

**RELATIONSHIP BETWEEN FINANCIAL DEEPENING AND POVERTY
LEVEL IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been submitted for any award in any other university.

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This project has been submitted with my approval as University Supervisors.

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DEDICATION

I dedicate this project to my loving, caring and supportive husband Martin Mururu Wanjohi and my dear dad Paul Karanja, for his unending love and support, my mum Nancy Wanjiru and siblings for their prayers and support.

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In the course of conducting the study, I have received great cooperation, guidance and help from many individuals. I therefore take this opportunity to most sincerely express my gratitude to them all.

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ABSTRACT

Poverty is one of the major macroeconomic problems of most economies including Kenya. The study was conducted with the purpose of determining the existence of a relationship between financial deepening and poverty level in Kenya. Time series data was used to examine the relationship between financial deepening and poverty level for the period 1997 to 2012. Broad money supply ($M2/GDP$), domestic credit to the private sector (DCP/GDP) and domestic financial savings (DFS/GDP) are used as proxies for financial deepening and private per capita consumption as a proxy for poverty level.

The study reveals the existence of a long run relationship between financial deepening (money supply, domestic credit to private sector and domestic financial savings) and poverty (private per capita consumption). Results from error correction mechanism show the existence of both short run and long run relation between private per capita consumption and ratio of broad money supply to GDP ($M2/GDP$). All the three proxies for financial deepening are positively correlated with private per capita consumption.

The research project concludes that financial deepening reduces poverty level. The global microfinance movement which promotes direct access to finance services can improve individual livelihoods amongst the poor in Kenya by enabling them to manage scarce resources more efficiently smoothing consumption. This follows also the establishment of the Kenya Financial Sector Deepening Programme in 2005 to help stimulate wealth creation and reduce poverty by expanding access to financial services for lower income households and smaller scale enterprises.

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LIST OF ABBREVIATIONS

AMFI	Association of Microfinance Institutions
GOK	Government of Kenya
R&D	Research and development
DFI	Development Finance Institutions
FSDK	Kenya Financial Sector Deepening Programme
SRR	Statutory Requirement Ratio
GDP	Gross Domestic Product
DFID	Department for International Development
UK	United Kingdom
G.O.K	Government of Kenya
COSOP	Country Strategic Opportunities Programme
KNBS	Kenya National Bureau of Statistics
KHIBS	Kenya Integrated Household and Budget Survey

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The primary function of the financial systems is to facilitate the allocation and deployment of economic resources both spatially and across time, in an uncertain environment (Merton, 1992). An efficient financial sector is one of the cornerstones of a well functioning financial system that mobilizes savings, allocates resources and facilitates risk management.

1.1.1 Financial Deepening

Financial deepening affects economic growth and subsequently helps in alleviating poverty because economic growth leads to poverty alleviation. It's a vehicle that accelerates investment and economic growth which is key in poverty alleviation. The shifting of productive funds from surplus units to deficit units holds a tight link between financial deepening and poverty alleviation (Azra, 2012). The government must therefore improve incomes of poor people by improving their access to both rural and urban financial services so as to combat rural poverty.

The main dimension of financial deepening for this research shall be that of increased provision of financial services with a wider choice of services to all levels of society in Kenya. Kenya's financial market is relatively well developed; competition is strong amongst a diverse group of service providers that have moved deeper into the low income market over the last five years partly attributed to interventions by FSDK. Gains have

come from the introduction of mobile money and the responding roll out of branchless agency banking models by commercial banks competing for the mass market space.(FSDK,2011).This has consequently increased the access and provision of financial services in Kenya.

Researchers have continuously searched for a better understanding of the relationship between financial services and the poor. The work of Stuart Rutherford in Bangladesh found that even where microfinance institutions moved to underserved markets, they commanded a small share of business compared to other informal services. His work has revealed the poor as discerning consumers who use a variety of informal products to meet complex financial needs.

Financial Deepening refers to the increase in investments in financial instruments or a shift in investment from the real sector to financial market. Economic development experts have often expressed financial deepening as the increased provision of financial services with a wider choice of services geared to all levels of society. Financial deepening generally means an increased ratio of money supply to GDP (liquid money). This means that the more liquid money is available in an economy the more opportunities for continued growth and poverty reduction. A general proposition is that financial deepening plays an important role in reducing risk and vulnerability for disadvantaged groups, and increasing the ability of individuals and households to access basic services like health and education thus having a direct impact on poverty reduction (Shaw, 1973).

Financial Deepening instruments include: Interest rates-a positive relationship exists between interest rates and financial deepening, developing countries have repressed

economies with ceilings on interest rates and limitations in credit availability which impose restrictions on growth (McKinnon and Shaw,1973), Availability of credit-developing economies have been advised to increase the availability of funds by removing restrictions in the financial sector and Statutory reserve requirement ratio-a reduction in the reserve ratio or a payment for reserves based on a market clearing loan rate is growth enhancing (Fry 1995).When the financial instruments are managed well, emerging economies achieve growth and as a result poverty reduction.

Stiglitz and Weiss, (1992) challenged the proposition of McKinnon and Shaw on the basis that information asymmetry and moral hazard (Moral hazard may arise because and individual or institution in a transaction does not bear the full consequences of its actions, and therefore has a tendency or incentive to act less carefully than would otherwise be the case, leaving another party in the transaction to bear some responsibility for the consequences of those actions) result in market failure which can only be rectified with government intervention in financial markets.

Financial Deepening is the increase in the size of the financial system and in its role and pervasiveness in the economy (Levine, 1997).The term refers to the increased provision of financial services and also an increased ratio of money supply to GDP. From a monetary perspective, the growing diversification of firms and households' portfolios is especially relevant as they are continuously affected by the developments in financial markets (Muchiri, 2011).

The regulatory environment is expected to determine the pace of financial deepening. At the macro level, government policy, legislation and supervision set the basic framework

within which financial services providers operate. An effective and enabling environment reduces the costs and risks of doing business and encourages deepening. At the other end of spectrum, the micro-level, it is retail providers who actually deliver services, developing practical know-how among providers as diverse as commercial banks and community based associations is at the heart of financial deepening. Between the two levels, at the meso level, are other services on which retail providers depend, building the capacity and the know-how among relevant service providers such as credit reference, audit and training can enhance deepening (FSD Kenya 2011). Besides enabling access to financial services, financial deepening facilitates legal, regulatory and institutional reforms and the dire need for portfolio diversification among investors.

1.1.2 Poverty Level

People define, view and experience poverty in different ways. Poverty is not only to be hungry and malnourished, to lack adequate shelter and housing, and to be illiterate but also to be exposed to ill treatment and to be powerless in influencing key decisions affecting lives. Poverty signifies deficiency of social, economic, cultural and human rights which an individual, household or community hold as important for their existence, survival or well being (Miano, 2004).

Poverty manifests itself in various forms and may be defined in absolute or relative terms, relative poverty is when one cannot purchase a bundle of basic needs available to a reference social group while absolute poverty is a state where one cannot raise the income required to meet the expenditure for purchasing a specified bundle of requirements. The minimum level of consumption at which basic needs are assumed to be satisfied is known as the poverty line. (Miano, 2004).

Kenya's poverty levels currently stand at 44%-46% which is an improvement from 56% in 2000. A 2005/6 household budget survey by the Kenya National Bureau of Statistics showed that 20% of Kenyans suffered food poverty such that their entire income was not even enough for purchasing food, although this study is yet to be updated it's a clear indicator of how far the country is in alleviating poverty. Kenya Integrated Household and Budget survey, (KHIBS) conducted in 2006 found that 46% of the total Kenyan population is absolutely poor, that is, below the poverty line, whereas 49% of the rural population is absolutely poor. Understanding what factors drive household movements in and out of poverty is extremely important for the design of poverty reduction strategies and still an open area of research.

Poverty is a big problem in the world, that is, it's a global phenomenon (Muli, 2010). However, according to the World Bank (2006), and there is no place where extreme poverty is more evident than Sub-Saharan Africa. Almost 50% of the population lives on under a \$1 a day-the highest rate of extreme poverty in the world. Kenya is ranked as among the world's 30 poorest countries.

The causes of poverty are multi-faceted: economic, social and political; national (macro) and micro. One of the key causes of poverty is macro-economic instability. For instance empirical evidence in Philippine demonstrated that despite a GDP growth of more than 4% over a period of three years, the poverty head count increased because of the average inflation of 13.9% which was recorded over the same period (World Bank, 2000). The links between rapid population growth and persistent poverty has been well established as it reduces growth in per capita incomes and subsequently savings.

1.1.3 Financial Deepening and Poverty Level

Several researchers have established that countries that have been able to achieve rapid poverty reduction like China, Chile, Costa Rica, Indonesia, and The Republic of South Korea have done so through sustained per capita economic growth. There is a very close link between economic growth and financial deepening. The supply leading hypothesis as advanced by prominent economists like McKinnon (1973) and Shaw (1973) contend that financial deepening induces real economic growth. Although scholars such as Robinson (1952) and Patrick (1966) rejected this hypothesis on the premise that financial deepening is merely a byproduct or an outcome of growth in the real side of economy, both the supply and demand leading hypothesis agree that economic growth impacts on poverty. Economic growth can be categorized as either growth with rising income inequality and poverty, or growth with falling income inequality and poverty. The differences between these two categories can alter the impacts of growth on the poor.

1.1.4 Financial Deepening and Poverty Level in Kenya.

Kenya is considered to have a well developed and diversified financial system. This is attributed to a functional financial system including banks, non bank financial institutions, microfinance institutions, credit cooperatives, capital market institutions, insurance companies, pension schemes and contractual savings. Many financial institutions and businesses are located in major towns leaving large sections in rural areas without banking services. However, recently the role out of mobile money services and agent banking that is able to penetrate to the lower levels of the society has been a huge boost of financial inclusion. Although poverty reduction is notable we need to empirically establish whether the 5-6% reduction in poverty is directly attributed to

financial deepening. The government has also established programmes where the disadvantaged can access direct financial support to enable them to meet their basic needs.

1.2 Statement of the problem

The nature of the relationship between Financial Deepening and poverty reduction continues to be a huge debate amongst scholars and researchers. Studies on financial deepening and income distribution include Clarke et al. (2006), Beck et al. (2007), Kari and Hamori (2009), and Ang (2010). They all observe that financial deepening helps reduce income inequality. Further studies on financial deepening and poverty by researchers such as Honohan, (2004), Jalilian and Kirkpatrick, (2009), Jeanneney and Kpodar,(2008), and Odhiambo, (2010) point out that financial deepening affects poverty reduction directly and also has an indirect impact through its effect on economic growth. However, these findings are mostly based on data for a large sample of countries; this research paper examines whether the findings from these studies are applicable in Kenya.

The issue of financial deepening and poverty reduction has attracted mixed reactions from different authors. Beck, (2007) pointed out that the close links between finance and growth do not necessarily mean financial deepening contributes to poverty reduction in essence there can be growth with rising income inequality and poverty. Other theorists such as (Singh, 1992) suggest that financial deepening favors the rich however, according to the neo-classical view, the availability of finance would allow individuals to fund education, training or business opportunities such that as financial markets grow deeper and access to finance improves, households that did not previously have access to finance

would be beneficiaries thereby equalize opportunities by favoring the poor. FSDK, (2012) contends that financial deepening theories that emphasized on the need to increase savings in order to stimulate investments leading to growth and poverty reduction to follow have since been overtaken by the global finance movement which promotes the benefits of direct financial service provision to the poor: direct access to finance services can improve individual livelihoods amongst the poor by enabling them to manage scarce resources more efficiently, thereby smoothing consumption and protecting against economic shocks.

The research topic on the relationship between financial deepening and poverty reduction in Kenya has not yet been carried out but related studies include: Muchiri, (2011) , he examined the impact of financial deepening on economic growth in Kenya and concluded that based on the evidence from a sample period 1997 to 2010, the supply leading hypothesis of economic development prevailed in Kenya implying finance led economic growth. Another study closely related was done by Gombe, (2011), He examined the impact of micro finance on formal sector and concluded that microfinance has had a significant influence on stock market development and not on banking sector development. The impact of microfinance services on poverty alleviation was conducted by Waiganjo, 2010 and he concluded that indeed micro finance institutions impacted positively on both the rural poor and the urban poor. The study therefore intends to fill this knowledge gap on the relationship between financial deepening and poverty level in Kenya.

1.3 Objective of the study

To examine the relationship between financial deepening and poverty level in Kenya.

1.4 Significance of the Study

The study stands to benefit the following:

Government-In formulating macroeconomic policies that will promote financial deepening and strike a balance between market friendly actions to facilitate deepening and avoid new sources of instability. The government in 2005 established FSDK to stimulate wealth creation and reduce poverty by expanding access to financial services for lower income households and small scale enterprises. This report will therefore help shed more light on the relevance of this programme. The government also in evaluation of its progress in poverty reduction as envisioned in the Kenya Vision 2030.

Stakeholders-The groups that have partnered with the government in the establishment of the FSDK programme which include UK's DFID, Embassy of Sweden, Bill & Melinda Gates foundation among others. These stakeholders are involved in funding FSD Kenya and would benefit in the study as it establishes the relationship between financial deepening and poverty reduction.

Researchers-The study will be invaluable to other researchers who might be interested in expounding the same area of poverty reduction or even other areas such as implications of financial deepening on savings, investments, and economic growth among others. This is because the background study and literature review gives a clear understanding of the concept of financial deepening.

Welfare Associations and public closely assess the success of governments in the implementation of Millennium Development goals which measure progress in poverty alleviation. Financial sector being key to ensuring growth and poverty reduction, information advanced by this research on the progress of financial deepening in poverty reduction will be embraced by the public and other associations that deal in welfare of the people.

The study will also be a guide to capital market intermediaries and financial analysts on how well to combine investment portfolios across market industries thus impact on the economic growth conditions prevailing in the country leading to improved standards of living.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Researchers and policy makers have expended great efforts on the validity of paradigms that try to explain merits of financial development especially for the most vulnerable segments of the population; however, while financial development and its effects on economic growth have attracted considerable attention in literature, far less work has been done on the relationship between financial deepening and poverty. This chapter reviews the existing theoretical and empirical contribution to financial deepening and poverty.

2.2 Theoretical literature

Keynesian theory asserts that financial deepening occurs due to an expansion in government expenditure. According to this theory, in order to reach full employment, the government should inject money into the economy by increasing government expenditure. An increase in government expenditure increases aggregate demand and income, thereby raising demand for money. This disequilibrium is resolved by reducing private investments resulting from higher interest rates. Since higher interest rates lower private investment, an increase in government expenditure promotes investments and reduces private investments concurrently (Dornbusch and Fischer 1978, chap.4).

The supply leading theories as advanced by policy makers and economists such as Ronald McKinnon (1973) and Edward Shaw (1973). McKinnon postulates that an increase in holding financial assets also known as financial deepening by the private

sector promotes savings mobilization which leads to higher levels of savings, investment, production and growth. McKinnon and Shaw depicted a positive relationship between interest rates and financial deepening. According to them, developing countries have repressed economies with ceilings on interest rates and limitations in credit availability which imposes restrictions on growth. Developing countries' financial systems were said to be characterized by unsound financial institutions with the absence of prudent regulations and supervision; uncompetitive financial markets with a few commercial banks dominating the sector and existence of informal financing. Interest rates were set administratively to accommodate government borrowing. The central bank served to finance government deficits, conduct foreign exchange transactions for the government and ensure that institutions do not enter into liquidity problems. Due to these factors, developing countries' financial systems were said to be repressed as opposed to deepening. Various economists have empirically tested the McKinnon-Shaw hypothesis on the positive relationship between interest rates and financial deepening and found mixed results.

According to the financial liberalization theory, the liberalization of the financial sector enables savers to switch some of their savings from unproductive real assets to financial assets hence expanding the supply of credit to the economy. In this way, financial liberalization plays a crucial role in financial deepening. Ikhida (1992) observed that real interest rates favors financial savings over other forms of savings and, therefore, promote financial deepening. Financial depth contributes to growth by improving the productivity of investments.

2.3 Empirical studies

Empirical analyses on the effects of financial deepening on poverty reduction include those by Ghali (1999) Honohan(2004),Jalilian and Kirkpatrick(2005),Beck (2007),and Jeanneney and Kpodar (2008),(Wambui 2008) among others.

Atukorala and Rajapathirana(1993) tested the McKinnon-Shaw hypothesis using Sri Lankan time series data on an annual basis for the period 1960-1987 with a dummy variable to represent policy changes in 1977.They confirmed the McKinnon hypothesis that there is a positive relationship between interest rate and financial deepening. They further concluded that financial deepening accelerates investment and economic growth that in turn helps in poverty alleviation.

Ghali, (1999) uses two alternative measures of financial development, the ratio of bank deposit liabilities to nominal GDP and the ratio of bank claims on the private sector to nominal GDP. The first measure excludes currency in circulation from the broad money stock and the second is a more direct measure of financial intermediation. Both financial measures are indicative of the stage of financial development and an increase in these ratios could be interpreted as financial deepening.

Honohan (2004) attempts to explore the association between financial depth as measured by private credit and the poverty ratio by using cross-country data available for more than 70 developing countries. His findings are that financial depth is negatively associated with the poverty ratio even after controlling for the mean income, the income share of the top 10% and the inflation rate.

Jeanneney and Kpodar (2008) assessed how financial development helps reduce poverty directly and also indirectly through economic growth. Using the panel data for 75 developing countries from 1966 through 1999, they used the generalized method of moments system to estimate models in which the average per capita income of the poorest 20% of the population is explained by real GDP per capita, the level and instability of financial development, and a set of control variables. They defined financial development as the average absolute value of residuals obtained by regressing the indicator of financial development on its lagged variable and a linear trend. Their results indicate that financial development has a significant positive relationship with the mean income of the poor, that the direct effect of financial development on poverty reduction is greater than the indirect effect that it causes by increasing economic growth, and that financial instability accompanied by financial development significantly reduces the income of the poor and partially offsets the benefit of financial development.

Kiyotaki and Moore (2004) borrowed from the model of money and liquidity to explore the impact of financial deepening. In their analysis, they drew a distinction between two aspects of financial contracting: bilateral commitment versus multilateral commitment. On the one hand, there maybe a limit on how much a private agent can credibly promise to repay someone who provides finance: that is, the degree of bilateral commitment a borrower can make to an initial lender when selling a paper claim. On the other hand, there maybe a limit on the extent to which the initial lender can resell the paper to someone else in a secondary market :in effect, the degree of multilateral commitment to repay any bearer is generally more demanding than bilateral commitment to repay the initial lender because, as an insider, the initial lender may become better informed about

the borrower than an outsider. In broad terms, the degree of bilateral commitment in an economy places a bound on the entire stock of private paper, whereas the degree of multilateral commitment determines how much of the paper can circulate.

Quarthey (2008) explored the interrelationship between financial development, savings mobilization and poverty reduction in Ghana from 1970 to 2001. By conducting a pair wise causality test, he found that financial development, measured as the ratio of private credit to GDP, granger causes poverty reduction measured in terms of per capita consumption although it does not granger cause savings mobilization.

Stammer (1972) using empirical evidence from Hong Kong, makes analysis to examine whether a country's financial system can be a leading sector in its economic development and subsequently poverty alleviation. Experience from Hong Kong suggests that economic development once underway can, to a large extent be left to finance itself and that governments in such developments should better use scarce resources to finance other sectors of the economy other than the financial sector. This allows such governments to focus more on improving other sectors of the economy especially the less developed and developing economies that have to reduce poverty levels. He argues that given a favorable environment and a certain stage in the economic development process, development finance maybe a more useful substitute for external finance through financial intermediaries.

Team Ghirmay (2004) examined the relationship between financial development and economic growth 13 sub-Saharan Africa countries .These countries are: Benin, Cameroon, Ethiopia, Ghana, Kenya, Malawi, Mauritius, Nigeria, Rwanda, South Africa,

Tanzania, Togo and Zambia based on the availability of long time series data. The data frequency being annual and time span ranging at least 30 years. Economic growth is measured by an increase in real GDP and financial development represented by the level of credit to the private sector by the financial intermediaries. The findings on the long run relationships between economic growth and financial development was positive in 8 of the 13 countries thus suggesting the need to expand and improve the efficiency of the financial system through appropriate reforms leading to improved standards of living.

Wambui (2008) examines the relationship between rural financial institutions and rural poverty in Kenya and concludes that members of rural financial institutions experience improvement in their living standards through access to education, availability of cheap and effective technical and financial services and access to affordable healthcare.

The concept of financial deepening is usually employed to explain a state of atomized financial system, that is, a financial system which is largely free from financial repression (Nnanna and Dogo, 1998). Financial deepening results from the adoption of appropriate real finance policy, namely relating interest rates of return to real stock of finance. Conversely shallow financial system is partly the consequence of distortions in the relative prices of finance Muchiri, (2011).

Financial markets play a vital role in the process of economic growth and development by facilitating savings and channeling funds from savers to investors. Financial intermediation of growth allows for financial deepening. Shaw, (1973) contends that an increase in the real size of the monetary system will generate opportunities for the

profitable operations of other institutions as well, from bill dealers to industrial banks and insurance companies (Muchiri, 2011).

According to the financial liberalization theory, the liberalization of the financial sector enables savers to switch some of their savings from unproductive real assets to financial assets hence expanding the supply of credit in the economy. In this way, financial liberalization plays a crucial role in financial deepening. Ikhida (1992) observed that positive real interest rates favor financial savings over the other forms of savings thereby promoting financial deepening. In its own right, financial depth contributes to growth by improving the productivity of investment (Muchiri, 2011).

When interest rates are pegged at an artificially low level, keeping the financial costs low stimulates the desired investment. This allows the government to invest in projects that will impact on the lower levels of society. However, low interest rates at the same time discourage financial savings and thus reduce funds available for lending, so that the desired investment is larger than the realized investment. Fry (1995) argues “trying to repress interest rate is a particularly serious mistake for a developing country because capital is scarce in these countries” When interest rates are artificially made low and credit directed, people who will have access to capital at these low rates are those with political influence who might be encouraged to waste capital in low yielding projects (Muchiri, 2011). This in essence means that the people targeted for the low interest rates particularly the poor might not benefit much.

Financial deepening in terms of micro finance institutions-institutions that provide financial services to the poor people who are otherwise excluded from the formal banking

sector (Morduch, 1999), review of over 350 articles and studies on microfinance institutions and their impact on economic growth and society concluded that institutional sustainability is a necessary goal as subsidized loan funds generally are more fragile and less focused. In his research titled “beyond micro finance: Entrepreneurial Solutions to Poverty Alleviation” concluded that although microfinance has become extremely popular as an approach to poverty alleviation, there are still various controversies associated with it. He argued that microfinance is primarily used for debt and consumption rather than real investment in revenue generating business. In the same effect, microfinance has a polarizing effect as there is discrimination in favor of richer clients, who benefit from better access to credit, and exclusion of poorer people.

Honohan, (2003) put together “the poverty trap” where he argued that poverty is a complex web of disempowering relationships which don’t work. Households trapped in this spider’s web suffer from material poverty, vulnerability, powerless, physical weakness, isolation and spiritual poverty. Thereby, addressing the problem of material poverty through financial deepening is critical but it will not be enough for the poor households to escape from the poverty trap.

Poverty as vulnerability is related to risk. Morduch, (1994) mentions that lack of access to consumption smoothing mechanism may be as detrimental to the poor as deprivation in health and nutrition, which is considered as part of poverty (Muli, 2011). For example, Jalan and Ravallion, (1999) find that in rural China the poorest wealth decile can only insure 60 per cent of the income shocks but the richest third of households are protected from 90 per cent of the income shocks. Rosenzweig and Binswager (1993) also find that the rich are much better insured than the poor using a data set in India. Risk averse

households may choose not to invest in profitable activities because they cannot bear the shocks which may occur. This choice leads them to a low rate of return on their production, often causing poverty.

Many researchers have also tried to examine the role of financial deepening in empowerment and consequently poverty alleviation. According to Parker D.P, 2002, empowerment refers broadly to the expansion of freedom of choice and action to shape one's life. It implies control over resources and decisions. He further asserts that, empowerment is the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives. Muli, (2011) asserts that, since poverty is multidimensional, poor people need a range of assets and capabilities at the individual levels such as health , education and housing, and at the collective level such as the ability to organize and mobilize to take collective actions to solve their problems. Poverty and vulnerability will not be reduced without broad based growth fueled by private sector activity. However, economic growth cannot be sustained if the poor are excluded from optimal engagement in productive activities. Financial services help poor and low income households to increase their incomes and build the assets that allow them to mitigate risk, plan for the future, increase food consumption, and invest in education, health, housing, water and sanitation.

Odhiambo, (2010) and other economists argued that, financial markets influence the form in which savings are expressed as well as the total amount of potential consumption which is diverted to savings. He suggested that appropriate savings instruments providing positive real rates of return to the household can induce rural people to put more of their savings into financial form. This, in turn may increase the average rate of return realized

by the household on its savings portfolio and induce the household to divert more of its income to savings-investments activities.

Honohan, (2004), came up with the poverty lending approach that focused on reaching the poorest of the poor who are typically engaged in pre-entrepreneurial activities that are more focused on consumption smoothing than productivity enhancing activities. This group requires assistance in form of income transfers to meet their basic needs, because any credit extended to them is most probably consumed rather than invested in something that generates a return sufficient to repay the debt (Rosengard, 2001).

2.4 Financial Deepening

Financial deepening implies the ability of financial institutions to effectively mobilize savings for investment purposes. The growth of domestic savings provides the real structure for the creation of diversified financial claims (Muchiri, 2011). It also presupposes active operations of financial institutions in the financial markets which in turn entail the supply of quality financial instruments and financial services. The views by Muchiri 2011 conform to the conclusions of the study by Nnanna and Dogo (1998) that financial deepening represents a system free from financial repression thus findings pointed out that policies of financial repression aimed at encouraging domestic investments through suppressing interest rates produced negative results. Based on these findings, negative real interest rates did not encourage greater investments but rather encouraged the banks to be more risk averse and more hesitant to lend. On the other hand, when interest rates are more market oriented and less negative in real terms, bank

lending increases and same to domestic investments and national savings (Muchiri, 2011).

Financial deepening generally entails an increased ratio of money supply to Gross Domestic Product (Nnanna, 2004). Financial deepening is thus measured by relating monetary and financial aggregates such as domestic credit to the private sector, broad money supply and domestic money bank assets to the Gross Domestic Product, this is based on the premise that, the more liquid money is available to an economy, the more opportunities exist for continued growth of the economy. Financial deepening has therefore been severally defined as the ratio of money supply to GDP, thus a function of domestic credit provided by banking sector as a percentage of GDP, domestic credit to private sector as a percentage of GDP, financial savings to GDP, rate of inflation, real lending rates, deposit money bank assets to GDP, currency outside banks to money supply and the dummy.

Several papers have empirically tested the impact of financial deepening on poverty reduction by attempting to study the link between financial deepening and growth using a number of proxy measures. Azra, (2012) examined the role of financial deepening on poverty alleviation using time series data for Pakistan for the period 1981-2010. Results based on autoregressive distributed lag model (ARDL) concluded that financial deepening (broad money supply and domestic credit to private sector) have long run relationship with per capita consumption (poverty reduction). He also found out that domestic money bank assets (DMBA) have no long-run relationship with poverty alleviation. Based on the error correction model, broad money supply and domestic credit

to the private sector are positively correlated and have a short run relationship with per capita consumption (poverty alleviation).

Muchiri, (2011) observed that financial deepening accelerates economic growth through the expansion of access to those who do not have adequate finance themselves. He further cited that, in underdeveloped financial systems, it is the incumbents who have better access to financial services through relationship banking. Moreover, incumbents also finance their growth through internal resource generation. Thus, in an underdeveloped financial system, growth is constrained to the expansion potential of incumbents. Mature financial systems on the other hand, financial institutions develop appraisal techniques, and information gathering and sharing mechanisms which then enable banks to even finance those activities or firms that are at the margin. This in turn leads to growth inducing productive activities in addition to the incumbents. It is this availability of external finance to budding entrepreneurs and small firms that enables new entry while providing competition to incumbents consequently encouraging entrepreneurship and productivity.

Financial deepening affects economic growth and thus helpful in alleviating poverty. This is because; strong finance is termed as a vehicle to accelerate investment and economic growth which is helpful for poverty alleviation. The planned finance improves the potential of financial system to take part in economic progress and then in poverty alleviation. Shifting of productive funds from surplus units to deficit units will hold tight link between financial deepening and poverty alleviation, (Azra, 2012).

2.5 Poverty

Poverty is a complicated concept that cannot be defined precisely. Generally, a family suffers from poverty when it is unable to satisfy its necessities with its income constraints, that is, basic needs exceed the available means to satisfy the basic needs.. According to the World Bank's definition of poverty, "A condition of life so characterized by malnutrition, illiteracy, and disease as to be beneath any reasonable definition of human decency". Extreme poverty is the most severe state of poverty where people cannot meet their basic needs for survival such as food, water, clothing, shelter and health care.

The determination of the extreme number of poor people in the world, World Bank characterizes extreme poverty as living on the daily income of US \$ 1 or less. Moderate poverty indicates the condition where people earn about \$1 to \$2 a day which enables households to just meet their basic needs but not education, health among others. Relative poverty according to Ghali A.K, (2007) is where a household has an income below the national average income.

Poverty manifests itself in various forms and may be defined in absolute or relative terms, relative poverty is when one cannot purchase a bundle of basic needs available to a reference social group while absolute poverty is a state where one cannot raise the income required to meet the expenditure for purchasing a specified bundle of requirements. The minimum level of consumption at which basic needs are assumed to be satisfied is known as the poverty line. (Miano, 2004).

Kenya's poverty levels currently stand at 44%-46% which is an improvement from 56% in 2000. A 2005/6 household budget survey by the Kenya National Bureau of Statistics showed that 20% of Kenyans suffered food poverty such that their entire income was not even enough for purchasing food, although this study is yet to be updated it's a clear indicator of how far the country is in alleviating poverty. Kenya Integrated Household and Budget survey, (KHIBS) conducted in 2006 found that 46% of the total Kenyan population is absolutely poor, that is, below the poverty line, whereas 49% of the rural population is absolutely poor (Kenya National Bureau of Statistics, 2007). Understanding what factors drive household movements in and out of poverty is extremely important for the design of poverty reduction strategies and still an open area of research.

2.6 Conclusions from Literature

Based on the literature reviewed, financial deepening has a significant positive effect on the poverty ratio in the whole economy and separately, in urban areas and rural areas. Since financial deepening is measured by the credit amount or deposit amounts of commercial banks, the development of the banking sector can be beneficial to the poor.

Financial deepening, the coefficient of economic growth is estimated to have a negative value in an economy as well as in urban areas and rural areas. This implies that economic growth is effective in increasing not only a country's average income but also the income of the poor within a country.

There exist three groups in the literature regarding the causal relationship between financial deepening, economic growth and poverty. The first group argues that financial deepening leads to economic growth then leads to poverty reduction, the second group maintains that economic growth leads to financial deepening which in turn helps alleviate

poverty while the third group contends that financial deepening and economic growth granger-cause one another (bi-directional causal relationship).

The global finance movement deviates from the theories and postulates that the poor stand to benefit more through direct financial services. Many financial inclusion promoters agree that, direct access to finance services can improve individual livelihoods amongst the poor by enabling them to manage scarce resources more efficiently, thereby smoothing consumption and protecting against economic shocks.

This empirical study therefore aims at examining how well financial deepening is related to poverty reduction in Kenya, with the increase in mobile money transfer, agent banking and increased micro finance institutions has that impacted directly on the living standards of Kenyans, that is, is there a positive effect of financial deepening in Kenya on poverty reduction. This is based on the premise that financial deepening is a necessary condition for accelerating growth in the economy as it mobilizes savings and allocates them for development process.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter described the research methodology of the study. The sections presented were research design and justification of the same, population and sample description, data collection and data analysis.

3.2 Research Design

Babbie, (2002) defined research design as the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Kothari (2004) further observed that research design is a blueprint which facilitates the smooth sailing of the various research operations thereby making research as efficient as possible.

This was a causal study which involved investigation of how financial deepening causes poverty reduction in Kenya. Causality approach to the study was preferred because the study sought as to whether financial deepening led to poverty level reduction indirectly through economic growth or directly through increased provision of financial services to all levels of society .Financial deepening affects economic growth and thus helpful in alleviating poverty however, these close relations do not necessarily mean that financial deepening contributes to poverty reduction (Beck, 2007).

The study used both descriptive and explanatory designs in answering the above. The study described the trend of financial deepening and poverty reduction in Kenya followed

by an explanatory approach that investigated whether financial deepening led to poverty reduction through economic growth and finally the causal research objective of the study.

The independent variable was the presumed cause and the dependent variable the potential effect (Muchiri, 2006). In the study, proxy measure for poverty level (private per capita consumption) was the dependent variable while proxy measures for financial deepening (domestic credit to private sector, money supply and domestic financial savings) formed the independent variables.

3.3 Population and Sample

A population is a group of individual persons, objects or items from which samples are taken for measurements, it is the group the investigator wishes to make inferences from (Babbie, 2002). The purpose of the study was to examine the relationship between financial deepening and poverty reduction in Kenya. The unit of analysis was the Kenyan economy and population; this included all the economic activities both rural and urban and entities such as households, firms, financial institutions and markets as financial deepening includes all levels of society and poverty level.

The study will use aggregated macroeconomic data thus, given that data will not be collected individually from institutions there is no need to sample.

3.4 Data Collection

The result of the research was highly dependent on secondary sources. It was carried out using annual time series data covering the period 1997 to 2012. This was an era of development and financial liberalization in Kenya characterized by output expansion,

money growth and increasing volume of investment (Muchiri, 2011). The data was collected from the Kenya National Bureau of Statistics-the custodian of all macroeconomic data in the country. Other Variables such as GDP, domestic credit to private sector, money supply and private per capita consumption were sourced from the economic surveys published by both the Kenya National Bureau of Statistics and FSDK.

3.5 Data Analysis

The study used descriptive and inferential statistics in analyzing the data. Descriptive statistics such as line graphs were used. The inferential statistics used was correlation analysis and OLS regression analysis to test the relationship between the variables.

Pearson Moment Correlation Coefficient as a measure of association was applied to determine the relationship between financial deepening and poverty reduction. Correlation is always between -1.0 where the variables have a negative relationship and +1.0 where the values have a positive relationship.

Regression analysis was used to assess the impact of financial deepening on poverty level. Regression model to be evaluated was as follows:

$$Y = \beta_0 + \beta_{(1)} X_1 + \beta_{(2)} X_2 + \beta_{(3)} X_3$$

Where: the dependent variable Y was private per capita consumption (PCC) as a proxy for poverty reduction and Independent variables included 3 proxy measures for financial deepening namely Domestic credit to private sector (X_1), money supply (X_2) and gross domestic savings (X_3). β_j –Beta j, j=1, 2 and 3 were the slope coefficients whose sign depicted the relationship between poverty level and financial deepening. “ β_0 ” was the

error term contained in the model which measured the goodness of model fit or the explanatory power of the model by capturing the effects of all other independent variables not included in the model.

Analysis was done with the help of EViews software (Version 6) a statistical computer programme used to analyze time series data. The programme was preferred as it quickly and efficiently manages data, performs econometric and statistical analysis, generates model simulations and high quality tables and graphs which were key in the study. The study also used macroeconomic data that tend to assume no trend in the long run, the programme enabled de-trending of variables. Eviews also provided autocorrelation and partial correlation as well as unit root tests.

3.6 Definition and Measurement of Variables

The dependent variable was private per capita consumption as a proxy measure for poverty level. Private per Capita consumption as the ratio of household final consumption expenditure to the total population. It was used to indicate standard of living of the people. This data was obtained from KNBS and surveys by KHIBS.

The independent variable was financial deepening that was measured by three proxy measures as follows:

1. Domestic Credit to Private Sector (DCP/GDP) which was the X1-the ratio of banks claim on the Private Sector to GDP. It represents the role played by financial sector in the economy.

2. Money Supply ($M2/GDP$) which was $X2$ represented the ratio of money supply to GDP. It indicated the real sector of the financial sector of a growing economy, consistently large increases in the money supply brings fears of future inflation.
3. Domestic financial savings which was $X3$ -the ratio of gross domestic savings to GDP. The measure indicated the intensity of the financial intermediaries as it corresponds to more financial services and hence financial depth, financial deepening was expected to benefit from higher gross domestic savings.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter deals with data analysis and presentation of the findings of the study as set out in the research methodology. The chapter commences with the descriptive statistics, which give the normality tests of the series among other statistics. Regression results the follow and diagnostic tests are presented at the tail end of the chapter.

4.2 Descriptive Statistics of Variables

This entails the examination of normality of the data; most economic data is skewed (non normal) due to the fact that economic data has a clear floor but no definite ceiling. Also it could be as a result of outliers. This has been done using Jarque-bera statistic test as it utilizes the mean based coefficients of skewness and kurtosis to check normality of variables used. Skeweness is the tilt in the distribution and should be within the -2 and +2 range for normally distributed series. Kurtosis as a measure of the peakedness of a distribution should be within -3 and +3 range when the data is normally distributed. Normality test uses the null hypothesis of normality against the alternative hypothesis of non normality. If the probability value is less than Jarque-Bera chi-square at the 5% level of significance, the null hypothesis is rejected (Muchiri, 2011).

The summary of the descriptive statistics of the data used in this study is shown in Table 4.1. The normality tests show that private per capita consumption, total domestic credit and money supply are normally distributed while domestic financial savings are not normally distributed. The presence of non normality impairs the normality of the

residuals forming the long run relationship. This is likely to lead to non normality of residual series. The descriptive statistics do give guide on which of the equations are more able to yield better results and highlight on possible problems to encounter .However, there is need to supplement the statistics by more incisive analysis such as the correlation matrix, (Muchiri,2011).

Table 4.1: Summary of Descriptive Statistics

	Private per capita consumption(Ksh.Mn)	Domestic Credit to Private Sector(Ksh.Mn)	Money Supply (Ksh.Mn)	Domestic Financial Savings(Ksh.Mn)
Minimum	453,176	244,747	277,811	40,939
Maximum	3,448,050	1,345,209	1,469,037	426,283
Mean	1,375,970	541,034	613,273	198,263
Std.Dev.	965,794	347,897	381,129	131,278
Skewness	1.11	1.35	1.14	0.45
Kurtosis	0.01	0.84	0.21	(1.15)
Jacque-Bera	3.73	2.18	2.28	7.16
Probability	0.145	0.33	0.32	0.028**
Observations	16	16	16	16

Note: ** Reject hypothesis of normality at 10% level

* Reject hypothesis of normality at 5% level

Skewness: Private per capita consumption=1.11, Domestic Credit=1.35, Money supply=1.14 and financial savings=0.45 all within the -2 & +2 range for normally distributed series.

Kurtosis: Private per capita=0.01, Domestic credit=0.84, money supply 0.21 and financial savings=-1.15 all within the -3 & +3 for normally distributed series.

Normality test: Prob< Jarque Bera @ 5% null hypothesis rejected thus:

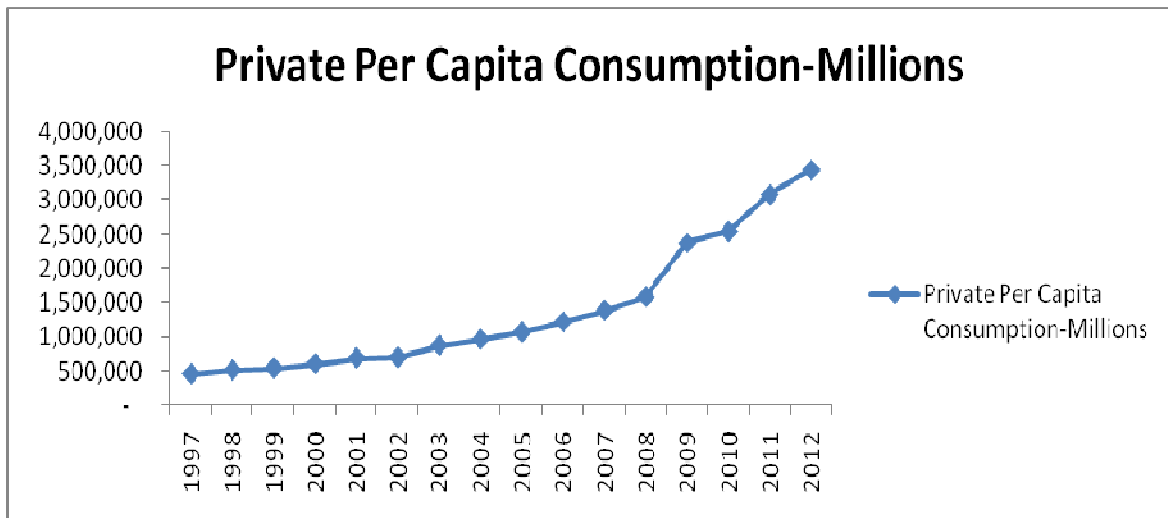
*Private per Capita: 0.145<3.73 thus variable normally distributed; Domestic Credit 0.33<2.18 thus normally distributed, money supply 0.32<2.28 normally distributed, domestic financial savings 0.028** implies we reject hypothesis of normality.*

4.3 Graphical Presentation of Variables used

Poverty level was represented by Private per Capita Consumption. Figure 4.1 shows that the proxy measure of poverty which is private per capita consumption has been surging upwards from 1997 to 2008 and fell slightly in 2009 after which the steady increase trend continued.

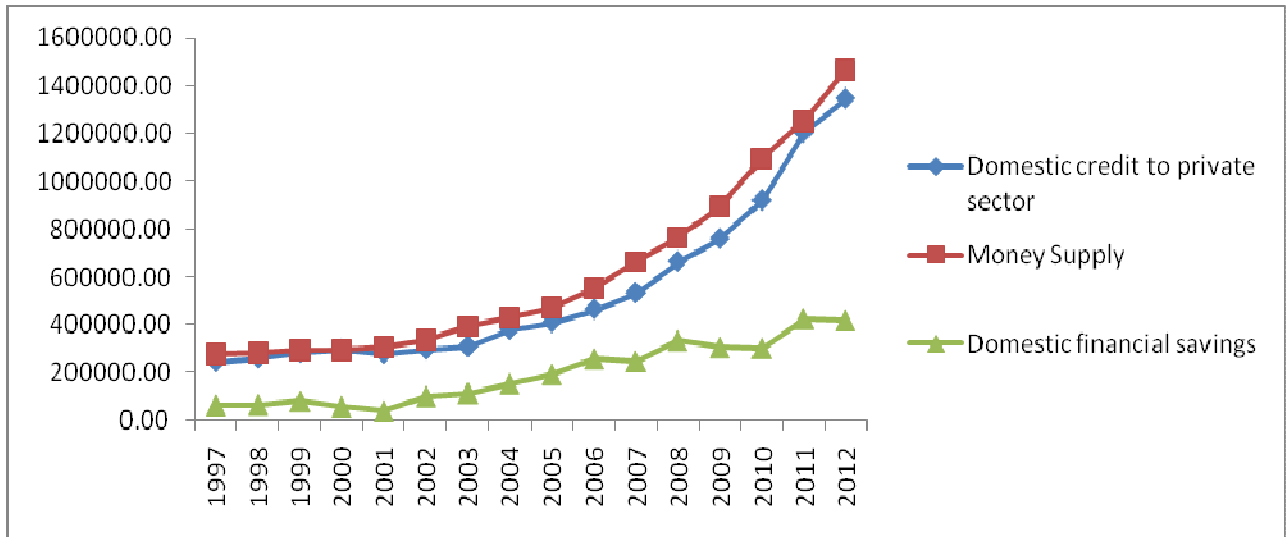
Figure 4.2 shows that all the financial deepening measures: Domestic Credit to Private Sector, Money Supply and Domestic financial Savings rose steadily from 1997 to 2012.

Figure 4.1: Graphical representation of Private per Capita Consumption



Private per Capita consumption increased steadily up to 2008 after which there was a sharp increase in 2009 and the last three years the consumption more than doubled. This indicates growth in the real side of the economy as households had more money to spend.

Figure 4.2: Graphical Representation of Financial Deepening Measures



Domestic credit to private sector rose steadily from 1997 to 2003 after which the increase was sharp and more than tripled by 2012, money supply has had an upward trend since 1997 while Domestic financial savings fell in 2001 after which the increase has been steady. These increases in financial deepening proxies represent liberalization of financial markets that boosted economic performance.

4.4 Correlation Analysis

The correlation matrix is an important indicator that tests the linear relationship between the explanatory variables. The matrix also helps to determine the strength of the variables in the model, that is, which variable best explains the relationship between proxy of poverty –Private per Capita Consumption and proxies of financial deepening: Domestic Credit to Private Sector, Money Supply and Domestic Financial savings. This helps in determining which variable(s) to drop from the equation

Table 4.2 represents the correlation matrix of the variables in levels.

Table 4.2: Correlation Matrix at Levels

	Private Per Capita Consumption	Domestic Credit to Private Sector	Money Supply	Domestic Financial Savings
Private Per Capita Consumption	1			
Domestic Credit to Private Sector	0.989	1		
Money Supply	0.994	0.994	1	
Domestic Financial Savings	0.931	0.927	0.940	1

The table above shows that there is positive correlation between Private Per Capita Consumption and proxies of financial deepening: Domestic Credit to Private Sector, Money Supply and Domestic Financial savings. The Correlation co-efficient were 0.989, 0.994 and 0.931 respectively. This indicates strong relationship between these variables

4.5 Time Series Properties

Non-Stationarity of time series data has often been regarded as a problem in empirical analysis. Working with non-stationary variables leads to spurious regression results from which further inference is meaningless (Muchiri, 2011). The conventional Dickey-Fuller (DF) and Augmented Dickey-Fuller (ADF) tests were used to test for stationarity of the series. The results of the test for variables in levels are presented in Table 4.3.

Table 4.3 Unit Root Tests

Variables	ADF statistic First difference (1)	Order of Integration
Private per Capita Consumption	-4.765	1
Domestic Credit to Private Sector	-3.125	1
Money Supply	-3.791	1
Domestic Financial savings	-4.273	1

Critical values for DF and ADF: 1% Critical Value=-3.642; 5% Critical Value=-2.952.

The figure in parentheses next to ADF indicates the number of lags.

The tests show that all variables are stationary at first differencing. This indicates that to assume stability, the variables were differenced once, hence becoming stationary.

The next step after finding out the order of integration was to establish whether the non stationary variables at levels are cointegrated. Differencing of variables to achieve stationarity leads to loss of long run properties. The concept of cointegration implies that if there is a long-run relationship between two or more non stationary variables, deviations from this long run path are stationary. To establish this, the Engel- Granger two step procedure was used. This was done by generating residuals from the long run equation of the non stationary variables, which were then tested using the ADF tests. The results of Cointegration shows that all the variables are not cointegrated and hence do not have long term relationship. As a result, the study adopted shortrun OLS Regression.

4.6 OLS Regression Results

Table 4.4: OLS Regression Analysis, reporting the short run relationship

Dependent variable : Private per Capita Consumption				
Variable	Coefficient	Std.Error	t statistic	Prob.
Constant	3.744	3.973	0.942	0.355
Domestic Credit to private sector	0.134	0.058	2.28	0.031**
Money Supply	0.466	0.4	11.393	0.000*
Domestic Financial Savings	0.142	0.07	2.038	0.0069*
R-squared	0.812	Mean dependent var		6.578
Adjusted R-squared	0.985	S.D dependent var.		0.506
S.E of Regression	0.167	Akaike info. Criterion		-0.541
Sum squared Residues	0.672	Schwarz criterion		0.217
Log likelihood	15.391	F statistic		41.749
Durbin-Watson statistic	0.866	Prob(F statistic		0.000*

Note:

*Significance levels: * significance at 1% ** significance at 5%*

*Estimated Equation: Private per capita consumption=3.744+0.134*Domestic credit to private sector+0.466* Money supply+0.142* Domestic financial savings*

4.7 Summary and Interpretation of Findings

The regression model was estimated using Ordinary Least Squares. Table 4.4 present the result of the regression. The table shows existence of a short run relationship among the variables. The F statistic is greater than Prob(F) implying that the regression is statistically significant at 1% level. Notable also is that result indicating all coefficients of the explanatory variables to be statistically significant. This implies that all the three proxies of financial deepening influences private per capita consumption which is a proxy for poverty level. The regression performed indicates goodness of fit with an adjusted R^2

of 98.5% implying that 98.5% of the deviations of regression from the actual fit are explained by the explanatory variables, with the residuals explaining only 1.5%.

The regression model was subjected to a number of diagnostic tests in order to evaluate its validity. The diagnostic test outcomes were satisfactory. These were: the LM-autocorrelation, which supplements the DW statistics, the ARCH (Autoregressive conditional heteroscedasticity) which detects the problem of heteroscedasticity, the Jaque-bera test for normality of the residuals and the RESET test for specification of the regression. In addition to the above tests, CUSUM test was done. The results obtained revealed that errors of the estimated model satisfy all the assumptions of OLS model. However, the CUSUM test revealed that parameters were stable but the model cannot be used for forecasting into the future. Besides the Jaque-Bera normality test, which is distributed as chi-square statistics, the rest of the diagnostic tests utilized the F statistic distribution.

All the variables considered in the determination of poverty level are as hypothesized. The results show that the coefficients of all the variables have the correct signs and are statistically significant. This implies that financial deepening proxies namely domestic credit to private sector, money supply and domestic financial savings have impact on poverty. The results show that there is a positive impact of domestic credit on the poverty level. A 1% increase in domestic credit to the private sector leads to poverty level reduction through a 0.134% increase in private per capita consumption. Money supply impacts on the poverty level by directly impacting on economic growth and increased per capita consumption of 0.142%. The results confirm the level of financial deepening in the country contributes to low poverty levels by impacting on the private per capita consumption and also indirectly through economic growth. As a result, improved financial deepening will lead to low poverty levels in Kenya both directly through private

per capita consumption and indirectly through economic growth. Diagnostic test applied to check that the estimations gave support of no econometric problem was Jarque Bera statistic which concluded that there was no econometric problem, error term was found to be normally distributed.

Several papers have empirically tested the impact of financial deepening on poverty reduction by attempting to study the link between financial deepening and growth using a number of proxy measures. Azra, (2012) examined the role of financial deepening on poverty alleviation using time series data for Pakistan for the period 1981-2010. Results based on autoregressive distributed lag model (ARDL) concluded that financial deepening (broad money supply and domestic credit to private sector) have long run relationship with per capita consumption (poverty reduction). He also found out that domestic money bank assets (DMBA) have long-run relationship with poverty alleviation. Based on the error correction model, broad money supply and domestic credit to the private sector are positively correlated and have a shortrun relationship with per capita consumption (poverty alleviation). These findings are consistent with the findings of this study.

Consequently, Muchiri (2011) echoed the results of the study when he observed that financial deepening accelerates economic growth through the expansion of access to those who do not have adequate finance themselves. He further cited that, in underdeveloped financial systems, it is the incumbents who have better access to financial services through relationship banking. Moreover, incumbents also finance their growth through internal resource generation. Thus, in an underdeveloped financial system, growth is constrained to the expansion potential of incumbents. Mature financial

systems on the other hand, financial institutions develop appraisal techniques, and information gathering and sharing mechanisms which then enable banks to even finance those activities or firms that are at the margin. This in turn leads to growth inducing productive activities in addition to the incumbents. It is this availability of external finance to budding entrepreneurs and small firms that enables new entry while providing competition to incumbents consequently encouraging entrepreneurship and productivity.

In summary, financial deepening affects economic growth and thus helpful in alleviating poverty. This is because; strong finance is termed as a vehicle to accelerate investment and economic growth which is helpful for poverty alleviation. The planned finance improves the potential of financial system to take part in economic progress and then in poverty alleviation. Shifting of productive funds from surplus units to deficit units will hold tight link between financial deepening and poverty alleviation.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The purpose of the study was to establish the relationship between financial deepening and poverty level in Kenya. The results of the study show that financial deepening has had a positive effect on poverty level in Kenya, more specifically as proxies of financial deepening were increased the private per capita consumption consequently increased which is a proxy measure for poverty.

Table 4.4 provides a summary of the effect of financial deepening on poverty. In general, the signs of the coefficients obtained were positive and statistically significant. Using money supply as indicator of financial deepening in the growth in per capita consumption, the coefficient obtained was positive indicating that increase in money supply has a significant positive influence on poverty level. The use of Domestic credit to private sector and domestic financial savings also yielded similar result. This implies that the development of the financial sector has promoted growth in private consumption consequently reducing poverty levels.

The study reveals the existence of a long run relationship between financial deepening (money supply, domestic credit to private sector and domestic financial savings) and poverty (private per capita consumption). Results from error correction mechanism show the existence of both short run and long run relation between private per capita consumption and ratio of broad money supply to GDP ($M2/GDP$). All the three proxies for financial deepening are positively correlated with private per capita consumption.

5.2 Conclusion

This paper has examined the impact of financial deepening on poverty levels in Kenya. Based on the evidence from a sample period 1997-2012, financial deepening positively impacted on private per capita consumption which is the proxy for poverty. The correlation coefficients were 0.989 for domestic credit to private sector, 0.994 for money supply and 0.931 for domestic financial savings indicating a very strong relationship between these variables.

The conventional Dickey-Fuller (DF) and Augmented Dickey-Fuller (ADF) tests for Stationarity indicated that to assume stability, the variables were differenced once hence becoming stationary.

The regression performed indicated goodness of fit with an adjusted R^2 of 98.5% implying that 98.5 % of the deviation of regression from the actual fit are explained by the independent variables with the residuals explaining only 1.5%.

The study revealed the existence of a long run relationship between financial deepening (money supply, domestic credit to private sector and domestic financial savings) and poverty (private per capita consumption). Results from error correction mechanism show the existence of both short run and long run relation between private per capita consumption and ratio of broad money supply to GDP (M2/GDP). All the three proxies for financial deepening are positively correlated with private per capita consumption.

Based on the error correction model, broad money supply and domestic credit to private sector are positively correlated and have a short run relationship with private per capita consumption which is the proxy measure for poverty alleviation.

5.3 Policy Recommendations

There is need to sustain a high level of macroeconomic stability in Kenya in order to reduce high incidences of non performing credits to ensure that private sector credits are channeled to the real sector of the economy thus strengthening risk management in the financial system. This is because domestic credit to the private sector and private per capita consumption are positively correlated thus increase in domestic credit will increase private per capita consumption.

It is important to control the development of financial intermediaries as financial crisis such as pyramid schemes are detrimental to the poor. Financial intermediaries directly impact on the size and depth of financial deepening and as such crisis should be averted by all means.

Policy makers to pursue economic growth and broader financial development by reducing the role of the public sector and rely more on the private sector. This shall involve increased availability of credit to the private sector which impacts positively on household consumption.

The government needs to promote domestic savings through increased deposit rates, strengthen supervision and regulation of banks with a focus on risk management. When domestic financial savings are increased there is direct impact on the real economy side and as such promotes access to financial services.

Microfinance has served as a key tool of poverty alleviation and as such should be intensified in rural areas to the needy people. Specific training programs to be developed to ensure the needy allocate the funds effectively to attain the set objective.

5.4 Limitations of the Study

The main limitation of the study has been relevance and reliability of macroeconomic data in the Kenyan economy. Different data sources gave different data for the same variable. To maintain consistency, the study relied on data published by government press through Kenya National Bureau of Statistics.

The study estimated augmented growth model while incorporating different measures of financial depth as explanatory variables. A separate financial deepening equation was not specified. Specifying both models could have been better to enable assessment of impact both in direction and size of economic and financial deepening.

The study used time series data, meaning all limitations of estimation and analysis of time series data applies to this study such as historical data not being a good indication of what might happen in the future.

The study was carried out over a period of 16 years covering 1997 to 2012; this period may not be enough to draw conclusions as major economic fluctuations may influence the economic performance therefore wrong conclusions may have been arrived at during this study.

5.5 Suggestions for further studies

The study focused on only one aspect of financial deepening, that is, financial deepening as the increased access of financial services to all levels of the society and over looked the issue of financial deepening in the case of financial instruments and development of strong markets for a range of financial products, this is an area that could be tackled in future.

Poverty alleviation as a result of economic growth was not evaluated. Does economic growth as a result of financial deepening translate to poverty alleviation or does it only increase the gap between the rich and the poor is an area yet to be tackled.

Some researchers claim that financial system improvements benefit the rich and the politically connected more; a study of the same locally would help unveil this paradox. Others are of the opinion that deepening improves allocation of capital impacting positively on the poor thus need for further research.

Further studies also required on financial deepening and its implications on savings and investments in Kenya which both directly and indirectly impact on poverty level.

Finally, a possible area of study is financial deepening, property rights and poverty: evidence from Kenya. A proposition that financial deepening could narrow income inequality and reduce poverty and that stronger property rights reinforce these effects. A study needs to be done as institutional reforms and stronger property rights are key to poverty alleviation.

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APPENDICES

Appendix 1: Secondary Data Used

Year	Private per capita consumption	Domestic credit to private sector	Money Supply	Domestic financial savings
1997	453,176.00	244,747.00	277,811.00	65,238.50
1998	510,082.80	260,562.00	284,510.00	67,487.40
1999	537,861.90	284,710.00	295,513.00	81,006.30
2000	602,353.40	297,536.00	297,872.00	58,840.40
2001	685,607.00	279,827.00	308,735.00	40,939.00
2002	693,171.29	296,847.00	338,244.00	102,149.20
2003	872,821.00	308,880.00	395,116.00	114,636.00
2004	961,974.00	379,617.00	432,567.00	155,222.00
2005	1,066,471.00	410,476.00	474,490.00	193,172.00
2006	1,217,635.00	465,289.00	553,907.00	258,745.00
2007	1,385,833.00	533,804.00	666,875.00	247,439.00
2008	1,583,651.00	664,636.00	766,393.00	334,814.00
2009	2,371,180.00	759,794.00	898,099.00	305,331.00
2010	2,543,878.00	920,671.00	1,099,234.00	301,880.00
2011	3,081,768.00	1,203,946.00	1,253,958.00	426,283.00
2012	3,448,050.00	1,345,209.00	1,469,037.00	419,052.00