THE EFFECT OF PUBLIC INFRASTRUCTURE BOND FINANCING ON

GOVERNMENT EXPENDITURE IN KENYA

BY

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DECLARATION

This research project is my original work and has not been presented to any other learning institution for a degree or any other award.

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DEDICATION

I dedicate this work to my parents Mr. and Mrs. Gikabia for their support during the schooling period.

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ABBREVIATIONS

AFDB   African Development Bank

AICD   Africa Infrastructure Country Diagnostic

CBK   Central Bank of Kenya

CEPA   Cambridge Economic Policy Associates

CZAR   Russian currency

GDP   Gross Domestic Product

GFC   Global Financial Crisis

IFC   International Finance Corporation

IFI   International Financing Institution

IPPs   Independent Power Producers

LIBOR   The LIBOR rate is what banks charge each other for short-term loans.

NGN   Nigérian Naira

NSE   Nairobi Stock Exchange

OECD   Economic Co-operation and Development

PPP   Public –Private Partnership

SPSS   Statistical Package for Social Science

USAID   Unites State Agency for international Development

ABSTRACT

Bonds are meant to promote economic growth through infrastructure development. Good infrastructure helps in providing economic services efficiently, promoting economic competitiveness and supports high productivity. Government expenditure is a term used to describe money that a government spends. Expenditure occurs on every level of government, from local city councils to federal organizations. There are several different types of government expenditure, including the purchase and provision of goods and services, investments, and money transfers. For some time, government funding was the main source of financing for large infrastructure projects. However, the sole reliance on government is not an appropriate or affordable way to fund such projects. Raising funds from the capital or money market has become an alternative source, and bonds are one of the most popular debt finance instruments used. The objective of the study was to examine the effects of infrastructure bond financing on government's expenditure in Kenya. The study employed descriptive research design. This was in form of a cross sectional survey design. The researcher collected secondary data for the period 2007 to 2014 from the Central Bank of Kenya, Kenya Revenue Authority and the Kenya National Bureau of Statistics websites. Collected data was then entered into Statistical Package for Social Sciences (SPSS) software whereby multiple linear regression and correlations were run. The research findings showed that there is a relationship between amounts raised via infrastructure bonds and government spending. The nature of the relationship was a positive one in that increments in amounts collected via bond issued led to higher government spending in the study period. The study also showed that there is a positive relationship between total revenue collected and the amount of government expenditure. The study also established that increments in inflation rates led to additional spending by the government. This can be attributed to the high cost of commodities during times of inflation. The study concluded that there is a strong relationship between infrastructure bond and spending by the governments. Additionally, there was a strong relationship between total revenue collected and government current expenditure. The study also established that the amounts attained via government bonds and government expenditure had increased over the study period. the study recommends that national government should charily review the overall national spending and consequently allocate resources to the various economic sectors that are better placed to encourage growth. The study recommends that the national government ought to make investments in public bonds more attractive to the population. The study suggested that further studies can be done on the various factors that influence different expenditures by the various sectors and possibly their effects to the economy and livelihood of the citizens at large.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

A government Bond refers to a bond issued by a national government denominated in the country's own currency. Bonds issued by national governments in foreign currencies are normally referred to as sovereign bonds. The first ever government bond was issued in 1693 to raise money to fund a war against France (Beck et al, 2006).It was in the form of a tontine. Today bonds are meant to promote economic growth through infrastructure development.   In this case, infrastructure refers to economic services from utilities such as electricity, gas, telecommunications, and water and transport works such as roads ,bridges, urban transit systems, seaports, and airports which are central in promoting economic activities in the country. Good infrastructure helps in providing economic services efficiently, promoting economic competitiveness and supports high productivity. Poor infrastructure impedes economic growth and can be seriously detrimental to the efficient use of scarce resources (OECD, 2006).

Currently there is a growing need for large-scale infrastructure projects around the world. In 2006, the OECD estimated that around 3.5% of global GDP or approximately USD2trillion needs to be invested in electricity distribution, road and rail transportation, telecommunications, and water infrastructure annually or USD 53trn from 2010 to 2030. Adding in sectors such as ports and airports pushes the figure even higher: including another USD11trn makes the annual requirement USD3trn plus per annum. In 2012, the World Economic Forum estimated global annual infrastructure investment and maintenance needs in excess of 4% of GDP. The needs are more concentrated in

developing countries. If the OECD and Eastern Europe are removed from the average, the World Economic Forum figure rises to over 6% of GDP. In Africa and South Asia the estimated need is higher still at 10% of GDP (Mugwe, 2013).

Demand for large-scale investment has been complicated by the fiscal constraints in many countries. With shrinking budgets, governments are increasingly forced to choose between competing priorities. Economic infrastructure in particular can have a positive multiplier effect on output and productivity. The challenge is finding innovative ways for value-adding infrastructure to be funded and financed in a manner that is sustainable for both governments and infrastructure users.

Africa's infrastructure needs are substantial and go well beyond what donors and continental, regional, and multilateral development banks can provide. The Africa Infrastructure Country Diagnostic (AICD) estimates Africa's current infrastructure financing requirements at US$93 billion or about 15 per cent of Africa's GDP. Two thirds of this US$93 billion is needed in investment and one-third in maintenance. African governments, infrastructure users, the private sector, and external sources together already contribute about US$45 billion. About two-thirds of the existing spending is domestically sourced, from taxes or user charges, and channeled through public institutions, making the public sector (these being governments and non-financial public enterprises) the most important financier of capital investment as postulated by Mugwe (2013) .

A core function of any government is to develop their country's public infrastructure to enable commercial activities to take place. However, due to many other pressing demands, Governments usually have limited resources with which to undertake this

infrastructure development, forcing them to seek out other alternative means of developing their infrastructure such as infrastructure bond (OECD, 2006). Infrastructure bonds are issued to fund infrastructure projects such as road construction, water supply improvement, power generation projects etc. These bonds offer tax advantage because government promotes infrastructure development and investments through these bonds and they are subject to tax exemptions. An infrastructure bond carries a fixed rate of interest to be paid at the time of maturity.

According to Mugwe (2013) bonds are long-term investment bonds issued by any non-banking financial company such as industrial finance corporation. He further noted that these companies are an ombudsman borrowing from the investors and lending to the government. The Central Bank of Kenya (CBK) has sold debt worth Kshs 20 billion ($228million) through infrastructure bond, the first time in two years. The government intends to spend the funds as follows: Kshs 10.1136 billion on water, sewerage and irrigation projects, Kshs 14.2784 billion on developing transport infrastructure and 11.6334 billion for energy projects.   The proceeds from the bond will partially finance these projects (Mugwe, 2013). This financing has an impact on the government expenditure programs. Out of the many project-financing alternatives, Kenya has currently embarked on infrastructure bonds for her major projects (Central Bank of Kenya, 2012). The Kenyan Government has an investment program of USD 50-60bn up to 2020, in addition to its public-private energy program of USD 3bn a year. There is a USD 30-40bn shortfall of public finance available and a commitment in government to engage the private sector (Calderon, C., 2008).

Nevertheless, ADB and ADBI (2009) highlights that Kenya do have a number of risks in

that the issuing governments are not able to avoid contingent liability, making this study on the effects of infrastructure bonds financing on government's expenditure program necessary. Consequently this study examines the impact of infrastructure bonds on government expenditure programs in Kenya

1.1.1 Public Infrastructure Bond

Bond is a security issued by company in which the company acknowledges that a stated sum is owed and will be repaid at certain date. A corporate bond like a government bond usually pays a stipulated amount of interest throughout its life to the holder (Dictionary.com). In finance, a bond is an instrument of indebtedness of the bond issuer to the holders. It is a debt security, under which the issuer owes the holders a debt and, depending on the terms of the bond, is obliged to pay them interest (the coupon) and/or to repay the principal at a later date, termed the maturity date (O'Sullivan and Sheffrin, 2003). Interest is usually payable at fixed intervals such as semiannually or monthly. Very often the bond is negotiable, i.e. the ownership of the instrument can be transferred in the secondary market.

A government bond is a bond issued by a national government, generally with a promise to pay periodic interest payments and to repay the face value on the maturity date. Government bonds are usually denominated in the country's own currency. Another term similar to government bond is "sovereign bond". Technically any bond issued by a sovereign entity is a sovereign bond but sometimes the term is used to refer to bonds issued in a currency other than the sovereign's currency. If a government or sovereign is close to default on its debt the media often refers to this as a sovereign debt crisis. Economic Analysis (2010) and Blades (2006).

1.1.2. Government expenditure

Government expenditure is a term used to describe money that a government spends. Expenditure occurs on every level of government, from local city councils to federal organizations. There are several different types of government expenditure, including the purchase and provision of goods and services, investments, and money transfers.

In addition, according to Barro and Grilli (1994) and Bureau of Economic Analysis (2010). Government spending or expenditure includes all government consumption, investment, and transfer payments. In national income accounting the acquisition by governments, of goods and services for current use, to directly satisfy the individual or collective needs of the community, is classed as government final consumption expenditure. Government acquisition of goods and services intended to create future benefits, such as infrastructure investment or research spending, is classed as government investment (government gross capital formation). These two types of government spending, on final consumption and on gross capital formation, together constitute one of the major components of gross domestic product (Bureau of Economic Analysis, 2010).

1.1.3 Public Infrastructure Bond and Government Expenditure

For some time, government funding was the main source of financing for large infrastructure projects. However, the sole reliance on government is not an appropriate or affordable way to fund such projects. Raising funds from the capital or money market has become an alternative source, and bonds are one of the most popular debt finance instruments in developed economies such as the United Kingdom and the United States (Lam et al, 2011). The development has now begun being implemented in the developing countries.

1.1.4 Public Infrastructure Bond and Government Expenditure in Kenya

Kenya has massive infrastructure development requirements which cannot be met by Government financing alone (Central Bank of Kenya, 2009). As per Kandie (2014), proceeds from the Eurobond will reduce domestic borrowing. This will reduce Government expenditure as the interest rates will also be lower than borrowing from the domestic market. To speed up development of infrastructure programs which will in turn boost economic growth, the Government of Kenya has thus been issuing infrastructure bonds to tap into the financial and money markets (Central Bank of Kenya, 2012).

1.2 Research Problem

Infrastructure is a necessity for development. Yet, most developing countries face a chronic deficit of infrastructure facilities such as in transport, energy and water. One billion people in developing countries like Kenya have no access to all-weather roads, including two-thirds of the rural population in Africa (Calderon, 2008). Calderon (2008) further noted that over 1.5 billion people have no access to electricity, including over 60% of the African population. With the high economic growth rates over the last decade, the need to improve infrastructure frameworks has become even more pressing, not only to address poverty and equity, but also to enable productive activities (Calderon, 2008). Central Bank of Kenya (2009) highlighted that in Africa alone the financing needs for infrastructure are estimated at close to US$100 billion per year, mainly in electricity and transport. Currently, infrastructure investment amounts to less than half this amount. Funding the infrastructure gap is thus a major challenge (Central Bank of Kenya, 2009).

Recent studies by Kandie (2014) on the impact of bonds on the government indicate that with the current issuance of Eurobond the government will reduce it domestic borrowing

and improve its currency against dollar. Nonetheless, economists such as Mohamed (2013) are split on the benefits of Africa issuing Eurobonds. Some are of the opinion that the costs may as well outweigh the benefits unless the funds are prudently managed (Kandie, 2014) and used. However, Anzentse (2014) reported that besides having all the above debates the Kenyan Eurobond was able to secure bids worth $8 billion but announced it would accept $ 2 billion. Anzentse (2014) only indicated that the world is looking at Africa and becoming increasingly interested in investing in the continent partly because of its robust GDP growth rates and considerable resilience to financial shocks. This indicates that the bonds may have the required impact on the Kenyan economy (Anzentse, 2014).

However, Literature on the impact of public debt on the economy in Kenya, and Africa in general, is scanty, as most studies have largely focused on developed countries. This study therefore aims at filling this gap by using the most recent data to analyze the impact of infrastructure financial bond on government expenditure.

1.3 Objective of the Study

The objective of this study is to examine the effect of infrastructure bond financing on government's expenditure in Kenya.

1.4 Value of the Study

This study will be significant to the policy makers on fiscal matters in Kenya. The findings of the study will assist the government in articulating their vision for the next two decades of Kenya's development. In addition, the findings will inform the national planners on the appropriate financial models to use when financing infrastructure and other projects. Moreover, the study will add to the academic knowledge, as there are very

few of this kind of study done in Kenya.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature that focuses on the effects of infrastructure bond financing on the government expenditure program and the theoretical framework informing the study. It will review literature on the global, national, and local effects of financial bond financing. It will establish the place for infrastructure bond financing in Africa narrowing to Kenyan governments by reviewing effects of coupon, long term financing, per value and maturity of the bond, and the effects of debt financing. Moreover, this chapter will review conceptual framework linking the effects of infrastructure bond financing with government expenditure program and the moderating variables.

2.2 Review of Theoretical Framework

This study will utilize the following theories as a guide to the research.

2.2.1 Keynesian Economics Theory

This is an economic theory of total spending in the economy and its effects on output and inflation (Blinder, 2008).Keynesian economics was developed by the British economist John Maynard Keynes (1930) in an attempt to understand The Great Depression. Keynesian theory advocates for increased government expenditure and lower taxes to stimulate demand and pull the global economy out of the depression. Based on this theory; the evaluation of the effects that increased government expenditure may result to high indebtedness through public infrastructure bonds.

2.2.2 The Arbitrage Pricing Theory

This theory states that the return that is expected from financial assets can be presented as a linear function of various theoretical market indices and macro-economic factors. According to Ross (1976), it is assumed that the factors considered are sensitive to changes, and is represented by a factor-specific beta coefficient. This theory will guide the study in examining the effects of public infrastructure bond funding on government expenditure program especially where there are economic changes.

2.2.3 Pecking-Order Theory of Capital Structure

The study will utilize Pecking Order Theory, which states that capital structure is driven by firm's desire to finance new investments, first internally, then with low-risk debt, and finally if all fails, with equity. Therefore, the firms prefer internal financing to external financing (Myers 2001).This theory is applicable to this study since governments raise funds through public infrastructure bonds to meet the financial gaps in infrastructure development.

2.3 Determinants of Government Expenditure

Government expenditures are determined by fiscal conditions, political and economic factors (Fan & Rao, 2003). These are discussed in details below:

2.3.1 Fiscal conditions

Fiscal conditions mean the level of tax collections that a government is able to collect and revenues the government is able to generate. The higher the tax collections, the higher the government expenditure.

2.3.2 Political Factors

In democratic countries parties compete on the plans they will put in place to either grow the economy or maintain growth thus when a party wins the election it will tailor the government expenditure to its manifesto.

2.3.3 Economic Factors

For economic factors depending on the level and stage of economy, government expenditure may be increased or decreased. For example in a recession many governments increase their expenditures to increase economic growth as per the Keynesian model of economics.

2.4 Review of Empirical Studies

This section highlights some of the empirical studies that this study is based on. It starts with the current situation in Africa capital projects; Adelgang and Radzewicz-Bak (2009) indicated that in Africa, many countries need to deepen sovereign and multilateral bond issuance as a precursor to corporate and project issuance. Across most of the continent, reforms to date have focused on getting sovereign bonds issued, often to finance infrastructure development. Many sovereign bonds are not rated, and those with natural resource revenues often need to set up a sinking fund committing future revenues to secure financing. Nonetheless, 2012 and the first half of 2013 saw significant Eurobond issuances, notably Ghana (USD750m 10 year bonds), Rwanda (USD400m 10 year bonds), Zambia (USD750m 10 year bonds), Tanzania (USD500m seven year private placement) and Angola (USD1bn 7 year private placement) (Absa2012). Although local capital markets are dominated by dollar bonds, in February 2013 IFC issued a five-year, local currency NGN12bn (Naira) denominated bond (cUSD75m) in Nigeria as part of a

program to deepen the domestic bond market across Africa. In September 2013, Kenya issued its sixth infrastructure bond for KES20bn (cUSD230m) as reported by CEPA (2010).

Adelgang and Radzewicz-Bak (2009) noted that it was important that African issuers appeal to investors by focusing on the "basics" of increasing transparency in the financial markets and coordinating more effectively across borders. The specific needs of each country vary, but commonly needed reforms include deregulation, a lifting of capital controls and stronger governance and disclosure.

Dailami and Leipziger (1999) noted that infrastructure financing was the biggest growing component of capital flows to developing countries. This has been as a result of the development and maturing of financial markets in the developing countries. Infrastructure needs in Africa are substantial and meeting those needs is crucial to ensuring continued economic growth across the African continent. Because of the fundamental role it plays in virtually every aspect of an economy, it is closely linked to capital markets and regional integration. Infrastructure investment can facilitate regional integration through cross-border trade and capital market development through long-dated securities. Capital market development provides a source of funding for infrastructure and a medium for regional investors. Regional integration and trade can reinforce these mechanisms (Deloitte, USAID, 2012)

It has been noted that infrastructure investment improves productivity by improving health, mobility, longevity and quality of human capital; improves international competitiveness and Protects Environment through waste management, water, sewage

etc. with positive spillover effects on agriculture, tourism & overall quality of life (Saidi,2012).

Many studies on infrastructure studies have been done internationally, however locally not many studies exist on them. The main one has been Mugwe (2013) where he postulates that two thirds of existing Government spending is domestically sourced from taxes or user charges through the public sector making it the most important financier of capital investment.

2.5 Literature Review summary

Many studies have been done on infrastructure bond financing. For instance Foster, (2008), Calderon,(2008), and Mugwe (2013). All these indicate the need for infrastructure financing to meet financial gap. The process African governments are taking especially Kenya government as indicated by Mugwe (September, 2013).However, few authors and Literature have dealt with impacts of public bond on government's expenditure program.

Nonetheless, very current data indicate that the Kenyan shilling is expected to receive cushion from the sovereign bond floated. (Cnbafrica.com, May 2014). Kandie (2014) reported that the impact of bonds especially the currently issued Eurobond was expected to reduce domestic borrowing and improve the currency against the dollar.

This study therefore will focus on the impact of public infrastructure bond financing on the government expenditure program.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlined the methodology that was applied in carrying out the study. It outlined the research design, target population, sample size and sampling procedures and research instruments. This was then followed by validity and reliability of the instruments and data collection procedures. It ended with data analysis procedures.

3.2 Research Design

Research design is a blueprint for fulfilling objectives and answering questions. The study employed descriptive research design. This was in form of a cross sectional survey design. The survey study design was chosen because it was useful in illustrating a general condition. It allowed the researcher to collect data from a relatively large sample. The study aimed at examining impact of public infrastructure bond financing on government expenditure program:

3.3 Data collection

The researcher collected secondary data for the period 2007 to 2014 from the Central Bank of Kenya, Kenya Revenue Authority and the Kenya National Bureau of Statistics websites. The data was collected on an annual basis for the entire study period. The researcher used secondary data since it was readily available online from the relevant sources.

3.5 Data Analysis Procedures

Data analysis involved checking the completeness of the collected data to ensure completeness. The data was categorized according to the research questions. The data was then entered into Statistical Package for Social Sciences (SPSS) software. From SPSS, regression and correlations were calculated. The results were then presented in form of tables.

3.6 Analytical model

This study utilized multiple linear regression models, which was a generalization of linear regression by considering more than one independent variable against a dependent variable.

The linear regression equation applied was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y= Total Government expenditure

X_1 = Infrastructure bond financing (Total Amount realized from bond issues annually)

X_2 = Total Revenue collected (by Kenya Revenue Authority, annually)

X_3 = Inflation rates

X_4 = Interest rates

β = Beta Coefficient

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.0 Introduction

This chapter presents the research findings, the analysis and the presentations. The study objective was to examine the effects of infrastructure bond financing on government's expenditure in Kenya. The research data was collected for an eight year period from 2007 to 2014.

4.1 Regression Analysis

The researcher conducted a multiple regression analysis to determine the extent of the relationship between the independent variables (Infrastructure bond, inflation, interest rates and total collected revenue) and the dependent variable, government expenditure.

Table 4. 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.8248	.6803	.6414	.4032

a. Predictors: (Constant), inflation rates, infrastructure bond, revenue, interest rate.
Source: Research Findings

The model summary results in Table 4.1 showed that the value of R was 0.8248 whereas the value of R square was 0.6803. This meant that the independent variables in the study contributed 68.03% of the changes in the government expenditure. The study therefore concluded that the government spends depending on the amount raised through bonds and also based on the prevailing economic conditions.

Table 4. 2: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.8669	4	.4667	13.4387	.002
Residual	.1042	3	.03473		
Total	1.9711	7			

a. Dependent Variable: expenditure
b. Predictors: (Constant), Infrastructure bond, Inflation rates, Total Revenue, Interest rate
Source: Research Findings

The ANOVA results showed that the value of calculated F was 13.4387. The F critical value at 4

numerator and 3 denominator degrees of freedom at 0.05 significance was 9.12. The F calculated

being greater than the F critical implied that the regression model was significant in showing the

relationship between the dependent and independent variables.

Table 4. 3: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.045	.3124		22.55	.0012
Infrastructure bond	12.045	.2365	-.298	50.93	.0025
Revenue	8.989	.842	.900	10.68	.014
Interest rate	.725	.1531	.387	4.74	.072
Inflation rates	.8297	.02315	-.103	35.84	.032

    a. Dependent Variable: Government Expenditure
Source: Research Findings

The adopted regression equation became;

$Y = 7.045 + 12.045 X_1 + 8.989 X_2 + 0.725 X_3 + 0.8297 X_4$

According to Table 4.3, holding all factors constant at zero, government expenditure

would be 7.045. Holding all other factors constant at zero, a unit increase in amount

raised via infrastructure bond led to 12.045 increase in government expenditures. A unit

increase in the total revenue collected led to 8.989 increase in government expenditures. A unit increase in the interest rates in the study period led to a 0.725 increase in government expenditures whereas a unit increase in inflation rates led to a 0.8297 increase in government spending. The significance value for investment bonds, inflation and revenue were all less than 0.05 thus they were significant in the regression model. However, the significance for interest rates was above 0.05 thus it was not statistically significant in the regression model.

4.2 Correlation Analysis

Table 4. 4: Correlations

		Infrastructure bond	Revenue	Expenditure	Interest rate	Inflation rates
Infrastructure bond	Pearson Correlation	1				
	Sig. (2-tailed)					
revenue	Pearson Correlation	.620	1			
	Sig. (2-tailed)	.0265				
Expenditure	Pearson Correlation	.638	.995	1		
	Sig. (2-tailed)	.024	.001			
Interest rate	Pearson Correlation	.986	.685	.704	1	
	Sig. (2-tailed)	.922	.202	.185		
Inflation rates	Pearson Correlation	.026	.144	.222	.548	1
	Sig. (2-tailed)	.017	.018	.020	.039	

Correlation is significant at the 0.05 level (2-tailed).
Source: Research Findings

According to Table 4.4 on correlations, the association between infrastructure bonds and government expenditure was a strong positive one as indicated by a co-efficient of 0.638.

A very strong positive association was however noted between the total revenue collected and amount of government expenditure as shown by a co-efficient of 0.995. The inflation rates had a weak positive relationship with government expenditure as shown by a correlation co-efficient of 0.222. The association between inflation rates and interest rates was moderately strong positive as indicated by a correlation co-efficient of 0.548. These research findings revealed that the amounts of government expenditure and the amounts collected via infrastructure bonds issued by the CBK and also total revenue collected by KRA have a positive association. In essence, the government spends by paying consideration to what it collects from its citizens.

4.3 Discussions of Findings

The study had sought to determine the effects of infrastructure bond financing on government's expenditure. The study used secondary data collected from the period 2007 to 2014 in analysis. The research findings showed that there is a relationship between amounts raised via infrastructure bonds and government spending. The nature of the relationship was a positive one in that increments in amounts collected via bond issued led to higher government spending in the study period. The study also showed that there is a positive relationship between total revenue collected and the amount of government expenditure. These findings concur with Fan and Rao (2003) that government expenditures are determined by fiscal conditions and economic factors for instance revenue collected. The availability of money for funding long term projects will in turn lead to more spending by the government thus leading to overall economic growth. In essence, long term financing has a positive impact on government spending since the government can now invest in long term projects since there is availability of adequate

revenue streams. These deductions concur with remarks by Central Bank of Kenya (2012) that in order for economic growth to be realized, development of infrastructure programs should be readily promoted. The study also established that increments in inflation rates led to additional spending by the government. This can be attributed to the high cost of commodities during times of inflation. This will require additional capital so as to cater for additional government spending, as such Government of Kenya has been issuing infrastructure bonds in order to tap into the financial and money markets. Infrastructure investment can facilitate regional integration through cross-border trade and capital market development through long-dated securities. Capital market development provides a source of funding for infrastructure and a medium for regional investors (Deloitte, USAID, 2012)

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the research findings, conclusions drawn from the findings and the recommendations made thereon. This chapter also gives the suggestions for further research by future researchers in the same line of research as this study.

5.2 Summary

The research findings revealed that amounts gained from infrastructure bonds and also total revenue collected had a positive relationship with government spending. The level of inflation rates also had a positive relationship with government expenditure. The findings imply that the government will spend more if it is able to raise more in a given year. The government spending are aimed at improving the general welfare of the citizenry for instance through investments in social amenities. Infrastructure developments are therefore likely to increase if the government is collecting more in terms of taxes and bonds issued via the Central of Kenya. These spending will spur economic growth in the country thus the attainment of the economic blueprint as set in Vision 2030. A strong positive relationship was observed between subscriptions of investments bonds and government spending. The research revealed that there was a strong positive correlation between total revenue collected by the revenue authority and government expenditure. The government raises additional long term funding via borrowings from the public through issue of debt instruments that are issued by the Central bank to the public. The uptake of these instruments increases the total available revenue to the government hence it can spend more depending on the gross revenue

received. However, optimal spending ought to be done so that adequate amounts are invested leaving another portion to other state functions. This will ensure that not all state revenue is utilized as current expenditure.

5.3 Conclusions

The study objective was to determine the effects of infrastructure bond financing on government's expenditure in Kenya. The results indicated that infrastructure bonds had a positive effect on government's expenditure in the study period. Total revenue collected and level of inflation rate was also found to positively influence the level of government spending. The study concluded that there is a strong positive relationship between infrastructure bond and spending by the governments. Additionally, there is a strong relationship between total revenue collected and government current expenditure. The study also established that the amounts attained via government bonds and government expenditure had increased over the study period.

 The government has been spending more partly due to significant increments in total tax remittances from the public. The inflation rates in the study period were found to fluctuate up and down hence affected spending only to a minute extent. Their influence on government spending was however positive. The study concluded that the country was raising more money via infrastructure bonds hence improving on the government`s liquidity. The study concludes that infrastructure bonds strongly influences spending by the Kenyan government. The amount of money collected from the Central Bank and the Kenya Revenue Authority determines the spending habits of the national government. The government ought to conduct a better assessment of taxpayer needs and demands before engaging to use funds for the provision of different services. An increment in

government expenditure is imperative for economic growth. Expenditure on health, public order, education and safety definitely have a positive impact on economic growth.

The study established that government expenditure, revenue and amounts raised via infrastructure bonds has increased tremendously in the last eight years. The current adopted public spending programme by the government is anticipated to ensure permanence in resource allocation on the basis of prioritized programmes that are in line with goals outlined in Vision 2030. Increased spending will spur economic growth reduce poverty and create employment opportunities.

The study concluded that the government ought to properly assess and rank important programs in line with available resources. Proper budgeting in line with available funds will ensure optimal resource allocation that spurs economic growth in the country. This will also translate to the credible use of tax-payers money by the government. This way, the citizens will be able to know if the government is prioritizing the most important issues that need government support in terms of finances.

5.4 Recommendations for Policy and Practice

The Government ought to emphasize on infrastructural development in the country in order to ensure the attainment of desired goals as set out in the economic blueprint of Vision 2030. Public expenditure is related to economic growth since national revenue is utilized in the process. Therefore, the study recommends that national government should charily review the overall national spending and consequently allocate resources to the various economic sectors that are better placed to encourage growth.

The study recommends that the national government ought to make investments in public

bonds more attractive to the population. This will consequently lead to more uptake by the public hence more revenue will be collected. Consequently, the government will be able to raise adequate funds to cater for its expenditures. External debts will also reduce to some extent if the government can be able to get significant investment funds from local sources. The government can even lower the lowest amount required to purchase the bonds so that even low income earners can wholly contribute to internal national funding. Procedures involved in the purchasing of bonds ought to be simplified; online and mobile platforms can be integrated so as to even popularize the bonds and hence increase subscriptions of the same by the general public.

Increments in government spending should be accompanied by relevant support documentation to ensure accountability of tax payers` money. The government ought to put up measures to ensure public resources are properly utilized by conducting proper supervision and regulation. The implementation of performance contracts in parastatals and in the various government ministries would ensure that money is spent as per budgetary allocations. Additionally, institutions that are mandated to handle corruption should be empowered by ensuring their independence so that those who embezzle public money are brought to book. From the research findings, it is notable that there is need to enhance public awareness on the role of government bonds in the economy. Sound application and issuance policies should be adopted by the relevant stakeholders in the bonds market.

5.5 Limitations of the study

This study used four independent variables (infrastructure bonds, inflation, interest rates and total revenue collected) as determinants of government expenditure. The study

therefore did not put into consideration the effects of other macroeconomic variables that affect the level of government expenditure.

In addition, this study was based on the 2007-2014 period whereby data was collected for this time frame only. The study therefore was limited to a small sample size owing to the number of years involved in the study. Future researchers ought to incorporate a broader time frame in determining the effects of investment bonds on government spending.

The study used data gathered from secondary sources only. Future studies would gain enhanced insight into the effects of investment bonds on government spending by collecting primary data from the personnel involved in budgetary allocations.

5.6 Suggestions for Further Research

Future studies can be done by splitting government expenditure into recurrent and developmental expenditure and then determining the effects of investment bonds on each type of expenditure.

Future assessment on the effects of increased government spending on the social, political, security and economic development of the country ought to be carried out as a result of increased budgetary allocations.

Further studies can be done on the various factors that influence different expenditures by the various sectors and possibly their effects to the economy and livelihood of the citizens at large.

REFERENCES

Absa Capital (2011): *African Local Markets Guide 2012 AXCO* (2012): Namibia Insurance Market Report.

ADB & ADBI (2009). *Infrastructure for a Seamless Asia*. Manila

Adelgang, O.J., & Radzewicz-Bak, B. (2009): *What determines bond market development in Africa,* IMF Working Paper WP/09/213.

Anzetse, W. (2014*).What's With All The International Sovereign Bonds Being Issued By African Governments*; Posted on 03/July 2014. Retrieved from http://asokoinsight.com/

Barro, R. J. & Grilli, V. (1994). *European Macroeconomics*, London, The Macmillan Press Ltd.

Beck, T., Demirgüç-Kunt, A. Laeven, L. & Maksimovic, V. (2006). The Determinants of Financing Obstacles, *Journal of International Money and Finance,* 25 (6), 932–952.

Belson, K. (2006). *Coupon Clipping the old-fashioned way*, New York times

Blinder, A.S (2008), *Keynesian Economics* in David R. Henderson (ed) Concise Encyclopedia of economics (2nd ed.) Indianapolis

Bodie, Kane & Marcus (2007) *Essentials of Investments*. Sixth International Edition, Singapore: McGraw-Hill. (https;//www.gov.uk/leasehold-property/service charges- and-other- expenses|)

Bureau of Economic Analysis. May 28, 2010. Retrieved 12 July 2014.

Braun, M., & Briones, I. (2006). The Development of Bond Markets around the World.' Mimeo, Anderson School, UCLA.

Calderon, C. (2008): *"Infrastructure and Growth in Africa",* AICD, Working Paper, World Bank.

Calderon, C. & Servén, L. (2004). The Effects of Infrastructure Development. On *Growth and Income Distribution,* Central Bank of Chile Working Papers.

Central Bank of Kenya (2009): Infrastructure Bond Performance Report.

Central Bank of Kenya (2012): Infrastructure Bond Performance Report.

CEPA (2010): Establishing feasibility and recommending policy options for development of a municipal bonds market in Tanzania.

Chris C, Danny F, Heather R and Chris S (2009). *Public Infrastructure Financing. An International Perspective.*

Christensen, J., (2005), "Domestic Debt Markets in Sub-Saharan Africa", IMF Staff Papers, Volume 52, Number 3, Page 518-538.

Cheikhrouhou, H., Britt Gwinner, W., Pollner, J., Salinas, E., Sirtaine, S., & Vittas, D. (2007): *Structure Finance in Latin America*, World Bank

Commonwealth Secretariat/ Cambridge Economic Policy Associates (CEPA)   (2010): Public Private Partnerships, Policy and Practice

Corkin, L., Burke, C. & Davies, M. (2008): *China's Role in the Development of Africa's Infrastructure*, SAIS Working Paper.

Deloitte, USAID (2012): Uganda Infrastructure Fund Feasibility Study –Draft Report Financial Services Board, Registrar of Pension Funds: Annual Report 2010.

David Mugwe (September 2013) *Kenya infrastructure bond auction attracts $430m-* The East Africa. www.theeastafrican.co.ke/../index.html

Economic Analysis (2010).Retrieved 12 July 2014.

Financial Times (2012): Chile's Privatized Pension Funds Draw Principal Interest

Foster, V. (2008). *Overhauling the Engine of Growth: Infrastructure in Africa*. Africa Infrastructure Country Diagnostic, September. World Bank Report.

Joseph S. and Peter M, Houlihan L. and Lyndon N., Kirkland and Ellis   International LLP (2008). A practitioner's guide to Corporate Restructuring.City and financial Publishing.1st Edition.

Isaya M, Abbas A S. M. & Christensen J. E, (2007). The Role of Domestic Debt Markets in Economic Growth: An Empirical Investigation for Low-income Countries and Emerging Markets". International Monetary Fund.

Lequiller F, D. Blades (2006) *Understanding National Accounts,* Paris: OECD.

Karen Kandie (June 3rd, 2014): Kenya's Eurobond Issue Success comes with Immense Risks

Kenya, Government of, Medium-Term Budget Strategy Paper, 2008/09-2010/11 (May 2008)

Kenya, Government of Kenya, Medium-Term Budget Strategy Paper, 2009/10-2011/12(June 2009).

Knoll, A. (2013), *The Post-2015 Development Framework Issues, Challenges, Opportunities,* Background note for the high level session of the Stakeholders meeting of the Belgian Development Cooperation, May 2013

Lequiller, Blades D. (2006) Understanding National Accounts, Paris: OECD,

Mohamed, W. (2013). *Kenya Eurobond Good Idea; wrong timing.* Posted on December 1, 2013 by Nairobi Business Monthly.

Myers, S. (2001). *Finance theory and financial strategy*. . In Chew, D. H. (Ed.). (2001). *The New Corporate Finance: Where theory meets practice.* p. 96-106. New York: Irwin

Saidi, N. (2012). *Building Infrastructure for Future Generations in MENA.*

OECD, Infrastructure to 2030, Mapping Policy for Electricity, Water and   Transport.

O'Sullivan, A. & Sheffrin, S. M. (2003). *Economics: Principles in action.* Upper Saddle River, New Jersey 07458: Pearson Prentice Hall.

Perspectives on Global Development (2013) - *Industrial Policies in a changing world, OECD*, May 2013

Ross, S. (1976). *The Arbitrage Theory of Capital Asset Pricing*. Journal of Economic Theory 13(3).

Swedy, B. (2013). What is coupon rate on bonds?

World Economic Forum, *Strategic Infrastructure Steps to Prioritize and Deliver Infrastructure effectively and efficiently.*

Richard, A. (2015). Capital projects and infrastructure. Retrieved from www.pwc.com/capitalprojectsandinfrastructure.

Lesego M. (2015). Effects of the Eurobond on the Kenyan Shilling. Retrieved from www.cnbafrica.com/markets/currencies/21 May 2014

APPENDICES

APPENDIX I : INFLATION

	2009	2010	2011	2012	2013	2014
Jan	13.2	6	5.4	18.3	3.7	7.2
Feb	14.7	5.2	6.5	16.7	4.5	6.9
March	14.6	4	9.2	15.6	4.1	6.3
April	12.4	3.7	12.1	13.1	4.1	6.4
May	9.6	3.9	13	12.2	4.1	7.3
June	8.6	3.5	14.5	10.1	4.9	7.4
July	8.4	3.6	15.5	7.7	6	7.7
Aug	7.4	3.2	16.7	6.1	6.7	8.4
Sep	6.7	3.2	17.3	5.3	8.3	6.6
Oct	6.6	3.2	18.9	4.1	7.8	6.4
Nov	5	3.8	19.7	3.3	7.4	6.1
Dec	5.3	4.5	18.9	3.2	7.2	6
Average	9.375	3.983333	13.975	9.641667	5.733333	6.891667

APPENDIX II : INTEREST RATE

Years	2009	2010	2011	2012	2013	2014
January	14.78	14.98	14.03	19.54	18.13	17.03
February	14.67	14.98	13.92	20.28	17.84	17.06
March	14.87	14.8	13.92	20.34	17.73	16.91
April	14.71	14.58	13.92	20.22	17.87	16.7
May	14.85	14.46	13.88	20.12	17.45	16.97
June	15.09	14.39	13.91	20.3	16.97	16.36
July	14.79	14.29	14.14	20.15	17.02	16.91
August	14.76	14.18	14.32	20.13	16.96	16.26
September	14.74	13.98	14.79	19.73	16.86	16.04
October	14.78	13.85	15.21	19.04	17	16
November	14.85	13.95	18.51	17.78	16.89	15.94
December	14.76	13.87	20.04	18.15	16.99	15.99
Average	14.80417	14.35917	15.04917	19.64833	17.30917	16.51417

Appendix III: Revenue

Period	2009	2010	2011	2012	2013	2014
Revenue	542,945.06	651,409.99	725,521.78	830,319.56	1,006,862.03	1,083,434.74

Appendix IV: Expenditure

Period	2009	2010	2011	2012	2013	2014
Expenditure	786451.7	952963.73	1014071.21	1238869.95	1542837.49	1646642.156