Poverty level in the country is made worse by high levels of income inequalities. Although a lot of efforts have been made to reduce the poverty levels in Kenya, poverty remains paramount and much still needs to be done. Several anti-poverty policies have been introduced including (NPEP, 1995-2005) where the government committed itself to poverty alleviation by 2015. Despite the poor state of the economy there have been efforts to grow the financial sector in the economy with an aim of reducing poverty. Kariuki, (2004).

In Kenya the gap between the rich and the poor is huge and the major issue being distribution of wealth and income. Recent statistics for Kenya show that income is heavily skewed in favor of the rich and against the poor. The country's top 10% household's control 42% of the total income while the bottoms 10% control less than 1%.This means that for every shilling earned by the poorest 10% households, the richest 10% earn about Kshs 56. It is notable that the 8th, 9th and 10th population groups account for over 70% of the income. (KIBHS (2012).

Estimates of KIBHS (2014) on Kenya demographics indicate that 0-14 years: 42.1%; 15-24 years: 18.7% ; 25-54 years: 32.8% ; 55-64 years: 3.7% while 65 years and over: 2.8%. The Kenyan urban population makes up for 24% of total population (2011) while the rate of urbanization is 4.36% annual rate of change (2010-15). As in regards to income opportunities and socio-economic rights, the wealthier groups in Kenya generally have better access to education than the poor ones and also access better health care facilities than the poor. Also the rich have comparative access to clean water than the poor. (KIBHS (2006). These aspects clearly show that Kenya has high levels of inequality in income distributions.

Gupta *et al.* (1998), Li *et al*. (2000), Hendriks et al. (1998), and Johnston (1989) argue that corruption increases income inequality through several channels. First, to the extent that corruption decreases economic growth, which is more likely to increase the income share of the poor than the rich, it increases income inequality and poverty. Second, corruption leads to a bias of the tax system in favor of the rich and powerful, thus making the effective tax system regressive (Hendriks *et al*. 1998), which implies that the burden of the tax system falls disproportionately on the poor.

Efforts were made to establish the Kenya financial sector deepening programme in the year 2005 to support the development of financial markets with an aim of stimulating wealth creation and reducing poverty. The growth of the NBFI services in the country has been growing. Despite all these efforts many Kenyans are still stuck in poverty and with little access to financial services because of the biasness involved in accessing credit (Kibua, 2007). Although GDP growth has shown upward growth trend poverty levels are still above 47% of the total population. The contribution of NBFI credit on poverty reduction in Kenya has yet to be well assessed.

An empirical study done in Kenya by Odhiambo (2009) shows causality between bank-based financial development and economic growth. The study shows that a well-functioning banking sector supports economic growth and poverty reduction. Poverty remains a major concern of development policy in Africa and in Kenya policy regulations need to be assented to in order for the poor to have access to the privileges of accessing credit. In view of the social costs associated with poverty, poverty reduction is an important goal for development policy. This is evidenced by the attention poverty is receiving in international development debate. For example, two recent World Development Reports (World Bank, 2008; 2010), focused on poverty. Further, in the year 2000, leaders from 189 countries endorsed a set of Millennium Development Goals (MDGs) to be achieved by 2015, one of which was to 'halve' the number of people living in absolute income poverty relative to the 1990 levels. To achieve the goal, it is estimated that African countries must attain a GDP growth rate of at least 8 percent per annum.

One way of measuring human poverty, although it is far from adequate, is by using the human poverty index (HPI) introduced by UNDP in the Human Development Report of 1997. The HPI is a composite index of different features of deprivation in the quality of life that helps to judge the extent of poverty in a community. HPI measures human poverty in developing countries. The variables used are: (1) The percentage of people expected to die before age 40; (2) the percentage of adults who are illiterate; and (3) deprivation in overall economic provisioning measured by: (a) the percentage of people without access to health services and safe water and (b) the percentage of underweight children under five. The HPI is constructed by taking a simple average of the three variables. The trend in the HPI for Kenya between 1997 and 2012 is evident from Table 1. The table shows that the value of the HPI for Kenya has been rising and the poverty ranking of Kenya rose compared to other developing nations. Table 1also shows that the percentage of people living below the poverty line rose from 42 percent in 1997 to 45.9 percent in 2012 implying that half the population in Kenya was living below the poverty line in 2012

Table 1: Human Poverty Index for Kenya: 1997-2012

Human Poverty Index for Kenya: 1997-2012 Year	Human poverty index		Population below absolute national poverty line (%)
	Rank among Developing Countries	**Value (%)**	
1997	35	27.1	42.0
1998	49	28.2	47.0
1999	51	29.5	48.6
2000	49	31.9	50.0
2005	42	34.4	47.2
2010	50	35.9	45.0
2011	49	37.2	46.3
2012	48	39.9	45.9

Source: Human Development Indicators, (2013)

In Kenya the majority of the poor lack access to the basic financial services which are essential for them to manage their lives. The poor are excluded from the opportunities of financial services than the informal alternatives that are considered unsuitable. Credit is therefore considered as a vital tool to break the vicious cycle of poverty which is characterized by low incomes, low savings and low investment. According to Hulme *et al.* (1996) most institutions regard low-income households as "too poor to save". In order to generate higher incomes, savings and more investment there is need to inject capital in the form of credit.

According to the Poverty Reduction Strategy Paper (PRSP) of 1999, a large number of Kenyans gain their livelihood from the MSEs. Therefore, development of this sector represents an important means of employment creation, promoting growth, and poverty reduction in the long-term. The Government of Kenya acknowledges that greater access to, and sustainable flow of financial services, particularly credit, to the low-income households and MSEs is a major boost to poverty alleviation.

Regional poverty estimates for Kenya reveal that poverty varies widely by region and its incidence is particularly high in semi-arid areas of the country. Overall, the Kenyan poor are disproportionately found in: rural areas, households headed by widows and less educated persons. Some of the reasons put forward for high poverty rates in Kenya include: lack of income earning opportunities; inadequate human capital Investments; unfavorable agro-climatic conditions, HIV-AIDS pandemic and weak implementation of pro-poor strategies (Kimenyi 2002).

Economic growth is important for poverty reduction; however, the concern is that it may not do so substantially. For growth to impact on poverty substantially, it has to be sustained at relatively high levels. Kenya has numerous policy, regulatory and operational initiatives by government and other stakeholders to address growth, poverty and income inequality (KIPPRA, 2009). However the government emphasis more on accessing loans from Non-Bank Financial institutions. Kenya has seen growth of many NBFI's specifically structured to improve and sustain the lives of both small and medium sized enterprises and improve standards of living.

According to the World Bank, (2005), poverty is complex and multidimensional phenomenon. Poverty is normally defined as the lack of what is necessary for material well-being especially food but also housing, land, and other assets. Poverty is the lack of multiple resources leading to physical scarcity. Definitions of poverty and its causes vary by culture, gender, age, and other social and economic contexts. Nonetheless Poverty has such an adverse effect than those under it remain trapped in a vicious circle because access to basic necessities of life is lacking or inadequate. For example in rural and urban Ghana men relate poverty with a lack of material assets, whereas for women, poverty is defined as food insecurity. Perceived causes of poverty are affected by one's status and location.

Kenya's prospects for long-term growth are among the most favorable in East Africa. Sustained by its investments in infrastructure, its location as a regional business hub and gradual improvements in governance and public-sector capacity is expected to keep growing steadily, according to projections by the World Bank and the International Monetary Fund (2005). Since Kenya is still on the path to economic growth, poverty alleviation remains a challenge. Nearly a half of the country's 43 million people live below the poverty line are unable to meet their daily

nutritional requirements. According to the study done by (Asian Development Bank, 2009) accessing NBFI's credit helps to provide a broad range of small –scaled financial services to the poor, low-income households and their micro enterprises. Most of the NBFIs not only provide loans to the poor also try to increase their income by mobilizing savings. Apart from education which is a factor that contributes to human development, also empowerment is a variable that indicates improved standards of living.

In Kenya, despite the steady growth of the economy, more than a half of the country's population lives below the poverty line, on less than one US dollar a day. The most vulnerable are families and children living in the urban slums; in the arid lands of northern Kenya, and; in areas of the country worst affected by HIV. These are also the areas with high child mortality and low enrollment in school. Therefore the entire population is advised to access micro-credit because it's recognized by donors and development agencies to improve lives and tackle multidimensional aspects of poverty, (such as access to education, improvement of shelter, and increasing money-making activity among others).

1.2 Statement of the Problem

In Kenya, there are limited empirical studies on the effect of NBFI credit on poverty reduction. In addition, these empirical studies only examine effect of NBFI's credit on poverty reduction using individual household data of which may not give conclusive results on the extent to which credit can be used to alleviate poverty in Kenya due to regional imbalances. Other studies done in Kenya include financial development and poverty reduction using time series data (Odhiambo, 2009) and it has been shown that there exists a positive causality between financial development and poverty reduction. This study therefore was carried out to compliment other existing empirical studies done using time series data to show the existing relationship between NBFI's credit and poverty reduction in Kenya. Efficient and reliable access to credit may help mobile savings and create capital to SME's hence boost private investment through increase in incomes and employment creations. This study was important in order to prescribe policy recommendation to help reduce poverty in Kenya.

1.3 Objectives of the Study.

1.3.1 Broad Objective

The broad objective of the study was to analyze the effect of Non-Bank Financial Institution's credit on poverty reduction in Kenya over the years 1980 – 2013.

1.3.2 Specific Objectives

i) To determine effect of Non-Bank Financial Institution's Credit on population of people living below the poverty line in Kenya.

ii) To determine the effect of Non-Bank Financial Institution's credit on per capita Income in Kenya.

iii) To examine the effect of Non-Bank Financial Institutions Credit on GDP growth rate in Kenya.

1.4 Research Hypotheses

i) Non-Bank Financial Institution's credit has no significant effect on the Population living below the poverty line in Kenya.

ii) Non-Bank Financial Institution's credit has no significant effect on per capita income in Kenya.

iii) Non-Bank Financial Institution's credit has no significant effect on GDP growth rate in Kenya.

1.5 Significance of the Study

This study found the effect of NBFI's credit on poverty reduction in Kenya. The study was important for government policy makers in order to design mechanisms to use NBFIs credit as a poverty alleviation tool. The study also encourages NGOs and MFIs to channel more funds in the form of Revolving Loan Funds to the deserving poor to enable them improve their living standards and increase their per capita income. The study has also contributed to the body of existing knowledge on NBFIs credit and poverty reduction in Kenya and is useful for scholars who have some interest in conducting research within this topic.

1.6 Scope and Limitation of the Study

This study focused on the effect of NBFI's credit on poverty reduction in Kenya using annual data over the period 1980-2013. The period was chosen based on data availability for the period. Also the period was chosen decisively because NBFI's became active from the year 1980's therefore being the best period to conduct the analysis.

The main constraint was that data was missing for some variables. However, data was sought from other sources, which included Economic Surveys, Republic of Kenya poverty and social indicators reports and CBK prudential guidelines. The study concentrated on Kenya because it is a developing economy with huge income disparities.

1.7 Definition of Terms

GDP (Gross Domestic Product) - Gross domestic product is the market value of all officially
recognized final goods and services produced within a country in a year, or other given
period of time. GDP per capita is often considered as an indicator of a country's standard
of living

Inequality – Is the state of affairs in which assets, wealth, or incomes are distributed unequally
among individuals in a group, among groups in a population, or among countries.
Inequality in this study will be measured using the Gini coefficient.

Interest Rate - is the rate at which interest is paid by a borrower for the use of money that they
borrow from a lender. Specifically, the interest rate is a percent of principal paid a certain
amount of times per period usually quoted per annum.

NBFIs- is a financial institution that does not have a full banking license or is not supervised by
the central bank of a country.

Per Capita Income - Per capita income refers to average income or the measure of the wealth of
the population of a nation in comparison to other nations. Per Capita Income is often used
to measure the standards of living of a country.

Poverty – Poverty is defined in many forms one being poverty takes many forms including lack
of income and productive resources to ensure sustainable livelihood, hunger and
malnutrition, ill health, limited access to education and other basic services, increased
morbidity and mortality rates, homelessness and inadequate housing, unsafe
environments, social discrimination and exclusion. It is also characterized by lack of
participation in decision-making in civil, political, social and cultural life and the second
is a situation where a person earns 1.25 dollars a day. Source- WB (2014)

Poverty Line – Is a border line defined as a household who earning a per capita income of 1.25
US dollars a day.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews some of the related work and summarizes the results of the empirical research that has been done on poverty reduction. It also presents the theoretical structure of the vicious cycle of poverty model.

2.2 Theoretical Literature

World Bank (2005) categorizes poverty depending on the approach used in measuring it. For example, the income based definition of poverty seeks to specify a level of income per capita in a household below which the basic needs of the family cannot be met. However, it does not acknowledge variations in costs of similar goods for different consumers. The vital importance of non-market household production and non-monetised exchanges in poor families is not counted.

Despite the many facets of defining poverty, World Bank (2000) admits that we have misconceptions about the poor, why they are poor and what is needed to help them out of this vicious cycle. Regardless of the many definitions of poverty and its multi-dimensional perspective, we can conclude that overall poverty takes many forms including lack of income and productive resources to ensure sustainable livelihood, hunger and malnutrition, ill health, limited access to education and other basic services, increased morbidity and mortality rates, homelessness and inadequate housing, unsafe environments, social discrimination and exclusion. It is also characterized by lack of participation in decision-making in civil, political, social and cultural life.

Several theories have been put in place to explain poverty. These theories can be classified into two types: Cultural and Structural theories. Cultural theories find the explanation for poverty in the traits of the poor themselves. According to Levitan *et al.,*(2003) these theories assert that it's the assessments, attitudes and behavior patterns of the poor which prevent them from being socially mobile. In contrast, structural theories explain poverty in terms of the conditions under which the poor live: unemployment, underemployment, poor education and poor health.

The distinctive traits of the poor so central to the explanation of the cultural theorists are for the structural theorists, responses or adaptations to the hostility of the structural conditions the poor face. Structural theorists according to Levitan *et al.* (2003) fully accept the cultural theorist's characterization of the poor; they merely place another interpretation on it. Both types of theorists also believe that poverty is often cyclic, that successive generation of the same family remains poor. According to the cultural theorists the poverty syndrome is the explanation for the poverty cycles. On the other hand, the structural theorists explain the poverty cycle in terms of the persistence of inimical structural conditions over time.

Cultural theorists attribute the persistence of poverty to the poor themselves, arguing that as individuals they are to blame for their own poverty, or as groups they develop a culture of poverty that perpetuates their poverty. According to Dean and Taylor-Gooby (2002) interactionist approach also tend to agree with cultural theorists and argue that the structure of society creates a culture of poverty among the poor which perpetuates the structure of society and so forth.

In the 19th Century a sociologist by the name Spencer (1999) explained how Individual theory leads to poverty. Spencer claimed that the poor were lazy and those who did not want to work should not be allowed to eat. Spencer *et al.* (1999) attributes poverty to bad moral character and argued that the state should intervene as little as possible. It's Herbert that coined the phrase, "the survival of the fittest". Another sociologist Marsland (2000) typifies this approach and argues that low incomes are caused by the generosity of the state and additionally public expenditure on income support withdraws money from investment in the industry. He argues that benefits should be targeted at only those in genuine need such as the disabled.

According to the participatory poverty assessment study in Tanzania (World Bank, 1997), wealth is associated with the ability to meet basic needs, particularly food. In that study, poverty was associated with skipping meals, cutting meals to one or two per day, involuntary changing diets, sending children to eat at neighbour's homes, and children performing poorly in schools as hunger makes them skip classes and affects their attention in class.

Beginning in the early 1990s in Kenya, government expenditure on education, health and other social services decreased due to rising pressure from the World Bank and the IMF to reduce

government expenditure. Extremely low per capita incomes limited the ability of many communities and households to contribute more private funds to the education of their children. The additional burden on low-income households had a negative effect on school enrolment, especially enrolment of girls, as the demand for education is price sensitive in low-income households (Kabubo and Kiriti, 2001).

2.3 Non-Bank Financial Institutions

According to Jeffrey *et al.* (2002) Non-Bank Financial Institutions are institutions that do not have full banking license or is not supervised by a national or international banking regulatory agency. NBFI's facilitate bank-related financial service, such as investment, risk pooling, contractual savings and market brokering. Examples of NBFI's in Kenya include insurance firms, microfinance institutions, Sacco's and Cooperatives, ROSCA's, pension funds, mutual funds, brokering firms and real estate financiers.

NBFI's sole aim is to strengthen an economy by providing multiple alternatives to transform an economy's saving culture into a Capital Investment. NBFI's supplement banks by providing the infrastructure to allocate surplus resources to individuals and companies with deficits. NBFI's provide services that are tailor made to suit the needs of clients who are the low-income earners. Also it is multi-faceted with financial systems that protect economies from financial shocks and enable speedy recovery when these shocks happen, however an effective financial regulation should be put in place to govern the functioning of NBFIs.

Levine *et al*. (2000) defines NBFI as institutions that do not accept deposits or handle accounts like traditional banks but provide all other form of services like loans, share trading accounts and investment banking. The World Bank promotes the development of sound and accessible NBFI's across emerging markets and developing countries. This will enable households to have access to diversified Savings and Investment instruments, to buffer the poor against the risks of sickness and catastrophic events such a drought, floods, hurricanes and earthquakes to finance investments in infrastructure and housing, and to support the development of SME's from start-up to growth.(World Bank, (2003)

NBFI's in Kenya were set up to fill a gap in the financial system and rectify inefficiencies in loan facilities. These specialized financial institutions supplement the availability of finance provided

by commercial banks. They supplement commercial Banks mainly in deposits and in lending out credit to potential investors. The NBFI's are both public and private. These institutions mobilize savings in competition with commercial banks. The savings are then channelled into credit for commerce, agriculture, industry and household sectors. Kenya continues to develop a wider range of these financial institutions.(Kariuki and Misaro (2008).

In 1980's NBFI's grew rapidly in number, assets and liabilities. The growth of NBFI's was a development that was so positive. Registered NBFI's in Kenya include: Housing Finance of Kenya, Savings and Loan Kenya Ltd, Akiba loans and Finance Ltd, Kenya National Capital Cooperation Ltd, Commercial Bank of Africa Finance company, The Kenya Commercial finance company, Mombasa Savings and Finance Ltd and Industrial Development Bank all aimed at mobilizing savings for clients and offering loans to SME's. These NBFI's supplement Banks by providing the infrastructure to allocate surplus resources to individuals and companies with deficits.

According to Markismovic *et al*. (2001) there is high correlation between financial development and Economic growth. Generally a market based financial system has better-developed NBFI's than a bank-based system, which is conducive for economic growth. A multifaceted financial system that includes NBFIs can protect economies from financial shocks and enable speedy recovery when these shocks happen. This shocks tends to affect consumption patterns of individuals and its expected that domestic savings will also reduce. NBFI's provide multiple alternatives to transform an economy's savings into capital investment, which serves as back-up facility should the primary form of intermediation fail. Also NBFI's promote and develop commercially viable projects. According to Markismovic *et al*. (2001) NBFI's create a more competitive environment in the financial system. Enhanced competition improves operational efficiency and lowers financial intermediation costs. This promotes Savings and Investment and thus has a direct impact in economic growth.

The most vibrant sector of Non-Bank Financial Institutions is the Microfinance institutions. Irobi (2008) defines microfinance as provision of financial services such as loans (credit), savings, micro leasing, micro-insurance and payment transfers to economically active poor and low income households to enable them engage in income generating activities or expand and grow their small businesses.

The diversity of services offered by microfinance reflects the fact that the financial expectations of low-income individuals or households and small enterprises can change considerably over time. These services can help households improve per capita income, increase savings and increase household consumption expenditure. Services here include savings, loans, remittances and insurance. Because of these varied needs, and because of the industry's focus on the poor, microfinance institutions often use non-traditional methodologies that are not practiced by the formal financial sector in order to reach the poorest of the poor hence breaching poverty gaps between households. Besides, over the last two decades, a rising number of formal sector organizations (non-government, government, and private) have been created for the sole aim of meeting the needs of the less fortunate in the society.

Conversely microfinance acts as a credit methodology which utilizes valuable collateral substitute for short-term and working capital loans to micro-entrepreneurs and therefore in many ways this micro finance acts as a subsidy which will help improve standards of living of entrepreneurs by mobilizing savings and increasing income. According to IFAD (2005) dealing with rural poverty is tackling the problem at its source. Although the importance of poverty reduction has now been tremendously acknowledged and therefore sufficient attention is now being channeled to rural poverty reduction.

As an industry, microfinance is a relatively new phenomenon in Kenya, with a few agencies starting about 20 or so years ago but the sector gaining the status of an industry only in the last 15 years. The provisions of financial services to the low-income households and micro and small enterprises (MSEs) provide an enormous potential to support the economic activities of the poor and thus contribute to poverty alleviation. Widespread experiences and research have shown the importance of savings and credit facilities for the poor and MSEs. This puts great emphasis on the sound development of microfinance institutions as vital ingredients for investment, employment creation and sustainable economic growth. IFAD (2005)

CGAP (2003) in its study argues that microfinance is a powerful instrument against poverty. Access to sustainable financial services enables the poor to increase incomes, build assets, and reduce their vulnerability to external shocks. Microfinance allows poor households to move from everyday survival to planning for the future, investing in better nutrition, improved living

conditions, and children's health and education. Yunus *et al*. (1999) supports by saying that microfinance is not a miracle cure that can eliminate poverty in "one fell swoop". But it can end poverty for many and reduce its severity for others. Combined with other innovative programs that unleash people's potential, micro-credit is an essential tool in our search for a poverty-free world.

The Government of Kenya (GoK) has indirectly provided a boost to the microfinance sector. During 1992-1994, the GoK has been implementing a Structural Adjustment Program which has resulted in the liberalization of the economy. Therefore in order to counter the possible initial negative social impacts of the liberalization process, the Government of Kenya identified areas and project that need external donor support, including small-scale and micro enterprises. Lack of access to credit was considered a major bottleneck for entrepreneurial development. The international donor community responded generously. Microfinance agencies became donor darlings and to date a conservative estimate is that the microfinance industry has so far received a total of USD 80 million. Munguti (2013)

Therefore, an appropriate policy, legal and regulatory framework to promote a viable and sustainable system of microfinance in the country has been developed via the proposed deposit taking microfinance bill. In drafting the Bill, the Government had consulted with stakeholders to get their views on the best way to create the required enabling environment for the microfinance sub-sector. In addition, full-fledged microfinance units have been established under the Ministry of Finance and the Central Bank of Kenya to formulate policies and procedures that address the challenges facing microfinance institutions especially those in the rural areas, and to build a database that facilitates better regulation and monitoring of their operations. CBK (2005)

Kenya Rural Enterprise Programme (K-REP) can be considered the pioneer of NGO microfinance in Kenya. With a greater support from USAID, K-REP was designed as an agent non-governmental organization in 1984 to provide credit and technical assistance to other NGOs in Kenya. Due to the pioneering and supportive roles of K-REP together with NGOs imitating the Grameen Bank approach, Kenya witnessed the emergence of other NGO-microfinance

agencies in the 1990s, using adapted versions of the Grameen Bank group-lending model. In this regard, we might deduce and say that Kenya evolved as the Bangladesh of Africa. KWFT (2002)

Over 100 organizations, including about 50 NGOs practice some form of microfinance business in Kenya. About 20 of the NGOs practice pure micro financing, while the rest practice micro financing alongside social welfare activities. Major players in the sector include Faulu Kenya, Kenya Women Finance Trust(KWFT), Pride Ltd, Wedco Ltd, Rafiki microfinance, Small and Medium Enterprise Programme (SMEP), Kenya Small Traders and Entrepreneurs Society (KSTES), Ecumenical Loans Fund (ECLOF), Vintage Management (Jitegemee Trust) and JOYWO(Joyful Women organisation). The Kenya Post Office Savings Bank (KPSOB) is also a major player in the sector but only to the extent of providing savings and money transfer facilities. Many microfinance NGOs have successfully replicated the Grameen Bank model of delivering financial services to the low-income households. CBK (2005).

Microfinance institutions in Kenya are registered under eight different Acts of Parliament. They include the Non-Governmental Organizations Co-ordination Act, the Building Societies Act, The Trustee Act, The Societies Act, The Co-operative Societies Act, The Companies Act, The Non-Bank Financial Institutions Act, and The Kenya Post Office Savings Bank (KPOSB) Act. Regulation and supervision of the microfinance sector is expected to lead to quality economic growth, broaden the funding base for MFIs eligible to mobilize and administer deposits, credit facilities, other financial services, and initiate the process of integrating these institutions into the formal financial system. CBK (2005)

Depending on the purpose, two approaches are generally used to categorize the different providers of microfinance services in Kenya. The first and most commonly used one is on the basis of formality where providers are categorized as formal or informal depending on the extent to which the provider is registered and regulated under formal law and transactions are governed under the various statutes of the law of contract or rather by self-regulation or group-based rules. The second categorization is based on the customer/provider relationship in the management and ownership of the financial service-providing entity. Under this categorization, microfinance

providers could be dichotomized into client-based microfinance agencies (CMFAs) and member-based microfinance agencies (MMFAs). KWFT (2002)

K-REP (1999) in its study points out that *Client-based microfinance agencies* comprise of all microfinance providers, formal or informal, where customers are not also owners of the institution, have little direct involvement in the management of the institution, and do not have a share in the returns made by the institution. These include about 130 Non-Governmental Organizations, a small number of commercial banks and private companies as well as hundred thousands of informal microfinance providers, such as traders, shopkeepers, specialized money lenders, family and friends. By mid-1999, it was estimated that the formal segment of this category comprised of 86 institutions, with a total of 134,612 active clients and a loan portfolio of Kshs 2.5 billion.

Member-based microfinance agencies comprise of formal and informal mechanisms where resources are mobilized from members, management of the arrangement is in the hands of members and it is members who constitute the main target group for service provision. The formal segment of this largely comprise of both urban and rural Savings and Credit Cooperatives estimated to number 4,000 by mid-1999 with a combined total of 2.9 million members, an outstanding loan portfolio of Kshs. 22 billion, and savings deposits standing at Kshs. 29 billion. World Bank (2001)

The gap that was expected to be covered in this study was to show that NBFIs can be used to alleviate poverty reduction on the macro level, the study is expected to show how per capita income increases and how GDP growth rate changes as a result of access to credit in Kenya. Such a study is important in order to conduct further research in such an area of specialization.

2.3.1 Grameen Model
The roots of microfinance are evident, but the best known story is that of Yunus the Bangladesh's Grameen Bank. Yunus (1980) was recognized with disbursing the first micro-loan in Bangladesh in 1974. He later went on to find the Grameen Bank (GB) and was awarded the 2006 Noble prize for his hard work. Yunus (2001) reiterates that the GB was licensed to operate as a National bank in1983, with 75 branches spread in five districts of the country. As at 1997,

the bank reached about 2.5 million clients in 37,000 villages and the total amount of loan granted amounted to US$ 2 billion with a settlement rate of over 97%.

Grameen Bank lending system is purely group-based and participatory. It also offers other incorporated services in addition to credit like training and education in health, nutrition and home food production. The bank has a highly decentralized organization with branches that are profit maximisers working discreetly. Employees are said to be highly motivated to help the poor as they are awarded according to performance and productivity. According to Yunus, poor people require opportunities not charity all the time. This statement is supported by Roth *et al*. (1997) and says that if the poor are given charity today and none tomorrow then it does not help in ending their poverty at all. Opportunities established to them will go a long way in assisting or aiding their businesses thereby ending poverty.

2.3.2 The Asian Model

The Asian model replicates the Grameen model of microfinance, founded by Yunus (1980) that advocates micro lending to the poor, especially women as they are believed to be less likely to default compared to men due to children obligations. The Asian model of microfinance is referred as a double bottom-line company because of its social objective of reducing poverty and also profit seeking objective. Mutually the goals of these organizations are weighted equally and their performance is then judged through their achievement of nonfinancial missions which includes supporting children through high school all the way to universities.

The Asian model which has replicated Grameen's well-structured establishment has very often created a strong microfinance institution that plays a part through large scale disbursement of small amounts hence incurring high administration cost in the process. Nevertheless these high costs are met by timely repayment of up to 94% equal to that of the Chase Manhattan Bank. It is the human factor which Asian model possess that has an integrated advantage that other microfinance institutions lack. Based on asset sizes, Indian MFIs can be divided into three categories: First are institutions that are able to scale up their funds under management dramatically due to their ability to attract commercial capital, the second category, include both NGOs and for-profit MFIs which have high growth rates. The third type comprises of MFIs equivalent to NGOs that are striving to achieve significant growth. Yunus (1980)

2.3.3 The Latin-American Model

The Latin American model is conducted in the form of solitary lending where lending is given to individuals as opposed to groups. It focuses on profit maximization and has objectives that are closely aligned with financial institutions in developed economies. There are various variations of the Latin American model, however all of them use a common measurement of success that is largely through the financial earnings, performance and ownership therefore it is similar to "commercial" MFIs, justified by raising significant amounts of capital through IPOs or private equity investors. One such example is Banco Compartamos, a Mexican Microfinance firm that had a successful initial public offering (IPO) in 2007, which lately has been denounced by Mr. Yunus and others for charging high interest rate close to 100% a year. The Latin American model approved by leading institutions has a commercial orientation in its operations and is driven by financial performance and ownership contract.

Other forms of NBFI's include Sacco's and Cooperatives whose main aim is to promote economic interests of its members, also promote thrift among its members by affording them an opportunity for accumulating their savings, and to create thereby a source from which loans can be made to them exclusively at a fair and reasonable rates of interest and to use and control their money for their mutual benefit. Others include ROSCA's which entirely is to help members meet their daily needs and smoothen there consumption patterns as well as help members borrow from each other. Kariuki (2004).

This study was therefore based on the Grameen model of lending system.

2.4 Effect of Non-Bank Financial Institutions on Poverty Reduction

Strategic frame work for IFAD (2002-2006) argues that the poor need to be provided the chance to build individual and collective capabilities in order to gain access to economic opportunities and basic social services and infrastructure. Lennart *et al.* (2004) supports by saying that NBFI's credit is one way of fighting poverty in rural areas, where most of the world's poorest live. It puts credit, savings, insurance and other basic financial services within the reach of poor people. Through NBFI's such as credit unions, financial non-governmental organizations and even commercial banks, poor people can obtain small loans; receive money from abroad as transfer earnings and safe guard their savings. These services are crucial tools that absorb economic

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shocks and reduce vulnerability against poverty. Many people however have to turn to informal money lenders who charge exorbitant interest rates thereby condemning them to more financial constraint.

Hulme *et al*. (1996) argues that NBFI's credit is considered a vital tool that breaks the vicious circle of poverty which is characterized by low incomes, low savings and low investment. Most institutions regard low-income households as "too poor to save". In order to generate higher incomes, more savings and more investment, there is need to inject capital in the form of NBFI's credit. Poverty is frequently the result of powerlessness. The proponents of NBFI programmes as a solution of poverty ignore the complex matrix of power relations that circumscribe the capacities of the poor to run micro enterprises.

It is argued that stimulating economic growth, making markets work better for the poor and building their capacity is the key out of their poverty situation. There is need to change the whole context of the lives of the poor and economic activities which do not produce enough surplus to lift their standard of living. Some critics argue that the necessary infrastructure has been put in place in some areas for NBFI's credit to trigger economic processes but very little success has been recorded which makes the problem of poverty and the poor very tricky.

2.5 Empirical Literature

Morduch and Haley (2002) in their study explain that one tool that has been recognized as effective in improving many aspects of the lives of poor is microfinance. It has become a well-known and celebrated within the framework of development aid. It is said to contribute positively and in different ways to the improvement of the welfare of the poor people. CGAP (2002) and Wright *et al*.(2000) further supports the study done by Morduch and further point out that microfinance display positive impacts on the first six out of the eight UN´s Millennium Development Goals.

Nyakambi (2014) in a study analyzed the effect of microfinance on poverty reduction in Nakuru county and found out that microfinance credit access positively contributes to alleviation of poverty at the household level in Nakuru County by providing financial access to low income earners, less educated, and those in the informal sector which helps in the expansion of business,

acquisition of property, better education access and better health care services. The study used household level data using purposive sampling to conduct the study.

Roodman and Qureshi (2006) in their study further analyzed how microfinance work and found out that institutions have to devise suitable solutions to constraints like, controlling costs, keeping repayment costs high and preventing fraud if they are to deliver favorable financial services to the poor.

Peterson and Kiiru (1997) in their study argue that various approaches to credit for micro and small enterprises have been tried in Kenya by different institutions with varying degrees of success or failure. Major approaches include: minimalist versus integrated approaches; group based lending versus lending to individuals; village banking and linkage programs. Minimalist approaches and group-based lending have been very popular and much tried by leading NGOs in the field of microfinance, like K-REP, KWFT and Faulu Kenya. Minimalist approaches basically concentrate on the provision of loans, giving no or at most some functional attention to training or technical assistance. Group-based lending schemes have been very often based on the Grameen Bank method.

Group-based lending has been designed and developed in Bangladesh with a view to deliver financial services to the poor, who have no access to formal banking services. According to Peterson and Kiiru (1997) key features of the Grameen Bank method as applied in Kenya are Group-lending approach where clients organize themselves into groups or use informal groups for purposes of attaining economies of scale from the small sized transactions and instituting group-based guarantee mechanisms. Character-based credit appraisal is based on character assessment, rather than traditional collateral (ownership of land or other assets) and viability of the projects to be financed. Focus on micro-enterprises concentrates on financing very small businesses of the poor.

Lennart *et al*. (2004) explained that microfinance is an effective way for people to increase their economic security and thus reduce poverty. It enables poor people to manage their limited

resources, reduce the impact of economic shocks and increase their assets and income. Generoso and Vineet(2005) in their study noted that Microfinance was very instrumental in Bangladesh, Central America, Haiti and Rwanda in helping the poor reinvent themselves after natural and man-made disasters occurred. While assessing the impact of microfinance on the Tsunami disaster, Generoso *et al*. (2005) noted that microfinance has a great potential in improving the lives of the less fortunate and disadvantaged in the economy.

In a study done by Bichanga W. and Makanga N. (2014) to examine effect of micro credit on poverty reduction, used descriptive survey design, and also using representative samples to collect data, found out that Microfinance institutions play a significant role in poverty reduction. Their study found out that effective utilization of credit help boost economic activities of the poor and this has a multiple effect in reducing poverty levels in the society. Therefore this study was supposed to bridge the gap and show how data collected using aggregated variables of the economy can be used to show how poverty reduction can be reduced using the Non- Bank Financial Institutions credit.

2.6 Theoretical Framework

The study was informed by the proponents of vicious cycle of poverty theory to analyze the correlation between NBFI's credit and poverty reduction in Kenya. This study focused on a credit model that seeks to explain how NBFI's credit can be used as an instrument for poverty reduction Nurkse, (1967; 1971) explains that poverty perpetuates itself in mutually reinforcing vicious circle on both supply and demand sides. It is argued that, perhaps, the most important circular relationships of a kind are those that affect the accumulation of capital in economically backward country or society. Such economies are characterized by inequality both in resource allocation and gender biasness.

Explaining the supply side, Nurkse (1971), hold the view that there is a small capacity to save due to low level of real income in such an economy. The low real income is a reflection of low productivity, lack of capital, resulting in small capacity to save. With regard to the demand side, it is argued that, demand for capital is influenced by incentive to invest. However, the lack of zeal to invest could be due to low purchasing capacity of the people, small real income and as a

result of low productivity. Low productivity, however, could be due to small amount of capital used in the production, which may be caused partly by less incentive to invest. Meanwhile, the low level of real income, due to low productivity, is an issue that is common to both supply and demand sides of the circles.

Nevertheless, Aryeetey (2004) argues that a household that is constraint in its access to credit or other assets may not be able to survive a negative event. Aryeetey notes that in practice, many households survive but at the cost of adopting risk averse production strategy. However, proponents of microcredit believe that microcredit can transform the vicious circle of poverty into a virtuous circle.

The theoretical link between finance and poverty can be traced back to the Mckinnon Conduit Effect (Mckinnon 1973). Mckinnon 1973 says financial development leads to increase in domestic savings which is good for the poor as it then increases investment undertaken by the poor. This statement is further supported by Jeannency and Kpodar (2005) who assume that financial development is beneficial to the poor as it has a positive effect on Economic growth.

2.7 Conceptual Framework.

Figure 2.1 attempts to contextualize the theoretical framework to the objectives of the study, the hypotheses and how the procedures of data analysis relate to the problem of the study. The conceptual representation shows the independent variables which include, Non-Bank Financial Institutions Credit, Unemployment rate, Private Investment, Human Capital, and Inflation. The dependent variables include: population of people living below the poverty line, per capita income and GDP growth rate. The intervening variables comprise of weather patterns, Forex fluctuations, Economic recession and Political instability. Non-Bank Financial Institutions credit is expected to increase informal sector productivity because, in essence, the informal sector is the biggest beneficiary of Non-Bank Financial institutions credit. The interaction between Non-Bank Financial Institution's credits with the informal sector implies increased private investment, reduced unemployment rates, inflation reduction, and then budget deficit is reduced. This will subsequently lead to reduced poverty levels.

Independent Variables   **Dependent variables**

```
┌─────────────────────────┐                    ┌─────────────────────────┐
│                         │                    │                         │
│                         │                    │  Population of people   │
│   NBFI's credit         │                    │  living below the poverty│
│   Unemployment rate     │────────────────┐──→│  line.                  │
│   Private Investment    │                │   │  Per Capita Income.     │
│   Human Capital         │                │   │  GDP growth rate.       │
│                         │                │   │                         │
│                         │                │   └─────────────────────────┘
│                         │                │
└─────────────────────────┘                │
                                           │
                                           │
                        ┌──────────────────┴──────────┐
                        │                             │
                        │                             │
                        │   Weather patterns          │
                        │   Forex fluctuations        │
                        │   Economic recession        │
                        │   Political instability     │
                        │                             │
                        │                             │
                        └─────────────────────────────┘
```

Intervening Variables
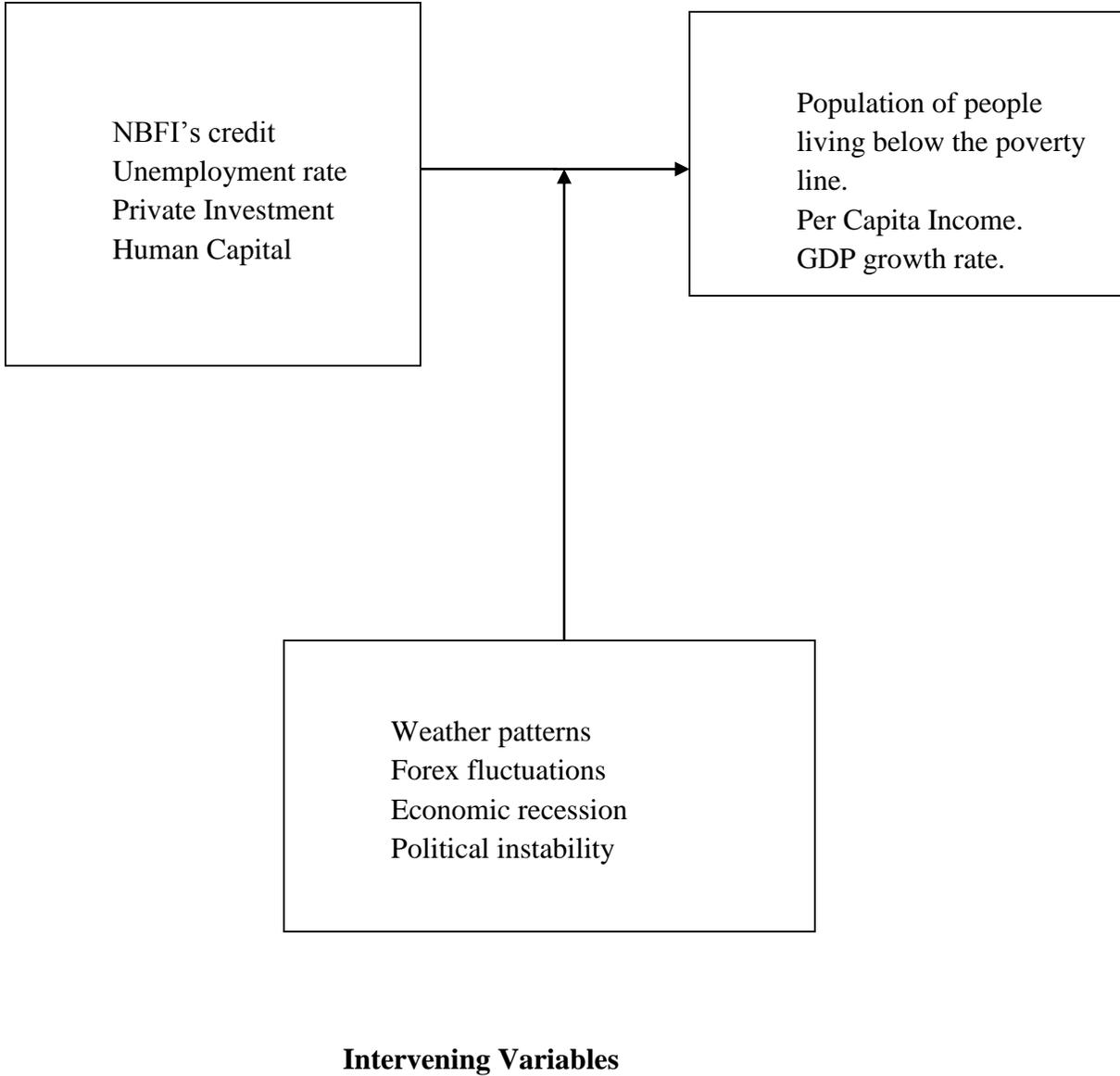
Figure 2.1: Conceptual Framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This section introduces the research methodology used in carrying out this study. It includes the research study area, research design, data collection and data analysis of the various objectives discussed in the study.

3.2 Study Area

The study area is republic of Kenya. Data period covered in this study is between1980-2013. Kenya was chosen for this research because although the economy of Kenya is the largest by GDP in Southeast and Central Africa, poverty levels are still high at levels of 45.9%(KNBS, 2007) which is almost half of the country's population. Also Kenya is marred by inequality in terms of wealth and resource distribution which subsequently leads to high corruption levels and therefore acutely justifying the need to analyze how poverty reduction is of importance in Kenya. Despite efforts of increasing government expenditure, Kenya's poverty level continues to be a key impediment to both human and economic prosperity (OECD, 2000). However in recent times government of Kenya identified lack of access to credit as being a major bottleneck for entrepreneurial development and rise in poverty levels and since then NBFI's have been set up to help the low income earners improve their welfare and up to the year 2012, real per capita income for Kenya has increased significantly from 4.2% to 5.8%. (CBK, 2012)

3.3 Research Design

Since the study is a case for testing the hypotheses of causal relationships between variables, then the study used historical research design. This kind of research design is to provide information on potential -effect relationships, associations or impact of one variable on another. In this case, the study looked at the effect of Non-Bank Financial Institutions credit on poverty reduction in Kenya. Variables that affect poverty were analyzed and inferences made whether NBFI's credit helps alleviate poverty in Kenya. This procedure helped to reduce bias, increase reliability and permit drawing of inferences about causality.

3.4 Data Type and Sources

Annual time series data was obtained from World Development Indicators and Central Bank of Kenya website from the period 1980-2013. The data obtained was then deflated by GDP deflator to convert them in to real values in order to remove inflationary effects.

3.5 Model Specification
In this section the empirical model specification and the estimation techniques are presented after the pre-estimation tests.

3.5.1 Analysis Techniques

This section presents analysis techniques used in the study. They include Descriptive Statistics, Unit root tests and Co integration Analysis.

3.5.2 Descriptive Data Analysis and Statistical Tests

Descriptive data analysis is essential in determining the statistical properties of the model so as to show whether the data used in the study follows a normal distribution. Therefore the study sought to determine the spread of the data which includes calculating for the mean, standard deviation, standard errors, maximum and minimum values of the variables overtime and making economic intuitions about their behavior. This also involved finding correlation matrix so as to check which variables are highly correlated so as to avoid the problem of multi-co linearity which is a common problem in time series data.

3.5.3 Unit Root Tests

One basic requirement of econometric estimation is that the variables contained in a regression model should be stationary. Stationarity means that the mean, variance and covariance of each variable should be time invariant. If non-stationary variables are used in a regression model, then this leads to spurious regression. To test the stationarity of the variables in the model, the study will use the Philip-Perron (PP) unit root test (Phillip and Perron, 1988), because it has a greater unit root detection abilities as compared to the Augmented Dickey-Fuller (ADF) test. Hence this study conducted a PP unit root test.

3.5.4 Co integration Analysis

The first step is to confirm that all variables are integrated of the same order. If the variables are integrated of the same order, then there is possibility of co integration. After this the study carried out co integration tests to determine the possibility of a long run relationship between the variables in the model. The co integration test was based on the F-statistics or Wald Statistics. The F-test has a non-standard distribution. Therefore co integration relationship was tested using ARDL by Pesaran and pesaran *et al* (2001).

3.5.5 Empirical Model

To estimate the effect of Non-Bank Financial Institutions Credit on Poverty reduction in Kenya, the study adopted a Distributed Lag (DL) model to analyze objective one, two and three. The Variables are transformed into logarithmic form in order to minimize the scale effect.

Objective one is to establish the effect of Non-Bank's Financial Institutions credit on the population of people living below the poverty line in Kenya.

$$\ln Y_{1t} = \beta_0 + \beta_1 LnUN_{t-i} + \beta_2 \ln PI_{t-i} + \beta_3 \ln HC_{t-i} + \beta_4 \ln GDPGR_{t-i} + \beta_5 \ln NBFI_{t-i} + \mu_t \dots (3.1)$$

Where :

$$\ln Y_{1t} = \text{Number of people below poverty line}$$

UN_{t-i} =Unemployment rate

$\ln PI_{t-i}$ =Private Investment

$\ln HC_{t-i}$= Human Capital

$\ln GDPGR_{t-i}$= Real per Capita GDP

$\ln NBFI_{t-i}$= Non Bank Financial Institutions credit

$\mu_t - white\ noise$

Objective two was to determine the effect of Non-Bank Financial Credit on Real Per capita Income in Kenya.

$$\ln Y_{2t} = \alpha_0 + \alpha_1 \text{Ln} UN_{t-i} + \alpha_2 \text{Ln} PI_{t-i} + \alpha_3 \text{Ln} HC_{t-i} + \alpha_4 \text{Ln} NBFI_{t-i} + \varepsilon_t \dots \dots (3.2)$$

$Where$:

$$\ln Y_{2t} - real\ Per\ Capita\ Income$$

$\text{Ln} UN_{t-i}$ = Unemployment rate

$\text{Ln} PI_{t-i}$ = Private Investment

$\text{Ln} HC_{t-i}$ = Human Capital

$\text{Ln} NBFI_{t-i}$ = Non Bank Financial Institutions Credit

Ln − Natural Log

ε_t − white noise

Objective three was to examine the effect of Non-Bank Financial Institutions credit on GDP growth in Kenya.

$$\ln Y_{3t} = \alpha_0 + \alpha_1 \text{Ln} UN_{t-i} + \alpha_2 \text{Ln} PI_{t-i} + \alpha_3 \text{Ln} HC_{t-i} + \alpha_4 \text{Ln} NBFI_{t-i} + \varepsilon_t \dots \dots (3.3)$$

Where:

$\ln Y_{3t}$ − GDP growth rate

$\text{Ln} UN_{t-i}$ = Unemployment rate

$\text{Ln} PI_{t-i}$ = Private Investment

$\text{Ln} HC_{t-i}$ = Human Capital

$\text{Ln} NBFI_{t-i}$ = Non Bank Financial Institutions Credit

ε_t − white noise

3.5.6 Post-Estimation Techniques

In order to establish the validity of the estimated results, it was essential to conduct post estimation tests in order to ascertain the fit of the model and the validity of inferences made from the estimated results. These tests include: Ramsey Regression Error Specification Test (RESET) for model specification and Durbin-Watson Test for presence of autocorrelation.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter explored the descriptive statistics of the variables to provide an understanding of the behaviour of the variables. The chapter then presented results of the Phillip-Perron (PP) unit root test so as to establish whether the variables are stationary in order to avoid the problem of spurious results and inconsistent estimation. Finally, the chapter presented the results of the Autoregressive distributed lag (ARDL) approach to co-integration.

4.2 Descriptive Statistics

	LnUN	LnPI	LnYt1	LnHC	LnGDPGR	LnNBFI	LnPCY
Mean	9.7853	2.9828	2.9828	.4274	1.0183	21.3225	11.123
Std. Deviation	.82283	.15766	.15766	.2366	.94441	.39798	.06900
Skewness	.906	-.126	-.126	-.548	-1.200	-.488	1.269
Std. Error of Skewness	.403	.403	.403	.403	.403	.403	.403
Kurtosis	3.308	-.940	-.940	-.842	.569	-.643	1.086
Std. Error of Kurtosis	.788	.788	.788	.788	.788	.788	.788
Range	4.50	.53	.53	.76	3.59	1.32	.27
Minimum	7.80	2.71	2.71	-.04	-1.46	20.56	11.04
Maximum	12.30	3.24	3.24	.72	2.13	21.87	11.31

Where;   LnUN- is log of unemployment

LnPI- is log of private investment

LnYt1- is log of the number of people living below the poverty line

LnHC- is log of human capital development

LnGDPGR- is log of GDP growth rate

LnNBFI- is log of Non-Bank Financial Institutions

LnPCY- is log of per capita income

Table 4.1 shows that Unemployment rate is a variable which shows high volatility. This variable ranges between 7.80 and 12.30 and this can be attributed to the low number of private investments. This is because failure by the government to ease the tight regulations governing private investments leads to more people becoming unemployed.

Table 4.1: Correlation Results

		LnUN	LnPI	LnYt1	LnHC	LnGDPGR	LnNBFI	LnPCY
LnUN	Pearson Correlation	1	.712	-.066	-.228	-.251	-.287	-.478**
	Sig. (2-tailed)		.012	.712	.195	.152	.100	.004
	N	34	34	34	34	34	34	34
LnPI	Pearson Correlation	-.066	1	1.000**	-.517**	.441**	-.414*	.277
	Sig. (2-tailed)	.712		.000	.002	.009	.015	.113
	N	34	34	34	34	34	34	34
LnYt1	Pearson Correlation	.712	-.668**	1	-.517**	.441**	-.414*	.277
	Sig. (2-tailed)	.012	.000		.002	.009	.015	.113
	N	34	34	34	34	34	34	34
LnHC	Pearson Correlation	-.228	-.517**	-.517**	1	.041	.969**	.448**
	Sig. (2-tailed)	.195	.002	.002		.818	.000	.008
	N	34	34	34	34	34	34	34
LnGDPGR	Pearson Correlation	-.251	.441**	.441**	.041	1	.065	.397*
	Sig. (2-tailed)	-0.52	0.809	.009	.818		.715	.020
	N	34	34	34	34	34	34	34
LnNBFI	Pearson Correlation	-.287	-.414*	-.414*	.969**	.065	1	.547**
	Sig. (2-tailed)	.100	.015	.015	.000	.715		.301
	N	34	34	34	34	34	34	34
LnPCY	Pearson Correlation	-.478**	.277	.277	.448**	.397*	.547**	1
	Sig. (2-tailed)	-0.74	.113	.113	.008	.020	.301	
	N	34	34	34	34	34	34	34

Table 4.2 presents the correlation coefficients between the variables. The results indicate a fairly high and significant positive (at 1 percent) correlation coefficient (0.712) between lnYt1 and LnUN. These results imply that the more the unemployment rate, the greater the number of people living below the poverty line. LnHC also has a relatively high negative relationship with the number of people living below the poverty line. This is because human capital development leads to increased skills which can then be efficiently employed in productive activities leading to generation of income.

The results also indicate a very strong negative correlation (-0.74) between per capita income and unemployment rate implying that high unemployment rates mean majority of a country's citizenry have low income levels. The relationship between per capita income and LnPI shows a weak positive correlation of 0.113 indicating that private investment has a weak positive influence on Kenya's per capita income. This could be implied by limited funds in form of credit to the private sector.

Kenya's GDP growth rate is found to be strongly and positively correlated with PI, HC and NBFI (at 0.809, 0.818 and 0.715 correlation indices respectively). This demonstrates that the three variables are strong determinants of Kenya's GDP growth rate. Private investment leads to increase in the national output through efficient utilization of resources, while high levels of human capital are crucial in management and manipulation of various resources to produce final output. NBFIs on the other hand, provide investible funds to Kenya's and especially to the private sector leading to increased production of output. On the contrary, high unemployment rates have a strong negative correlation (-0.52) with GDP growth rates. This is because unemployed human resource is a burden to any economy as it mostly consumes the domestic output without providing any services in return leading to deterioration of GDP growth rate.

4.3 Unit Root Test

Unit root test was conducted to test for the stationarity of the variables included in the models of this study. Non-stationarity series data is a key problem in econometric analysis because the presence of unit roots in time series data produces spurious results meaning that if two variables are trending over time, a regression of one on the other could result into a high R^2 value even if the two variables are totally unrelated. If the variables are not stationary, then the standard assumptions for asymptotic analyses are rendered invalid. The usual t-test statistics fail to follow

the usual t-distribution and therefore hypothesis test of the regression parameters cannot be validly taken. Therefore to test for the presence of unit roots in the data, this study employed the Phillips–Perron test because it allows for fairly mild assumptions concerning the distribution of the errors as compared to the other time series unit root tests which assume that the errors are statistically independent with a constant variance.

Table 4. 2: Results of the Phillip-Perron (PP) Unit Root Tests

Variable	PP (Level)		PP (First Difference)		Order of Integration
	Statistic	P-Value	Statistic	P-Value	
LnUN	-3.280	0.0158			I(0)
LnYt1	-2.483	0.1196	-7.178	0.0000	I(1)
LnHC	-4.889	0.000			I(0)
LnGDPGR	-1.937	0.3149	-4.100	0.0010	I(1)
LnNBFI	-1.617	0.4742	-4.723	0.0001	I(1)
LnPCY	0.304	0.9775	-3.141	0.0236	I(1)
LnPI	-2.483	0.1196	-7.178	0.0000	I(1)

Table 4.3 above presents the unit root test results which reveal that only LnUN and LnHC are stationary at their levels and so they are integrated of order zero. The other remaining variables are non-stationary at their levels but they become stationary after differencing once, and so they are integrated of order one. Since the application of ARDL bounds test approach to co-integration requires that the variables be integrated either of order zero or one, then these results suggested that ARDL approach to co integration was appropriate.

4.4 Co integration Test Results for the Relationship between Population of People Living below the Poverty Line and Regressors.

From Table 4.4 the variables were found to be either integrated of order 0 (LnUN, and LnHC) and order 1 (LnYt1, LnGDPGR, LnNBFI, LnPCY and LnPI). The preconditions for performing a bounds test for co integration using ARDL modelling requires that the variables be integrated of order 0 or order 1; a condition which has been met in this case. In conducting the test a lag length of two was selected. Pesaran *et al.,* (2001) suggested a maximum of two lag lengths for annual data owing to the small sample size. Therefore the bounds test was performed and the results reported in Table 4.4.

Table 4.3: Bounds Test Co integration Results

Significance Level	Bounds Critical Values		F-test Value
	I(0)	I(1)	
1%	1.75	2.87	
5%	2.04	3.24	8.845
10%	2.66	4.05	

Source: The critical values were obtained from Pesaran *et al.,* (2001), Table T1-T3.

From Table 4.4 the calculated F-test value (8.845) is greater than all the tabulated critical values at any significance level. Therefore we reject the null hypothesis and conclude that co integration relationship exists among the variables.

4.5 The Long-run Regression Results of the effect of NBFI's Credit on the Population of People living Below the Poverty Line

Due to the fact that the variable *LnYt1 (number of people living below the poverty line)* was found to be co integrated with all the explanatory variables, then this subsection presented long-run results of the effect of Non-Bank Financial Institution's Credit on population of people living below the poverty line. The ARDL model was estimated using the Akaike Information Criteria (AIC) where a lag length of two was adopted. This was to achieve objective one of the study. The results were reported in Table 4.5

Table 4.5 shows the factors that are likely to affect the poverty level of a given population. The results show that *NBFIs credit* has positive but insignificant effect on *poverty reduction*. The

insignificant negative effect could be as a result of the fact that most citizens of Kenya still do not have access to credit from the NBFIs due to high collaterals required to access such credit facilities thereby limiting many people. According to Bichanga and Makanga (2014), in their study found that microfinance institutions are useful tools for poverty reduction. Some of their findings for poverty reduction include trainings, localizing the business through expansion of business in remote areas to reach the poor. However, their findings also showed that respondents indicated some dissatisfaction with the current loan range, and definitely the loan range is influenced hand in hand by the amount of collateral the respondent was able to produce. Therefore these results concur with the findings of the study above. According to Easterly (2006) on impact analysis of NBFIs the study suggests that the majority of borrowers who already have some assets are more likely to succeed. The study refers to NBFIs as "searchers", they search instead for existing small enterprises in the informal sector, not the very poor without any assets or entrepreneurial skills.

The results show that higher *unemployment rates* have a significant positive effect (at 5 percent significance level) on poverty affecting a given population in a country. The results show that a 1 percent increase in the *unemployment rates* leads to a 0.05 percent increase in the poverty levels. This is true because those without productive employment have no access to regular income and therefore cannot afford to acquire the basic needs that are essential for a decent living. This finding is further confirmed by Saunders (2002); Ukpere and Slabbert (2009); Apergis *et al.* (2011) who in their studies found out that Poverty levels increase with increasing unemployment rates. The relationship between unemployment and poverty studied by Haveman and Schwabish, (2000); Freeman, (2003) in their analysis concluded that variations in the unemployment rate significantly affected the poverty rate. Therefore provision of employment is an essential ingredient for any poverty reduction strategy that a country can adopt.

Table 4.4: Long-run Regression Results Based on AIC (1,2,1,0,1)

Variable	Coefficient	Std. Error	t-Statistic	P-value
Constant	0.7694	2.178	0.35	0.729
LnNBFI	-0.8314	0.10650	-0.78	0.466
LnUN	0.0542**	0.0926	2.40	0.0175
LnPI	-0.4174**	0.1069	-3.90	0.0107
LnHC	-0.5100	1.3094	-0.39	0.702
LnPCY	-0.7135**	0.0335	-2.13	0.049
Adjusted R-Squared = 0.7711				
Durbin Watson =2.0097				
F-Statistics = 8.569 **Prob > F =0.000**				
Ramsey Reset Test = 0.0693				

Notes: ** denotes significance at 5 percent**

The results further show that *private investment* has a negative significant effect on poverty. That is, a 1 percent increase in private investment leads to a 0.4174 percent decrease in poverty levels. This implies that investment in the private sector offers employment and is responsible for provision of critical goods and services as well as ensuring efficient flow of capital. All these combined ensure that people have income through employment and the competition and efficiency in this sector leads to availability of cheap but high quality goods. This result is consistent with those of Suryadarma and Suryahadi (2006) who analyzed the impact of private sector growth on poverty reduction in Indonesia and found out that the private sector investment significantly reduces poverty. This finding is further supported by Ayashagba and Abachi (2002) in their study on Foreign Private Investment and poverty reduction in Nigeria. They found out that direct foreign private investment contribute better to reduced poverty levels. Therefore investment by the private sector ensures that more jobs are created and real per capita income grows and leads to an improvement in the living standards of the populations of a country. When there are more infrastructures, the cost of living is brought down because people are more productive and this ensures that people can engage in activities like small scale jua kali businesses that generate some income for them and therefore reduces poverty.

Table 4.5 also shows that, *per capita GDP* has a negative significant effect, at 5 percent significant level on poverty reduction. That is, if the economy grows by 1 percent, then poverty reduces by 0.7135 percent. This means that if a country pursues economic growth, it is likely to reduce poverty levels in the population. This findings are supported by Dollar and Kraay, (2000) who found out that on average, the income of the bottom one-fifth of the population rose one – for-one with the overall growth of the economy as defined as per capita GDP. Dollar and Kraay argue that poverty reduction could in fact be necessary to implement stable macroeconomic policies to achieve higher growth. According to Anyanwu (2013) higher real per capita GDP have significant negative effect on poverty and thus good for poverty reduction and inclusive growth. Economic growth means greater investments in the leading sectors of the economy and this leads to reduction in poverty levels. Also economic growth is likely to come with more employment opportunities and people generate income in the end which reduces poverty. Therefore the Kenyan government should pursue growth oriented policies in order to reduce poverty levels in the country.

The adjusted R^2 had a good fit. This means that 77.11% of the variations of the dependent variable are explained by the variations in the explanatory variables. The results reveal that the model passes diagnostic test like Durbin-Watson test whose value shows absence of serial correlation. The results of the F-test also reveal that the parameter estimates are significantly different from zero. The null hypothesis of the Ramsey Reset Test states that there is no specification error in specifying the model as linear. It is shown that the RESET test's p-value obtained in the model is 0.0693 which is greater than 0.05 and therefore we accept the null hypothesis and conclude that there is no misspecification error of the model.

4.6 Short-run Regression Results
Having established a co integrating relationship among the variables and having estimated the long-run coefficients, the short-run coefficients are modeled. Table 4.6 reports the estimated error correction results.

Table 4.5: Short-run Regression Results based on AIC (1,1,2,1,0,1)

Variable	Coefficient	Std. Error	t-Statistic	P-value
ECM	-0.4225	0.1388	-3.04	0.002
ΔYt1	-1.1566	0.1915	-6.04	0.000
ΔLnNBFI	-0.1416**	-0.0128	-3.47	0.061
ΔLnUN	0.1125**	0.0271	4.14	0.000
ΔLnPI	-1.3376**	0.2190	-6.11	0.000
ΔLnHC	-1.9353	1.4683	-1.32	0.187
ΔLnPCY	-0.2985	0.4801	-0.62	0.534
R-Squared = 0.8952				
F-Statistics = 8.569 **Prob > F =0.000**				
LM Test pro > Chi-Square = 0.2455				
Ramsey Reset Test = 0.0522				

The results on Table 4.6 indicate that the coefficient of *LnUN* has significant (at 5% significance level) positive impact on population of people living below the poverty line. 1% increase in unemployment rate leads to a 0.1125% increase in the number of people living below the poverty line. [Therefore policies need to be put in place to encourage creation of more employment opportunities available to the deserving poor.]

From the results, the coefficient of *LnPI* has a significant negative impact on the population of people living below poverty line. 1% increase in Private investment leads to a 1.3376% decrease on the population of people living below the poverty line. [Therefore more private investments will help mobilize savings and increase income of the poor and provide an opportunity to venture into small scale businesses that generate income].

The coefficient of *LnHC* and *per capita GDP* has insignificant positive effect on the population of people living below poverty line. This may be due to the fact that since in the short-run prices and wages are fixed, then inflation will not have any significant effect on prices of goods and services while the wages will also not vary. This will ensure that there is no significant effect on the number of people living below the poverty line.

NBFI's credit is shown to have a significant (at 5% significance level) negative effect on the number of people living below the poverty line. This means that extension of credit will in the short-run help improve the welfare of the poor people.

The results further reveal that the error correction term which has a value of -0.4225 has the correct sign and is significant at 5% level of significance. This result implies that there's low speed to adjustment to the equilibrium.

The Ramsey RESET test shows that there is no specification error in the model while the LM test statistics reveal the absence of autocorrelation. The coefficient of determination shows that the regressors of the model explain 89.52% of the variations in the regress and implying that the model fits the data well.

4.7 Co Integration Test Results of the Relationship between per capita GDP and Regressors.

Table 4. 6: Bounds Test Co integration Results

Significance Level	Bounds Critical Values		F-test Value
	I(0)	I(1)	
1%	1.75	2.87	
5%	2.04	3.24	5.674
10%	2.66	4.05	

Source: The critical values were obtained from Pesaran *et al.,* (2001), Table T1-T3.

From Table 4.4 the calculated F-test value (5.674) is greater than all the tabulated critical values at any significance level. Therefore we reject the null hypothesis and conclude that co integration relationship exists among the variables.

4.8 Long run Results of the effect of NBFI's Credit on Real per Capita Income in Kenya
Table 4.8 shows regression of objective two, which tries to establish the effect of NBFIs credit on real per capita income in Kenya. From the table, *NBFIs credit* has a positive contribution to the economic growth of the Kenyan economy. A 1 per cent increase NBFIs credit leads to a 0.04 per cent increase in per capita income. The effect is small due to the limited access of the credit by most Kenyans. This is because when credit is channeled to the private sector by the NBFIs

economic growth is likely to be promoted. The study by Gupta, Yesmin and Khan (2013) reiterate that the empirical evidence in their study suggested that financial indicators of NBFI including deposits and total assets are responsible for the future change in the per capita real GDP in Bangladesh. Importantly the results indicate that NBFIs are the dominant market players of the financial sectors through which the financial resources are effectively channeled for savers to the users in the economy. Therefore from the findings of the study, it's clear that NBFIs has a positive contribution to the economy and subsequent increase in per capita income.

Table 4. 7: Long –run Results Based on AIC (2,2,2,0)

Variable	Coefficient	Std. Error	t-Statistic	P-value
CONSTANT	1.5042***	4.4619	4.80	0.0002
LnUN	-0.4229***	0.0500	-8.45	0.0010
LnPI	0.7921**	0.3312	2.39	0.0232
LnHC	0.0127	0.0223	0.57	0.5702
LnNBFI	0.0424**	0.0256	1.85	0.0273
Adjusted R-Squared = 0.7693				
Durbin Watson =1.993				
F-Statistics = 5.674 **Prob > F =0.00001**				
Ramsey Reset Test = 0.0724				

From the results, it is also evident that private investment is a very important component of economic growth and consequently, real per capita income in Kenya. The results are significant at 5 per cent level of significance. This implies that 1 per cent increase in *private investment* leads to a 0.7921 percent increase in real per capita income in Kenya. This may be because of the efficiency that is associated with the private investment which may lead

to greater output and higher per capita income. It is therefore important for the government to come up with policies that encourage the growth of the private sector firms in Kenya. Ghura (1997) established a significant causal linkage between private investment and economic growth: increases in the private investment ratio boost economic growth. This implies that government

investment would be more efficient if it focused on capital projects chosen on the basis of strict economic criteria and with adequate rates of return. These findings are also supported by those of Kongphet and Masaru (2012) who found that private domestic investment has a positive effect on economic growth.

The results further confirm the negative relationship between *unemployment rates* and *per capita income*. This is significant at 1 per cent level of significance. This means that a 1 per cent increase in unemployment rates leads to a 0.4229 per cent decrease in per capita income. Unemployment here means the loss of output that the unemployed persons or other factor (s) or inputs would have contributed towards GDP growth. According to Meidani (2006), unemployment rate has a significant and negative effect on per capita income. These findings concur with Castells-Quintana and Royuela (2012) who found out that high and persistent unemployment is likely associated to inequality increases and this has a negative effect on subsequent per capita income and long-run economic growth. Therefore the above findings concur with the findings of this study.

Human capital has a positive but not significant effect on per capita income of the country. This could be due to the high unemployment rates (40%) being experienced in the country or could be the low amount of resource allocation to research and development and training. According to Appleton and Teal (1998) in their study of Human Capital and Economic development, it's found that human capital is only one factor in accounting for differences in economic growth rates. A more proximate cause is the low level of investment in physical capital. Low rates of investment in physical capital have implications for the rates of return on human capital especially education. Therefore the returns to human capital investment depend on the success of policies in promoting the growth of physical capital. From the study inadequate investment in education clearly is not the cause of economic difficulty. Therefore government investment in the social sector is likely to be economically productive and indeed likely to bring more direct benefits to the people than many forms of government expenditure.

The adjusted coefficient of determination *(Adjusted R^2)* is a good fit. From the model, regressors are statistically significant and different from zero. The regressors explain 76.93 percent of the variations of the dependent variable. The results reveal that the model passes diagnostic test like Durbin-Watson test whose value (1.993) shows absence of serial correlation. The null hypothesis

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in the Ramsey Reset Test states that there is no specification error. It is shown that the RESET test's p-value obtained in the model is 0.0724 which is greater than 0.05 leading to the accepting of the null hypothesis and conclusion that there was no misspecification of the model.

Table 4.8: Short-run Regression Results based on AIC (1,2,2,2,0)

Variable	Coefficient	Std. Error	t-Statistic	P-value
ECM	-0.5990	0.1551	-3.86	0.000
ΔLnPCY	-0.01775	0.01041	-1.70	0.088
ΔLnUN	-0.28292 ***	0.04826	-5.86	0.000
ΔLnPI	0.25309**	0.14474	1.75	0.080
ΔLnHC	0.55246**	0.61549	0.90	0.369
ΔLnNBFI	0.29492**	0.04307	6.85	0.000
R-Squared = 0.8468				
F-Statistics = 4.872 **Prob > F =0.000**				
LM Test Prob > Chi-Square = 0.2880				
Ramsey Reset Test = 0.0558				

The short-run coefficient of *LnUN* has a significant negative effect on *per capita income*. This result is significant at 5% significance level. The result implies that a 1% increase in unemployment rate leads to a 0.2% decrease in per capita income in the short-run. This is due to the fact the work force that would have contributed towards per capita income growth remains unemployed and dependent on the employed work force. This means that the income of the employed work force is shared among a relatively big number of dependents.

The coefficients *private investment and human capital* development are insignificant at 5% significance level implying that these two variables have no effect on per capita income owing to the rigidity of factors of production, wages and prices in the short-run.

NBFI's credit is shown to significantly boost per capita income in the short-run. This result is significant at 5% implying that a 1% increase in credit access leads to a 0.2949% increase in per capita income due to the fact that more poor people will now have more money to meet their needs.

The coefficient of the error correction term is appropriately signed and significant at 5% significance level. The value -0.5990 implies a fairly rapid speed of adjustment and shows that 59.90 percent of the disequilibrium in the model are corrected in one year.

The coefficient of determination shows that 84.68% of the variations in the dependent variable are explained by the variations in the explanatory variables. This shows that the model fits the data well. The LM test indicates that there's no autocorrelation in the model and the Ramsey RESET test confirms that there is no mis-specification error in the model.

4.9 Co integration Test Results of the Relationship between GDP Growth and Regressors

Table 4. 9 : Bounds Test Co integration Results

Significance Level	Bounds Critical Values		F-test Value
	I(0)	I(1)	
1%	1.75	2.87	
5%	2.04	3.24	7.934
10%	2.66	4.05	

Source: The critical values were obtained from Pesaran *et al.,* (2001), Table T1-T3.

From Table 4.10 the calculated F-test value (7.934) is greater than all the tabulated critical values at any significance level. Therefore we reject the null hypothesis and conclude that co integration relationship exists among the variables.

4.91 Long-run Results of the Effect of NBFI's Credit on Real GDP Growth Rate in Kenya
Table 4.11 shows regression of objective three, which tries to establish the effect of *NBFIs credit* on *GDP growth rate* in Kenya. From the results, it is evident that private investment is a very important component of economic growth and consequently, *real per capita income* in Kenya.

Table 4. 10 Long-run Regression Results based on AIC (2, 2, 0, 1)

Variable	Coefficient	Std. Error	t-Statistic	P-value
CONSTANT	1.8042	3.4619	3.80	0.0054
LnNBFI	0.0424**	0.0256	1.85	0.0273
LnUN	-0.3359**	0.4150	-6.34	0.0101
LnPI	0.5921**	0.3123	2.32	0.0232
LnHC	0.0127	0.0223	0.57	0.5702
Adjusted R-Squared = 0.7534				
Durbin Watson =2.079				
F-Statistics = 7.934 **Prob > F =0.000**				
Ramsey Reset Test = 0.05943				

The results are significant at 5 percent level of significance. This implies that 10 per cent increase in *private investment* leads to a 5.9 percent increase in *GDP growth rate* in Kenya. This is because of the efficiency that is associated with the private investment. Both neo-classical and Maxist economist placed main emphasis on capital accumulation as the engine of economic growth. There may be little corruption in the private sector in Kenya and that may lead to greater output and higher GDP growth rate. An important use of capital is to increase the production of capital intensive goods. The consumption of such goods generally increases with the growth of income through which capital accumulation promotes growth of income. It is therefore important for the government to come up with policies that encourage the growth of the private sector firms in Kenya. According to Anwer and Sampath (1999) in their study on investment and economic growth, it's found that there is causality from Private Investment to GDP growth rate. The findings collaborate with Sheikh Haque (2013) findings that there exist a short-run and long-run relationship between public and private investment and economic growth in Bangladesh. This implies that public and private investment impact positively economic growth in the short and long run process. In addition it confirms that private investment is more effective in the long run than public investment.

The results further confirm the negative relationship between *unemployment rates* and *GDP growth rate*. This is significant at 5 per cent level of significance. This means that a 1 per cent increase in *unemployment rates* leads to a 0.3359 per cent decrease in *GDP growth rate*. This is because the unemployed people do not contribute to the GDP of the country and therefore they themselves do not earn any income, hence low per capita income. According to Meidani (2006) unemployment rate has a significant and negative effect on GDP growth rate. These findings concur with Levine (2013) who discussed the long-run relationship between changes in the rates of GDP growth and unemployment being the rate of growth in the potential output. The study found out that the rate of growth of potential output is a function of the rate of growth in potential productivity and the labor supply when the economy is at full employment. According to the study, when the unemployment rate is high, as it is now, then actual GDP falls short of potential GDP. This studies discussed above concur with the findings of this study.

NBFIs credit also has a positive contribution to the economic growth rate of the Kenyan economy. A 1 percent increase NBFIs credit leads to a 0.04 percent increase in GDP growth rate. The effect is small due to the limited access of the credit by most Kenyans. This is because when credit is channeled to the private sector by the NBFIs a substantial economic growth is likely to be promoted and achieved. The study by Gupta, Yesmin and Khan (2013) in their study on Growth of NBFIs and contribution to Economy: Evidence from Bangladesh, reiterate that the empirical evidence in their study suggested that financial indicators of NBFI including deposits and total assets are responsible for the future change in the per capita real GDP in Bangladesh. Importantly the results indicate that NBFIs are the dominant market players of the financial sectors through which the financial resources are effectively channeled for savers to the users in the economy. According to Aminul (2010) in the study on the role of NBFIs in Economic growth: An Empirical case study in Malaysia finds that the total assets of NBFIs have a positive long-run relationship with economic growth and also private credit (NBFIs credit) has positive and significant impact on long run economic growth. Granger causality test shows that in the long-run there is bidirectional causality between the indicators of NBFIs credit and economic growth. In addition, in the short run, the study finds evidence that the NBFIs assets Granger cause economic growth with no reverse effect but in the case of private credit causality is bidirectional. Therefore the findings of the study concur with the above study and it's clear that NBFIs has a positive contribution to the economy and subsequent increase in per capita income.

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Human capital has a positive but not significant effect on *GDP growth rate* of the country. This could be due to the high unemployment rates being experienced in the country. According to Appleton and Teal (1998) in their study of Human Capital and Economic development, it's found that human capital is only one factor in accounting for differences in economic growth rates. A more proximate cause of slow economic growth is the low level of investment in physical capital. Low rates of investment in physical capital have implications for the rates of return on human capital especially education. Therefore the returns to human capital investment depend on the success of policies in promoting the growth of physical capital. Therefore government investment in the social sector is likely to be economically productive and indeed likely to bring more direct benefits to the people than many forms of government expenditure. Therefore the results in the above study concur with the findings of this study.

The results of the adjusted coefficient of indicate that the regresors explain 75.34 percent of the variations of the dependent variable. The results further reveal that the model passes diagnostic test like Durbin-Watson test whose value (2.079) shows absence of serial correlation. The null hypothesis in the Ramsey Reset Test states that there is no specification error. It is shown that the RESET p-value obtained in the model is 0.05943 which is greater than 0.05 and therefore we accept the null hypothesis and conclude that there is no misspecification of the model.

Table 4. 11: Short run Regression Results based on AIC (1, 2, 2, 2, 1)

Variable	Coefficient	Std. Error	t-Statistic	P-value
ECM	-0.2172	0.1016	-2.14	0.033
ΔLnGDPGR	0.189951	0.1600041	1.19	0.236
ΔLnNBFI	0.2971369 **	0.0937069	3.17	0.002
ΔLnUN	-0.08622**	0.11815	-0.73	0.466
ΔLnPI	0.54247**	0.0516	10.51	0.000
ΔLnHC	0.2320614**	0.3058283	0.76	0.448
R-Squared = 0.8245				
F-Statistics = 7.698 **Prob > F =0.000**				
LM Test Probability > Chi-Square = 0.2115				
Ramsey Reset Test = 0.05241				

The results indicate that the coefficient of *NBFI's credit* is significantly positive at 5% significant level. The result implies that a 1% increase in financial access to credit from the NBFIs would result in a 0.2971% growth in GDP. This is because the mobilized resources in form of credit extension by the NBFIs will be put in productive use and therefore lead to increase in national output.

The *unemployment rate and human capital development* have no significant effect on GDP growth rate at 5% significance level. But is shown that a 1% increase in private investment would lead to a 0.54247 % increase in the overall GDP growth rate at 5% significance level. This is because private investment has more benefits and in the short-run may lead to development of new business ventures and this may lead to increase in national output levels.

The diagnostic results of R^2 imply that 82.45% of the variations in the dependent variable are explained by the joint changes in the independent variables thus indicating that the model is a good fit of the data. The results of the LM test have a p-value of 0.2115 which is greater than 0.05 thereby indicating the absence of serial autocorrelation in the model since the result accepts the null hypothesis of no autocorrelation. Further, the model has no mis-specification error as shown by the results of the Ramsey RESET test which accept the null hypothesis of no model mis-specification.

CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary, conclusion and recommendations based on the study findings. The study examined the effect of Non-Bank Financial Institutions credit on Poverty reduction in Kenya using time-series data over the period 1980 – 2013 using ARDL model approach to co integration in data analysis.

5.2 Summary

The study aimed to establish the effect of NBFIs' credit on poverty reduction in Kenya. To achieve the objectives proposed, the study performed unit root test using Phillip-Perron (1998) test so as to avoid spurious regression results that arise due to non-stationarity data. Unemployment and human development variables were found to be integrated of order zero and thus stationary. The other variables which included; the number of people living below the poverty line, GDP growth rate, NBFIs' credit, per capita income and private investment were found to be non-stationary. Each one of them was then differenced and tested for unit root after which it was established that they were all integrated of order one I(1).

Since the pre-requisite for bounds approach to co integration is that the variables of interest be integrated either of order one or order zero, the study employed the procedure. All the variables of the three models were found to be co integrated. The long-run regression results for the first model established that NBFIs' credit had insignificant positive effect on the number of people living below the poverty line. Human capital development too, had insignificant influence on the number of people living below the poverty line. But Unemployment rates and inflation rates had significant positive effect on number of people living below the poverty line, while private investment and per capita income had significant negative and significant positive effect on the number of people living below the poverty line respectively. The short-run results indicated that unemployment rates had significant positive effect on the number of people living below the poverty line. Private investment was found to have significant negative effect on the number of people living below the poverty line. Human capital development and per capita income were found to have insignificant influence on the number of people living below the poverty line.

The long-run regression results from the second model indicate that both NBFIs' credit and private investment would significantly and positively influence per capita income in Kenya. But unemployment rates were found to have significant negative effect on per capita income in Kenya, while human capita development failed to have any significant effect. The short-run effects also showed that NBFIs' credit and Unemployment had significant positive and negative influence on Kenya's per capita income respectively. All the other remaining variables were found to have insignificant effect on the per capita income.

In the third model, both NBFIs' credit and private investment are found to positively influence GDP growth rates both in the long-run and in the short-run. Unemployment is found to have significant negative effect on GDP growth rates long-run only, In the short-run though, unemployment rate together with human capita development (whose effect on GDP growth rate is also found to be insignificant in the long-run), are found to have insignificant effect on GDP growth rate. The post-estimation diagnostic tests indicated that all the models did not suffer from autocorrelation, were well specified and had good fit.

5.2 Conclusion

From objective one it can be concluded from the results that creation of employment opportunities necessitates affordability of basic services essential for decent living. It's also clear that private investment leads to an improvement in the standards of living and by doing so reduce the number of people living below poverty line. Evidently economic growth means greater investment in both public and private sectors and this subsequently may lead to reduced poverty levels and an improvement in the living standards of mostly the people living below poverty line. From the study high real per capita income has a significant negative effect on poverty reduction and inclusive growth. From the study it was also found out that NBFIs credit has a negative but insignificant effect on poverty reduction on the population of people living below poverty line. This is because the poor have no collaterals for obtaining loans and therefore cannot access loans for productive ventures.

From objective two it can be concluded from the results that private investment is an important component of per capita income because increases in private investment ratio boosts economic growth. It is also clear that unemployment has a negative contribution to Per capita income and

economic growth in Kenya. Unemployment is likely associated to inequality increases and that in most cases it has negative effects on subsequent per income and long-run economic growth. Also it can be concluded that NBFIs credit has a positive contribution to economic growth and increased per capita incomes.

From objective three it can be concluded that Private investment is an important component of GDP growth rate and that increase in Private investment mostly leads to improved GDP growth rate. It can still be concluded that public and private investment impacts positively to economic growth in the short-run and long-run processes. It can also be concluded that unemployment has a negative contribution to GDP growth. NBFIs credit is found to have a positive contribution to GDP growth rate; however the credit is of limited access to most of the people who have no collateral.

5.2 Policy Recommendations

The government should increase employment opportunities by increasing government expenditure and reducing price of loans to encourage small sector businesses to grow and by doing so more youth are encouraged to engage in productive ventures. Also the government should invest more on infrastructures and establish projects that are appropriate to the skills owned by majority of Kenyans so that the excess labor force can be mopped out and poverty reduced to lower levels.

Economic growth is key to a vibrant economy, therefore the government should pursue growth oriented policies and this may lead to greater investments therefore reducing poverty by great margin.

From the study inadequate investment in education clearly is not the cause of economic difficulty. Therefore government investment in the social sector is likely to be economically productive and indeed likely to bring more direct benefits to the people than many forms of government expenditure

Employment creation is a key ingredient in income generation and poverty reduction in the country. It is therefore crucial for the government to create more employment opportunities so as to employ more Kenyans. The government should also pursue growth so as to sustain poverty reduction and create more employment opportunities.

The government should encourage private investment and induce NBFIs to reduce their collaterals so as to enable more people acquire credit and generate more private opportunities. The direct way that financial policy can influence the poor's' income generation and income stabilization (poverty reduction) is by increasing their access to financial services.

5.4 Areas for Further Research

The study recommends that further studies can be conducted on other factors that might have specific effects on poverty reduction like access to infrastructure, research and development in agriculture can have tremendous impact on the rural poor. This is an interesting area that can be explored for further research.

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