# ECONOMIC DETERMINANTS OF SAVINGS MOBILIZATION BY COMMERCIAL BANKS IN KENYA

**BY**

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## DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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Date ……………………

I do hereby confirm that I have examined the master's Dissertation of

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## ABSTRACT

Savings is a sacrifice of current consumption which provides for accumulation of capital hence addition of output that can be used for future consumptions. Commercial banks play a major role in savings mobilization through its function of financial intermediation to promote growth and investment. This function of the bank is critical with respect to economic growth. In Kenya and the developing countries it is evident that foreign capital alone is not adequate to create a permanent high standard of living in future thus domestic sources of finance will facilitate more successful implementation of any economic development. This study analyzed the economic determinants of savings mobilization by the commercial banks in Kenya with regards to real deposit interest rate on savings mobilization by commercial banks in Kenya and structural infrastructure. The target population of this study composed of representatives of the all commercial banks in Kenya with head office in Nairobi, both the managers and middle level employees. The target population of this study therefore was 431. The study used stratified random sampling method, to select 30% of the respondents who formed a sampling frame of 129 respondents. Data was collected using questionnaires. Data was analyzed using descriptive statistics done with the help of software Program SPSS version 21 and presented using frequency tables and graphs. In addition, multivariate regression model was applied to determine the relative importance of each of the four variables with respect to savings mobilization. Based on the research findings the study concludes that real deposit interest affects saving mobilization of the commercial bank to a moderate extent. The study also concludes that economic growth has a significant influence on saving mobilization in commercial banks in Kenya. The research further concludes that structural infrastructure has a great influence on saving mobilization. Basing on findings the study recommends that commercial banks should reduce it real deposit interest in order to attract more customers to save in their banks. Commercial banks should come up with policies to adjust their interest rate that are favorable to customers. The study further summarizes that considerable investment in the rural areas takes place in a non-monetized form through the use of family cottages-cottages for family use, farm roads and the like.Finally government should gear its efforts towards reducing domestic inflation in order to arrest its negative impact on both real interest rates and spread.



**Keywords:** savings mobilization, economic growth, economic determinants, real deposit interest rate

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TABLE OF CONTENTS

## DEDICATION

This work is dedicated to my Family Mr and Mrs Stanley ongeti, my beloved Lady Sandra Sigei for prayers and support during the time of the study, my brother Eugene for his support and also to the banking fraternity.

## LIST OF TABLES

## LIST OF FIGURE

## ACRONYMS AND ABBREVIATIONS

| | | |
|---|---|---|
| APS | - | Average Propensity to Save |
| CBK | - | Central Bank of Kenya |
| GDP | - | Gross Domestic Product |
| GNP | - | Gross National Product |
| KBRR | - | Kenya Bankers Reference Rate |
| MBA | - | Modigliani-Brumberg-Ando |
| MPS | - | Marginal Propensity to Save |
| NY | - | National Income |

## OPERATIONAL DEFINITION OF TERMS

**Inflation** - It is defined as the persistent increase in the general prices of goods and services within an economy over a given period (World Bank, 2007)

**Interest rates - **The Institute of Charted Accountants of Nigeria (2009) defined interest rates as the cost one pays for money in a financial market

**Macroeconomic Environmental Factors** are nominal exchange rate, inflation, government policies, national income levels and stability; financial sector reforms also influence savings mobilization by commercial banks in Kenya (Andrle et al, 2013).

**Structural infrastructure** can be summed up as the innovative savings instruments, number of branch network, structure of the financial system, the depth and size of financial markets, extent of financial intermediation, lagged money stock, availability of saving facility and individual savings capacity are the aspects of structural infrastructure (Baumol & Alan, 2006).

**Savings** in an economy can assume one of several forms. These include personal savings, corporate or business savings and Government savings. Of these, the household savings or personal savings has been agreed to contribute the substantial part of aggregate savings in both industrialized and developing countries (Klaus, Webb & Coresetti, 2011).

**Lower level Management:** lower level managers are responsible for day to day running of the organization and implantation of goals set by Middle-level management. They include branch Managers, assistant branch managers or operations manager and supervisors. Since are more involved in the day-to-day workings of a company, they may provide valuable information to top managers to help improve the organization's bottom line (Marcia, 2016).

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the study

Adequate supply of domestic savings is a core national policy objective, both because of its direct growth effect and also due to the fact that a high national savings ratio in line with an economy's investment needs, reduces the economy's vulnerability to unexpected shifts in international capital flows. In addition, as international financial integration continues to expand, high domestic saving mobilization by commercial banks helps to ensure macroeconomic stability (Barro & Sala-i-Martin, 2004). Nwaochi (2003) argue that the error of assisting developing nations is coming to an end and it's not really satisfying most countries financial needs. At the time when every country has an economic need to satisfy and all of them depend on foreign debt and donors it becomes more challenging to secure funds from the same donors and lenders in addition to increasing debt burden of the country therefore savings mobilization is a very important component in any development agenda as it is the surest of increasing income and boosting productivity in an attempt to eradicate poverty.

The Institute of Charted Accountants of Nigeria (2009) defined interest rates as the cost one pays for money in a financial market. Ojo (2001) saw interest rates as a tool that rationalizes supply and demand of financial resource. A study conducted by Odhiambo (2009) argues that since the liberalization of financial sector in Kenya ,interest rates took the center stage however real deposit rate had insignificance influence on savings behavior in Kenya, this was also echoed by Mwega and Ngola (1991) contrary to a study by World Bank (2000) across countries established that higher saving rates tend to go hand in hand with higher income growth, a fact that has been taken as proof of the existence of both virtuous cycles of saving and prosperity and poverty traps of insufficient saving and stagnation. This concurs with Deodat (2012) who established that the main sources of growth analysis in nine countries namely: Great Britain. Canada, U.S, Sweden, Germany, Italy, Norway, Japan and France have depicted that growth in physical capital input alone from savings has brought almost half the growth in the collective income of nine developed countries between 1960-1997.

Savings mobilization by commercial banks by and large depend on the rate of return in terms of interest rate they give to depositors the higher the interest the more likely they are to mobilize more savings. Lending rates in Kenya are very high compared to the rate of return given to bank clients with savings accounts since commercial banks liberalization in Kenya in the year 1995. Commercial banks lend at 20.05% and give a return of 8.7% this is according to the Kenya bankers reference rate (KBRR) 2015 thus there is a huge disparity which makes savers to look for alternative ways to save and invest. The importance of savings as key driver in economic development in majority of developing nations is recognized by developed economists (McKinnon, 2011). Andrle, Berg, Morales, Portillo and Vlcek (2013) also argue that the overall growth and development of economies is another factor that influences savings mobilization in commercial banks in Kenya today. Being one of the developing countries, the overall performance of the economy is crucial in determining the savings trends of individuals.

According to World Bank (2007), high levels of poverty in a country are a negative attribute towards the savings and mobilization of resources in the country thus ,according to Vision 2030, the government aims to reduce the 2006 poverty rate of 46 percent to 28 percent (World Bank, 2007). Although there are other catalysts such as education framework and the economic environment not forgetting how resources are managed it is not easy to sustain an economy nor have economic growth without savings. Matovu (2010) posits that savings remains a major precondition for developing countries to take off in economic development. Planning for investment has been a challenge to policy makers due to over reliance on foreign aid and debts other than domestically generated funds this is a case of countries like Ghana as noted by Belinga (2012). In Kenya the external debt rose to ksh.1615.18billion in December 2015 from ksh.1562.52billion in November the same year and ksh361.73billion in 2003 (CBK, 2016).

Kenya has turned into a highly indebted country and it is important to policy makers to reduce the countries level of over reliance on foreign debts to domestic mobilization of savings, this requires well organized and structured financial institutions and such structures that aide in savings mobilization, hence the solution lies in mobilization of funds locally and who is better placed than banks since they have a wide network of branches as compared to other financial institutions. Fry (1997) postulates that the role of banks is to act as intermediary between depositors and borrowers in this functions funds can be channeled to capital formation through lending.

Kenyan commercial banks mobilize savings however according to financial access survey (2009) the number of people who use no bank facilities to save was 17.9% in 2009 by the time of the 2013 financial survey was done the number had doubled to 34% this indicates that commercial banks are not mobilizing savings adequately. In efforts to report high profits commercial banks in Kenya have opted to deviate  from the traditional banking practice and financial intermediation to concentrate on non interest business such as insurance giving an example of Barclays bank Kenyan ltd which has acquire 63.3 % in first assurance company and equity bank venturing in mobile telephony and money transfer with Equitel. These trends have made commercial banks to rely heavily in borrowed funds from abroad to either finance the capital expenditure mostly expanding in other countries in the region while majority of the population have no access to banking facilities. Capital improves productivity this is in line with vision 2030 a policy document in Kenya where key flagship projects of up to Ksh.500 billion are to be finance through domestic accumulation of funds which are to be at 30% or above in savings to enable the country to be a middle income economy thus savings mobilization is critical. The central bank of Kenya (2012) has acknowledged that it will be a challenge to attain Vision 2030 without change of financial policy therefore this study will assist policy formulators in attaining their objectives.

As discussed by Nissanke and Aryeetey (2008), there are a few structural and institutional restrictions to the growth of savings and propose that commercial banks in Africa are greatly uneven and the high operations costs for economic means to try to move all over different sections as a hindrance in savings enlistment. This is connected to different institutional constraints of the formal part, for instance that savings mobilization from rural areas is much expensive, and the banks in Africa are not made to deal with this through original approaches in savings mobilization.

Several studies like Ngula, Isaack and Belinga (2012) concentrated on banking industry as whole and various internal factors affecting savings mobilization while this study will look at economic factors affecting commercial banks in savings mobilization similarly Bairamli and Kostoglou (2010) concentrated on social and demographic effects such as gender, age, level of education, marital status and size of the family on savings mobilization.

### 1.2 Statement of the Problem

Adequate supply of domestic savings is a core national policy objective, both because of its direct growth effect and also due to the fact that a high national savings ratio in line with an economy's investment needs, reduces the economy's vulnerability to unexpected shifts in international capital flows. In addition, as international financial integration continues to expand, high domestic saving mobilization by commercial banks helps to ensure macroeconomic stability (Barro and Sala-i-Martin, 2004).

One challenge that Kenya faces is lacks a realist interest rate policy that encourages savers and mobilizes savings with better returns on their savings, the rates given when inflation is adjusted for returns are more often negative or very low. This has made the government and banks to solicit funds across borders. The external debt rose to ksh.1615.18billion in December 2015 from ksh.1562.52billion in November the same year, this is in contrast with the year 2003 where countries debt had reduced to ksh.361.73billion (CBK, 2016). Kenya has turned into a highly indebted country and it is important to policy makers to reduce the countries level of over reliance on foreign debts and encourage domestic mobilization of savings, this challenge requires well organized and structured financial institutions and such structures that aide in savings mobilization.

Baumol and Alan (2006) in his macroeconomic studies using both quantitative and qualitative data found out that the innovative savings instruments, number of branch network, structure of the financial system, the depth and size of financial markets, extent of financial intermediation, lagged money stock, availability of saving facility and individual savings capacity are the aspects of structural infrastructure that influence savings mobilization by commercial banks. Lucas (2011) argues that Kenya is ill equipped to facilitate savings among the entire population in the country. Commercial banks fail to facilitate savings due to some bottlenecks that come from all sectors of the economy. They are also facing stiff competition from other financial institutions such as Saccos and MFIs.

Andrle, Berg, Morales, Portillo and Vlcek (2013) also argue that the overall growth and development of economies is another factor that influences savings mobilization in commercial banks in Kenya today. Being one of the developing countries, the overall performance of the economy is crucial in determining the savings trends of individuals. GNP per capita, population growth, occupational structure of the labour force, urbanization, and consumption per capita, poverty levels, infrastructure and social conditions are some of the indicators of economic growth and development in a country. Baumol and Alan (2006) add that the structure of labour force in an economy is also an indicator of the levels of development in that particular country.In Kenya. The economic growth has stagnated and the number of population  that has a formal income is low this affects savings mobilization by commercial banks.

Another challenge is the increase in the number of banks facing liquidity problems in Kenya which is mainly attributed to lack of deposit mobilization and over reliance on foreign debts to create credit, in addition to citizens having to look for alternative ways of savings including purchasing of lands investments in champs and merry go rounds. Aryeetey (2004) argued that the rate of return on savings is very low which contributes on the challenge of savings mobilization this is in concurrency with a study done by World Bank (2000). However Odhiambo (2009) concur that interest factor is insignificant to mobilize savings .To achieve the double digit economic growth envisaged in the vision 2030 blue print, commercial banks role to mobilize savings is increasingly evident hence the need to study the economic determinants of savings mobilization by commercial banks in Kenya.

The cited studies fell short of explaining the economic determinants affecting savings mobilization by commercial banks in Kenya with regards to real deposit interest rate on savings mobilization by commercial banks in Kenya, economic growth and structural infrastructure. in light of this the study seeks to fill the existing gap by carrying out a research and analyze the economic determinants affecting savings mobilization by commercial banks in Kenya with regards to real deposit interest rate on savings mobilization by commercial banks in Kenya and structural infrastructure.

## 1.3 Research Objectives

### 1.3.1 General Objective

The general objective of this study was to establish the economic determinants affecting savings mobilization by commercial banks in Kenya.

### 1.3.2 Specific Objective

The specific objectives of this study were:

i. To determine the effect of real deposit interest rate on savings mobilization by commercial banks in Kenya
ii. To ascertain the effect of economic growth on savings mobilization by commercial banks in Kenya
iii. To establish the effect of structural infrastructure on savings mobilization by commercial banks in Kenya

## 1.4 Research Questions

The study sought answers to the following questions:

i. What is the effect of real deposit interest rate on savings mobilization by commercial banks in Kenya?
ii. What is the effect of economic growth on savings mobilization by commercial banks in Kenya?
iii. To what extent does structural infrastructure affect savings mobilization by commercial banks in Kenya?

## 1.5 Justification of the Study

The purpose of the study will be to analyze economic determinants affecting saving mobilization by commercial banks in Kenya with a view of making recommendations to assist commercial banks in Kenya improve the levels of savings hence liquidity in the institutions. Savings mobilization by commercial banks will enable resources mobilization required by the government to finance the 20 flagship projects worth Ksh. 500 billion as envisaged in the vision 2030.

This research will not only assist commercial banks liquidity position but also strengthen the economy and improve its growth significantly; more a saving culture in the country will be natured by ensuring there are well set policies and structural infrastructure to enable savings mobilization.

The study will be significant by providing insight to policy makers, and offer way forward  to decision makers in the implementation process of vision 2030 ,more so, findings will add to the existing body of knowledge in the areas of savings, inflation, money supply growth rate, decision making and form a basis for further research.

## 1.6 Scope of the Study

The study was conducted on the economic determinants of savings mobilization by commercial banks in Kenya.The study considered all the 43 commercial banks in Kenya with their headquarters in Nairobi. The study administered Likert questionnaire to top level managers, middle level and lower level managers of the banks in data collection

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

This section involves systematic identification, location and analysis of documents containing information related to the study. Literature review makes it possible for the researcher to come up with a clear and extensive study. It involves evaluation of any already existing literature related to the study to identify gaps in the previous studies.

## 2.2 Theoretical Review

### 2.2.1 Life-Cycle Model

The model by Modigliani emphasized on how saving can be utilized to transfer the purchasing power from one phase of life to the other. In the early life, labour income is typically low relative to later working years. Typically, income peaks in the last part of the working life, but then it drops at retirement. Consumers wishing to smooth consumption would opt to borrow during the early low-income years, repay the loans and then accumulate wealth during the high-income years, then spend the accrued savings during retirement (Bhattarai, 2007). Imbedded in the life-cycle approach is the notion of a lifetime budget constraint that connects consumption at various dates during the lifetime. The slope of the budget constraint, determines the trade-off between period t consumption and period t+ 1 consumption, is (1 + r), where r is the real interest rate at which consumers borrow and lend. The position of the budget constraint is dependent on the present value of lifetime earnings, which is typically called wealth (Mavrotas & Kelly, 2001).

Earlier empirical tests of the life-cycle model were conducted to test whether wealth and the interest rate explained consumption better than the current disposable income. Even though some successful results were acquired, empirical work was bedevilled by the trouble of measuring the stock of wealth accurately. Generally, government statisticians are more prosperous at measuring flows than stocks. Stocks are more challenging to measure for at least three reasons. First, because flows move, it is easier to sum them up than stocks of assets that may “hide” in someone’s possession for many years (Koop, 2006). Second, sales, income, and expenditures are often taxed, which means that the government has good enough reasons for assessing these flows as precisely as possible. Lastly, their value is usually easier to determine.

Most of the economic variables are aggregated with regard to their dollar value. For each transaction taking place, a dollar value is placed on the goods involved. Flows by definition involve current transactions and, consequently, have a clearly observable current value (Bhattarai, 2007). Stocks may change hands relatively irregularly, which make it harder to accurately assess their current market value. Prices are quoted regularly for assets that are traded on organized exchanges, such as bonds, stocks and gold, which makes it easy to identify their value. For assets like real estate, tax collectors make estimates of market value regular.

Conversely, Bhattarai (2005) found that for a huge collection of assets, data collectors are coerced into either using historical cost whereby the approach taken by accountants, which may at times underestimate the structures’ value drastically and overestimate the value of such rapidly depreciating assets as computers or to approximate market value based upon whatever scanty information available at the time. For most households, the largest asset of the economy is the earning power manifested by the human capital of their members. Since historical cost is greatly immaterial here, this can only be very crudely estimated by attempting to guess their lifetime stream of future wage earnings and put a capital value on it by standard present-value techniques (Mavrotas & Kelly, 2001). The challenge of measuring wealth makes it even more challenging to perform a reliable test of the life-cycle model.

The most common approach used it the inclusion of wealth only a limited set of assets whose value is comparatively easy to measure. In terms of equation (2), this leads to the use of only the “visible” part of the A0 term and neglecting both immeasurable components of A0and the hypothetically much larger unobservable summation of discounted future labour income. Since the most suitable concept of wealth is so much wider than the measures that are used in empirical applications, one would not essentially expect a strong correlation between the consumption spending and measures used. Consequently, the lack of strong statistical support for this version of the life-cycle model as likened to the simple Keynesian function cannot be considered as a definitive refutation of the model (Koop, 2006).

### 2.2.2 Central Theory of the McKinnon-Shaw

McKinnon (1973) and Shaw (1973) postulated that in a developing country especially, when interest rate is liberalized, it will lead to increase in the real interest rate which will lead to increase in savings, spur investments and eventually lead to economic growth. McKinnon-Shaw central theory postulates that financial and economic sector developments are co-dependent but coming up with a causal relationship between the two is contentious. In this paper we would take for granted that the existence of a financial sector is an essential condition for an economic take-off; this is consistent with Schumpeter's theory that the banking system impulses growth as innovations can be fully financed. Others, like Goldsmith, conclude on the basis of empirical evidence, that the more intricate the financial system in a country is, the greater will be the development level in that country. These works supports the perception of liberal economists like Shaw or McKinnon who believe that financial repression needs to end in developing countries and advocate for financial liberalization. They indicate, a country should develop its financial sphere to upsurge its real growth. Financial repression suggests a series of constraints the need for banks to have no compensated reserves in central banks, too low interest rates for savers, etc. (Savanhu et al., 2011). That is so strong that the financial sphere cannot be developed.

For these economists, financial repression leads domestic agents to prefer having unproductive assets or no monetary assets instead of depositing assets in the bank. Therefore, there are inadequate funds to be lent in the economy, which create a problem for investment and therefore for growth. Subsequently only free markets can guarantee optimal saving allocation .The liberal theories of these two notable economists, as well their criticisms will be well exposed. According to McKinnon, financial saving by definition, is needed for investment and thus for growth. In emerging markets, saving resources though existing are badly managed. Emerging economies are split so there is a greater probability of having investments that are less productive. Capital accumulation is hindered by the fact that for a high inflation rate, nominal interest rates are set too low and therefore real interest rates could be negative. Given that capital supply of banking sector is limited and banks have only particular credit activities, people are forced to finance their investment projects themselves or go to the informal sector where interest rates are usurious more often than not (Rehman & Gill, 2013).

Financial liberalization for McKinnon cause joined financial markets and the best approach is to let the rates of interest freely alter. In this circumstance, the rates of interest would exhibit the capital inadequacy and the information costs regarding borrower quality. Beside, low income investments would be stopped by high rates of interest. The states should limit the part they play to enhance low inflation and to stimulate development of the financial sector. Nevertheless, in fixed exchange rate systems, financial liberalization could cause bigger inflation (because of the entry of capital flows led by carry-trades), which would terminate the positive effect of the rise in the nominal interest rate. To solve this issue, the exchange rates should progressively be devalued until a level of equilibrium is realized between interest rates that are domestic and foreign (Arestis & Demetriades, 1999).

Even though Shaw's theory is different from McKinnon's, it similarly leads to the same deductions. As stated by Shaw, financial liberalization allows a concentration of the capital market, which is an essential state for economic growth. Consistent with him, financial suppression has numerous negative magnitudes: In disparity, financial liberalization has positive impacts on development owing to an ideal distribution of resources with a redeemable price that exhibits its inadequacy and the domestic financial system unification (Savanhu et al., 2011). Besides, it also reduces rates of unemployment (as the capital price rises and as there is switch of capital by labour), a better financial credit deal (with extensive maturity for example) and the foreign capital entry.

## 2.3 Empirical Review

### 2.3.1 Real Deposit Interest Rate

Ngula (2012) conducted a study on the determinants of savings mobilization and its role in promoting economic growth in Ghana. Data for the analysis covered the period between 1980 and 2010. Characteristics of the time series of the data were examined by applying unit root tests to investigate the stationary of each variable. To decide on the robustness of the Ordinary Least Squares (OLS) regression coefficients, a test for heteroscedasticity and serial correlation was undertaken. The real bank deposits demand was then modeled using the OLS technique. Findings from the study show that exchange rate, money supply and inflation rate (M2) considerably affect the mobilization of financial savings (deposit) in Ghana. Deposit interest rate on the other hand, proved to be a weak determining factor of bank deposit mobilization. This is accredited to the lack of confidence that people in the banking system had. Successful mobilization of domestic resources needs a stable macroeconomic environment in which inflation is under full control and probable currency exchange is controlled by a steady exchange rate. The functions performed by banks, particularly their use of deposits to allocate credit to the private sector for investment, uphold growth to an extent. However, government borrowing and other factors limit the economy from fully realizing growth benefits of functions as performed by the banks. Financial policies by government can also supplement this development process by guaranteeing greater amount of information on credit worthiness of households and businesses in the economy.

Baumol and Alan (2006) did a study of macroeconomic principles and policy. he collected data from secondary sources and analyzed the statistics obtained using software for data analysis. a further t-test of the economic variables tested for variances of the different economic factors that affect savings mobilization. The study found out that commercial banks, the basic component of financial institutions, are the major relevant institutions, which encourage and mobilize savings and channel savings into productive investment because of their network of offices. Financial institutions play an important role in influencing savings mobilization among the population. Financial institutions' rate spreads have a significant impact on the savings mobilization. This can be interpreted to mean that the inability of commercial banks to adjust their lending rates to reflect the mobilisation of deposits and allocation of resources could significantly increase the cost of intermediation through the payment of higher implicit interest rates.

Implicit deposit interest rates of commercial banks range between 17.96 and 22.50 percent, averaging 18.45 percent during the 1980-86 periods. These rate rates are far higher than the average stipulated deposit rate of 7.5 percent during the same period (World Bank, 2007). This implies that commercial banks interest rates were higher than the restricted interest rates for which they were allowed to transact their businesses. With interest rate restrictions, the banks resort to the use of implicit interest rates, in the form of gift and promotional items, to attract prime customers for deposits and lending, since such implicit rates are outside the control of the monetary authorities.

Guryay (2007) also conducted a study of financial development and economic growth, the study involved both primary and secondary data. Data was collected using both open and closed ended questionnaires which was later analyzed and presented in descriptive form. the findings of the study revealed that a positive real interest rate increases financial depth through the increased volume of financial saving mobilization and promotes growth through increasing the volume of productivity of capital.

Andrle (2013) conducted a study on the forecast and monetary policy analysis in Kenya. data was collected by secondary means from the available materials various libraries. the findings of the study indicated that the inflation rates in the country affect the performances of organisations through various ways. The study found that Kenyan banks can pool back funds into the formal banking system if they innovate savings products with attractive returns. However, interest rates reforms in Kenya cannot optimally achieve its goals, if those other factors (e.g. inflation, interest rate margin, bank failure, high unemployment, liquidity crunch) which negatively affects deposits in the country, as suggested by Muza (2012) are not tackled. This implies that the link between deposit rates and deposit mobilisation is not automatic.

### 2.3.2 Economic Growth (Gross Domestic Product)

Economic conditions and policies are the key determinants of the level of savings and the stability of the financed system drives its mobilization. In a study of Nwachukwu and

Egwaikhide (2007) used an error correction to investigate the determinants of savings in Nigeria. The estimation results indicated that the level of per capita income, terms of trade changes, public saving rate, external debt service ratio has positive and significant influences on domestic saving while real interest rate and growth rate of income have a negative impact on the saving rate. They supported the hypothesis that both the change in the rate of income growth and the change in income levels are powerful determinants of changes in the private saving rate. Similarly, Uremadu (2007) investigated the core leading determinants of financial savings in Nigeria using ordinary least square (OLS) econometric framework. The results shows positive and significant influence of gross domestic product per capita, interest rate spread, broad money supply, and debt service ratio on savings while real interest rate and domestic inflation rate have negative influence on the level of savings.

Bhattarrai (2000) observed that the overall growth and development of economies is enhanced by financial sector liberalization, which gives support to the distribution of income. The distribution then affects enterprise and business growth. He maintained that these financial resources advance general economic wellbeing, and favor households and small to medium scale enterprises for accelerated growth in developing economies.

Andrle, Berg, Morales, Portillo and Vlcek (2013) also argue that the overall growth and development of economies is another factor that influences savings mobilization in commercial banks in Kenya today. Being one of the developing countries, the overall performance of the economy is crucial in determining the savings trends of individuals. GNP per capita, population growth, occupational structure of the labour force, urbanization, and consumption per capita, poverty levels, infrastructure and social conditions are some of the indicators of economic growth and development in a country (Andrle, Berg, Morales, Portillo & Vlcek, 2013). GNP is the total market value of all final goods and services produced by a country in one year. It is a measure of economic activity, or how much is produced in a country. The more that a country produces per person, the more developed it is assumed to be.

Baumol and Alan (2006) add that the structure of labour force in an economy is also an indicator of the levels of development in that particular country. Economic geographers divide economic activities into primary activities, secondary activities, and tertiary activities. (Some add quaternary activities and quinary activities). Primary activities are those that directly remove resources from the earth. Generally they include agriculture, mining, fishing, and lumbering. Secondary activities involve converting resources into finished products which are the manufacturing activities. Tertiary activities comprise the service sector of the economy which includes retailing, transportation, education, and banking.

As countries develop the occupational structure of the labour force changes, in developing countries, most people are engaged in primary activities. In high income countries like the United States most people are involved with the tertiary sector (Baumol & Alan, 2006). Urbanization on the other hand is the percentage of a country's population who live in urban areas. Urban areas generally means in towns and cities of 2,500 or more people. Currently just less than half of the world’s population live in urban areas. Generally, as countries develop urbanization increases which in turn affects the saving mobilisation of people through the multiplier effect.

World Bank (2007) provides that the high levels of poverty in a country are a negative attribute towards the savings and mobilization of resources in the country. According to Vision 2030, the government aims to reduce the 2006 poverty rate of 46 percent to 28 percent (World Bank, 2007). Substantial economic growth and financial reforms put forth by an active government-led poverty reduction initiative have helped decrease the overall incidence of poverty by almost 13 percent from 2000 to 2006. In addition, growth in per capita income has rebounded strongly from a decline of 2.5 percent in 2002 to a positive 2010 rate of 2.8 percent, in spite of post-election violence in 2007 and the global financial crisis of 2008 and beyond. While progress over the past decade in reducing poverty has been significant, the disparity in wealth across Kenya's 47 counties is huge. From 2006 to 2009, wealth has shifted significantly across various provinces.

Though this may be due to a migration of wealth, population or both, Kenya's heterogeneous nature and the associated difficulties of implementing a centralized poverty reduction plan affects to a large extent the mobilization of savings in commercial banks. There is also a wide variation of absolute poverty rates within individual provinces. For example, the 2006 poverty rate in Kajiado stood at 11 percent compared to Turkana's 94 percent rate, both of which are districts located in Rift Valley Province. Furthermore, there is a gender gap in the urban poverty for male headed households, which hovers at 30 percent and increases to 46.2 percent for female-headed households. This underscores the difficulties faced by governments and financial institutions in developing savings services in a country where provinces have vastly different economic situations (World Bank, 2007).

Social Conditions are also among the measures of economic development. Many refer to the social conditions of a country such as literacy rates, life expectancy, health care and infant mortality. A unit increase in any of these factors is a negative implication to the savings mobilisation. Commercial banks are not in a position to encourage savings when the country is experiencing high levels of poverty and vice versa (World Bank, 2007).

### 2.3.3 Structural Infrastructure

According to Baumol and Alan (2006), commercial banks are the most resourceful in mobilization, savings and financial resource allocation institutions. As a result, these roles make them a vital phenomenon in economic development and growth. In undertaking this role, it must be acknowledged that banks have the potential, prospects and scope for marshalling financial resources and consequently allocating them to productive investments. As a result, regardless of the methods of generation of income or the economic policies of the country, commercial banks would be interested in offering loans and advances to their several customers considering the three principles guiding their operations which are profitability, solvency and liquidity.

A vast majority of financial institutions have been involved themselves in savings mobilization and also have played a significant role in providing various savings services and products such as bonds, accounts holdings with interest yielding and they have played a vital role in savings mobilization. Among the factors that determine saving behavior is ability to save which depends on disposable income, propensity to save, access to financial institutions and the type of savings. While most efforts to save are voluntary, others are compulsory as in the case of social security contributions (Bagonza, 2001).

Savings in an economy can assume one of several forms. These include personal savings, corporate or business savings and Government savings. Of these, the household savings or personal savings has been agreed to contribute the substantial part of aggregate savings in both industrialized and developing countries (Klaus, Webb & Coresetti, 2011).

The system of financial intermediation can affect economic performance and growth directly through the role it plays in savings mobilization. In particular the financial intermediation channels savings into the most productive investment projects and thus contributes to higher rates of growth (Matovu, 2010). Meanwhile, willingness to save is perceived to be dependent on the ease of access to savings instruments, the appeal of such instruments and the existing economic conditions (Wright, 2009).

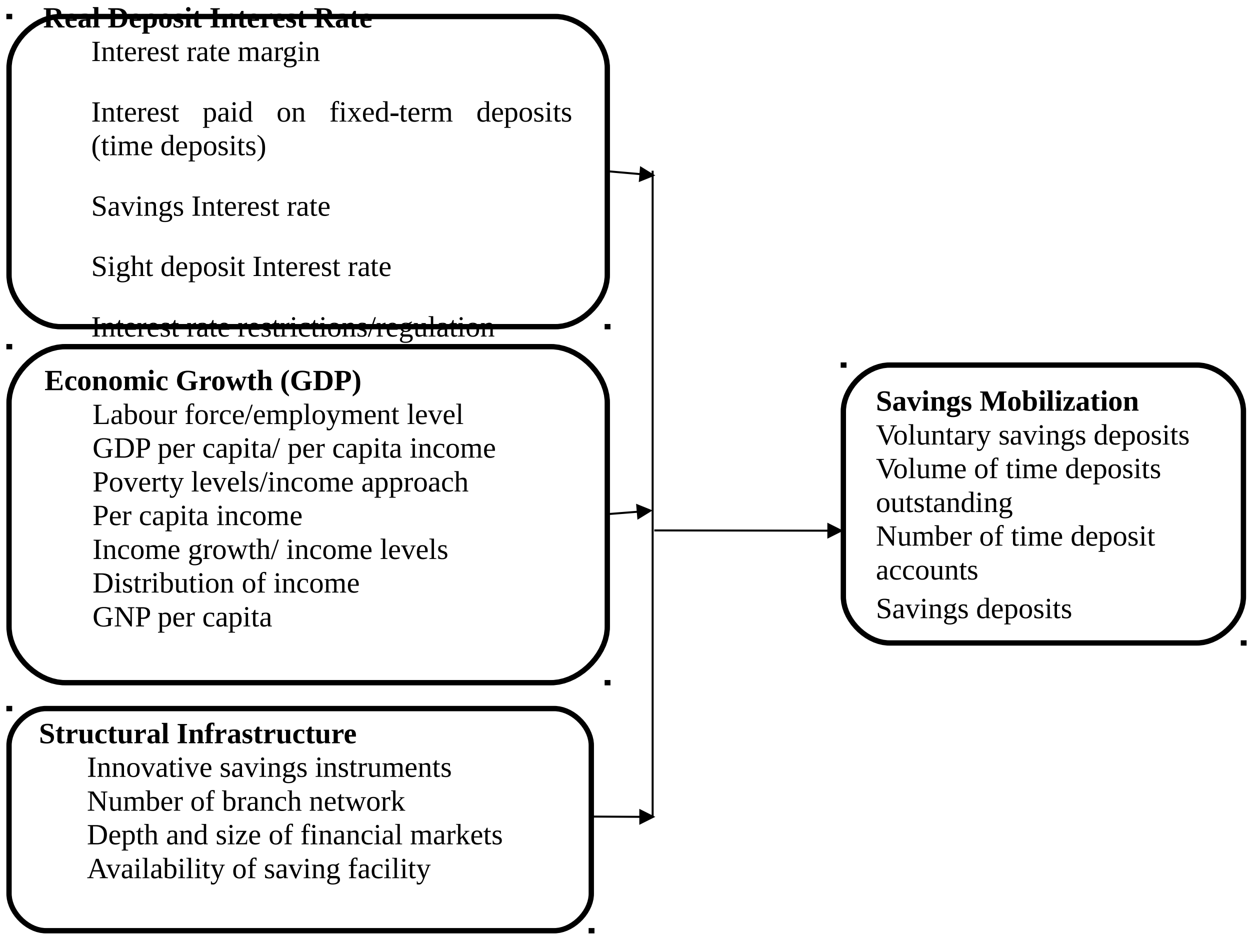
Baumol and Alan (2006) in his macroeconomic studies using both quantitative and qualitative data found out that the innovative savings instruments, number of branch network, structure of the financial system, the depth and size of financial markets, extent of financial intermediation, lagged money stock, availability of saving facility and individual savings capacity are the aspects of structural infrastructure that influence savings mobilization by commercial banks in Kenya. The structural components of commercial banks in Kenya affect their operations, thereby the mobilisation of savings among the population. The financial system of a bank contributes greatly to the loyalty of its customers. The ability of the bank to pool savers in the country leads to an increase in the savings of that particular individual. Furthermore, individuals need to have confidence and trust towards their choice of bank in order to make sound savings decisions.

Lucas (2011) also did a study about the mechanics of economic development. The study used deductive approach as it tried to find the relationship that exist between the structure of the commercial banks and savings rate within the Kenyan economy. The multiple regressions was used to statistically establish the model for the study by expressing, testing operationally fit and examining the outcomes. The study made conclusions that financial institutions in Kenya are ill-equipped to facilitate savings among the entire population in the country. Commercial banks fail to facilitate savings due to some bottlenecks that come from all sectors of the economy. Policies formulated by the government are an example of the challenges the commercial banks go through in an attempt to mobilise savings. Moreover, most banks consider the rich people having the notion that poor people cannot save.

A significant fraction of the country is at poverty levels and hence the number of people on the cut-out of savings is on the rise (World Bank, 2007). Currently, commercial banks in Kenya, have not met, the target number of branches to develop in rural areas. The rural people still have the problem of access to the banks hence discouraging savings. Growth in the financial and banking sector development leads to the formation of many new branches of financial and banks institutions. New branches make it possible for money-depositing processes. As a result, with increased number of branches and facilities, people are in a position to save money conveniently. If there is no easy access to bank branches, people may be reluctant to visit the branches that are faraway to save money. Henceforth, coming up with a convenient banking is the prime factor to increasing mobilization of savings. For example, many countries claim that new branches in the rural area have helped to increase the savings of people.

## 2.4 Conceptual Framework

In this study, the conceptual framework will look at the relationship between various factors of the economy and savings mobilization by commercial in Kenya.




**Independent variables** **Dependent variable**

**Figure 1: Conceptual Framework**

**Source: Author (2015)**

## 2.5 Operationalization of Variables

This section of the study indicates how the independent variables will be manipulated in order to achieve the objectives of determination of economic factors affecting savings mobilization by commercial banks; this was captured in table 2.1.

**Table 1:** **Operational Framework**

| Variables | Orientation | Objectives | Indicators | Scale of measurement | Tool of Analysis |
|---|---|---|---|---|---|
| Savings mobilization | Dependent variable | | Voluntary savings deposits<br>Volume of time deposits outstanding<br>Number of time deposit accounts | Ordinal using point 5 Likert scale | Descriptive Regression Analysis |
| Real deposit interest rate | Independent variable | To determine the effect of real deposit interest rate on savings mobilization by commercial banks in Kenya | Interest rate margin<br>Interest paid on fixed-term deposits (time deposits)<br>Savings Interest rate<br>Sight deposit Interest rate<br>inflation<br>Interest rate restrictions/regulation | Ordinal using point 5 Likert scale | Descriptive Regression Analysis |
| Economic growth | Independent variable | To ascertain the effect of economic growth on savings mobilization by commercial banks in Kenya | Labour force/employment level<br>GDP per capita/ per capita income<br>Poverty levels/income approach<br>Per capita income<br>Income growth/ income levels<br>Distribution of income<br>GNP per capita | Ordinal using point 5 Likert scale | Descriptive Regression Analysis |
| The structural infrastructure | Independent variable | | Innovative savings instruments<br>Number of branch network<br>Structure of the financial system<br>Depth and size of financial markets<br>Extent of financial intermediation<br>Lagged money stock<br>Availability of saving facility | Ordinal using point 5 Likert scale | Descriptive Regression Analysis |

## 2.6 Summary of Literature

The chapter reviews relevant literature on the factors that influence savings mobilization by commercial banks in Kenya. Commercial Banks through their intermediation role between savers and investors have affected the volume as well as mobilization of savings, by providing the market with the diversification of instruments that will meet the precise liquidity needs of savers and at the same time making financial resources available to the investors over a relatively long-period in accord with their needs (Baumol & Alan, 2006). Unfortunately, there has been a limited appreciation of the influence of financial technology embodied in the quality and variety of financial instruments developed by financial institutions, on savings and capital formation in developing countries due to the dominant influence of Keynesian macroeconomic development.

Government affects the level of national savings in two ways. First, it chooses the level of one of the three components of national savings, government savings by raising income for itself through taxation. Second, the government indirectly affects the other two components through its influence on the incentives to save, faced by households and corporations. While the government can choose the level of its own savings directly, a change in this variable need not imply a one-for-one change in national savings (World Bank, 2007). The other sectors may respond in such a way as to offset the government's actions at least to some extent. The government also affects private savings without necessarily altering the volume of government savings. Administrative regulation of credit markets affects the rate of return that savers earn in developing countries. Choices between the taxation of income and taxation of consumption also have implications for the after-tax rate of return that savers earn. There are various theories that try to explain the notion of savings from different perspective of the economy. All the theories are applicable to different extents in the study of mobilisation of savings.

## 2.7 Research Gaps

Despite the positive relationship between savings  and economic development, the impact of savings  process initiatives depends upon a number of internal and external factors, interest rates, infrastructure, inflation, internal management, external capital flows and exchange rate. Hence there is no automatic relationship between savings and the performance of the economy in the country. There is need for long-term solutions to promote mobilisation of savings among the population (Bhattarai, 2005). Such framework would promote increased savings from the public and increased investments between the people and commercial banks in Kenya.

The empirical evidence indicates that it is evident that research in the area of savings has been done, but not in a comprehensive approach in explaining the economic determinants affecting savings mobilization by commercial banks in Kenya with regards to real deposit interest rate on savings mobilization by commercial banks in Kenya, and structural infrastructure. in light of this the study seeks to fill the existing gap by carrying out a research and analyze the economic determinants affecting savings mobilization by commercial banks in Kenya with regards to real deposit interest rate on savings mobilization by commercial banks in Kenya, and structural infrastructure.

## CHAPTER THREE

## RESEARCH METHODOLGY

### 3.1 Introduction

This chapter highlights the research design, the study variables, the study area, the study population, sampling techniques and sample size determination, construction of research instruments, pilot study, validity and reliability of the instruments, methods of data collection and data analysis.

### 3.2 Research Design

Descriptive research survey was employed in this study. Descriptive research was used to obtain information concerning the current status of phenomena with respect to variables or conditions in the situation. The method aid the study with the issues at hand which required describing and analyzing of phenomena for any conclusions. Descriptive design was used in collecting information about people's attitude, opinions, habits and other possible behavior (Kombo & Tromp, 2006). The study sought to describe the state of affair as was hence descriptive research design was the most appropriate for the study.

### 3.3 Target Population

The target population of this study comprised of 43 commercial banks in Kenya with branches in Nairobi. The study interviewed, Chief finance officers, Finance mangers, Treasury managers, operation managers and branch managers as indicated in table 3.1 below.

**Table 2: Target Population**

| | **Frequency** | **Percentage** |
|---|---|---|
| Top management | 44 | 8.4 |
| Middle level management | 98 | 22.7 |
| Low level management | 297 | 68.9 |
| **Total** | **431** | **100.0** |

**Source: CBK (2013)**.

### 3.4 Sampling and Sampling Procedure

This research study used a stratified random sampling method to select 10% of the respondents. The study therefore selected 129 respondents by taking 30% of the respondents. According to Mugenda and Mugenda (2003), a sample size of 10% is a good representation of the target population and is large enough so long as it allows for reliable data analysis.

**Table 3: Sampling Frame**

| Sections | Population (Frequency) | Sample Ratio | Sample size |
|---|---|---|---|
| Top management | 44 | 0.3 | 11 |
| Middle level management | 98 | 0.3 | 29 |
| Low level management | 297 | 0.3 | 89 |
| **Total** | **431** | | **129** |

**Source: CBK (2013)**.

### 3.5 Research Instruments

Primary data was collected through the use of self-administered structured questionnaire, because of the nature of the variables where the opinions, perceptions and feeling of the respondents was sought. The respondents to the questionnaires were also literate as they comprised of the top management, middle and low level management.

### 3.6 Validity and Reliability of the instrument

The questionnaire designed by the researcher based on the research questions was pilot tested to refine the questions before it was administered to the selected sample.

#### 3.6.1 Validity

Face validity was employed by this study it is a measure of the degree to which a test subjectively viewed as covering the concept it is measuring. To establish the validity of the research instrument the researcher sought opinions of experts in the field of study especially the lecturers in school of business.

### 3.6.2 Reliability

The researcher intends to select a pilot group of 20 individuals from the target population to test the reliability of the research instruments. The researcher used the most common internal consistency measure known as Cronbach's alpha (α). The recommended value of 0.7 was used as a cut-off of reliabilities (Kvale, 2007).

## 3.7 Data Collection Procedure

The researcher administered the questionnaire individually to all respondents. Care and control by the researcher was exercised to ensure all questionnaires issued to the respondents are received. To achieve this, the researcher maintained a register of questionnaires, which was sent, and received. The questionnaire was administered using a drop and pick later method to the sampled respondents.

## 3.8 Data Processing and Analysis

The quantitative data collected were analysed using descriptive statistics such as frequency, percentages, mean and standard deviation using SPSS version 21 and Microsoft excel. The findings presented using frequency tables and graphs. Content analysis was used in processing of qualitative data from the open ended questions and results presented in prose form.

The next technique involved factor analysis as the main component of quantitative data analysis. Factor analysis allow the large number of the questionnaires variables to be reduced to more limited sets of important and useful factors. The study undertook exploratory factor analysis a level of analysis that involves examining the variable relationships without a predetermination of a model in which to fit the results (Bryman & Cramer, 2011). Four basic steps were followed in undertaking factor analysis: KMO and Bartlett's test, Factor extraction, Factor retention and Factor rotation. Finally interpretation of factor analysis was done from the results of rotation. Before embarking on the factor analysis, tests were done to ensure the suitability of the data for this purpose; including the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO test). According to Hinton et al (2012), a KMO test outcome of 0.5 or higher establishes the suitability of the data for factor analysis. Another test that the study performed was the Bartlett test of sphericity, which is to establish whether there are relationships to investigate (Hinton et al, 2012).

Further, on suitability and reliability, the study also ensured that the data meets the recommended sample size. There are various suggestions on the most suitable sample size for factor analysis. Pallant (2007) for instance, recommended minimum ratio of two subjects (respondents) for every one item (variable). However to ensure that the data meets sample size threshold for factor analysis, the study relied on the suggestion by Gorsuch (1983), popularly cited in factor analysis literature, of an absolute minimum of not less than 50 respondents for any analysis. In addition, a multivariate regression model was applied to determine the relative importance of each of the four variables with respect to savings mobilization. The regression model will be as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

Where:

$Y$ = Savings Mobilization

$\beta_0$ = Constant (coefficient of intercept)

$B_1 \ldots B_3$= regression coefficient of five variables.

$X_1$= Real deposit interest rate

$X_2$= Economic growth (GDP)

$X_{3=}$ Structural infrastructure.

$\varepsilon$ = Error term

Inferential statistics such non parametric test which include analysis of variance (ANOVA) was used to test the significance of the overall model at 95% level of significance. According to Mugenda (2008), analysis of variance is used because it makes use of the F – test in terms of sums of squares residual.

# CHAPTER FOUR

# RESEARCH FINDINGS AND DISCUSSION

## 4.1 Introduction

This chapter discusses the findings obtained from the primary instrument used in the study. It discusses the characteristics of the respondents, their opinions on an analysis of economic determinants of savings mobilization by commercial banks in Kenya In order to simplify the discussions, the researcher provided tables and graphs that summarize the collective reactions of the respondents

### 4.1.1 Response Rate

The study targeted 129 top, middle and low managers of 43 commercial banks in Kenya with branches in Nairobi Out of 129 questionnaires administered, a total of 95 filled questionnaires were returned giving a response rate of 73% which is within what Mugenda and Mugenda (2003) prescribed as a significant response rate for statistical analysis and established at a minimal value of 50%. The study made use of frequencies (absolute and relative) single response questions. For matrix questions, the study used likert scale in collecting and analyzing where a scale of 5 points was used in computing the mean scores and standard deviations. These were then presented in tables as appropriate with explanations being given in prose.

### 4.1.2 Reliability Analysis

A pilot study was carried out to determine reliability of the questionnaires. The pilot study involved 20 respondents.Reliability analyses was subsequently done using Cronbach’s Alpha which measures the internal consistency by establishing if certain items within a scale measure the same construct. Gliem and Gliem (2012) established the Alpha value threshold at 0.7, thus forming the study’s benchmark. Cronbach Alpha was established for every objective which formed a scale. This illustrates that all the four scales were reliable as their reliability values exceeded the prescribed threshold of 0.8. This therefore depicts that the research instrument was reliable and therefore required no amendments.

**Table 4: Reliability Analysis**

| | Cronbach's Alpha |
|---|---|
| Real Deposit Interest | .933 |
| Economic Growth | .971 |
| Structural infrastructure | .993 |

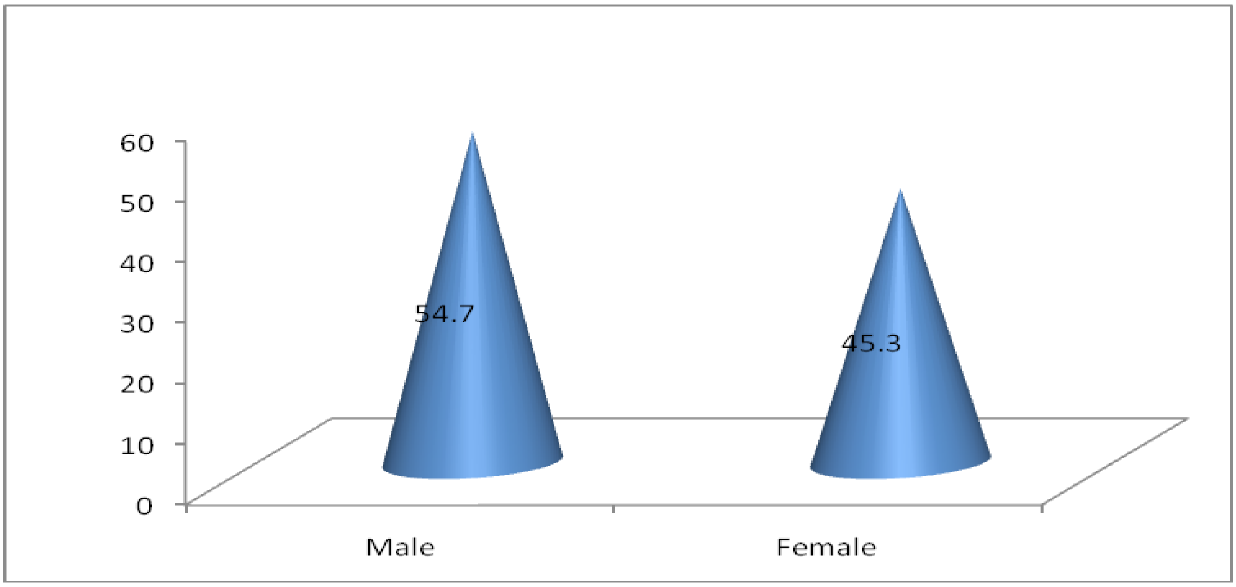
**4.2 Demographic Information of Respondents**

The study sought to enquire on the respondents' general information including age, gender, highest academic qualification, position holds in the company and the experience of the respondents.

**4.2.1 Gender of the Respondents**

The researcher wanted to know the types of gender of the respondents were. The results were as shown in the figure 4.1

**Figure 2: Gender of the Respondents**



The findings indicated that male respondents were 54.7 % while female respondents were 45.3% this shows that the researcher was not biased since he considered both gender in his study.

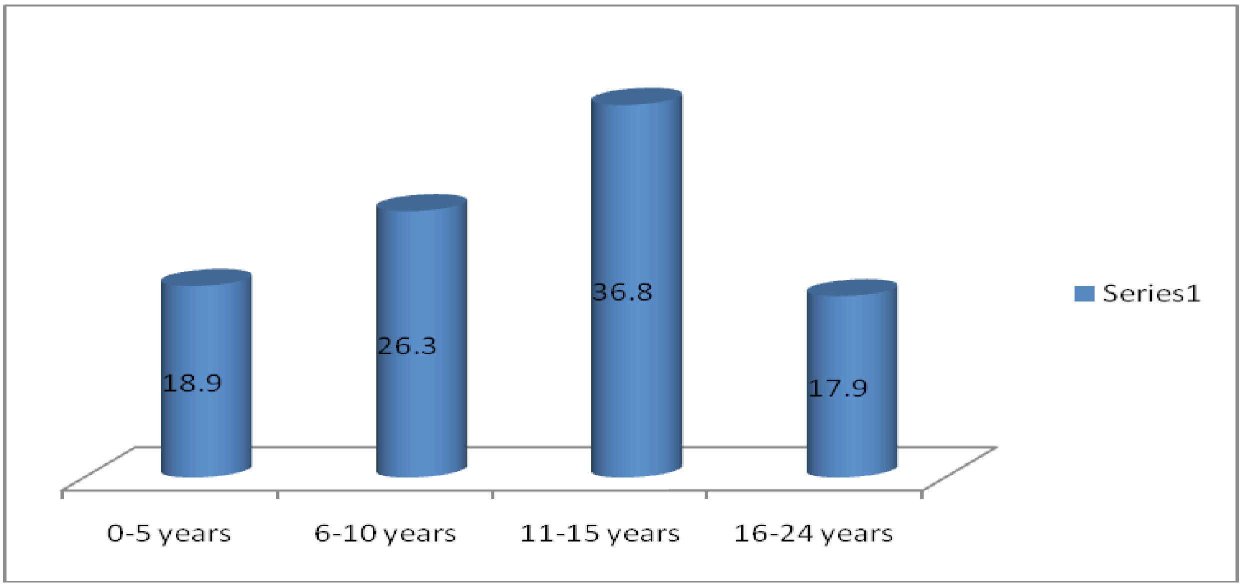
### 4.2.2 Department Respondent Serves in the Organisation

To managers the study sought to enquire the department the respondent works in the organization. Since the question was open ended the study summaries the findings were as follows. 30 of the respondents works in finance department, 25 works in human resource department ,20 works in marketing departments , 15 works in customer relationship department

### 4.2.3 Duration respondents had worked in the commercial bank

The respondents were also requested to indicate the duration of time they had worked in the commercial banks .The responses obtained are shown in the figure 4.2.

**Figure 3: Duration worked in the Commercial bank**

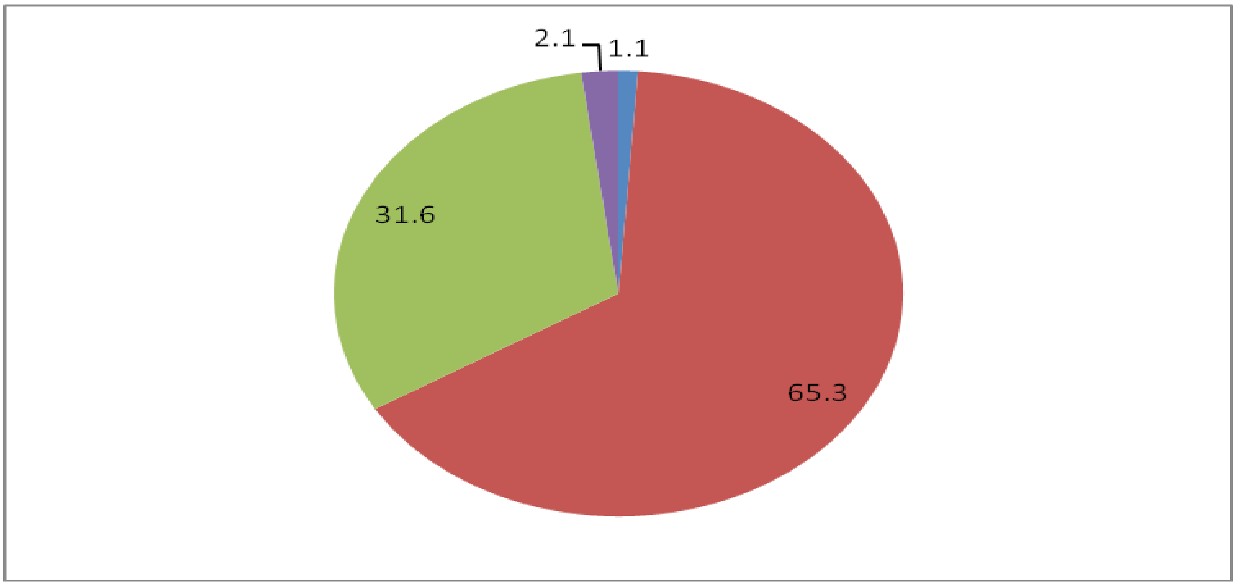



As per the findings the majority of the respondents have worked in commercial banks between 11-15 years are 36.8%, those who have worked between 6-10 years are 26.3%, those managers who have worked in the commercial banks between 0-5 years are only represented by 18.9%. While 17.9% have worked in commercial banks between 16-24 years. The findings indicated that majority of the respondents had worked in commercial banks between 11 and 15 years. This means have long time experience to know economic determinants of saving mobilisation in commercial banks.

### 4.2.3 Academic Qualification of the Respondents

The respondents were further requested to indicate their academic qualification. The results are as shown in the figure 4.3.

**Figure 4: Academic Qualification of the Respondents**




From the findings 65.3% of the respondents indicated that their academic qualification is the bachelor's degree level, 31.6% were masters' holders, and 2.1% indicated the PhD level while 1.1% indicated the diploma. As per the findings majority of the respondents were degree holders meaning they had enough knowledge on saving mobilization determinants.

### 4.3 Economic Factors and Savings Mobilization

#### 4.3.1 Real Deposit Interest

The respondents had to indicate the extent at which real deposit interest affects saving mobilization in commercial banks in Kenya. The responds are indicated in table 4.2.

**Table 5: Extent at which real deposit interest affects saving mobilization**

| | Frequency | Percent |
|---|---|---|
| No Extent | 5 | 5.3 |
| Little extent | 25 | 26.3 |
| Moderate extent | 21 | 22.1 |
| Great extent | 27 | 28.4 |
| Very great extent | 17 | 17.9 |
| **Total** | **95** | **100.0** |

From the findings, 28.4% of the respondents indicated that real deposit interest affects saving mobilization in commercial banks to a great extent, 26.2% indicated little extent, and 22.1% indicated that real deposit interest affects the saving mobilization in commercial banks to a moderate extent. 17.9% of respondents indicate that real deposit interest affects saving mobilization in commercial banks in Kenya to a very great extent, while only 5.3% indicated no extent affect of real deposit interest on savings mobilization. The findings supports study of Guryay (2007) which revealed that a positive real interest rate increases financial depth through the increased volume of financial saving mobilization and promotes growth through increasing the volume of productivity of capital.

**Table 6: Extent attributes of real deposit interest rate affects savings mobilization**

| | Mean | Std. Deviation |
|---|---|---|
| Inflation (there is low savings in times of inflation) | 3.305 | 1.337 |
| Interest rate margin. when there are low interest rates offered by bank savings are affected | 3.379 | 1.360 |
| Bank failure policies made by your bank affect the rate of savings | 2.926 | 1.409 |

| | | |
|---|---|---|
| Unemployment, lack of jobs affect the way individuals save | 3.737 | 1.257 |

The respondents indicated with a mean of 3.737 that that lack of jobs affect the way individuals save to a great extent. Respondents further indicated with a mean of 3.379 low interest rates offered by bank savings affects saving mobilization to a moderate extent. Respondents also noted with a mean of 3.305 that there is low savings in times of inflation. Bank failure policies made by bank affect the rate of savings to a moderate extent with mean of 2.926. The findings agrees with Baumol and Alan (2006) study which states that financial institutions play an important role in influencing savings mobilization among the population. Financial institutions' rate spreads have a significant impact on the savings mobilization.

### 4.3.2 Economic Growth

The respondents had to indicate the extent at which economic growth affects saving mobilization in commercial banks in Kenya. The responds are indicated in table 4.4.

**Table 7: Extent at which economic growth affects saving mobilization**

| | Frequency | Percent |
|---|---|---|
| No Extent | 6 | 6.3 |
| Little extent | 24 | 25.3 |
| Moderate extent | 20 | 21.1 |
| Great extent | 22 | 23.2 |
| Very great extent | 23 | 24.2 |
| **Total** | **95** | **100.0** |

From the findings, 25.3% of the respondents indicated that overall growth and development affects saving mobilization in commercial banks to a little extent, 24.2% indicated very great extent, 23.2% indicated that overall growth and development affects the saving mobilization in commercial banks to a great extent.21.1% indicated that overall growth and development affects saving mobilization in commercial banks in Kenya to a moderate extent, while only 6.3% indicated no extent real deposit interest affect savings mobilization. The study concur with Andrle, Berg, Morales, Portillo and Vlcek (2013) who argues that the overall growth and development of economies is another factor that influences savings mobilization in commercial banks in Kenya today. Being one of the developing countries, the overall performance of the economy is crucial in determining the savings trends of individuals.

**Table 8: Extent attributes of economic growth affects savings mobilization**

| | Mean | Std. Deviation |
|---|---|---|
| To what extent do the following attributes of overall growth and development of affect savings mobilization in commercial banks in Kenya: Population growth when population is high people save less | 2.9684 | 1.34838 |
| labor force(the type of work an individual does influences amount they save | 3.6632 | 1.30148 |
| GNP per capita(the GNP per capital of an individual is so low there is not much left to save | 3.7368 | 1.08383 |
| Poverty levels(individuals have low poverty levels hence cannot save enough) | 4.1474 | .97815 |

The respondents indicated with mean 3.7368 that if GNP per capital of an individual is so low there is not much left to save to a great extent. Type of work an individual do influences amount they save to a great extent with mean of 3.6632. Respondents further indicated with a mean of 4.1474 individuals with low poverty levels hence cannot save enough to a great extent. Population growth was indicated to moderate extent with mean of 2.9684 that when population is high people save less to a moderate extent. Findings of this study agree with study of Andrle, Berg, Morales, Portillo and Vlcek (2013) that GNP per capita, population growth, occupational structure of the labour force, urbanization, and consumption per capita, poverty levels, infrastructure and social conditions are some of the indicators of economic growth and development in a country.

### 4.3.3 Structural Infrastructure

The respondents had to indicate the extent at structural infrastructure affects saving mobilization in commercial banks in Kenya. The responds are indicated in table 4.6.

**Table 9: Extent at which structural infrastructure affects** saving mobilization

| | Frequency | Percent |
|---|---|---|
| No Extent | 4 | 4.2 |
| Little extent | 25 | 26.3 |
| Moderate extent | 14 | 14.7 |
| Great extent | 31 | 32.6 |
| Very great extent | 21 | 22.1 |
| **Total** | **95** | **100.0** |

The findings noted that, 32.6% of the respondents indicated that structural infrastructure affects saving mobilization in commercial banks to a great extent, 26.3% indicated little extent, 22.1% indicated that structural infrastructure affects the saving mobilization in commercial banks to a very great extent.14.7% indicated that structural infrastructure affects saving mobilization in commercial banks in Kenya to a moderate extent, while only 4.2% indicated no extent affect of structural infrastructure on savings mobilization. The findings are supported with study of (Wright, 2009) which states that willingness to save is perceived to be dependent on the ease of access to savings instruments, the appeal of such instruments and the existing economic conditions.

**Table 10: Extent attributes of structural infrastructure** affect savings mobilization

| | Mean | Std. Deviation |
|---|---|---|
| Innovative savings instruments(the savings instruments the management uses determines the rate of savings) | 4.232 | .95039 |
| Number of branch network( the number of branches your bank has influences savings mobilization) | 4.368 | .88789 |
| Structure of the financial system(how you organize your financial system contributes to the levels of savings) | 3.421 | 1.15389 |
| Depth and size of financial markets(the bigger the markets the higher the savings) | 3.379 | 1.16855 |
| Extent of financial intermediation(the higher the number of middle men in the financial system the less the savings) | 3.421 | 1.15389 |
| Lagged money stock | 3.358 | 1.16615 |
| Availability of saving facility (more savings facility | 2.705 | 1.35955 |

| |
|---|
| increase savings) |

The respondents indicated with mean 4.368 that the number of branches your bank has affects savings mobilization to great extent. It was indicated with mean of 4.232 that the savings instruments the management uses determines the rate of savings to a great extent. Respondents further indicated with a mean of 3.421 that financial system organization contributes to the levels of savings a great extent. The higher the number of middle men in the financial system the less the savings affected to moderate extent with mean of 3.421. The bigger the markets the higher the savings to a moderate extent with mean of 3.379. Furthermore, it was indicated with mean of 3.357 that lagged money stock affect saving mobilization to a moderate extent. More savings facility increase savings to a moderate extent with mean of 2.705. The finding are in conjunction to  Baumol and Alan (2006) study which finds out that the innovative savings instruments, number of branch network, structure of the financial system, the depth and size of financial markets, extent of financial intermediation, lagged money stock, availability of saving facility and individual savings capacity are the aspects of structural infrastructure that affect savings mobilization by commercial banks in Kenya.

### 4.3.3 Savings Mobilization

The respondents had to indicate the extent at which saving mobilization in commercial banks in Kenya has been rated. The responds are indicated in table 4.10.

**Table 11: Rate** **of saving mobilization in commercial banks in Kenya**

| | Frequency | Percent |
|---|---|---|
| Very poor | 1 | 1.1 |
| Poor | 3 | 3.2 |
| Average | 30 | 31.6 |
| High | 46 | 48.4 |
| Very high | 15 | 15.8 |
| **Total** | **95** | **100.0** |

From the finding, 48.4% the respondents indicated that saving mobilization in their organization is high.31.6% indicated that saving mobilization in their bank is average, 15.8% indicated very high saving mobilization. Those who indicated poor mobilization in their industries are 3.2% and only 1.1% indicated very poor saving mobilization in their firms. The findings concurs with report of financial access survey (2009) which states that the number of people who use bank facilities to save was 17.9% in 2009 by the time of the 2013 financial survey was done the number had doubled to 34% this indicates that commercial banks are mobilizing savings adequately.

Table 12: Trends of various aspects of savings mobilization in bank for the last five years

| | Mean | Std. Deviation |
|---|---|---|
| Voluntary savings deposits | 3.052 | 1.21488 |
| Volume of time deposits outstanding | 3.442 | 1.25237 |
| Number of time deposit accounts | 3.021 | 1.22021 |
| Savings deposits | 2.989 | 1.19836 |

Volume of time deposits outstanding has remains constant for last five years, voluntary saving deposits has remain constant with mean of 3.053, number of time deposit accounts has also been constant for the last five years with a mean of 3.021.It was indicated with a mean of 2.989 that saving deposits has also remains constant for last five years. The findings supports the Financial access survey(2009) which said These trends have made commercial banks to rely heavily in borrowed funds from abroad to either finance the capital expenditure mostly expanding in other countries in the region while majority of the population have no access to banking facilities.

**4.4 Diagnostic Tests**

**4.4.1 Normality test**

Normality of the variables was examined using the Kolmogorov-Smirnovand Shapiro-Wilk test.

**Table 13.** Tests of Normality

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Real deposit interest rate | 0.127 | 94 | 0.039 | 0.887 | 94 | 0.012 |
| Economic growth (GDP) | 0.153 | 94 | 0.004 | 0.834 | 94 | 0 |
| Structural infrastructure | 0.126 | 94 | 0.041 | 0.924 | 94 | 0.397 |

a. Lilliefors Significance Correction

The study found that significance in both test were less than 0.05 which is leads to the rejection of the null hypothesis that that data on the economic determinants of savings mobilization was not normally distributed. This depicts that data on the variables were normally distributed.

### 4.4.2 Testing for Heteroscedasticity

The modified Wald test was used to test for Heteroscedasticity.

**Table 14: Heteroscedasticity Test**

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (11)   =      12.38
Prob>chi2 =       0.3357
```

Since the p-value obtained is greater than 0.05 we do not reject the null that the data is homoscedastic. This implies that the data has constant variance or it is homoscedastic.

### 4.4.3 Homoscedasticity

In this study, Levene test was employed to assess the equality of variances for the variables calculated

**Table 15:** Test of Homogeneity of Variances

| Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|
| 1.626 | 5 | 291 | .043 |

From table 4.15 the resulting P-value of Levene's test is less than the conventional 0.05 critical value, indicating that the obtained differences in sample variances are likely not to have occurred based on random sampling from a population with equal variances.

### 4.4.4 Multicollinearity Test

The variance inflation factor (VIF) was applied detects multicollinearity by measuring the degree to which the variance has been inflated.

**Table 16: Summary of Collinearity Statistics**

| Model | Collinearity Statistics | |
|---|---|---|
| | Tolerance | VIF |
| Real deposit interest rate | 0.9023 | 4.7331 |
| Economic growth (GDP) | 0.7826 | 3.4689 |
| Structural infrastructure | 0.6175 | 2.7457 |

The Variance inflation factor (VIF) was checked in all the study variables. The findings tabulated above show which is not a cause of concern according to Baum (2006) who indicated that a VIF greater than 10 is a cause of concern. This shows that there was no autocorrelation problem.

### 4.5 Regression Analysis

Regression analysis shows how independent variable is influenced with independent variable

**Table 17: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.285 | 0.081 | 0.040 | 3.82884 |

Table 4.12 is a model fit which establish how fit the model equation fits the data. The adjusted $R^2$ was used to establish the predictive power of the study model and it was found to be 0.040 implying that 4.0% of saving mobilization in commercial banks is influenced by the following variables; real deposit interest, economic growth, structural infrastructure leaving 96.0% unexplained. Therefore, further studies should be done to establish the other factors

(96.0%) that influence the saving mobilization in commercial banks. The findings implies that there are other variables that influence saving mobilization in commercial banks apart from real deposits interest, economic growth and structural infrastructure since error term was big.

**Table 18: ANOVA results**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 116.346 | 4 | 29.087 | 1.984 | .104 |
| | Residual | 1319.401 | 90 | 14.660 | | |
| | Total | 1435.747 | 94 | | | |

The probability value of 0.104 indicates that the regression relationship was insignificant in determining how real deposit interest, economic growth and structural infrastructure influence saving mobilization in commercial banks. The F calculated at 5 percent level of significance was 1.987. Since F calculated is less than the F critical (value = 2.47), this shows that the overall model was significant.

Table 19: Coefficients of Determination

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 13.355 | 3.109 | | 4.295 | .000 |
| | Real Deposit Interest | .039 | .116 | .035 | .338 | .736 |
| | Economic Growth | .232 | .125 | .199 | 1.851 | .067 |
| | Structural Infrastructure | -.193 | .084 | -.260 | -2.283 | .025 |

The established model for the study was:

$Y = 13.355 + 0.039\ X_1 + 0.232X_2 – 0.193X_3 + 0.003\ X_4$

The regression equation above has established that taking all factors into account (real deposit interest, economic growth, structural infrastructure) constant at zero economic determinants the saving mobilization is 13.355.The findings presented also show that taking all other independent variables at zero, a unit increase in the real deposit interest would lead to a 0.039 increase in the score of saving mobilization. The findings are supported by Odhiambo (2009) who argues that since the liberalization of financial sector in Kenya, interest rates took the center stage however real deposit rate had insignificance influence on savings behavior in Kenya. The findings also indicated that a unit increase in the scores economic growth would lead to a 0.234 increase in the scores of saving mobilization as per study of Egwaikhide (2007) which indicates that both the change in the rate of income growth and the change in income levels are powerful determinants of changes in the private saving rate.

Further, the findings shows that a unit increases in the scores of structural infrastructure would lead to a 0.193 decrease in the scores of saving mobilization in commercial banks. The results are supported by study of Lucas (2011) thatfinancial institutions in Kenya are ill-equipped to facilitate savings among the entire population in the country. The findings concurs with study of Lucas (2011) that policies formulated by the government are an example of the challenges the commercial banks go through in an attempt to mobilise savings. Only structural infrastructure was significant because ($p<0.05$).All other variables were insignificant since their $p>0.05$.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter presented the discussion of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations drawn were focused on addressing the objective of the study.

## 5.2 Summary

### 5.2.1 Real Deposit Interest

The findings summarize that real deposit interest influence the saving mobilization in commercial banks. The results of the findings further show that there is low savings in times of inflation to a great extent. Lack of jobs influences the way individuals save to a great extent. Results further show that low interest rates offered by bank affects saving mobilization to a moderate extent. Finally bank failure policies made by bank affect the rate of savings to a moderate extent. The findings agrees with Guryay (2007) study of financial development and economic growth, the study revealed that a positive real interest rate increases financial depth through the increased volume of financial saving mobilization and promotes growth through increasing the volume of productivity of capital.

### 5.2.2 Economic Growth

The findings of study summarises that overall economic growth influences saving mobilisation in commercial bank. The findings of the study summarizes that if GNP per capital of an individual is so low there is not much left to save to a moderate extent. Furthermore, type of work an individual do influences amount they save to a great extent.

Results of the findings also show that if individuals have low poverty levels hence cannot save enough to a great extent. The findings also summarize that when population is high people save less to a moderate extent. Findings of this study agree with study of Uremadu (2007) which shows positive and significant influence of gross domestic product per capita, interest rate spread, broad money supply, and debt service ratio on savings while real interest rate and domestic inflation rate have negative influence on the level of savings.

### 5.2.3 Structural Infrastructure

As per the summary of the findings structural infrastructure influences saving mobilisation in the commercial bank in Kenya. Furthermore, the findings summarizes that the number of branches bank has influences savings mobilization to great extent. Also the findings summarizes that savings instrument the management uses determines the rate of savings to a great extent. Furthermore, how financial system organized contributes to the levels of savings a great extent. In addition the higher the number of middle men in the financial system the less the savings affected. Also, the result of the findings reveals that how you organize your financial system contributes to the levels of savings to a moderate extent. The findings also summarizes to a moderate extent that bigger the markets the higher the savings. Lagged money stock influence saving mobilization to a moderate extent. Lastly, more savings facility increase savings to a moderate extent. Baumol and Alan (2006) in his macroeconomic studies using both quantitative and qualitative data found out that the innovative savings instruments, number of branch network, structure of the financial system, the depth and size of financial markets, extent of financial intermediation, lagged money stock, availability of saving facility and individual savings capacity are the aspects of structural infrastructure that influence savings mobilization by commercial banks in Kenya

### 5.2.4 Saving Mobilization

Volume of time deposits outstanding has remains constant for last five years, voluntary saving deposits has also remain constant, number of time deposit accounts has also been constant for the last five years. Findings summarizes that saving deposits has also remains constant for last five years in the commercial banks in Kenya.

## 5.3 Conclusions

Based on the research findings the study concludes that real deposit interest determines saving mobilization of the commercial bank to a moderate extent. It has been observed from the findings that real deposit interest has a negative correlation with saving mobilization in the commercial banks. When real deposit interest increases saving reduces and when real deposit interest rate reduces saving increases. The study summarizes that there is low savings in times of inflation. The study concludes that Lack of jobs influences the way individuals save in commercial banks.  Results further conclude that low interest rates offered by bank affects saving mobilization. Finally the study concludes that bank failure policies made affect the rate of savings in the commercial banks in Kenya.

Secondly, the study concludes that economic growth has a significant influence on saving mobilization in commercial banks in Kenya. The study further concludes that the relationship between economic growth and saving mobilization is positive in that saving mobilization increases with increase in economic growth and development. The study also concludes that When GNP per capital of an individual is so low there is not much left to save. The study concludes that type of work an individual do influences amount they save. In addition the study concludes that when population is high people save less. Finally, the study concludes that high poverty level also reduces savings.

Thirdly the research concludes that structural infrastructure has a great influence on saving mobilization. It is noted clearly from the findings that when the structural infrastructure increases saving also increases in commercial banks in Kenya. This also implies that saving mobilization reduces with decrease in structural infrastructure. In relations to aspects of structural infrastructure the study concludes that the number of branches bank has influences savings mobilization. Also the study concludes that savings instrument the management uses determines the rate of savings. Furthermore, financial system organization contributes to the levels of savings in commercial banks. In addition the study concludes that the higher the number of middle men in the financial system the less the savings. Also, research concludes that organization of financial system contributes to the levels of savings in commercial banks. The study also concludes that the bigger the markets the higher the savings. In conjunction to lagged money stock, the study concludes that it has an influence on saving. Lastly, it is concluded by the study that more savings facility increase savings.

The study concludes that when exchange rate is low savings are high but when exchange rate is high savings are low. The study further concludes that financial repression negatively influence saving. In addition, when interest rate policies are favorable the savings increases but when are unfavorable the savings decreases. Furthermore, the study concludes that when money supply increase in the economy the saving increases but when money supply is low savings reduces. Finally the study concludes that high taxes leads to low savings in the economy but taxes are low savings increases in commercial banks taxation.

### 5.4 Recommendations

The study recommends that commercial banks should reduce it real deposit interest in order to attract more customers to save in their banks. Commercial banks should come up with policies to adjust their interest rate that are favorable to customers. The key challenge for the national economic policy in the field of domestic savings mobilization should be, to eliminate policies, which lead to financial repression, especially by pursuing a more flexible interest rate policy. The common justifications for policies, which result in financial repression, prove to be less convincing. From a development point of an efficient financial infrastructure, lowers the overall propensity to save and leads to credit rationing. Thus, a liberalization policy, which substantially improves the functioning of the financial system, is of great .Financial Market should be sustained). Such a policy should allow both for assets and liabilities positive real rates of interests. The positive effects of higher real interest rates for the mobilization of additional financial savings can be demonstrated in those countries, which have implemented interest rate liberalization policies or more comprehensive reforms of the financial market.

The study also recommends that economic growth should be increased. Government has to create job opportunities so that labor force may increase which shall lead to increase in saving rate. The focus of development policy should be to increase the productive base of the economy in order to reduce unemployment and improve the per capita income of the people. For this to be achieved, a diversification of our resource base is indispensable. The policy thrust should include a return to agriculture, the adoption and implementation of a comprehensive energy policy, with stable electricity as critical factor, the establishment of a viable iron and steel, industry, the promotion of small and medium scale enterprises and a serious effort at improving information technology. Increase in per capita income and reduction in unemployment will lead to greater services which will consequently drive growth through investment and capital formation. The structure of credit allocation by the commercial banks should be made to favour the private sector more than the public sector since the impact of credit on economic growth is more from the private sector than the public sector.

As for structural infrastructure the study recommends that considerable investment in the rural areas has to take place in a non-monetized form through the use of family cottages-cottages for family use, farm roads and the like. Such use of family labour can be intensified only if the rewards accrue to those who work rather than to those who own land. The promotion of this type of non-monetized saving and investment thus requires security of tenure to those who cultivate the land (tenant farmers). Similarly, at the community level, real assets like minor irrigation; school buildings, community halls and drinking water.

Government should gear its efforts towards reducing domestic inflation in order to arrest its negative impact on both real interest rates and spread. The recent move by the Central Bank of Kenya to adopt inflation targeting is a step towards the right direction if the necessary macroeconomic environment is put in place for its implementation. There should be determined effort by the monetary authorities to bridge the widening gap existing between lending rate and savings rate, so that the people will be fully motivated to save in a bid to generate needed loan able funds for investment in Kenya.

## 5.5 Limitation of the study

Although the study has been thoroughly done there were some limitations, first because of time constraints especially in regards to data collection. Banks are not only careful and strict in releasing information, there are also many bureaucratic process involved in obtaining information this requires patience and time. Secondly the population sample was small as the study covered commercial banks only with branches and headquarters in Nairobi,

## 5.6 Recommendations for Future Research

From the above findings, conclusion and recommendation the study recommends that an in-depth study should be carried to determine the challenges faced commercial banks in mobilizing for saving.

The study recommends another study should be done to investigate effects of determinants of growth on saving mobilization by other organizations on different industries rather than the commercial banks. Examples of such industries like microfinance institution.

Since there is an 84.9% error term, other studies should work at other factors not tackled by the study. The study can be done by focusing on different variables not tackled in this study.

Future studies should also consider employing primary sources of data to collect data for their studies. This would be time saving and would also facilitate detailed information collected from original sources which would as well give reliable and accurate results that explain the details of the subject.

Future studies should explore the reasons behind the strategies adopted by commercial banks to manage saving. Researchers should go ahead and establish the reasons behind the failure of commercial banks to manage saving mobilisation among customers hence establish long term solutions.

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## APPENDICES

### Appendix I: Research Questionnaire

**Dear Respondent**

This questionnaire is designed to assist the researcher to make an objective assessment of the factors influencing savings mobilization by commercial banks in Kenya. The exercise is basically academic and your answers will be treated with the utmost confidentiality they deserve. Your maximum co-operation is highly anticipated. Please tick ( √)the response applicable to you.

**SECTION I: DEMOGRAPHIC INFORMATION**

**Instructions**

You are requested to fill out your personal information in the spaces below. Please tick only one response.

*1)* Gender.

Male ☐ 2) .Female ☐

*2)* State your department.

……………………………………………………..

*3)* State your experience in the bank

a) 0-5years ☐ b) ☐ 10 years

c) 11-15 years ☐ d) ☐ 16-24 years

*4)* State your education level.

a).Certificate ☐ b). Diploma ☐ e). PhD ☐

c). Degree ☐ d). Master ☐

**Part B: Economic Factors and Savings Mobilization**

**Savings Mobilization**

*5)* How do you rate savings mobilization in your bank?

Very High ☐ High ☐

Average ☐ Poor ☐

Very poor ☐

*6)* What has been the trend of the following aspects of savings mobilization in your bank for the last five years? Use a scale of 1-5 where 1= Greatly improved, 2= Improved, 3= constant, 4= decreasing and 5 = greatly decreased

| **Savings Mobilization** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Voluntary savings deposits | | | | | |
| Volume of time deposits outstanding | | | | | |
| Number of time deposit accounts | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Savings deposits | | | | | |

**Real Deposit Interest**

*7)* To what extent does real deposit interest rate affect savings mobilization in your bank*?*

To a very great extent [ ] To a great extent [ ]
To a moderate extent [ ] To a little extent [ ]
To no extent [ ]

*8)* To what extent do the following attributes of real deposit interest rate affect savings mobilization in your bank*?* Use a scale of 1-5 where 1= very great extent, 2= great extent, 3= moderate extent, 4= little extent and 5 = not at all

| | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Inflation (there is low savings in times of inflation) | | | | | |
| Interest rate margin. when there are low interest rates offered by bank savings are affected | | | | | |
| Bank failure policies made by your bank affect the rate of savings | | | | | |
| Unemployment, lack of jobs affect the way individuals save | | | | | |

**Economic Growth**

*9)* To what extent does overall growth and development of affect savings mobilization in commercial banks in Kenya?

To a very great extent [ ] To a great extent [ ]
To a moderate extent [ ] To a little extent [ ] To no extent [ ]

*10)* To what extent do the following attributes of overall growth and development of affect savings mobilization in commercial banks in Kenya*?* Use a scale of 1-5 where 1= very great extent, 2= great extent, 3= moderate extent, 4= little extent and 5 = not at all

| | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Population growth when population is high people save less | | | | | |
| labor force(the type of work an individual does influences amount they save | | | | | |
| GNP per capita(the GNP per capital of an individual is so low there is not much left to save | | | | | |
| Poverty levels(individuals have low poverty levels hence cannot save enough) | | | | | |

**Structural Infrastructure**

*11)* To what extent does structural infrastructure factors affect savings mobilization in commercial banks in Kenya?

To a very great extent [ ] To a great extent [ ]
To a moderate extent [ ] To a little extent [ ]
To no extent [ ]

*12)* To what extent do the following attributes of structural infrastructure factors affect savings mobilization in commercial banks in Kenya*?* Use a scale of 1-5 where 1= very great extent, 2= great extent, 3= moderate extent, 4= little extent and 5 = not at all

| | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Innovative savings instruments(the savings instruments the management uses determines the rate of savings) | | | | | |
| Number of branch network( the number of branches your bank has influences savings mobilization) | | | | | |
| Structure of the financial system(how you organize your financial system contributes to the levels of savings) | | | | | |
| Depth and size of financial markets(the bigger the markets the higher the savings) | | | | | |
| Extent of financial intermediation(the higher the number of middle men in the financial system the less the savings) | | | | | |
| Lagged money stock | | | | | |
| Availability of saving facility (more savings facility increase savings) | | | | | |

**End**

**Thank you.**

**Appendix II: Time Frame**

| | 2016 | | | | | |
|---|---|---|---|---|---|---|
| | May | June | July | August | September | October |
| Proposal Writing | | | | | | |
| Proposal Presentation | | | | | | |
| Data Collection | | | | | | |
| Data Analysis | | | | | | |
| Report Writing | | | | | | |
| Report Submission | | | | | | |

**Appendix III: Budget**

| Item | Quantity | Cost (Kshs.) | Total (Kshs.) |
|---|---|---|---|
| **1. Personnel** | | | |
| Research assistants | 3days | @3000 | 9000.00 |
| **2.Travel** | 10days | @ 2000 | 20,000.00 |
| **3. Materials** | | | |
| Photocopy paper | 3ream | @ 500 | 1500.00 |
| Ball pens | 1 packet | @50.00 | 50.00 |
| Foolscap | 3 ream | @ 300.00 | 300.00 |
| Scratch card | | | 1,000.00 |
| Internet | | | 1000.00 |
| **4. Data analysis** | | | |
| Statistical analysis | | | 20,000.00 |
| **5. Report Preparation** | | | |
| Typing | | | 4000.00 |
| Printing | | | 5000.00 |
| Binding | | | 2000.00 |
| **Total** | | | 63850.00 |

**Appendix IV: Secondary data**

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Commercial banks Interest Rate | 8.90 | 8.99 | 9.96 | 13.02 | 14.00 | 11.9 | 11.3 | 10.34 | 9.18 | 12.14 |
| Interest paid on fixed-term deposits (time deposits) | 4.1 | 4.32 | 4.84 | 3.6 | 3.59 | 6.99 | 8.20 | 6.51 | 6.65 | 6.81 |
| Inflation | 15.6 | 12.0 | 16.2 | 9.3 | 3.7 | 12.05 | 3.20 | 6.0 | 10.0 | 11.2 |
| GDP growth rate | 2.25 | 2.97 | 3.05 | 3.25 | 5.57 | 6.15 | 4.35 | 5.79 | 5.85 | 6.24 |
| Number of branch network | 575 | 740 | 887 | 996 | 1063 | 1,161 | 1,272 | 1,342 | 1,443 | 1,530 |
| Money supply | 727.8 | 864.4 | 956.3 | 1197.5 | 1375.8 | 1513.1 | 1676.0 | 1839.0 | 2001.9 | 2182.8 |
| Volume of time deposits (BILLIONS) | 597.7 | 707.8 | 864.0 | 1,006.0 | 1236.5 | 1488.2 | 1707.8 | 1935.7 | 2,292.2 | 2,593.0 |
| Number of time deposit accounts(MILLIONS) | 3,329.6 | 4,738.1 | 6,428.5 | 8,657.5 | 12,803.6 | 14,881.1 | 20,965.0 | 21,796.0 | 28,438.0 | 30,645.0 |