

**THE EFFECT OF FINANCIAL DEEPENING ON ECONOMIC
GROWTH IN KENYA**

By

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DECLARATION

This project is my original work and to the best of my knowledge has not been submitted for examination or a degree award in any other University.

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This project has been submitted for examination with my approval as the University Supervisor.

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May the Almighty God bless you all.

DEDICATION

This research project is dedicated to my family members, especially my wife Lydia Mwango who always supported me in every endeavor and for her encouragement and to all my friends. Your support is immensely appreciated.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
CBK	Central Bank of Kenya
CMA	Capital Markets Authority
DFI	Development Finance Institution
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GEMS	Growth Enterprise Market Segment
GNI	Gross National Income
GNP	Gross National Product
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
MFI	Microfinance Institution
NSE	Nairobi Securities Exchange
NBFI	Non-Bank Financial Institution
R&D	Research and Development

ROSCA	Rotating Savings and Credit Association
SACCO	Savings and Credit Cooperative Society
SSA	Sub-Saharan Africa

ABSTRACT

Financial deepening refers to an increase in the supply of financial assets in an economy. The connection between financial development and economic growth has been of interest in development and finance literature. It's against this background that this study was carried out to establish the effect of financial deepening on economic growth in Kenya. The basis of this study was the the finance-growth nexus which argues that the development of financial sector significantly promotes economic development.

Secondary data from the year 1995-2014 used was collected from the Kenya National Bureau of Statistics, Central Bank of Kenya, Nairobi Stock Exchange and World Bank. Descriptive research design was adopted for this study whose objective was to investigate the effect financial deepening on economic growth in Kenya. The findings of the study revealed a positive correlation between the Gross Domestic Product (GDP) and Financial Deepening variables. The study therefore lends support to the finance-growth nexus and recommendation to policy makers and financial sector regulators is to formulate policies which will help in the growth of capital markets especially the bond market to helps us achieve our vision of transforming the country into middle-income level and industrializing economy by the year 2030

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Of late, the role that financial deepening plays in the growth process has received considerable attention in terms of research work. A better understanding of how financial deepening especially in the capital markets contribute to economic growth is important from a regulatory point of view. Capital markets play a critical role in spurring economic growth and development by mobilizing liquidity, channeling medium and long-term capital for productive corporate investment, helping in price discovery, reductions in transactions costs and risk transfers (Gurley and Shaw, 1955; Goldsmith, 1969; and Hicks, 1969) as cited by Rahman & Mustafa (2015)).

The Kenyan financial system has undergone a lot of changes in the past few decades starting from around the 1990s when a raft of reforms was introduced. In the 1990s the economies were characterized by extensive regulation, administration of interest rates, direct credit programs, weak banking structure, lack of proper risk management systems, and lack of transparency in operations among other factors (Otieno, 2013) The intention of these reforms was to open up the financial system and the general expectation for this was that there would be increase in savings and investments in the country and thus boost the country's growth rate.

According to Otieno (2013), a developed financial system broadens access to funds, conversely, in underdeveloped financial system, access to funds is limited and people are constrained by the ability of their own funds and have to resort to high cost informal sources such as money lenders. This results into few economic activities that would spur

growth. In other words, lack of a developed financial infrastructure restricts economic growth. Thus more emphasis should be directed in ensuring that financial sector is developed so as to support the real sector of the economy.

1.1.1 Financial Deepening

Financial deepening refers to an increase in the supply of financial assets in an economy. It's defined as the process that marks improvement in quantity, quality, and efficiency of financial intermediary services (Sackey & Nkurumah, 2012). According to Ndebbio (2004), economic growth and development of a country depends greatly on the level of financial deepening. The constitution of these financial assets that wealth-holders hold as a result of high per capita income is what should be defined clearly. This information will be crucial when trying to estimate the extent of financial deepening.

According to Rahman and Mustafa (2015) financial deepening has been identified as one of those strategies whose implementation can quicken the pace, development and contributions of the market. Financial deepening is more concerned with the process of financial intermediation. Financial deepening is a multi-faceted process that involves the interaction of a number of markets (primary, secondary and retail), instruments (deposits, loans, foreign exchange, bonds and debt securities) and stakeholders like banks, contractual savings institutions and companies (Nguena & Abimbola, 2013). It can be described as the process by which financial markets and institutions facilitate goods and services exchange (e.g., payment services), mobilize and pool savings of a large number of investors, acquire and process information about the companies and the potential investment projects and, therefore, allocating private savings to the most productive uses, boost investments and exert corporate governance, and diversify and reduce liquidity

risk as well as inter-temporal risk (King & Levine, 1993). In other words, financial deepening can be understood as a process by which the range of products and players widens, deadlines extend and services play a role in risk coverage and diversification.

Otieno (2013) argues that a developed financial system broadens access to funds, conversely, in underdeveloped financial system, access to funds is limited and people are constrained by the ability of their own funds and have to resort to high cost informal sources such as money lenders. These result into few economic activities that would spur growth.

1.1.2 Economic Growth

Economic growth can be described as the sustained increase in welfare of an economy. For some, “economic growth” is synonymous with “economic development” and is associated with such things as growth of population (especially working population), development of resources, technological advance and increasing capital formation. Generally, economic growth means growth of output and discussions of economic growth is conducted in quantitative terms. Economic growth is commonly measured as the annual rate of increase in a country’s gross domestic product (GDP) by economists or by related indicators, such as gross national product (GNP) or gross national income (GNI) which is derived from the GDP calculation (Arthur, 1964)

Iram and Nishat (2009) describe economic growth as the indicator of the health of an economy, and that capital is one of the pre-requisites to maintain and enhance the momentum of growth. Simply put, a country’s economic health can be measured by

looking at the country's economic growth and development. Economic growth is what mainly determines the material well-being of a nation.

1.1.3 Effect of Financial Deepening on Economic Growth

Financial deepening refers to an increase in the supply of financial assets in an economy. A large literature dating back as far as Schumpeter (1911) emphasize the positive influence of the development of a country's financial sector and the rate of growth of its per capita income. The argument is that the services the financial sector provides- of reallocating capital to the highest value use without substantial risk of loss through moral hazard, adverse selection or transaction costs are essential catalyst of economic growth (Rajan & Zingales, 1998).

Financial development and economic growth influence each other positively. Choong and Chan (2011) argue that, whereas empirical studies often provide a direct relationship between financial development proxies and growth, much controversy remains on how these results should be interpreted. Schumpeter (1911) in his works contends that a well-functioning financial system will spur technological innovations through the efficiency of resource allocation from unproductive sector to productive sector.

Levine (1996) in his working research paper, Financial Development and Economic Growth, argues that the preponderance of theoretical reasoning and empirical evidence suggests a positive, first-order relationship between financial development and economic growth. There is even evidence that the level of financial development is a good predictor of future rates of economic growth, capital accumulation, and technological change. While past work may show that the level of financial development is a good predictor of

economic growth, these results do not settle the issue of causality in totality. In essence, financial development may simply be a leading indicator, rather than an underlying cause of economic growth (Beck, Levine & Loayza, 2000).

According to Levine and Zervos (1998), to assess the relationship between economic growth and stock market, we need empirical indicators of stock market liquidity and size; and measures of economic growth. Capitalization measures the size of the stock market and equals the value of listed domestic shares on domestic exchanges divided by GDP. Many observers use Capitalization as an indicator of market development. Turnover and value traded are related measures of market liquidity. Turnover equals the value of trades of domestic shares on domestic exchanges divided by the value of listed domestic shares. Value Traded, which equals the value of the trades of domestic shares on domestic exchanges divided by GDP. Turnover measures the volume of domestic equities traded on domestic exchanges relative to the size of the market whereas Value traded measures trading volume as a share of national output and should therefore positively reflect liquidity on an economy wide basis. High Turnover is often used as an indicator of low transactions costs. For economic growth we use real GDP growth (Output Growth)

The relationship between financial deepening and economic growth is also illustrated in the bi-directional hypothesis between financial development and economic growth which is also referred to as the feedback hypothesis. Its advocates argue that there is a two way relationship between financial development and economic growth. It simply means that financial markets develop as a consequence of economic growth which in turn feeds back as a stimulant to real growth.

1.1.4 Financial Deepening and Economic Growth in Kenya

The Kenyan government has a vision of transforming the country into middle-income level and industrializing economy by the year 2030 and they have identified the financial sector as one of the areas that will help in attaining this critical target. The Capital Markets Authority of Kenya acknowledges that the Kenyan financial markets are at different stages of development. Whereas Kenya has a well-developed and liquid government bond market, the equities market on the other hand is characterized by relatively few listings, which are skewed towards financial companies, and low liquidity (Capital Markets Master Plan, 2014).

Ambitious targets have been set for improvements in listings, liquidity and performance of new product areas in order to develop the Kenyan financial markets. First, is to improve the ratio of equity market capitalization to GDP which currently stands at 50% to 70% by end-2023. Second target is the number of GEMS listing, which reflect the supply of future main board listed companies, to increase by 3-4 annually. The third target is to raise the ratio of corporate bonds outstanding to GDP to reach 40% by end-2023 and lastly the value of outstanding exchange-traded derivative contracts to reach USD 200 billion by end-2023 which is an ambitious target, given that the market has not yet been launched, but is achievable by comparison with other markets (Capital Markets Master Plan, 2014)

Kenya is one of the countries in the African continent having a well-developed financial system based on the ground. During the last two decades, several reforms translated by developments and innovations have taken place in the Kenyan banking sector that have led to the increase in the sector's assets. Such developments have mainly been driven by

financial innovations in the sector. Specifically, the reduction of the retention ratio from 6 to 5.25 percent by the Central Bank of Kenya (CBK) made loans more affordable to the public; the transformation of Non-Bank Financial Institutions (NBFI) into commercial banks(e.g. Equity and Family banks); and the introduction of new products and financial service delivery channels (such as M-pesa, Islamic banking, mobile banking, agency banking and the integration of Automated Teller Machines (ATMs) by micro finance institutions) to name a few (Bakang, 2015).

1.2 Research Problem

Financial deepening is often used in development studies and it refers to an increase in the supply of financial assets in an economy geared towards development of all levels of the society. It's defined as a process that marks improvement in quantity, quality, and efficiency of financial intermediary services (Sackey & Nkurumah, 2012).

Different views on the finance growth nexus have been raised over the years. The supply-leading hypothesis suggest that financial development contributes to economic growth whereas growth led finance hypothesis states that a high economic growth may create demand for certain financial instruments and arrangements and the financial markets are effectively a response to these demands and changes.

The Kenyan financial system has undergone a lot of changes in the last decades. In Sessional Paper No. 1 1986 the government indicated its commitment in facilitating growth of the capital market and this saw the kick-off of the capital market reform in late 1980s which saw institutional and policy reforms. The intention of these reforms was to increase the degree of financial development in the country.

A number of empirical studies have reinforced the finance growth nexus where development of financial institutions is considered as key component of financial deepening. There is evidence that the level of financial development is a good predictor of future rates of economic growth, capital accumulation and technological change. (Levine, 1996; Levine 1997; Beck, Levine & Loazya, 2000; King & Levine, 1993) Locally, Ngugi, Amanja, & Maana (2008) in their study of Capital Market, Financial Deepening and Economic Growth in Kenya found out there exists a significant relationship between economic growth and capital market and banks. Otieno (2013) who examined the relationship between financial deepening and profitability of commercial banks in Kenya found out that financial deepening affects bank profitability. Aduda, Chogii and Murayi (2014) and Bakang (2015) while examining the effects of financial deepening on economic growth in Kenya concluded that financial deepening has a positive effect on economic growth in Kenya.

Capital market development is an important component of financial sector development and supplements the role of the banking system in economic development where it assists in price discovery, liquidity provision, reduction in transactions costs, and risk transfer. Moreover, efficient capital markets also facilitate inflow of foreign financial resources into the domestic economy. (Ngugi et al., 2008)

There is need therefore to address the relationship between financial deepening and economic growth especially by incorporating the role that foreign direct investment plays in the overall economic growth in Kenya. This study therefore seeks to fill the gap by studying the effect of financial deepening and the growth of Kenya's economy. The study

will help to answer the following research question; what is the effect of financial deepening on economic growth in Kenya?

1.3 Objective of the study

To establish the effect of financial deepening on economic growth in Kenya

1.4 Value of the Study

The finding of this study will be of significance to government officials and financial sector regulators as it will be of help in the formulation of policies that promote financial sector deepening which will go a long way in ensuring a continued growth of financial sector in Kenya and beyond. This will make them appreciate the big role they play in making decisions that affect the financial deepening variables that in turn affect the dependent variable which in our case is the economic growth measured as a percentage change of real GDP.

To researchers and academicians, the findings of this study will add on to the already existing literature. Those who wish to carry out further research in the area of financial deepening and economic growth in Kenya may obtain some insight on this area. To investors, the finding of the study will be significant to them too as it will enable them to make informed choices while making investment decisions as they construct their investment portfolios in the capital markets.

Generally, the study will be of significance as at the moment the Kenyan government has a vision of transforming the country into middle-income level and industrializing economy by the year 2030 and with this they have identified the financial sector as one of

the areas that will help in attaining this critical target. This is embodied in the “Kenya vision 2030” which is the Kenyan economic blueprint

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on financial development and the effect of financial development on economic growth. The chapter presents both the theoretical and empirical studies which give a perspective of financial development and economic growth in general.

2.2 Theoretical Review

The connection between financial development and economic growth has been of interest in development and finance literature in the recent past where financial development is considered as the main input for economic growth (Abd.Majid, 2008). The origin of the financial development concept goes back to the early work of Gurley and Shaw (1967) who investigate the evolution of the financial structure during economic growth. They argue that financial development is a positive function of real wealth. Financial development basically affects economic growth by increasing the saving rate, thereby raising the level of investment. Furthermore, by efficiently allocating the available resources, it increases the productivity of investment (Saqib, 2015) According to Ohwofasa and Aiyedogbon (2013) the level of financial deepening reflects the soundness of the financial sector and the ability with which credits are created with respect to lending and deposit rates. Financial deepening theory thus defines the positive role of the financial system on economic growth by the size of the sector's activity

A larger number of studies have been carried in regards to financial development and economic growth but one question has not been dealt with finality. Does financial development precede economic growth or does economic growth precede financial development or do both financial development and economic growth cause each other? There are those who argue that financial development which results from financial liberalization leads to economic growth (McKinnon, 1973; Shaw 1973; Patrick, 1966:) whereas there are those who hold a different view that economic growth is what leads to financial development and that where there is economic growth financial development follows (Robinson, 1952)

2.2.1 Supply Leading Hypothesis

The “finance-led growth” hypothesis postulates the “supply-leading” relationship between financial and economic developments (Patrick, 1966). It is argued that the existence of financial sector, as well-functioning financial intermediations in channeling the limited resources from surplus units to deficit units, would provide efficient allocation resources thereby leading the other economic sectors in their growth process. Indeed, a number of studies (Schumpeter, 1912; Levine, 1997) have argued that the development of financial sector has significantly promoted economic development (Abd.Majid, 2008).

The recent work of Dernirguc-Kunt & Levine (2008) in a theoretical review of the various analytical methods used in finance literature, found strong evidence that financial development is important for growth. To them, it is crucial to motivate policymakers to prioritize financial sector policies and devote attention to policy determinants of financial development as a mechanism for promoting growth (Ohwofasa & Aiyedogbon, 2013).

2.2.2 Growth-led Finance Hypothesis

Robinson (1952) challenged the finance led growth hypothesis. She argues that the relationship should start from growth to finance. She contends that a high rate of economic growth leads to a high demand and a well-developed financial sector will automatically respond to this type of demand. According to this view, when opportunities arise in an economy that require financing, the economy will develop the necessary markets and institutions to finance these opportunities; in words of Joan Robinson (1952, p86) "where enterprise leads, finance follows".

The "growth-led finance" hypothesis states that a high economic growth may create demand for certain financial instruments and arrangements and the financial markets are effectively response to these demands and changes. In other words, this hypothesis suggests a "demand following" relationship between financial and economic developments (Choong, Yusop, Law & Sen, 2004). Studies by Friedman and Schwartz (1963) and Demetrides and Hussein (1996) offer empirical support for this view (Abd.Majid, 2008).

2.2.3 Feedback Hypothesis

Finally, the "feedback" hypothesis suggests a two-way causal relationship between financial development and economic performance. In this hypothesis, it is asserted that a country with a well-developed financial system could promote high economic expansion through technological changes, product and services innovation (Schumpeter, 1912). This in turn, will create high demand on the financial arrangements and services (Levine, 1997). As the banking institutions effectively respond to these demands, these changes

will stimulate a higher economic performance. Therefore, both financial development and economic growth are positively interdependent and their relationship could lead to feedback causality. The work of Luintel and Khan (1999), among others, is supportive of this view.

2.3 Determinants of Economic Growth

A wide range of studies has investigated the factors underlying economic growth and have placed emphasis on a different set of explanatory parameters and offered various insights to the sources of economic growth. These factors include investment, human capital, innovation and R&D, economic policies and microeconomic conditions, openness to trade, FDI, institutional framework, political factors, social cultural factors, geography and demographic trends (Petraikos, Arvanitidis & Pavleas, 2007).

2.3.1 Investment

Investment is the most fundamental determinant of economic growth identified by both neoclassical and endogenous growth models. According to Barro (1996) the neoclassical growth model for a closed economy, the saving rate is exogenous and equal to the ratio of investment to output. A higher saving rate raises the steady-state level of output per effective worker and thereby raises the growth rate for a given starting value of GDP. Some empirical studies of cross-country growth have also reported an important positive role for the investment ratio (DeLong and Summers (1991) and Mankiw, Romer, and Weil (1992)). The importance attached to investment by these theories has led to an enormous amount of empirical studies examining the relationship between investment and economic growth. Nevertheless, findings are not conclusive (Petraikos et al., 2007).

2.3.2 Human Resource

Human capital refers principally to workers' acquisition of skills and know-how through education and training. A large number of studies have found evidence suggesting that educated population is key determinant of economic growth (Petraikos et al., 2007). Barro (1996) in his paper "Determinants of Economic Growth: A Cross-Country Empirical Study" carried out some studies on initial level of human capital and found out that an extra year of male upper-level schooling is estimated to raise the growth rate by a substantial 1.2 percentage points per year. More surprisingly, female education at various levels is not significantly related to subsequent growth. However, some additional results indicate that female schooling is important for other indicators of economic development, such as fertility, infant mortality, and political freedom. Specifically, female primary education has a strong negative relation with the fertility rate (see Schultz [1989], Behrman [1990], and Barro and Lee [1994]). A reasonable inference from this relation is that female education would spur economic growth by lowering fertility

2.3.3 Innovation and Research & Development

Innovation and R&D activities can play a major role in economic progress increasing productivity and growth. This is due to increasing use of technology that enables introduction of new and superior products and processes (Petraikos et al., 2007).

2.3.4 Economic Policies & Macroeconomic Environment

Economic policies can influence several aspects of an economy through investment in human capital and infrastructure, improvement of political and legal institutions and so on whereas macroeconomic conditions are regarded as necessary but not sufficient

conditions for economic growth (Fischer, 1993). In general, a stable macroeconomic environment may favour growth, especially, through reduction of uncertainty, whereas macroeconomic instability may have a negative impact on growth through its effects on productivity and investment (e.g. higher risk) (Petraikos et al., 2007).

2.3.5 Openness to Trade

Openness to trade has been used extensively in the economic growth literature as a major determinant of growth performance. Openness affects economic growth through several channels such as exploitation of comparative advantage, technology transfer and diffusion of knowledge, increasing scale economies and exposure to competition. Openness is usually measured by the ratio of exports to GDP or by the sum of imports and exports relative to the GDP. There is a substantial and growing empirical literature investigating the relationship between openness and growth (Petraikos et al., 2007).

According to Barro (1996) the effect of a change in the terms of trade—measured as the ratio of export to import prices on GDP is, however, not mechanical. If the physical quantities of goods produced domestically do not change, then an improvement in the terms of trade raises real domestic income and probably consumption, but would not affect real GDP. Movements in real GDP occur only if the shift in the terms of trade stimulates a change in domestic employment and output. For example, an oil-importing country might react to an increase in the relative price of oil by cutting back on its employment and production.

2.3.6 Foreign Direct Investment

Foreign Direct Investment (FDI) has recently played a crucial role of internationalizing economic activity and it is a primary source of technology transfer and economic growth. This major role is stressed in several models of endogenous growth theory (Petraokos et al., 2007). According to Abala (2014), it is widely acknowledged that FDI has potential benefits that accrue to host countries. The view suggests that FDI is important for economic growth as it provides much needed capital, increases competition in host countries and helps local firms to become more productive by adopting more efficient technology.

2.3.7 Political Factors

The relation between political factors and economic growth has come to the fore by the work of Lipset (1959) who examined how economic development affects the political regime. The degree of democracy is also associated with economic growth, though the relation is much more complex, since democracy may both retard and enhance economic growth depending on the various channels that it passes through (Alesina & Rodrik, 1994).

2.4 Empirical Review

A growing volume of theoretical and empirical work shows that the development of institutions and financial markets are vital to economic growth (Levine, 2003). Although the relationship between growth and financial development has been found to be strong, the channels by which financial development causes growth are still under discussion (McDonald & Liliana Schumacher, 2007). King and Levine (1993) reported that financial

development, proxied by several measures of financial deepness (such as bank liabilities and bank credit), predicted long-run economic growth, capital accumulation, and productivity increases for a sample of 77 countries for 1960–89. The results tended to hold for smaller samples of countries.

2.4.1 International Evidence

Singh and Huang (2011) carried out a study on “Financial Deepening, Property Rights and Poverty: Evidence from Sub-Saharan Africa”. In their paper they argue that recent studies on the relationship between financial development and poverty have been inconclusive. Some claim that, by allowing more entrepreneurs to obtain financing, financial development improves the allocation of capital, which has a particularly large impact on the poor. Others argue that it is primarily the rich and politically connected who benefit from improvements in the financial system. In their paper, they looked at a sample of 37 countries in sub-Saharan Africa from 1992 through 2006. Its results suggest that financial deepening could narrow income inequality and reduce poverty, and that stronger property rights reinforce these effects. Interest rate and lending liberalization alone could, however, be detrimental to the poor if not accompanied by institutional reforms, in particular stronger property rights and wider access to creditor information.

Ohwofasa and Aiyedogbon (2013) carried out a study on financial deepening and economic growth in Nigeria. They assess the level of development of financial deepening in the banking sector and the extent to which it has impacted on economic growth. They employed Vector autoregressive (VAR) methodology and its derivatives, impulse response function and variance decomposition in their study. This was to enable them to scrutinize the relationship between financial deepening and economic growth. The

findings show that the series are co-integrated and that long run relationship existed between the variables.

Safdar (2014) carried out a study on financial deepening and economic growth in Pakistan. The research examines the long run relationship between financial deepening (FD) and economic growth (GDP) for Pakistan with inclusive of foreign direct investment (FDI) and inflation (INF). Stationarity among variables is examined through ADF which shows that all the variables become stationary at level i-e I (0). Using Johansen's Cointegration test, current study finds that financial deepening; foreign direct investment, inflation and economic growth are cointegrated, hence long run relationship exists among variables for Pakistan. Results of VECM shows the existence of short run relationship among variables and error correction model for GDP and FD shows the adjustment effect back towards long run. In last, Granger causality test shows the unidirectional relationship among variables.

Akomolafe (2014) investigated the relationship between financial deepening and economic growth in Nigeria from 1980 to 2010. Two measures of financial deepening were used in the study. They include money supply represented by M2, total commercial banks loans. GDP was used as proxy for economic growth. Johansen Co-integration and Vector Error Correction Mechanism (VECM) were used to analyze the relationship among the variables in both the long run and the short run respectively. Granger causality test was also employed to test direction of causality among the variables. The result showed that there is long run and short run positive relationship among the variables.

Rahman and Mustafa (2015) analyzes the effects of stock market turnover and liquidity, as measures of financial deepening, on stock market returns in selected 19 developed and 21 developing countries over 1988-2013 by implementing Pedroni's panel co-integration methodology and panel vector error-correction models. Their study finds out that Stock market turnover contributes more to stock market returns than stock market liquidity in both selected developed and developing economies. However, the results are much weaker for developing countries than for developed countries

2.4.2 Local Evidence

In Kenya, Olweny and Kimani (2011) investigate the causal relationship between stock market performance and economic growth in Kenya for the period 2001-2010. They state that although there are numerous empirical researches conducted with regard to the correlation between financial market and economic growth, majority of them have focused on the implication of banks and the credit markets on economic growth. No single research had constituted an in-depth study of the causal relationship between stock market performance and economic growth in Kenya before. The investigation of the causal relationship was conducted using the popular Granger causality test based on the Vector Autoregressive (VAR) model. The findings imply that the causality between economic growth and stock market runs unilaterally or entirely in one direction from the NSE 20-share index to the GDP. From the results, it was inferred that the movement of stock prices in the Nairobi stock exchange reflect the macroeconomic condition of the country and can therefore be used to predict the future path of economic growth

Otieno (2013) examined the effects of financial deepening on profitability of commercial banks in Kenya. The study targeted all the commercial banks in Kenya and used

secondary data from the Kenya National Bureau of Statistics, Central Bank of Kenya and websites of licensed Commercial banks in Kenya. The study used both explanatory research design and inferential statistics to investigate the effect of financial deepening on profitability of commercial banks. The findings of the study revealed that financial deepening affects bank profitability positively.

Nyamakanga (2013) carried out a study aimed at finding the causal relationship between stock market development and economic growth in Kenya. The main objective was to investigate the causal relation between stock market capitalization, turnover and economic growth. The study used the Granger test for causality on stock market capitalization to GDP ratio which represents the size of growth of the stock market, the stock market turnover ratio and GDP growth in Kenya over the period 1993-2012. The results showed a strong positive relationship between stock market development and economic growth stemming from a one sided causal relation from market capitalization to economic growth while market liquidity (stock market turnover ratio) showed a non-causal effect to economic growth

Aduda et al., (2014) conducted a study on the effect of capital market deepening on economic growth in Kenya. Whereas the research objective was to determine the effect of capital market deepening on economic growth in Kenya, the study aimed at addressing the issue by incorporating a measure of bond market turnover. Using correlation design the research focused on data from a 20 year period, that is 1992 to 2011, correlation analysis and regression results were used to determine the effect of the capital market deepening variables on economic growth variable, which was real GDP of Kenya. From the results obtained from the multivariate regression, three out of five variables for capital

market deepening have a significant positive relation with GDP it can therefore be concluded that indeed capital market deepening has a significant positive effect on economic growth in Kenya.

Ochanda (2014) examines the effect of financial deepening on the growth of Small and Medium Enterprises (SMEs) in Nairobi County. The study sought to find out the effect of financial innovation, financial sector regulation, inflation and general interest rates on growth of SMEs. It was also to determine the effect of credit access on growth of SMEs in Nairobi County. The study adopted an exploratory design and applied stratified sampling to identify the 100 SMEs in Nairobi County registered by the industrialization ministry that were used in the study. Regression models were used to examine the effect of financial deepening on growth of SMEs. The study found that access to credit positively influenced the growth of 92% of SMEs. Most SMEs were found to be hindered by high cost of finance and lack of collateral for the new SMEs. Financial innovation was also found to have a strong positive influence on the growth of SMEs. High financial sector regulation, inflation and interest rates were found to hinder growth of SMEs.

Bakang (2015) in a study sought out to investigate the effects of financial deepening on economic growth in the Kenyan banking sector. The study achieved this objective by using quarterly time series data from 2000 to 2013. Financial deepening, which was the independent variable was captured by four alternative indicators: Liquid Liabilities (LL) as ratio to nominal Gross Domestic Product (GDP); Credit to the Private Sector (CPS) as ratio to nominal GDP; Commercial Bank Assets as ratio to commercial bank assets plus Central Bank Assets (CCBA); and Commercial Bank Deposits (CBD) as ratio to nominal GDP. The dependent variable, economic growth, was measured by real GDP. The study

found that banking sector in Kenya has an important role in the process of economic growth. Specifically, the empirical results reveal that liquid liabilities, credit to the private sector, commercial-central bank assets and commercial bank deposits have positive and statistically significant effects on GDP.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section highlights the methodology that was used in the study. It includes research design, data collection and data analysis methods. Data was collected from the Nairobi Securities Exchange, Kenya National Bureau of Statistics, Central Bank of Kenya and World Bank for the period 1995-2014. Correlation research design was used to identify the effect of financial deepening on economic growth.

3.2 Research Design

Research design adopted for this study is a descriptive design. Descriptive approach to this study was the most preferred as the study attempts to investigate what effect financial deepening has on economic growth in Kenya. Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group, whereas diagnostic research studies determine the frequency with which something occurs or its association with something else (Kothari, 2004)

3.3 Data Collection

Secondary data was used in this study. The data on market capitalization, stock market turnover ratio, value traded ratio and bond market turnover ratio to be used was sourced from Nairobi Securities Exchange and Central Bank of Kenya websites whereas data on economic growth indicators (GDP) and foreign direct investment (FDI) was sourced from

Government of Kenya through Kenya National Bureau of Statistics (KNBS) as well as World Bank development indicators.

3.4 Data Analysis

The study used both descriptive and inferential statistics in analyzing the data. First, data collected was sorted, classified and collated. Descriptive statistics such as mean and standard deviation for each variable was calculated and tabulated using tables and inferential statistics. The SPSS computer software was used in the analysis of data. The data was entered into the statistical package for social science (SPSS) and analyzed using descriptive and regression analysis. To measure the effect of financial deepening on economic growth of Kenya the researcher used regression analysis.

3.4.1 Analytical Model

The study adopted a multivariate regression model to determine the effect of financial deepening on economic growth to regress the independent variables against the dependent variable. This followed the steps adopted by Onwumere et al., (2012), Kemboi and Tarus (2012), Nyamakanga (2013) and Aduda et al., (2014). They used a similar model in their studies. The general form of a multiple regression model is as given below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

Where;

Y = Dependent variable

β_0 = Constant term (equation constant)

β_i = Beta coefficients of explanatory variables

X_i = Independent (or explanatory) variables

ε = Error term

In this study the proxies for financial deepening are given as market capitalization, stock market turnover ratio, value traded ratio, bond market turnover ratio and foreign direct investment ratio (all the data was on an annual basis as provided by the Nairobi Securities Exchange, Kenya National Bureau of Statistics and World Bank sources); the following acronyms were used:

Stock Market Turnover Ratio = STR

Bond Market Turnover Ratio = BTR

Value Traded Ratio = VTR

Market Capitalization Ratio = MCR

Foreign Direct Investment Ratio = FDIR

Gross Domestic Product = GDP

The study adopted the following model for analysis;

$$Y = f(\text{SMTR}, \text{BMTR}, \text{VTR}, \text{MCR}, \text{FDIR})$$

$$Y = \beta_0 + \beta_1 \text{SMTR} + \beta_2 \text{VTR} + \beta_3 \text{BMTR} + \beta_4 \text{MCR} + \beta_5 \text{FDIR} + \varepsilon$$

Where Y= is the Economic Growth as represented by growth in Real GDP

Market Capitalization Ratio measures the size of the stock market and equals the value of listed domestic shares on domestic exchanges divided by GDP. According to Levine

and Zervos (1998) overall market size is positively correlated with the ability to mobilize capital and diversify risk on an economy-wide basis.

Stock Market Turnover Ratio in this study was used as a liquidity measure in the market and was measured by total volume of trade in stock market traded divided by the total market capitalization. According to Levine and Zervos (1998) high turnover is often used as an indicator of low transactions costs. A large stock market is not necessarily a liquid market: a large but inactive market will have large Capitalization but small Turnover.

Bond Market Turnover Ratio in this study was used as a liquidity measure in the market and was measured by total volume of trade in bond market traded divided by the total amount of bonds outstanding.

Value Traded Ratio was the other measure of market liquidity which equals to the value of the trades of domestic shares and bonds on domestic exchanges divided by GDP. It measures trading volume as a share of national output and therefore, it positively reflect liquidity on an economy wide basis. In this study, this ratio was used to compliment the market capitalization rate as a measure of growth of the capital market in line with the work Aduda et al., (2014)

Foreign Direct Investment Ratio measured as a share of Foreign Direct Investment to Gross Domestic Product. According to Abala (2014), it is widely acknowledged that FDI has potential benefits that accrue to host countries. The view suggests that FDI is

important for economic growth as it provides much needed capital, increases competition in host countries and helps local firms to become more productive by adopting more efficient technology.

β_i are the slope coefficients which depict the relationship between the dependent variable and the independent variable and ε is the disturbance term which measures the goodness of fit by capturing the effects of all other independent variables not included in the model.

3.4.2 Test of Significance

The study employed the use of Analysis of Variance (ANOVA) and it was preferred in the study since it enables performance of simultaneous test hence considered an important tool of analysis (Kothari, 2004). Tests of significance included the R^2 tests as well as F-statistics which tests the significance of the relationship between the five independent variables of financial deepening and one dependent variable of economic growth.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and findings of the research. The objective of this study was to establish the effect of financial deepening on economic growth in Kenya. Data in this section was analyzed and presented in tables.

4.2 Descriptive Statistics

This section provides a description of the data variables used in the study to determine the effect of financial deepening on economic growth in Kenya. Table 4.1 provides a summary of the data where the number of observations (N), mean and standard deviation is given.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
GDP	20	465250.740	5357672.000	2056577.17500	1483759.684216
SMTR	20	.030	.180	.07800	.042624
VTR	20	.003	.051	.01960	.015316
BMTR	18	.063	.873	.34033	.234447
MCR	20	.090	.360	.21950	.087267
FDIR	20	.0004	.0228	.005445	.0053340
Valid N (listwise)	18				

Source: Research Findings

As can be seen from the table, there were 20 observations for all the variables except BMTR (bond market turnover ratio) which had 18 observations as data for two years was

lacking. The number of observations represented 20 years that was used in the study. The mean for GDP, SMTR, VTR, BMTR, MCR and FDIR were 2056577.175, 0.078, 0.020, 0.340, 0.220 and 0.005 respectively. The standard deviations for the variables were 1483759.684, 0.0423, 0.015, 0.234, 0.087 and 0.005 respectively.

4.3: Inferential Statistics

This section highlights the relationship between financial deepening and economic growth in Kenya by assessing the variables under study.

4.3.1 Correlation Analysis

Correlation analysis measures the relationship between the financial deepening and economic growth in Kenya variables which are under study. The variables under study include GDP, SMTR, VTR, BMTR, MCR and FDIR. The sample correlation coefficient, denoted r , ranges between -1 and +1 and quantifies the direction and strength of the linear association between the two variables. At value 0, there is no relationship. Table 4.2 represents the correlation matrix.

Table 4.2: Correlations Matrix

		GDP	SMTR	VTR	BMTR	MCR	FDIR
Pearson Correlation	GDP	1.000					
	SMTR	.464	1.000				
	VTR	.611	.948	1.000			
	BMTR	.690	.234	.311	1.000		
	MCR	.750	.692	.848	.450	1.000	
	FDIR	.263	.246	.345	.118	.351	1.000

Source: Research Findings

From the results shown on table 4.2, the relationship between the GDP and VTR, BMTR and MCR is positive and strong with correlation coefficient of 0.611, 0.69 and 0.75 respectively. There is also a positive relationship between GDP and SMTR and FDIR though weak as depicted by the correlation coefficient of 0.464 and 0.263 respectively. This implies that there is a correlation between GDP and all the variables and they influence GDP positively.

4.3.2 Regression Analysis

In this study, a multiple regression analysis was employed in the analysis of the relationship between the dependent variable (GDP) and the independent variables (SMTR, VTR, BMTR, MCR and FDIR). The research was conducted using SPSS version 20; statistical software used to analyze data to code enter and run output of the data fed into the statistical tool. A 95% confidence interval and a 5% level of confidence were assumed.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.855	.732	.620	914876.845818

Source: Research Findings

From table 4.3, the value of R^2 is 0.732 which means that that 73.2 percent of the total variance in GDP has been explained by the independent variables under study.

Table 4.4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-31746.227	1359689.828		-.023	.982	-2994255.868	2930763.414
SMTR	-17499733.394	22627966.254	-.503	-.773	.454	-66801836.578	31802369.789
VTR	65210511.368	86640526.372	.673	.753	.466	-123562979.061	253984001.797
BMTR	2863791.396	1074397.470	.453	2.665	.021	522880.405	5204702.387
MCR	5564352.310	6816478.848	.327	.816	.430	-9287479.258	20416183.878
FDIR	-3827808.946	46199879.125	-.014	-.083	.935	-104488698.312	96833080.421

Source: Research Findings

The coefficient of determination explains the variation in the dependent variable (GDP) that can be attributed to the changes in the independent variables (SMTR, VTR, BMTR, MCR and FDIR). From the coefficients in table 4.4, the value of constant β_0 is -31746.227 and the values of β_1 , β_2 , β_3 , β_4 , and β_5 are -17499733.39, 65210511.37, 2863791.40, 5564352.31 and -3827808.95 respectively.

4.3.3 Analysis of Variance

Analysis of Variance is a statistical method used to test differences between two or more means. Table 4.5 represents the ANOVA table.

Table 4.5: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	27382231892428.598	5	5476446378485.720	6.543	.004
1 Residual	10043995716162.145	12	836999643013.512		
Total	37426227608590.740	17			

Source: Research Findings

From the ANOVA table 4.5, there was a statistically significance in the processed data as determined by the ANOVA ($F(5, 12) = 6.543, p=0.004$)

However, from table 4.2, we note strong collinearity between some independent variables. VTR and SMTR have a strong correlation coefficient of 0.948 and VTR and MCR have a correlation coefficient of 0.848. In order to address the issue of multicollinearity, one independent variable was dropped and below is the regression results;

Table 4.6: Descriptive Statistics

	Mean	Std. Deviation	N
GDP	2056577.17500	1483759.684216	20
VTR	.01960	.015316	20
BMTR	.34033	.234447	18
FDIR	.005445	.0053340	20
SMTR	.07800	.042624	20

Source: Research Findings

Table 4.7: Correlations Matrix

		GDP	VTR	BMTR	FDIR	SMTR
Pearson Correlation	GDP	1.000				
	VTR	.611	1.000			
	BMTR	.690	.311	1.000		
	FDIR	.263	.345	.118	1.000	
	SMTR	.464	.948	.234	.246	1.000

Source: Research Findings

From the results shown on table 4.7, the relationship between the GDP and VTR, BMTR is positive and strong with correlation coefficient of 0.611, and 0.69 respectively. There

is also a positive relationship between GDP and SMTR and FDIR though weak as depicted by the correlation coefficients of 0.464 and 0.263 respectively.

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847 ^a	.717	.630	903060.564222

a. Predictors: (Constant), SMTR, BMTR, FDIR, VTR

b. Dependent Variable: GDP

Source: Research Findings

From table 4.8, the value of R^2 is 0.717 which means that that 71.7 percent of the total variance in GDP has been explained by the four independent variables under study.

Table 4.9: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	26824488634097.390	4	6706122158524.348	8.223	.002 ^b
Residual	10601738974493.350	13	815518382653.335		
Total	37426227608590.740	17			

Source: Research Findings

From the ANOVA table 4.9, there was a statistically significance in the processed data after dropping MCR variable as determined by the ANOVA ($F(4, 13) = 8.223, p = 0.002$)

Table 4.10: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	915325.061	699871.053		1.308	.214	-596654.425	2427304.547
VTR	122541614.626	50079624.974	1.265	2.447	.029	14351162.506	230732066.747
1 BMTR	3145049.476	1004508.595	.497	3.131	.008	974940.593	5315158.359
FDIR	-6713046.616	45469523.331	-.024	-.148	.885	-104943979.645	91517886.413
SMTR	-29415079.040	17067247.553	-.845	-1.723	.108	-66286625.706	7456467.627

Source: Research Findings

When one of the variables SMTR, MCR or VTR was dropped, there was a small change on the model R^2 to 0.718, 0.717 and 0.719 respectively. When MCR is dropped, the constant of the model becomes positive and BMTR and VTR variables are statistically significant as can be shown on table 4.10. From the coefficients in table 4.10, the value of constant β_0 is 915325.06 and the values of β_1 , β_2 , β_3 and β_4 are 122541614.63, 3145049.48, -6713046.62 and -29415079.04 respectively.

4.4 Interpretation of the Findings

The four independent variables used in the study explain 71.7% of the gross domestic product (GDP) and this is represented by R^2 of 0.717 in table 4.8 above. This means that other factors not considered in this study contribute to 28.3% of the GDP. From the ANOVA statistics table 4.9, the processed data had a significance level of 0.002, $F(4, 13) = 8.223$ which is statistically significant. The coefficient of determination explains the variation in the dependent variable (GDP) that can be attributed to the changes in the independent variables (SMTR, VTR, BMTR and FDIR).

From the coefficient table 4.10, when all the independent variables are set to zero, the dependent variable which is GDP would be at Kshs. 915325.061 according to our research model. In other words, it would increase by an amount of Kshs. 915325.061. The study also found that a unit increase in VTR will cause an increase in level of GDP by Kshs 122541614.626 holding other independent variables constant; a unit increase in BMTR will cause an increase in GDP by Kshs. 3145049.476 holding other independent variables constant. It also found that a unit increase in SMTR will cause a decrease in GDP by Kshs. 29415079.040 holding other independent variables constant and a unit increase in FDIR will cause a decrease in GDP by Kshs. 6713046.616 holding other independent variables constant.

At 5% level of significance and 95% level of confidence VTR, BMTR, FDIR and SMTR had 0.029, 0.008, 0.885 and 0.108 levels of significance respectively. BMTR and VTR are seen as the most significant variables as they have significance values of 0.029 and 0.008 respectively. This indicates that GDP had a significant relationship with BMTR and VTR. It's also evident that the GDP had no significant relationship with SMTR, and FDIR as can be seen from the 95% confidence interval for B. Zero appears in the confidence interval which starts from a negative to a positive number.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following summary, conclusion and recommendations were made. The responses were based on the objectives of the study.

5.2 Summary

The research objective was to determine the effect of financial deepening on economic growth in Kenya. The study adopted five independent variables and one dependent variable. According to Levine and Zervos (1998), to assess the relationship between economic growth and stock market, empirical indicators of stock market liquidity and size; and measures of economic growth are essential. Capitalization measures the size of the stock market and equals the value of listed domestic shares on domestic exchanges divided by GDP. Many observers use Capitalization as an indicator of market development. Turnover and value traded are related measures of market liquidity. Turnover equals the value of trades of domestic shares on domestic exchanges divided by the value of listed domestic shares. Value Traded, which equals the value of the trades of domestic shares on domestic exchanges divided by GDP. Turnover measures the volume of domestic equities traded on domestic exchanges relative to the size of the market whereas Value traded measures trading volume as a share of national output and should therefore positively reflect liquidity on an economy wide basis. High Turnover is often

used as an indicator of low transactions costs. For economic growth we use real GDP growth. Foreign Direct Investment (FDI) also plays a crucial role in economic growth.

From the findings, it's clear that the relationship between the gross domestic product (GDP) and value traded ratio (VTR) and bond market turnover ratio (BMTR) is positive and strong whereas the relationship between GDP and stock market turnover ratio (SMTR) and foreign direct investment ratio (FDIR) is positive though weak. Value traded ratio has a correlation coefficient of 0.611 with bond market turnover ratio having a correlation coefficient of 0.69. Stock market turnover ratio (SMTR) and foreign direct investment ratio (FDIR) have a correlation coefficient of 0.464 and 0.263 respectively.

The regression results indicate that 71.7 % (represented by R^2) change in the dependent variable, which is GDP, could be explained by changes in the independent variables, that is Stock Market Turnover Ratio, Value Traded Ratio, Bond Market Turnover Ratio and Foreign Direct Investment Ratio. According to the findings, only BMTR and VTR have a significant effect on GDP with significant levels of 0.029 and 0.008 whereas the rest, SMTR and FDIR have no significant effect on GDP and therefore cannot be good predictor of GDP. This is in contrast with the works of Aduda et al. (2014) who used a similar model and only differed since the researcher introduced FDIR variable and did not include stock market size. From their results, they found stock market size and market capitalization ratio to have a significant effect on GDP.

According to Onwumere, Ibe, Ozoh & Mounanu, (2012) the turnover ratio is an indicator of liquidity of the market and a high turnover in the stock and bond market will be taken to mean high liquidity of the market and indicator of low transaction cost and efficiency

in the market. The liquidity variables in this study were Value traded ratio (VTR), the stock market turnover ratio (SMTR), and Bond market turnover ratio (BMTR). The bond market turnover ratio has a significant positive coefficient which means it is a good predictor of the GDP of Kenya in line with the work of Aduda et al. (2014)

The negative coefficient of the stock market turnover ratio and foreign direct investment ratio can be attributed partly to macroeconomic factors that affect investors demand and supply for stock and the political environment of Kenya as a whole. Generally as a percentage of the GDP, FDIR has been very low and only in 2007 and 2014 were the figures significantly high. According to Abala (2014), these can be attributed to market size, low economic growth, lack of policy transparency and rising cost of electricity and labour. The deterioration of Kenya's infrastructure, particularly at a time of major improvement in infrastructure in other parts of the developing world have induced many foreign investors already established in the manufacturing sector to divest or consolidate their operations out of Kenya in recent years

The size variable was Market Capitalization ratio; however, it was dropped from the study so as to mitigate effect of multicollinearity on the model. Aduda et al. (2014) in their study found out that market capitalization ratio not to be a good predictor of the GDP since it had a negative coefficient. Levine and Zervos (1998) argue that although large markets do not necessarily function effectively many observers use capitalization and an indicator of market growth.

5.3 Conclusions

Using correlation design the research focused on data from a 20 year period, that is 1995 to 2014, correlation analysis and regression results were used to determine the effect of the financial deepening variables on economic growth variable, which was real GDP of Kenya. The results indicate that the five independent variables have a positive correlation with the dependent variable which is the GDP which is consistent with previous research conducted by Aduda et al (2014), Levine and Zervos (1998). The results also indicate that one variable, bond market turnover ratio, has a significant effect on the economic growth in Kenya. This shows bond market has a big role to play in boosting economic activity. The study therefore further lend support in finance-growth nexus which suggest the positive role played by finance in mobilizing savings and investments through creation of efficient capital markets.

5.4 Recommendations for Policy and Practice

From this study, it's evident that the role that financial deepening play in the economy is great and cannot be ignored. Though Kenya has a well-developed financial system in place by regional standards, there is need to develop the financial sector further and sustain a higher level of financial deepening. It's imperative for government officials and financial sector regulators to take advantage of various studies that have been carried out in the financial sector like this one to help them in the formulation of policies that promote financial sector deepening. This will go a long way in ensuring a continued growth of financial sector in Kenya and beyond.

Capital markets have a significant contribution to the development of the economy and as such incentives that will attract investors to the capital market should be put into place. This may include but not limited to tax incentives on financial instruments like stocks, bonds and treasury bills. It's good that the capital markets authority of Kenya has acknowledged the important role that capital markets play in the economy and it would therefore be great if they upped their game in the oversight role they play so that the confidence of current and potential investors is not eroded.

5.5 Limitations of the Study

Different sources give distorted data for the same variable and as such the study only used secondary data from the Nairobi Stock Exchange, World Bank website and KNBS. Obtaining data for bond turnover and outstanding bonds was not easy as some years prior to 1997 the data was not readily available.

The study used time series data for a period covering 20 years and is therefore limited to the extent of time series data limitations. The study only focused on capital markets development whereas there are other areas like money markets and banking industry which would have given a complete picture on the effect financial sector as a whole has on the economic growth in Kenya.

5.6 Recommendations for Further Research

The study only concentrated on financial deepening in capital markets in Kenya due to time constraints and availability of data. The research would recommend further detailed study on the Kenyan financial markets as a whole by incorporating money markets in the study and other variables in the capital markets like market size.

Even though by regional standards Kenyan financial system is developed further studies should be carried out to find out to find out the obstacles that are preventing us from achieving our full potential. A deeper analysis on the role that foreign direct investment (FDI) plays in the development of our capital markets should be carried out.

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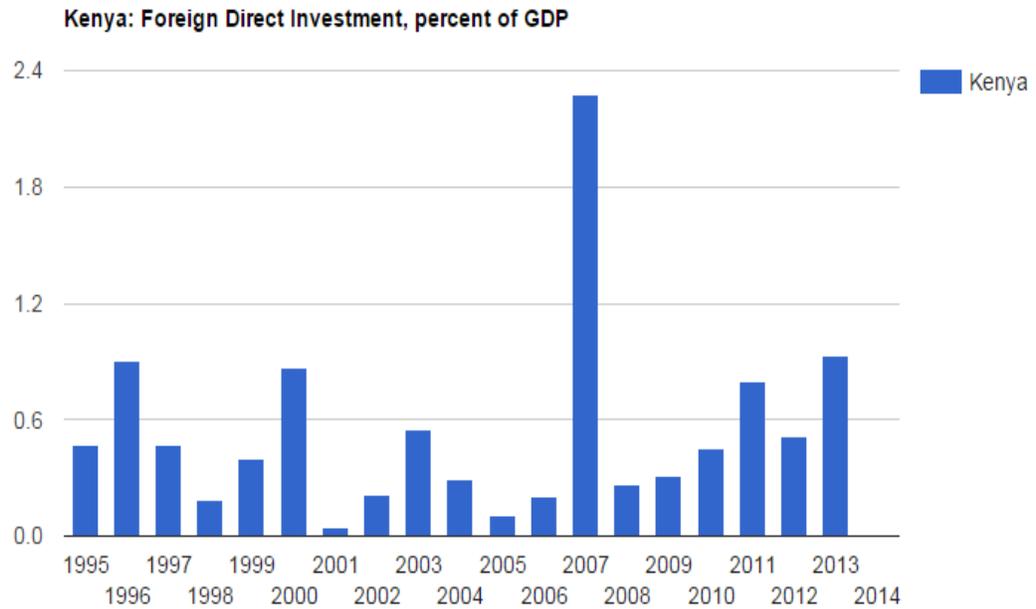
APPENDICES

APPENDIX I: Raw Data

Year	% Real GDP Growth	Real GDP (Kshs.)	SMTR	VTR	BMTR	MCR	FDIR
1995	4.40	465,250,740,000.00	0.03	0.007	-	0.23	0.005
1996	4.10	687,998,000,000.00	0.04	0.006	-	0.15	0.009
1997	0.50	770,313,000,000.00	0.06	0.008	0.515	0.14	0.005
1998	3.30	850,808,200,000.00	0.04	0.005	0.166	0.14	0.002
1999	2.30	906,927,630,000.00	0.04	0.006	0.235	0.13	0.004
2000	0.60	967,836,930,000.00	0.03	0.004	0.118	0.12	0.009
2001	3.80	1,020,221,000,000.00	0.03	0.003	0.119	0.10	0.000
2002	0.50	1,035,373,000,000.00	0.03	0.003	0.202	0.09	0.002
2003	2.90	1,131,782,000,000.00	0.10	0.013	0.216	0.13	0.006
2004	5.10	1,274,329,000,000.00	0.09	0.018	0.183	0.20	0.003
2005	5.90	1,415,725,000,000.00	0.10	0.026	0.063	0.25	0.001
2006	6.30	1,862,041,000,000.00	0.18	0.051	0.201	0.28	0.002
2007	7.00	2,151,349,000,000.00	0.13	0.041	0.279	0.32	0.023
2008	0.20	2,483,058,000,000.00	0.12	0.039	0.299	0.34	0.003
2009	3.30	2,863,688,000,000.00	0.05	0.013	0.253	0.29	0.003
2010	8.40	3,169,301,000,000.00	0.12	0.035	0.873	0.29	0.005
2011	6.10	3,725,918,000,000.00	0.07	0.021	0.655	0.29	0.003
2012	4.60	4,261,151,000,000.00	0.08	0.020	0.735	0.25	0.003
2013	5.70	4,730,801,000,000.00	0.11	0.033	0.515	0.29	0.007
2014	5.30	5,357,672,000,000.00	0.11	0.040	0.501	0.36	0.016

Source: Research Data

APPENDIX II: Foreign Direct Investment Graphical Data

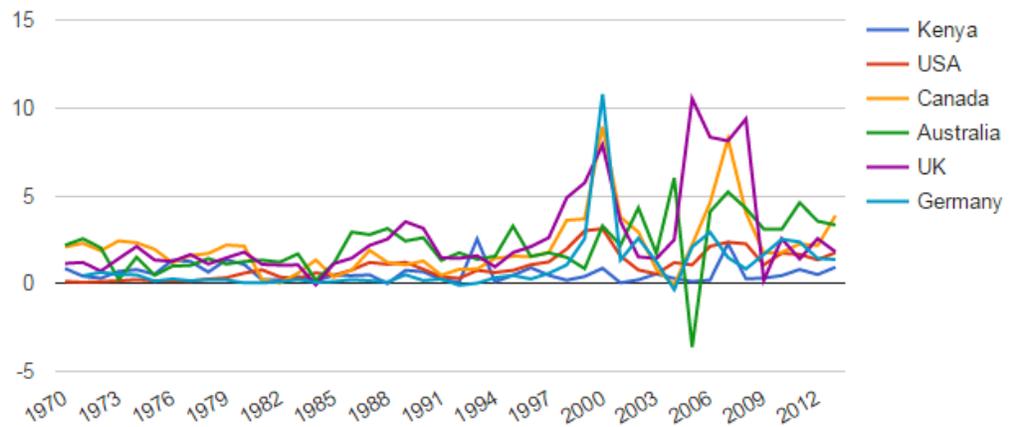


World bank definition: Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

Source: World Bank website

APPENDIX III: Comparison of Kenya FDI percent of GDP with other countries

Kenya Foreign Direct Investment, percent of GDP: Compare to other countries



Source: World Bank website