THE EFFECT OF CREDIT ON ECONOMIC GROWTH IN KENYA

BY

MILKAH KWAMBOKA MWALUNGO

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER IN BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

2011

DECLARATION

STUDENT

I declare that this proposed research project is my original work and that it has not been presented for a degree in any other university.

Signature………………………..…………… Date……………….………...

Milkah Kwamboka Mwalungo

Reg No. D61/70050/2009.

SUPERVISOR

This proposal has been submitted for moderation with my approval as the University Supervisor.

Signature………………………..………… Date……………….………...

Dr. Sifunjo- Lecturer,

Department of Finance and Accounting

DEDICATION

To my mother Mrs. Grace Nyaboke Mogaka for her encouragement and ceaseless prayers. To my husband, Alexander Kiprop for his love and patience and lastly to my son Adriel Kandie for continously being my source of strength.

ACKNOWLEDGEMENT

In a work of this kind, there are several people who deserve a heart felt appreciation for their guidance and support during the period of my study. It is always impossible to acknowlwdge all but a few. Thus though indebted to many people, i can directly only thank a few people, foremost of whom are members of family ; my husband Alexander and son Adriel for their prayers and encouragement. Further, I appreciate the support of my mother for her constant support. You are the best.

Many thanks goes to my supervisor Dr. Sifunjo for the many tireless hours he took poring over the draft, offering invaluable advice and making corrections. I also thank him for his constant support, guidance, clear thinking, positive criticism and passion to see me excel. Thank you so much for your time, I enjoyed being your student.

My acknowledgement also goes to my classmates and friends at the University of Nairobi for the support and tolerance throughout the program.

My greatest gratitude is to God the Almighty. He is a faithful God and may His name be praised today and forever.

ABSTRACT

The objective of the study was to establish the effect of credit on economic growth in Kenya. Both qualitative and quantitative methods were used to achieve the objective of the study. A regression model was used to carry out the empirical analysis. The study used secondary data that was collected from the supervision department of the Central bank of Kenya for a period of 15 years.

The findings and analysis reveal that private credit advanced has an effect on economic growth in Kenya.The study used a simple regression model,descriptive statistics and correlation analysis to establish the effect of credit on economic growth in Kenya.The model equated economic growth as a function of credit.The results obtained from the regression model show that there is a positive correlation between credit and economic growth in Kenya.Commercial banks should therefore expand their financial outreach to the various sectors of the economy to be able to improve economic growth rate in Kenya.

In view of these findings, the researcher recommends that financial institutions should endevour to expand their financial outreach. The regulator should also review policies set to ensure that the low income earners have as much access to credit as the middle and high income earners. As indicated by the research findings credit is critical to Kenya's economic growth.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF GRAPHS

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Capital is the most crucial element in any investment project. It can be in different forms but the most important form is the monitory form. People, organizations and other economic agents require finance for different purposes. Specific institutions are organized in a way to provide the needed finance by rendering financial services. Such institutions are called financial institutions. Banks are among such institutions that render financial services. They are mainly involved in financial intermediation, which involves channeling funds from the surplus unit to the deficit unit of the economy, thus transforming bank deposits into loans or credits Ademu (2006).

Credit has played a great role in economic development by providing financial outreach to various economic agents to enable them meet operating expenses. To clarify, business unit obtain credit to buy machinery and equipment. They also obtain credit for purposes of financing their working capital. Farmers obtain credit to purchase seeds, fertilizers, put up various kinds of farm buildings. Governmental bodies obtain credits to meet various kinds of recurrent and capital expenditures. Last but not least, individuals and families also take credit to buy and pay for goods and services (Adeniyi, 2006). According to Ademu (2006), the provision of credit with sufficient consideration for the sector's volume and price system is a way to generate self-employment opportunities. This is because credit helps to create and maintain a reasonable business size as it is used to establish and expand the business, to take advantage of economies of scale. It can also be used to improve casual activity and increase its efficiency. This is achievable through resource allocation and substitution, which is

1

facilitated by the availability of credit. While highlighting the role of credit, Ademu (2006), further, explained that credit can be used to prevent an economic activity from total collapse in the event of natural disaster, such as flood, drought, disease, or fire. Credit can be garnered to restore such an economic activity that suffered the impede.

In an economy, there exist a surplus unit and a deficit unit. The banking sector helps to make credits available by mobilizing surplus funds from savers who have no immediate needs of such funds and thus channel such funds in form of credit to investors who have radiant ideas on how to create additional wealth in the economy but lack the necessary capital to execute the ideas. It is instructive to note that the banking sector has stood out in the financial sector as of prime importance, because in many developing countries of the world, the sector is virtually the only financial means of attracting private savings on a large scale, (McKinnon, 1980 as cited by Adeniyi, 2006).

The debate on the intermediary role of banks in the economic development has dominated many discussions in literature but bear a lot of weight on credit. However, there seem to be a general consensus that the role of intermediary role of banks helps in boosting economic development. Akintola (2004) identified banks' traditional roles to include financing of agriculture, manufacturing and syndicating of credit to productive sectors of the economy.

1.1.2 Credit and Economic Growth in Kenya

Credit of banks to the Kenyan economy has been increasing over the years. According to Central Bank of Kenya Annual Report (2007), credit to the core private sector by the Deposit Money Banks grew by 98.7%. Credit flows to the core private sector in 2007 increased by 25

per cent. Kimenyi (2001) observed that in making credit available, banks are rendering a great social service, because through their actions, production is increased, capital investments are expanded and a higher standard of living is realized.

According to Central Bank of Kenya 2007 report, the resources available in the economy measured as gross national disposable income amounted to 107.9 per cent of GDP in 2006 compared to 106.7 per cent of GDP in 2005. The total output by all sectors also grew by 6.1 per cent compared with 5.7 per cent in 2005. The resources were allocated to consumption, investment and savings. Gross domestic investment has been increasing by an average of 19.4 per cent. The increase in gross domestic investment was largely in gross fixed capital formation, which increased to an average of 18.9 per cent from 18.4 per cent of GDP. Investment or gross national savings, defined as gross national disposable income less total consumption, increased from 15.4 per cent in 2005 to 17.1 per cent in 2006 of GDP. Gross domestic savings, that is, gross domestic product less domestic consumption, went up from 8.7 per cent in 2005 to 9.2 per cent of GDP.

Kenya's public and publicly guaranteed debt increased from Kshs 789.1 billion at the end of June 2006 to Kshs 801.3 billion at the end of June 2007. This represented an increase of Kshs 12.2 billion or growth of 1.5 per cent during the fiscal year 2006/07. The increase in the stock of debt during the fiscal year was attributed to an increase of Kshs 46.9 billion in domestic debt, which was partly offset by a decrease of Kshs 34.7 billion in external debt. Domestic debts increased during the fiscal year mainly due to planned domestic borrowing to finance the budget deficit while the decrease in external debt was attributed to strengthening of the Kenya shilling. (Central Bank of Kenya 2007 report).

As the government of Kenya continued to reduce her external debts and increase domestic debts to expand her projects, it has in one way or the other tried to spur economic growth. The government is continuously increasing her overral domestic credit and in 2010, according to Central Bank of Kenya 2010 report, it increased to Kshs 1.3 trillion from 978.3 billion in 2009. The money obtained is being channeled to under-developed public sectors. Central Bank of Kenya 2010 report also confirms that there have been an increase of 21.2 per cent in credit to private sector including quasi government bodies and 62.3 per cent increase in domestic credit to Central Government.

Table 1. Growth Rates in Agriculture, manufacturing, trade, and Finance in percentages

Year	*Agriculture*	Manufacturing	Trade restaurants and Hotels	Finance, insurance, real estates and business services	Kenyan GDP growth rate
1989/90	3.4	5.2	2.3	6.4	4.3
1990/91	-1.1	3.8	1.3	6.1	2.1
1991/92	-3.7	1.2	1.5	6.9	0.5
1992/93	-4	1.8	0.1	7.2	0.2
1993/94	2.8	1.9	6.1	6.1	3
1994/95	4.8	3.9	7.9	6.9	4.9
1995/96	4.4	3.7	8	7.1	4.7
1996/97	1	1.9	4	5.3	2.4
1997/98	1.5	1.4	2.3	3.2	1.8
1998/99	1.2	1	2	2	1.4
1999/00	-2.4	-1.5	1	0.4	-0.3

Source: Several Economic Surveys

1.2 Statement of the Problem

Easy accessibility of funds to private and public institutions in Kenya has not performed creditably well and hence has not played the expected fundamental and vibrant role in economic growth and development in Kenya. This situation has been of great concern to the government, citizenry, operators, practitioners and the organized private sector groups. Throughout the year, the government at central and even local levels during budgetary allocations, policies and pronouncements have signified interest and acknowledgement of the crucial role of the financial outreach to economic growth. Due to this, policies for energizing the accessibility of funds to different economic sectors are being put in place. There have also been fiscal incentives, grants, bilateral and multilateral agencies support and aids as well as specialized institutions all geared towards making different economic sectors vibrant.

Well-known researchers believe that credit to different economic sectors merely responds to economic growth and development, adjusting to changing demands from the real sector and is therefore overemphasized (Robinson, 1952; Lucas, 1988). On the other hand, equally prominent researchers believe that availability of credit from banks plays a crucial role in alleviating market frictions and hence influencing savings rates, investment decisions, technological innovation and therefore long-run growth rates (Schumpeter, 1912; Gurley and Shaw, 1955; Goldsmith, 1969; McKinnon, 1973; Miller 2003). There is a divided opinion from the prominent researchers about the relationship between credit and economic growth of developing nations.

The study aims at answering the research question: what is the effect of Credit on economic growth in Kenya. This study contributes to the debate between the two sides on the effect of Credit on economic growth in Kenya. Through empirical research, this study will clarify and

consolidate the divided minds of different prominent researchers on the effect of Credit on Economic growth in Kenya.

1.3 Objective of the Study

The objective of this study was to establish the effect of credit on economic growth in Kenya.

1.4 Importance of the Study

Kenya, like other countries, has some economic indicators that are common to other countries and some that are unique to it. The study would be of great benefits to the banks that have their operations in Kenya and its stakeholders and to the whole communities as a whole. The study would help to realize the importance of financial outreach to economic growth. Basically the study would be of greater importance to stakeholders who were: Bank Managers, investors, scholars and policy regulators.

Managers, who are capable of taking their business organizations from a lower level to a higher level, help the organization maintain a high investor confidence level. The ideas in this research paper would help these managers to aspire economic growth by inventing and innovating techniques that would make it easy for different economic sectors to easily access financial help. Bank managers would be able to understand the area that need overhauling hence would advise different stakeholders to corporate in such a matter.

The major purpose of investing in a business organization was to create wealth. The research paper would help investors in different sectors to be able to access funds from banks and invest appropriately to create benefits of the two parties. Banking sector proving investment

advises hence potential investors would benefit by knowing the appropriate place to get information about their investments.

Interested researchers who would like to advance in establishing the relationship between financial outreach and the economic growth would have a base on which they would build their researches. This would build a foundation in an important area of study that would spill the benefits to all stakeholders. This study would be useful to all regulatory institutions that have the mandate to regulate the understudy sectors. Policies are the backbone of a well running institution. These policies determine what to do and how to do it. The study would help regulators set policies that would never undermine economic growth but increase the pace for financial outreach and economic growth.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two is generally talking about the effect of credit on economic growth by extending financial outreach to the productive units of a country's economy. Section 2.2 is giving the theoritical literature on the effect of credit on economic growth. Section 2.3 and 2.4 are giving the empirical evidence on the effect of credit on economic growth. The empirical evidence in section 2.4 is evidence experienced in the economic growth of kenya.

2.2 Theoretical Literature on the Effect of Credit on Economic Growth

There are abundant growth models in literature but there exist no consensus as to which strategy will achieve the best success. The achievement of sustained growth requires minimum levels of skills and literacy on the part of the population, a shift from personal or family organization to large scale unit (Nnanna, 2004). Some of these existing growth models are Two-Gap Model, Marxian Theory, Schumpeterian Theory, Harrod-Domar Theory of Growth, Neo-Classical Model of Growth, and Endogenous Growth Theory. The growth models relevant to this are Neo-Classical Model of Growth, and Endogenous Growth Theory, since these growth models explain the situation in developing economies such as Kenya, Uganda, Rwanda Nigeria, Ghana, any many others.

Robert Solow first devised the neo-classical model of growth. The model believes that a sustained increase in capital investment increases the growth rate only temporarily. This is because the ratio of capital to labour goes up, there is more capital available for each worker

8

to use, but the marginal product of additional units of capital is assumed to decline. The economy eventually moves back to a long-term growth path, with real GDP growing at the same rate as the workforce plus a factor to reflect improving "productivity". A "steady-state growth path" is reached when output, capital and labour are all growing at the same rate, so output per worker and capital per worker are constant. Neo-classical economists believe that to raise an economy's long term trend rate of growth requires an increase in the labour supply and an improvement in the productivity of labour and capital. Differences in the rate of technological change are said to explain much of the variation in economic growth between developed countries. The neo-classical model treats productivity improvements as an "exogenous" variable meaning that productivity is assumed to be independent of capital investment (IMF, 2001).

According to Nnanna, Englama, and Odoko (2004), based on Solow's analysis of the American data from 1909 to 1949, he observed that 87.5% of economic growth within the period was attributable to technological change and 12.5% to the increased use of capital. The result of the growth model was that financial institutions had only minor influence on the rate of investment in physical capital and the changes in investment are viewed as having only minor effects on economic growth.

Romer (1986), Lucas (1988), and Rebelo (1991) developed endogenous growth theory or new growth theory in the 1980s, among other economists as a response to criticism of the neo-classical growth model. The endogenous growth theory holds that policy measures can have an impact on the long-run growth rate of an economy. The growth model is one in which the long-run growth rate is determined by variables within the model, not an

exogenous rate of technological progress as in a neoclassical growth model. Jhingan (2006) explained that the endogenous growth model emphasizes technical progress resulting from the rate of investment, the size of the capital stock and the stock of human capital. In an endogenous growth model, Nnanna, Englama, and Odoko (2004) observed that financial development can affect growth in three ways, which are: raising the efficiency of financial intermediation, increasing the social marginal productivity of capital and influencing the private savings rate. This means that a financial institution can effect economic growth by efficiently carrying out its functions, among which is the provision of credit.

2.3 Empirical Evidence on the Effect of Credit on Economic Growth

Many empirical studies have investigated the relationship between credit and economic growth. But the results are ambiguous. The studies based on the cross section and panel data find positive effects of credit on output growth even after accounting for other determinants of growth as well as for potential biases induced by simultaneity, omitted variables and unobserved country specific effect on the Finance-growth nexus. On the other hand, the studies based on the time series data give contradictory results. Demetriades and Hussein (1996) find the evidence that finance is a leading factor in the process of economic growth. They further found that for the majority of the countries, causality is bi-directional, while in some cases finance follows economic growth. Luintel and Khan (1999) used a sample of ten less developed countries and concluded that the causality between credit and economic growth is bi-directional for all countries. Finally,studies, which look at the structure and sources of company finance, also conclude that the development of credit facilitates the growth of corporate sector[Rajan and Zingalas (1996)]. All these results show that a

consensus on the role of financial development in the process of economic growth does not exist so far.

A large number of empirical studies have tried to assess the qualitative and quantitative impact of credit on economic growth by using different types of econometric approaches and a variety of indicators to measure financial development. In a seminal study, King and Levine (1993b) analysed cross-country data for 80 countries over the period 1960-1989. They use four different indicators to measure financial development. Controlling other variables that affect long-run growth, they found that different financial indicators were strongly and robustly correlated with economic growth. They also showed that the initial level of financial depth was a good predictor of subsequent rates of economic growth even after controlling other growth-enhancing factors.

Xu (2000) used a multivariate vector autoregressive approach to examine the effects of credit on domestic investment and output in 41 countries between 1960 and 1993. The results showed that credit is important to GDP growth and that domestic investment is an important channel through which financial development affects economic growth. Furthermore, many countries were able to turn the short-term negative effects to long term positive effects, and all these results were robust.In a recent study Rioja and Valev (2004) investigate the channels through which financial development influence economic growth in a panel of 74 countries during 1961-1995. They found that finance has a strong positive influence on productivity growth primarily in more developed countries. In less developed countries, the effect of finance on output growth occurs primarily through capital accumulation.

Xu, (2000) noticed that financial institutions facilitate growth by focusing on capital formation and extending the capital in form of credit to different economic units. From this perspective, capital formation and distribution can be influenced by financial institutions through altering the savings rate or by reallocating savings among different capital producing technologies. Liquidity is crucial in this perspective of economic growth. The high-return projects involve a long-run commitment of capital and savers are generally reluctant to lose control of their savings for a long time. The task of financial institutions is to enhance the liquidity of long-term investments so that more investment is expected in the high-return projects. According to Hicks the industrial revolution in England was mainly caused by the financial institutions' improvements that moderated liquidity risk (Levine, 1997).

The above evidence of extention of credit and economic growth was shared by scholars like Goldsmith (1969), McKinnon (1973) and Shaw (1973), who opted for the proactive function of financial services. Goldsmith (1969) assumed that the size and function of a financial system is linked with the supply and quality of financial intermediation and his analysis on 35 sample countries proved a positive correlation between the credit extention and economic growth. Xu, (2000) and Shaw (1973) suggested that state involvement in the development of financial systems can be an obstacle for economic growth. Thus financial institutions were perceived to positively affect economic growth.

By now there is an ever-expanding body of evidence that suggests countries with better developed credit facilities experience faster economic growth (Levine, 1997 and 2005). More evidence that is recent also suggests advanced credit facilities not only promote economic growth, but also improve the distribution of income (Crowley 2008). The provision of credit

has increasingly been regarded as an important tool for raising the incomes of rural populations, mainly by mobilizing resources to more productive uses. As development takes place, one question that arises is the extent to which credit can be offered to the rural poor to facilitate their taking advantage of the developing entrepreneurial activities. The generation of self-employment in non-farm activities requires investment in working capital. However, at low levels of income, the accumulation of such capital may be difficult. Under such circumstances, loans, by increasing family income, can help the poor to accumulate their own capital and invest in employment-generating activities (Hossain, 1988).

2.4 Effect of Credit on Economic Growth in Kenya

The relationship between financial depth and economic growth has recently received emphasis from numerous works during the last few decades. Financial development is one of the key elements of financial liberalization. While the theory of financial liberalization was popularised recently in the 1970s by the McKinnon (1973) and Shaw (1973) hypotheses, the original debate on the causal link between financial depth and economic growth can be traced back to (Odhiambo, 2004; 2005) who argues that finance leads to economic growth.

Agricultural growth is important for alleviation of poverty and stimulation of economic growth and development (Adeniyi, 2006). Sustainable poverty reduction can only be possible through economic growth and development strategies. The industrial development therefore is unlikely to be sustainable unless there is sufficient domestic demand, which essentially calls for raising incomes of the Kenyans. Despite this importance, support for agriculture through either donor aid or the domestic resources has fallen in absolute and relative terms. The total government expenditure on agriculture dropped from about 11.2 percent in the

1980s to about 4.7 percent in 2001. The result has been a slower growth in staples and traditional exports and an increase in poverty ultimately thwarting the efforts to reduce poverty and hunger. To achieve economic growth with equity, there is need to place priorities on the policies that enhance incomes of households through specific development strategies on crops, livestock, fisheries, irrigation and farmers institutions (Kimenyi 2001).

As a result of the latter factors, Kenya's economy has steadily declined over the past three decades since independence (Republic of Kenya 2001). Despite the recession and the oil commodity shocks during the period 1962-74, the economic growth rate averaged 6.6 percent which was then above the average for low-income countries. This initial growth could however not be sustained. Consequently, the rate of economic growth declined steadily in subsequent years to reach a low rate of 1.9 percent in the period 1990 to 2001. Due to its linkages to the whole economy, the performance of agricultural sector mirrored that of the national economy with higher rates of growth early after independence but declining to negative 2.4 in 2000. Similarly the growth of other sectors of the economy like manufacturing, building and industry have been poor except the services sector whose contribution to the Gross Domestic Product (GDP) has increased (Republic of Kenya 2001).

Although the contribution of agriculture to export earnings remains high at about 60 percent of the total exports, the proportion of coffee has declined due to falling production and productivity. However, tea and horticulture have continued to perform well and therefore increased their share of agricultural export earnings mainly due to the private sector participation in horticulture and gradual, well-planned liberalization of the tea industry and accessibility to financial facilities. The tea industry has also enjoyed increased production

14

and favourable prices in the world market. Tea is therefore currently the leading export crop in foreign exchange earning (Mwangi 2001).

Poor management and the liberalization of commodity markets weakened producer organizations that supported farmers by providing credit (Davis 2004). The High interest rates by commercial banks and the high risks of the agricultural sector inhibited banks from lending to agriculture. Farmers also do not access other services such as extension and market information. Research is poorly funded with most of the allocation paying staff salaries. Support of research by producers of cash crops like coffee and tea has also reduced due to the poor performance of these commodities. Inadequate and poor supervision and regulation of factor markets in the country has resulted in deterioration of the quality of inputs adversely affecting agricultural productivity. As a result of the poor competition in seed development, multiplication and distribution, there is widespread seed adulteration at the distribution level some of which involve sale of local maize seed purporting it to be hybrid.

The three most important sectors in the economy are agriculture, industries and services. Agriculture includes crops and livestock, fishing and forestry. The industrial sector comprises of manufacturing, building and construction, mining and quarrying (Republic of Kenya 2001). The services sector is the largest and consists of finance, real estate and business, transport storage and communication, trade, restaurants and hotels, electricity and water, private households, government, services, water collection, ownership of dwellings among others. The proportion of agriculture to the GDP has shrunk from 33 percent in 1980-85 to 26 percent in the period 1996- 2000. In 2000, the contribution of agriculture had

reduced to 24 percent of GDP. In the first decade of independence, agriculture constituted about 36 percent of the GDP. This is attributed to factors such as poor investment in agriculture, low productivity, poor infrastructure and lack of access to credit. Overall sector activity was marked by emergence of forestry and fishing whose growth rates exceeded sector averages. As a result of the declining performance of the sector, the rural incomes have stagnated over the last decade and have actually declined in recent years. Some farmers have shifted out of certain crops. Off-farm income activities are becoming increasingly important alternative sources of livelihood in the rural areas (Republic of Kenya 2001).

Agriculture is the foundation of economic growth in Kenya. The sector provides raw materials and essential commodities to other important sectors like industry to produce goods for the economy. Deterioration in agriculture means slow growth of Kenya economy. The government reformed the policies in the banking sector especially on the credit area to make it possible for the farmers and other important stakeholders in the economy to access credit from commercial banks and other financial institutions other than from informal financial sectors as it was the case. (Mwangi 2001).

2.5 Summary

Economic growth and development is an important concern to every country. Factors affecting the growth should not be taken for granted but be supported fully. The chapter has evidently supported the functions of commercial banks in the growth of economy. It concentrated more on financial outreach in form of credit from commercial banks to various productive economic units. It first of all highlighted the theoretical literature on effect of credit on economic growth of different countries. Empirical researches have also supported

16

the fact that credit from commercial banks has helped different countries to grow economically including Kenya. Through empirical research, this study clarifies and consolidates the divided minds of different prominent researchers on the effect of credit on economic growth in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the various methods and procedures the researcher adopted in conducting the study in order to find answers to the research questions. The chapter discusses the research design, research model, data collection instrument and procedures and data analysis.

3.2 Research Design

A research design can be thought of as the structure of the research. It is like glue that holds all the elements in research project together (Gay 1987). An empirical research design was employed in order to establish the effect of credit on economic growth in Kenya. This research design was of empirical nature because of the nature of data collected. Empirical research methods course bridges the gap between the theoretical foundations of models and its practical application (Kerlinger 1986).

3.3 Data Collection Methods

According to Yin (2003), data are parts of the information the researchers are pursuing in order to obtain findings and give their possible observations. According to this study, the researcher used secondary data obtained from Kenya commercial banks and Central Bank of Kenya. The duration of the study was between the year 1996 to the year 2010.The economic growth information as a result of credit were provided by Central Bank of Kenya yearly report.

3.4 Research Models and Data Analysis

3.4.1 The Conceptual Model

EG= f (Credit) ---- (1)

EG- Economic growth

Economic growth is a function of credit and it is measured using the elements that affect credit like interest rates, inflation, unemployment and many others. Economic growth is a dependant variable and credit is an independable variable. Any element in independable variable determines the economic growth and when it is changed, it triggers effects on the economic growth.

3.4.2 The Analytical Model

Empirical studies have agreed that there exists a linear relationship between credit and economic growth. In order to examine the relationship that exists between credit and economic growth, previous studies have used several analytical approaches. These include cross country growth regression used by King and Levine (1993); panel techniques used by Rioja and Valev (2003) and time-series used by Demetriades and Hussein (1996). These approaches Demetriades and Andrianova (2003) summarised that 'It is difficult to draw out any reliable policy implications from cross-country or panel regressions, and those conclusions that is drawn from time-series studies for individual countries cannot be generalised'. In essence, time-series is more applicable for single country analysis; hence this study used time-series method of estimation following this methods :

$EG = \alpha_0 + \alpha_1 \ CREDIT$ ....(2)

This according to Demetriades and Andrianova (2003) allow the use of appropriate statistical procedures, such as cointegration to test for the long run relationships; they also allow the use of statistical procedures that can shed light on the causality between two or more variables in both the long run and the short run. Though not without its limitation, it is often considered an appropriate tool in single country analysis.

3.4.3 Data Analysis

Data analysis is the important part in any research because this is where the truth unfolds itself. At this point, the researcher used T-test or P-Values to test the strength of relationship between economic growth and credit. A t-test is any statistical hypothesis test in which the test statistic follows t distribution, if the null hypothesis is supported. It is most commonly applied when the test statistic would follow a normal distribution if the value of scaling term in the test statistic were known. When the scaling term is unknown and is replaced by an estimate based on the data, the test statistic (under certain conditions) follows a t distribution.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study. Section 4.2 discussed summary statistics. Section 4.3 presents prediction of economic growth using credit in terms of correlation analysis and regression analysis, section 4.4 presents a discussion of the chapter and section 4.5 is a summary of the study. This chapter presents the analysis of secondary data that was collected from Central Bank of Kenya.

4.2 Summary statistics

The average value of economic growth was 4.7340E6 with a standard deviation of kshs 1.22206E6 while the average value of credit was 1.0270E6 standard deviation kshs 1.83253E5. There exist a very high variation in both economic growth and credit as indicated by the high values of the standard deviations.

Table 4.2.1 Descriptive Statistics

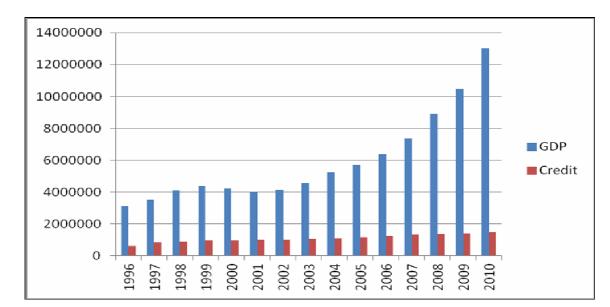|	N	Range	Minimum	Maximum	Mean	Std. Deviation
Economic growth	12	420,7874.00	3,142,117.0	7349991.00	4.7340E6	1.22206E6
Credit	12	693422.00	643450.00	1336872.00	1.0270E6	1.83253E5

Source: Author's Computation

Figure 4.1 Growth of GDP from 1996 to 2010

Source: Research data, 2011

As shown in figure 4.1, GDP increases steadily over the time period 1996 through 2010. On the same note credit values also increased steadily over the same period. It is clearly évident from the graph that in the years when credit level is High, the economic growth rate is also High thus showing a positive corrélation between the two variables.

4.3 Credit and economic growth

4.3.1 Correlation analysis and Results

As shown in table 4.3.1 there is a very strong positive correlation (0.900) between the credits and economic growth. This is an indication that credit could be used to predict the economic growth.

22

Table 4.3.1 Pearson correlation

	Economic Growth(GDP)	Credit
Economic growth (GDP)	1.000	.900
Credit	.900	1.000

Source: Author's Computation

Analysis in table 4.3.2 shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.809, that is, credit explains 80.9 percent of GDP leaving only 19.1 percent unexplained.

Table 4.3.2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	Df2	Sig. F Change
1	.900[a]	.809	.794	1.29237E6	.809	55.117	1	13	.000

Source: Author's Computation

4.3.2 Regression Analysis and results

The established simple linear regression equation was:

Y = -6, 342,872.111 + 11.12X_1

Where

α_o = -6, 342,872.111, shows that if credit was rated as zero, GDP rating would be 1, -6, 342,872.111

α_1= 11.127, shows that one unit change in credit rating results in 11.127 units increase in GDP other factors held constant

Table 4.3.3 Coefficients of regression equation

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	α_0	-6,342,872.111	1689116.016		-3.755	.002
	α_1	11.127	1.499	.900	7.424	.000

Source: Author's Computation

4.4 Discussion

It is evident that credit affects economic growth in Kenya. When the level of credit is high, the rate of economic growth is also high. This therefore means that credit and economic growth are positively correlated. It is clear that credit plays a very important role in the growth of the Kenyan economy. It has also been established that credit explains 80 percent of economic growth in Kenya. This implies that credit plays a major role in driving Kenya's economic growth rate forward.

4.5 Summary

The aim of carrying out this study was to to establish the effect of credit on economic growth in Kenya. The study exclusively depended on secondary data to achieve the objective. The data was collected from the Central Bank of Kenya from the year 1996 to 2010 to determine

the effect of credit on economic growth in Kenya. Descriptive statistics was used to analyze data and presented in form of frequency tables and graphs.

The tables and graphs showed that both credit and economic growth increased steadily over the year 1996 through 2010. The urge to test and determine the relationships between these variables arises as a result of simultaneous increase in credit and economic growth

The regression statistical analysis was used to determine the effect of credit on economic growth in Kenya. In determining the effect of credit on economic growth, the output in the analysis showed that the model was accurate. The finding showed that there is direct relationship between credits and economic growth in Kenya.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

5.1 Introduction

This chapter presents the summary and conclusionss of the study. Section 5.2 discussed summary of the study statistics while conclusion of the study is presented in section 5.3, section 5.4 presents limitation of the study, 5.5 discusses the recommendations for further research and 5.6 present's policy implicatioms.

5.2 Summary of the study

The objective of the study was to establish the effect of credit on economic growth in Kenya. Secondary data was collected from the archive of Central Bank of Kenya. To achieve the objective, the study used regression analysis to find the relationship between credit and Gross Domestic Product (GDP). Forecasting model was developed and tested for accuracy in obtaining predictions. One major finding of the study was that there is a strong positive correlation between credit rating and GDP growth, this is demonstrated in the part of the analysis where the correlation coefficiant obtained was 0.900.

The established model was also fit for forecasting as indictaed by the R^2 of 80.9 percent, that is 80.9 percent of the variation in GDP can be expalined by the changes in credit rating. The usage of the model developed to forecast GDP is therefore recommended as one might get predictions that are accurate as such the objective of the study is fully achieved. Therefore, as the value of private credit ratio increases it results to an increase on the the GDP growth rate. The analysis asserts that as the commercial banks volume of private credit increases there is a ripple effect in that it leads to increased economic growth. Therefore

commercial banks have to expand their financial outreach in order to achieve high levels of economic growth. This can be achieved through establishment of effective credit lending policies that also caters for the low income earners as they are the ones that form the bulk of the population.

5.3 Conclusions

From the findings of the study, it can be concluded that credit and Gross Domestic Product (GDP) are linearly related and also that credit is a major determinant of economic growth. This is supported by both values of correlation coefficient and coefficient of determination. Thus the objective of the study was achieved.

5.4 Limitation of the Study

The data used was secondary data and therefore the accuracy may not be guaranteed. Apart from the accuracy other economic factors such as inflation rate, interest rates and government policies could have boosted the the GDP growth rates. There is therefore room for isolating all these factors in order to generate better predictive GDP growth rate of commercial banks.

5.5 Recommendations for further research

In this study only one predictor variable (creditl) was singled out and used, it is recommended that a number of the independent variables be included and a multiple linear regression model be used. Similar studies need to be done in other non commercial banks operating in the Kenyan banking industry and the results be compared so as to establish whether the model is consistent among the various groups.

5.6 Policy implications

The research findings have established that there is a relationship between credit and economic growth in Kenya. This therefore means that policy makers should come up with policies that enhance financial outreach through prudent lending policies. These policies should be reviewed periodically to be in check with reality. Based on the findings, following are the recommendations to policy makers and regulators. The main stake holder to ensure that commercial banks adhere to set prudent lending policies. Central bank of Kenya, being the regulator should review policies set to ensure that the low income earners have as much access to credit as the middle and high income earners. As indicated by the research findings credit is critical to Kenya's economic growth.

Economic growth is a key pillar to the stability of the country's financial growth and freedom. Consistent deterioration of economic growth can lead to adverse effects on the country's financial system. Therefore central bank plays a key role in ensuring that the financial system is safeguarded by establishing policies and regulations that enhance financial outreach to various sectors in the economy.To enhance economic growth, the lending policies should be tightened to ensure that default rate is on the low.

References

Ademu, W. A. (2006). "The Informal Sector and Employment Generation in Nigeria: The Role of Credit." *Employment Generation in Nigeria.* Selected Papers for the 2006 Annual Conference of the Nigerian Economic Society, in Calabar, august 22nd to 24th.

Akintola, S. (2004). "Banks Move Against Soludo*" Nigerian Tribune* (July 23rd), p.24

Aghion, P. and P. Bolton (1997), "A Trickle-Down Theory of Growth and development with Debt Overhang", Review of Economic Studies 64, 151-72.

Arestis, P. and Demetriades, P. (1997). *Financial development and economic growth: assessing the evidence, Economic Journal, 107, 783-799.*

Barth, J.R., Caprio, G., and Levine, R. 2004. *"Bank regulation and supervision: What Works Best?" Journal of Financial Intermediation, 13, 205–248.*

Beck, T., Demirgüç-Kunt, A., Levine, R. (2006). *Bank Supervision and Corruption in Lending. Journal of Monetary Economics, 53, 2131-2163.*

Berger, A., Demirguc-Kunt, A., Haubrich, J. and Levine, R. (2004). *Introduction: Bank Concentration and Competition: An Evolution in the Making. Journal of Money, Credit, and Banking, 36(3), 433-53.*

Cooper, D & Schindler, P. (2003). *Business Research Method. Quarterly Journal of Business and Economics, Vol. 38 No. 2, pp. 17-35.*

Corricelli F. & Masten I. (2004) "Growth and Volatility in Transition Economies: The role of Credit" IMF - Festshcrift in Honor of Guillermo Calvo

Crowley J. (2008) "Credit Growth in the Middle EAST, North Africa and Central Asia Region" IMF Working Paper No: 08/184

Davis E. P. (2004) "Financial Development, Institutional Investors and Economic Performance

De Gregorio, J. and Guidotti, P. (1995). Financial Development and Economic Growth. World Development 23 (3), 433-448.

Demetriades, P. and Hussein, K. (1996). *''Does financial development cause economic growth? Time-series evidence from 16 countries'', Journal of Development Economics, 51, 387-411.*

Elumelu T. O. (2005) "Investment, Finance and Banking in Nigeria: Evolution and New Opportunities" Paper presented at The African Summit of the Corporate Council on Africa.

Goldsmith (1969) ''Financial Systems''A Historical Comparative Study.

Gurley and Shaw (1955). *''The Theory of Economic Development,'' Quaterly Journal of Business.*

Habibullah M. S. & Eng Yoke-kee (2006) *"Does Financial Development Cause Economic Growth? A Panel Data Dynamic Analysis for the Asian Developing Countries"; Journal of the Asia Pacific Economy Vol. 11, No: 4, pp 377 - 393*

IMF (2001). Theories of Economic Growth - Neo-Classical. Retrieved on April 19, 2010 from www.google.com

Jayaratne, J. and P. E. Strahan (1996), *"The Finance-Growth Nexus: Evidence from Bank Branch Deregulation," Quarterly Journal of Economics, CXI, pp. 639-671*

Jhingan, M. L. (2006). *The Economics of Development and Planning* (38th Ed). Delhi: Virnda Publication (P) Ltd.

Kimenyi Mwangi S, (2001), Agriculture, Economic Growth and Poverty Reduction. A paper presented to too a seminar organized by Institute of Certified Public Secretaries in Nairobi, November 2001.

Kimenye, M 2000. Kenya's experience promoting smallholder production of flowers and vegetables for European markets. African Rural Urban Studies 2 (2-3): 121-141

King, R. G. and R. Levine (1993a), *"Finance and Growth: Schumpeter Might Be Right", Quarterly Journal of Economics, 108: 717-738.*

Levine, R. (2005). Finance and growth: theory and evidence, In P. Aghion and S. Durlauf *(Eds.) Handbook of Economic Growth.* Elsevier Science: Netherlands.

Levine, R., N. Loayza and T. Beck (2000), *"Financial Intermediation and Growth: Causality and Causes", Journal of Monetary Economics, 46: 31-77.*

Liu, X. and Shu, C. (2002). The Relationship between Financial Development and Economic Growth. Studies in Economics and Finance, 20, 2002, pp 76-84.

Lucas (1988). Finance and Investments.Studies in Economic Review.

McKinnon (1973). Money and Capital in Economic Development.Businss and Economics Review

Miller (2003). *''Public Finance in Developing and Transitional countries'', Journal of Business and Economics.*

Nissanke, M. and H. Stein (2003) *"Financial Globalization and Economic Development: Toward an Institutional Foundation."* **Eastern Economic Journal**, *Vol. 29, No.2, Spring .*

Nnanna, O. J. (2004). "Financial Sector Development and Economic Growth in Nigeria: An Empirical Investigation". Economic and Financial Review. Vol.42, (3) P.1-17

Rajan, R. G. and L. Zingales (1998), "Financial Dependence and Growth", American Economic Review, 88: 559-586.

Republic of Kenya 2001, Poverty Reduction Strategy Paper for the Period 2001-2004

Robinson, (1952). Finance and Growth, In: the Rate of Interest and Other Essays, London: Macmillan.

Romer (1986). *''Economic Growth'', Quaterly Journal of Economics, Vol, 106 issue 2.*

Schumpeter, J. A. (1934). The Theory of Economic Development. Cambridge, Mass: Havard University Press.

Xu, Z. (2000), "Financial Development, Investment, and Growth", Economic Inquiry, 38: 331- 344.

Yin, R. K. (2003). Case Study Research: Design and Methods. Financial Review, Vol. 26 No. 3, pp. 409- 30.

Appendix I: List of Variables

Year	GDP	Credit	Inflation Rate	Interest Rate
1996	3142117	643450	12	18
1997	3524319	865432	6	18
1998	4099628	899320	7	20
1999	4368682	964230	6	16
2000	4215385	982855	10	12
2001	4034137	1020022	6	12
2002	4152643	1025854	9	12
2003	4584607	1056454	10	13
2004	5243625	1107715	12	12
2005	5710122	1172090	10	13
2006	6383102	1249458	11	10
2007	7349991	1336872	12	10
2008	8924194	1357639	26	13
2009	10484153	1392832	13	14
2010	13034774	1498000	14	15

Source: Central Bank of Kenya