THE RELATIONSHIP BETWEEN GOVERNMENT BUDGET DEFICIT AND DOMESTIC DEBT IN KENYA

BY

WAREGA JOSEPHINE ACHIENG

SUPERVISOR:

MR HERICK ONDIGO

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DECLARATION

This research project is my original work and has not been presented for examination in any other University.

Signed…………………………… Date………………………………...

WAREGA JOSEPHINE ACHIENG

D61/63225/2010

This research project has been submitted for examination with my approval as University supervisor.

Mr Herick Ondigo

Lecturer, School of Business
University of Nairobi
Signed…………………………… Date………………………………

DEDICATION

This research paper is dedicated to my parents Mr and Mrs Warega and my sons Ronkenoly and Emanuel.

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LIST OF ABBREVIATIONS

A-I-A	-Appropriation in Aid
COMSEC	-Commonwealth Secretariat
CS-DRMS	-Commonwealth Secretariat Debt Recording and
	Management System
GDP	-Gross Domestic Product
HIPC	-Highly Indebted Poor Countries
LDC	-Least Developed Countries
MEFMI	-Macro Economics and Financial Management Institute
MTEF	-Medium Term Expenditure Framework
ODI	- Overseas Development Institute
UNITAR	-United Nations Training and Research
VIF	-Variance Inflation Factor
SPSS	-Statistical package for social sciences.
DOMSDEBT	-Domestic debt
BUDGDFCT	-Budget deficit/Fiscal deficit
GVTEXP	-Government Expenditure
INTr	-Interest rates
INFLr	-Inflation rates
FLSTAP	-Financial Legal Sector Technical Assistance Project.

ABSTRACT

This study was carried out to determine the relationship between budget deficit and domestic debt for twenty years from1991 to 2010. Different scholars studied domestic debt and budget deficit in both developed and developing countries including Kenya. The studies considered variables that affected either domestic debt or fiscal deficit. The studies were either on domestic debt and other variables or budget deficit and other variables and therefore inconclusive as they neither contradicted nor supported the budget deficit and domestic debt relationship. The study on domestic debt and budget deficit considered government revenue but did not consider the government expenditure as one of the factors affecting domestic debt. This study in determining the relationship between budget deficit and domestic debt incorporated government expenditure as one of the variables affecting domestic debt. However no scholar has studied the relationship between budget deficit and domestic debt in particular. This study aimed at filling the gap by using the most recent data   to analyze the relationship between budget deficit and domestic debt in the Kenyan economy.

Secondary data was collected from quarterly budget economic reviews reports of the Ministry of finance and the monthly economic review and time series reports of Central Bank of Kenya. Multiple regression analysis was applied to investigate the relationship between the dependent and independent variable and Scatter plot analysis and Bivariate correlation analysis tests were run, they confirmed linear relationship between dependent and independent variable and tolerable collinear relationships between independent variables. Data analysis   indicated that there was a positive relationship between the budget deficit, government expenditure, government revenue and domestic debt which were critical in determining the level of domestic debt. Further a negative relationship between inflation rates, interest rates and domestic debt was found and observed that they were critical in determining the levels of domestic debts.

Maintaining the budget deficit low by reducing the government expenditure through restricted spending policies and increasing government revenue collection through expanded tax base was recommend to maintain the domestic debt low.

It was further recommended that the central bank maintain both interest and inflation rates low.

It areas recommended for consideration for further research by Scholars include; the relationship between government revenue and domestic debt; and government expenditure and domestic debt.

CHAPTER ONE
INTRODUCTION

1.1. Background of the Study

Public debt includes the finances obtained by the central government, state corporations and the local government from both residents and non residents. The government uses the Medium Term Expenditure Framework (MTEF), a three year rolling budget to state its three years expenditure projections. The government then sources for funds in line with these expenditures, therefore contracting debt to add on the revenue collected to fulfill these expenditure projections.

Public debt includes all the obligations and obligations guaranteed by the government. In addition debt consists of all liabilities that require payment of interest and/ or principal by the debtor to the creditor at a date(s) in the future. It is made up of the external debt, loans and obligations guaranteed by the government and the domestic debt. It is the sum of all domestic and external obligations of public debtors which include the central government and its agencies; states, provinces or similar political subdivisions including their agencies; and autonomous public bodies such as state enterprises and subsidiaries in which they have joint ownership with the private sector and a major shareholding. The obligations of public bodies outside the central government include borrowings that are both guaranteed and not guaranteed by the Government (UNITAR (2002).

1.1.1. Domestic Debt

Domestic debt is the funds the government raises by issuing securities in its local financial market through the central bank and other financial institutions. In Kenya the government issued an infrastructure bond for the construction of the Thika superhighway. Domestic debt is debt raised through treasury bills and bonds issued to the residents of the country. It is raised to finance budget deficit or finance projects. Domestic public debt is a debt the government incurs from borrowing from residents of its own country and usually but not always in domestic currency (Corkill (2007). Public domestic debt is the

debt the government incurs through borrowing in its own currency from residents of its country (Shekar Das, Raj Kumar,Ranee Jayamaha, Dev Useree and Andrew (1999).

African countries are facing rising external debt and are being made to ensure the debt is manageable. These attempts include; debt write off by world bank for highly indebted poor countries (HIPC),Public debt management facilitation by the commonwealth Secretariat (COMSEC) through development of the Commonwealth Secretariat debt recording and management system (CS-DRMS) used to record and manage debt. In Kenya under a world bank funded project the Financial Legal Sector Technical Assistance Project(FLSTAP) is strengthening the public debt office. MEFMI trains debt managers and auditors on proper debt management.

The developing countries that faced the problem of external in the 1980's are the same once facing problems with domestic debt management. This has attracted attention of debt managers on the domestic debt besides external debt (Shekar et al 1999).

Kenya's domestic debt is managed from both the Central Bank of Kenya debt department and the ministry of finance debt department. The Central bank raises money for the government through the issuance of the treasury bills, treasury bonds, overdrafts or advances from the central bank, savings certificates and notes and promissory notes. The Ministry of Finance through the external resources department and the debt department raises funds for the government by contracting loans and grants from the bilateral and multilateral development partners. The central bank and institutions like insurance companies and pension and provident funds, and private individuals hold the government debt (Shekar et al 1999). Kenya 's domestic debt has been growing at very fast rate due to declining and unpredictable external inflows of loans and credits to developing countries. This has forced governments to borrow from the domestic markets to fill the gap. The other contributors to high domestic debt are natural calamities such as, droughts floods, disease outbreaks and others (Muaka 2007).

1.1.2. Budget Deficit

Budget deficit or fiscal deficit is the financial gap that arises when the government revenue is unable to pay for the expenditures. The government recurrent revenue include; the taxes, proceeds from sale of government assets, receipts of interest from government investments and recurrent appropriation in aid(AIA), while the development revenues include the loans and grants from both bilateral and multilateral development partners. The government recurrent expenditure includes; payments for the government day to today operations expenses like salaries, entertainment, travel expenses stationery, internal and foreign interest payments, pensions and subscriptions to multilateral institutions reflected under Consolidated fund services and others, while the government development expenditure includes the government developments projects (Fiscal and Monetary affairs department (1994).

Fiscal deficit is the difference between revenue and current and development expenditure. Fiscal deficit= (Revenue + foreign grant +Loans)-(Recurrent expenditure +Development expenditure+ Loans servicing). The causes for the rise in fiscal deficits is attributed to the difference in the rate of rise in government revenue and expenditure that is the revenue rise at lower rate than rise in expenditure or revenue falls at a higher rate than fall in expenditure or revenue falls while expenditure rises (Adangah (1997).

Fiscal deficit is the amount by which government receipts exceeds its expenditure, over some specified time period. Fiscal policy is concerned with the revenue and expenditures of the government. The government in its budgeting process does compare available funds against expenditure and determine whether it is operating at a deficit or surplus (Koori (1992). Kenya has increasing government expenditures and unmatched revenues and hence budget deficit. The revenue collected is less than the expenditures to be paid therefore budget deficit (Milu 1998).

1.1.3. Relationship between Budget Deficit and Domestic Debt

Domestic debt

The domestic debt by instrument includes treasury bills (includes stock of frozen government debt), treasury bonds, government stock, overdraft at central bank, advances from commercial banks and other domestic debt (includes items in transit, securities rediscounted, and tax reserve certificates). Domestic debt was measured in Kenya shillings.

Budget Deficit/Fiscal Deficit

Budget deficit was computed by deducting government expenditure net of lending from the government revenue. It was measured in Kenya shillings.

Government Expenditure

Government expenditure includes Recurrent and development expenditures & Net Lending. Recurrent expenditure refers to recurrent expenditure net of lending. It includes the Wages and Salaries, Interest Payments, Foreign Interest due, Pensions, Civil service reform, Other recurrent , Operations & Maintenance/others net of appropriation in aid, drought recurrent expenditure. It is measured in Kenya shillings. Development expenditure referred to development expenditure and net Lending. It includes the development projects net of appropriation-in-aid, payment of guaranteed loans, drought development expenditure and items on transit to paymaster general. The government expenditure was measured in Kenya shillings.

Inflation rates and Interest rates

The inflation rate was measured in percentages and the average rate was used. While the interest rate used in the study was the 91 day treasury bills of the Central Bank of Kenya. They were measured in percentages and converted to decimals for consistency in measurements as the other variables were in Kenya shilling which is an absolute figure..

The domestic debt was dependent on the budget deficit, government expenditure, inflation rates and interest rates. Positive relationship was expected between independent variables budget deficit and government expenditure and dependent variable domestic debt, thus increased budget deficit and government expenditure would result in increased

domestic debt. When the government incurs increased expenditure the budget deficit rises and with increased budget deficit more domestic debt is contracted to fill the budget deficit. On the other hand if the government incurs less expenditure it results in less or no budget or budget surplus, it therefore contracts new domestic debt for development not for financing budget deficit. Fiscal deficit can be financed by borrowing abroad, printing money or borrowing domestically. The sum of these three in any particular year equals the fiscal deficit for that year. Domestic debt therefore is expected to rise when new domestic debt is contracted to finance the budget deficit (Shekar et al (1999).The existence of less government revenue compared to expenditure results in budget deficit which is expected to result in rise in domestic debt.

A negative relationship was expected between government revenue and domestic debt, thus increased government revenue would result in budget surplus and therefore decreased domestic debt as the government would contract domestic debt for development purposes but not for financing budget deficit.

A positive relationship was expected between interest rates and the domestic debt, thus increased interest rate would result in increased domestic debt. This is because increased interest rates crowds out the private sector and therefore less economic growth. With slow in economic growth, the private sector taxes income will fall and therefore government revenue fall, and in the following financial years the government will have increased domestic debt.

A positive relationship between inflation rates and the domestic debt was expected, thus increased inflation rate would result in increased foreign exchange loss. The government in servicing its foreign debt would incur increased debt service cost due to foreign exchange loss and hence budget deficit and increased domestic debt in the following financial years.

1.1.4. Budget Deficit and Domestic Debt in Kenya

The Kenya budget deficit has grown over time and has been financed through both domestic and foreign borrowing as shown in the appendix IV attached. The government witnessed budget deficit inclusive of grants on cash basis from 1993/1994 to 2005/2006. The budget deficits have been financed by both foreign and domestic borrowing. The government experienced both budget deficit and surplus in the period 1999/2000 to 2010/2011(quarterly economic budget review 1994, 1999, 2002 and 2006).

The total outstanding government domestic debt in Kenya increased as shown in Appendix I. The domestic debt has grown from Kshs.42, 814.00 million, Kshs.103,620.00 million and Kshs.357, 839.00 millions in 1988/89, 1992/1993 and at the end of June 2006 respectively(Fiscal and Monetary Affairs department Ministry of Finance (1994 and 2006).

The domestic debt stock then rose from Kshs.404,690.00 millions, Kshs.430,612.00 millions, Kshs.518,507.00 millions, Kshs.660,268.00 millions and Kshs.764,222.00 millions at the end of June 2007 to 2011 respectively (Fiscal and Monetary Affairs department Ministry of Finance (2008, 2010 and 2011).

1.2 Research Problem

Budget deficit occur when the government revenue is less than the expenditure. The expenditure and revenue are the fiscal policy instruments the government uses to steer development. The expenditure is reduced or increased through ministry of finance treasury circulars. To spur economic growth the government increases expenditure, while to reduce growth in certain sectors of the economy the government cut expenditure through treasury circular. The government uses revenue to increase development in the economy for example by increasing taxes on imported clothes to encourage development in certain sectors of the economy like cotton industry.

Domestic debt is made up of the debt held by residents of a country and it is raised through treasury bills and bond. The government through the central bank uses the open market operation instrument, the treasury bills and bond to regulate the flow of funds in the economy. The government issues treasury bills and bonds when there is excess money supply in the economy, or buys back the treasury bills and bonds in case of inadequate money supply to spur economic development.

Kenyan budget deficit has been on the rise due to the ever rising public expenditure unmatched by revenues like many other developing countries (Milu (1998). On the other hand the fast rise in the Kenya domestic debt in the last decade has been attributed mainly to declining and unpredictable external inflows which has forced governments to borrow from the domestic markets to finance the gap (Muaka 2007).

The Kenyan budget deficit has been rising as has been shown in the appendix IV. The rise of the budget deficit has been financed by domestic borrowing through the treasury bills and bonds resulting in the rise in the domestic debt. The rise in budget deficit and the rise in domestic debt is the reason that made me try to find out whether the rise in budget deficit results in the rise in domestic debt.

Further, different scholars have studied debt and budget deficit and they do have different perspectives on the topic. Desmond (1994), studied the budget deficits and public debt in Sweden and found that the deficits pose significant risks to medium term economic performance because of the prospects they raise for future crowding out and for future inflation. On the other hand Willem (1985), developed the guide to public sector debt and budget deficits and noted that public debt and budget deficits in the short and long run are endogenously determined by the interaction of the economic systems and government policy rules.

Mwega (1990) carried out an econometric study to determine whether demand for money is stable, changes in monetary variables influence domestic price levels and balance of payments and controllability of money and credit and extent of the control by policy makers. The correlation between budget deficit and monetary variables was studied under controllability of money and credit and extent of the control by policy makers. The results indicated that in 1960's correlation coefficient between budget deficit and domestic credit to government, total domestic credit and money supply expressed as a percentage of GDP were insignificant as the government pursued conservative policies to balance the budget deficit. However it became significant as more years were added. This study considered the monetary aspect of government revenue and did not consider the expenditure component of the fiscal deficits.

According to Koori (1992) who studied the macro economic effects of the budget deficit in Kenya, the price level income and current account of the balance of payment respond to the changes in the government fiscal deficit, and higher normal government expenditure financed through borrowing from the domestic banking system is reflected in a rise in price levels and deterioration in trade balance amount.

The above studies have been carried out in both developed and developing countries including Kenya. The studies have considered variables that affect domestic debt and other variables or budget deficit and other variables. However, no scholar has studied the relationship between budget deficit and domestic debt in particular. This study therefore

aimed at filling the gap by using the most recent data to analyze the relationship between budget deficit and domestic debt in the Kenyan economy. In view of the above, this study aimed at answering the question 'what was the relationship between budget deficit and domestic debt in Kenya?

1.3. Objective of the Study

To determine the relationship between Government budget deficit and domestic debt in Kenya.

1.4. Value of the Study

The study on the relationship between the Government budget deficit and domestic debt would help in the advancement of knowledge by supporting the earlier studies carried on domestic debt and budget deficit. In addition the studies would facilitate improvement on expenditure, debt and revenue management policies. The study would also help improve government budgeting by enabling the government put in place policies to curb expenditure .Further the study would help the government put in place improved revenue collection mechanisms and encourage reduced domestic borrowing for financing budget deficit but instead borrow domestically for development purposes
This study on the relationship between the budget deficits on the domestic debt will be useful to various people and institutions.

The Ministry of Finance, Kenya Revenue Authority and Central Bank of Kenya

The study will enable the Ministry of Finance debt managers understand the relationships that exists between budget deficit and domestic debts and therefore enable them put in place proper debt management policies. On the other hand the budgetary department will also understand the effect of budget deficit on domestic debt and therefore put in place proper budgetary policies to manage expenditure. Further the study will enable Kenya Revenue Authority officers understand the relationship between the budget deficit and

domestic debt and put in place proper revenue collection mechanism to assist in reduction of budget deficit.

The Office of the Auditor General and Debt Management Institutions (COMSEC and MEFMI)

The study will enable the public debt auditors understand the relationship between the budget deficit and domestic debt and therefore issue proper audit recommendations on government expenditure, revenue and domestic debt management. In addition the study will enable debt management institutions like COMSEC and MEFMI understand the relationship between budget deficit and domestic debt and therefore better manage third world countries debt. They will also be able to focus their training on key factors affecting domestic debt including the budget deficit.

Scholars

The University of Nairobi, other universities and UNITAR being training institutions will use the study to further build on the body of knowledge in domestic debt and budget deficit. With the research gaps in the study on relationship between Government budget deficit and domestic debt other researchers will be able to obtain areas for further research.

CHAPTER TWO
LITERATURE REVIEW

2.1. Introduction

Literature review discusses the theoretical review of the relationship between Government budget deficit and domestic debt, budget deficit theories, debt theories, related studies that have been carried out on budget deficit and domestic debt, reasons for domestic borrowing and impact of Excessive domestic borrowing on economy.

2.2. Theoretical Review

Budget deficit theories included the positive theory of fiscal deficits and government debt in a democracy and the theory of public choice. Positive theory of fiscal deficits and government debt in a democracy hold that functions of budget deficit and debt accumulation is redistributing income over time and across generations; and minimizing deadweight losses of taxation associated with the provision of public goods and services. Theory of public choice on the other hand explains how public servants and politicians use their positions to favor small interest group to secure their reelection through making short term decisions with immediate benefits and costs to be paid in the future.

The debt theories included the credit rationing theories and the intermediation theories. The credit rationing theories hold that funds are limited. The credit rationing theories include; price rationing and quantity rationing of credit. The price rationing of credit involved restricting availability of funds based on the amounts charged which covers for the default risk. The quantity rationing of credit includes the equilibrium and disequilibrium credit rationing. The equilibrium credit rationing occurs when the price set is the equilibrium price, set at point where the supply and demand of loanable funds are equal (market clearing price). On the other hand disequilibrium quantity credit rationing, occurs when the price set is at the non market clearing price where the supply and demand of loanable funds are not equal.

The intermediation theories included; economies of scale and the information asymmetry. The economies of scale theory explains the benefits on borrowing and costs charged by bank due to the large volumes of transactions and the effects of the lack of information by borrowers and therefore information asymmetry causing increase in the borrowing costs due to screening and monitoring of customers and the lack of reputation of the borrowing firms.

2.2.1. Positive Theory of Fiscal Deficits and Government Debt in a Democracy

Alberto and Guido (1987) noted that the positive theory of fiscal deficits and government debt in a democracy holds that budget deficits and debt accumulation can serve two purposes: they provide a means of redistributing income over time and across generations; and they serve as a means of minimizing the deadweight losses of taxation associated with the provision of public goods and services. The theory indicate that democratic governments incurs more expenditures on social goods increasing budget deficits. With increased budget deficits they borrow to fill the financing gap which makes the governments to accumulate debt to be serviced by the future generations and therefore redistributing income. This theory explains the fact that budget deficit increases domestic debt.

2.2.2 The Theory of Public Choice

The theory holds that, microeconomics is used to understand decision making of public servants and politicians, as the politicians in democratic nations use public funds to win their reelections. They favor special interest groups and make short term decisions that entail visible benefits, invisible costs that are to be   paid in the distant future (Buchanan (1967). This theory holds that the democratic governments are sponsored by special interest groups who are favored through social programs   like road constructions , digging of dams where they win the construction contracts and thus receive there reward. These expenditures increase government expenditures with the result of financing the gap through domestic debt to be serviced in many years to come.

2.2.3. Price Rationing of Credit

The price rationing of credit theory holds that price of credit is set to cover for default risk. The loanable funds interest rate (price) is set such that equilibrium fund level and interest rate (price) is achieved and the amounts of the available funds is determined by the price set based on the risk of default expected of the borrower. This theory holds that interest rates determine the available fundsas a result determining the source of funding the Government uses whether domestic debt or external. Because of the supply and demand for loanable fund the amounts of domestic debt can increase or decrease. The study has shown that the interest rates have a negative relationship with the domestic debt.

2.2.4. Loans Quantity Rationing

Loan quantity rationing holds that amounts of loanable funds available to individuals is unequal. There is the equilibrium and disequilibrium quantity rationing. Firstly, disequilibrium quantity rationing of credit holds that there may be rationing of credit at a non market-clearing price. The loanable fund is issued to users of funds as per government restrictions; one set of borrower receives more funds than the other. This is done to enable government achieve its monetary policy. This theory supports the findings of the study of the relationship between Government budget deficit and domestic debt that budget deficit has appositive relationship to the domestic debt.

Jaffee-Modigliani observed that equilibrium credit rationing is a problem of monopoly with limited discrimination. They noted that firstly unconstrained, perfectly discriminating monopolist would charge price which, given risk, would result in a loan volume such that marginal revenue equals marginal cost. Secondly, a monopolist charging same price would ensure that some borrower's demand would exceed the lender's optimal supply (Philip 1995).

2.2.5 Economies of Scale

Financial intermediaries enjoy economies of scale due to large volumes of transactions. Banks can pool risks and diversify portfolios more cheaply than individual investors, given fixed costs of acquiring investments. The bank provides a form of insurance to risk averse depositors against liquidity risk if it is assumed these individuals are small and risks cancel over the population and therefore sharing risk over large population reduce it (Philip 1995).

2.2.6 Information Asymmetry: Screening, Monitoring and Reputation

Information asymmetry makes it mandatory for lenders to screen entrepreneur's quality, while firms, monitor there performance to avoid adverse selection and moral hazards. The expertise and fixed technology costs in screening by banks may give rise to economies of scale for depositors financing large scale projects (Philip 1995)
Monitoring may result in economies of scale as banks have the resources both personnel and expertise for screening and monitoring. Diamond (1984) showed why it may be efficient for investors to delegate monitoring to banks due to information asymmetries between borrowers and lenders.

Reputations are important in a multi period context as it makes firms be able to select safe or less risky projects since reputation is considered as a capital asset. This makes firms with good reputation able to access bond or commercial paper markets (Davis and Myer (1991).

2.3. Reasons for Domestic Borrowing

There are three main reasons for government borrowing. Firstly the government borrows to finance its budget deficit when it is unable to meet its expenditure commitments from domestically raised revenue. The government may raise less revenue from taxes compared to the expenditure it has budgeted for; it therefore resorts to either domestic or

external borrowing to fill the financing gap. Secondly the government may use open market operation by issuing treasury bills or bonds to implement its monetary policies. When the government wants to reduce money supply in the economy it issues treasury bills or bonds, and by doing so reduce money supply in the economy on the other hand the government may repurchase treasury bills or bonds to inject money into the economy. The government borrows domestically to implement monetary policies by purchasing or selling of treasury (Alison 2001).

Finally, the government may choose to borrow and make available funds to financial institutions like the micro finance institutions to make the small and medium enterprises access funds, this enhances financial deepening and development. The government borrows domestically to make funds available to steer development of the financial sector (Alison 2001).

2.4. The Impact of Excessive Domestic Borrowing on Economy

The government may find itself borrowing domestically for various reasons, either to finance budget deficit or to undertake development project. Whichever way, domestic debt accumulates over time and may reach appoint when it is unsustainable or other excessive to the economy as explained below:

Firstly, excessive borrowing by government results in other sector spending being reduced and therefore deterring investment. When the government has borrowed excessively it debt servicing form major part of the expenditure and therefore increase in budget deficit. The government may reduce budget deficit by reducing expenditure on key sector like education and health to make funds available to service debt.

Secondly, excessive borrowing will make funds not available to the private sector, reducing its participation in economic development(crowding out the private sector) because the cost of funds becomes too expensive for the private sector. Lack of

participation of private sector in economic development slows down the economic growth.

Thirdly if the government borrows from its Central Bank through money printing inflation rate rises. Increased inflation rate results in increase in the debt service cost and therefore more budget deficit. Finally the government borrowing too much in the domestic market results in high debt accumulations and this therefore causes future generations to pay higher tax. The country with high debt accumulation is faced with lowered country's credit rating raising cost of future borrowing (Shekar et al (1999).

2.5. Empirical Literature.

Kiptui (1989) conducted a study on the fiscal lags, deficit financing and inflation in Kenya. The study looked at inflation, government expenditure, government revenue and money supply equations. The inflation equations indicated that inflation is positively related to the lagged price level; government expenditure equation indicated that the government expenditure are positively related to the level of real income and the government revenue equation indicated that the government revenue are positively related to nominal income. He found that there was no two way causality between fiscal deficits and inflation as the direction of causality runs from inflation to the fiscal deficits. This study did not consider the external effect of the fiscal deficit as it only considered one variable that determines fiscal deficit.

Mwega (1990) carried out an econometric study to determine whether demand for money is stable, changes in monetary variables influence domestic price levels and balance of payments and controllability of money and credit and extent of the control by policy makers. The study of the correlation between budget deficit and monetary variables is covered under the controllability of money and credit and extent of the control by policy makers. The results indicated that in 1960's correlation coefficient between budget deficit and domestic credit to government, total domestic credit and money supply expressed as a percentage of GDP were insignificant as the government

pursued conservative policies to balance the budget deficit. However the coefficient of correlation became significant as more years were added. This study considered the monetary aspect of government revenue and did not consider the expenditure component of the fiscal deficits. In this study, government expenditure has been considered as one of the independent variables considered in determining the relationship between budget deficit and domestic debt. Since budget deficit is computed by subtracting government revenue from government expenditure, it is therefore important to have the government expenditure as on e of the independent variables under study.

Koori (1992) studied the macro economic effects of the budget deficit in Kenya in 1967 - 1989. She used regression analysis on national income, private sector consumption, private sector investment, government expenditures and net exports. She concluded that the price level, income and current account of the balance of payment respond to changes in the government fiscal deficit in Kenya. She also concluded that government expenditure financed through domestic borrowing from the domestic banking system is reflected in a rise in the domestic price levels and the deterioration in the trade balance amount. This study utilized secondary data from different sources which was inconsistent and whose sample size was reduced. In studying the relationship between budget deficit and domestic debt it was found that there is a positive relationship between budget deficit and domestic debt .

Desmond (1994) studied the budget deficits and the public debt in Sweden; the case for fiscal consolidation. He found that the deficits pose significant risks to medium term economic performance because of the prospects they raise for future crowding out and for future inflation. This study on budget deficit and domestic debt found that there was anegative relationship between domestic debt and budget deficit. The study also found out that there is a negative relationship and inflation rates which results in crowding out .

Adangah (1997) studied fiscal deficits determinants and macroeconomic effects on balance of payments in Kenya in 1967-1994. Regression analysis on government consumption expenditure, public investment, money, bonds, external financing of fiscal

operations, GDP labor cost or salaries, development expenditure or government investment, transfers and tax revenues was done. She concluded that the government investments and debt service charges played a significant role in persistent fiscal deficit in Kenya. She further concluded that there is need to further reconsider government participation on investment to provide enabling environment for reducing fiscal deficit. The finding that government investment and debt service charges played a significant role in persistent deficit supports the finding of this study that the rise in budget deficit results in rise in domestic debt.

Milu (1998) conducted a study on revenue, public spending and fiscal deficits in Kenya in 1965 to 1996. Regression analysis was used on revenue, expenditure and budget deficit and found that both government spending and revenue feed to each other. For fiscal gap to close or reduce focus should be on the both government revenue and spending. The study of the relationship between budget deficit and domestic debt recommendations that to reduce the domestic debt we need to reduce the budget deficit by increasing revenue collection while reducing government debt are supported by the Milu study on revenue, public spending and fiscal deficits in Kenya in 1965 to 1996

Shekar et al (1999) studied the effective domestic debt management in developing countries and concluded that the developing countries need to integrate debt management into macroeconomic strategy, assess debt sustainability and need for fiscal adjustment, evolve an appropriate borrowing strategy, develop markets for government securities, improve coordination between debt and monetary management and improve debt data management. The conclusions of the study on relationship between budget deficit and domestic debt that to maintain domestic debt down government expenditure needs to be reduced while increasing government revenue to ensure low budget deficit is supported by the findings of the study by Shekar et al.

Willem (1985) developed the guide to public sector debt and deficits found that public debt in the long run (except under some rather special parameterization of fiscal and financial policy), the public sector deficits in the long run and in the short run are

endogenously determined by the interaction of the economic systems and government policy rules. This finding is supported by the study of the relationships between budget deficit and domestic debt which recommends reduced government expenditure and increased government revenue.

Mahiva (2002) studied the determinants of fiscal deficits and fiscal adjustment in Kenya between 1972 and 1999. Regression analysis was used and concluded that Kenya's new fiscal policy makes sense in the short term while the instruments used are narrow based. This study used aggregation as entire economy was considered as a unit. This resulted in failure to capture effects of sectoral variables.

Chironga (2003) studied the structure, trend and impact of domestic debt on economic growth in Kenya in period 1990 to 2001.Regression analysis on interest rate, marginal productivity of capital, and debt to GDP ratio, debt service to GDP ratio, Output growth rate and investment per head. He concluded that Kenya's domestic debt is becoming unsustainable and this impact negatively to the economy.

Juma (2010) conducted a study on the domestic debt and private investment in Kenya between 1963 to 2009. She used regression analysis on inflation rate GDP growth, fiscal deficit, debt service, stock of domestic debt and export government expenditure ratio. She concluded that growth in stock of domestic debt crowded investment in Kenya.This finding is supported by the finding of the study of the relationship between budget deficit and domestic debt whose findings indicates that there is a negative relationship between budget deficit and inflation rates.

2.6. Conclusion

Kiptui (1989), Mwega (1990), Koori (1992), Desmond (1994), Adangah (1997), Mahiva (2002) Chironga (2003) and Juma (2010) studied domestic debt and budget deficit. The studies were inconclusive as they neither contradicted nor supported the budget deficit and domestic debt relationship, because the studies done were either on domestic debt

and other variables or budget deficit and other variables. The study on domestic debt and budget deficit considered government revenue and did not consider the government expenditure as one of the factors affecting domestic debt. This study in determining the relationship between Government budget deficit and domestic debt incorporated government expenditure as one of the variables affecting domestic debt.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1. Introduction

This chapter discusses the research design, population, sample size, data collection methods and data analysis tools used in the study.

3.2. Research Design

This was a descriptive study to determine the relationship between the budget deficit and domestic debt. Descriptive study describes the characteristics associated with subject population (Cooper and Schindler 2000). A descriptive research design was suitable in determining the relationship between budget deficit and domestic debt in Kenya because concern was to secure a representative sample of relevant population to ensure accuracy and generalizability. This research was done using the regression analysis the method used by the researches discussed in the literature review.

3.3. Population

To determine the relationship between budget deficit and domestic debt, domestic debt data measured in millions of Kenya shillings was obtained from time series data from Central Bank of Kenya, for twenty years from 1991 to 2010 as reflected in Appendix I. The interest rate and the inflation rate data, measured in percentages was obtained from the Central Bank of Kenya's economic reviews for twenty years from 1991 to 2010 as reflected in Appendix II and III respectively .The budget deficit, government expenditure and government revenue data, measured in millions of Kenya shillings was obtained from quarterly budgetary economic reviews from ministry of finance budgetary department ,for twenty years from 1991 to 2010 as reflected in Appendix IV-VI.

The data covered twenty years from 1991-2010 because the period was long for one to be able to generalize and provide the most recent data.

3.4. Data Collection

This study involved the collection of secondary data from the ministry of finance and the Central Bank of Kenya. Annual budget deficit, government expenditure and government revenue in millions of Kenya shillings was collected from the quarterly budget economic reviews reports from the mministry of ffinance budgetary department. Monthly domestic debt in millions of Kenya shillings was obtained from the Central Bank of Kenya's time series data. Annual inflation rates was obtained from the Central Bank of Kenya, monthly Monthly economic review while monthly interest rates was obtained from Central Bank of Kenya's monthly economic review. The average inflation rates and interest rates were computed .The study covered twenty year's Kenya's public domestic debt for the period 1991-2010.

3.5. Data Analysis

Regression analysis is statistical technique for measuring or estimating the relationship among economic variables that constitute the essence of economic theory and economic life. Regression analysis helps in three ways; Firstly it provides estimates of values of the dependent variables from the values of independent variables, by obtaining the regression line. Secondly it obtains a measure of the error involved in using the regression line as a basis for estimation; this is done by regressing the dependent and independent variables to obtain the regression line. Finally it provides the degree of association or correlation that exists between the two variables. The coefficient of determination measures the strength of the relationship between the variables. It assesses the proportion of variance accounted for by the regression equation (Gupta and Gupta(2010).

3.5.1. Estimation Technique

Multiple regression analysis was used to investigate the relationship between the dependent and independent variable because all the variables were measured in a continuous interval or ratio scale. The following diagnostic tests were done :

The multiple regression model was used to analyze the relationship between the budget deficit and the domestic debt. Before running the regression analysis the variables were standardized so that they could be measured along same scale.

Linearity Test

To see whether the data fits the regression model, scatter plot analysis was done because of the regression analysis assumption of linearity between the dependent and independent variables and linear trends in the data were observed as shown above.

Multicollinearity Test

To test multicollinearity between independent variables bivariate correlation between pairs of independent variables was carried out as shown above, the coefficients were below 0.8 which was tolerable. The variance inflation factor analysis was done; it was observed that the variance inflation factor was below ten as shown above and therefore acceptable.

3.5.2. Model Specification

A multiple regression model was used to show the relationship between the variables as shown below:

DOMSDEBT= $ß_0$+ $ß_1$BUDGDFCT+ $ß_2$ GVTREV+ $ß_3$GVTEXP+ $ß_4$INFLr+ $ß_5$INTr+$έ_i$

Where:

DOMSDEBT =Domestic debt as measured in Kenya shillings.

$ß_0$ =constant variables that affect domestic debt

$ß_i$ =Coefficient of the independent variables budget deficit, Government expenditure, Government revenue, Interest rate and inflation rate

BUDGDFCT = Budget deficit measured in Kenya shillings.

GVTREV = Government revenue as measured in Kenya shillings.

GVTEXP = Government expenditure measured in Kenya shillings

INFLr = Inflation rate measured in percentages and converted to decimals for computations

INTr = Interest rate(91 day treasury bills interest rates) measured in percentages and converted to decimals for computations

$\acute{\varepsilon}_i$ = error term and the subscript i a particular observation.

The F test at 95% level of confidence was used to assess the significance of the regression model. The t test was used to determine the significance of the individual independent variables. The coefficient of determination was used to determine the extent to which the changes in domestic debt was explained by the changes in the budget deficit.

Expected Relationships:

When the government is faced with budget deficit when it incurs more expenditure compared to revenue raised. When this occurs it has to finance the budget deficit which it does by borrowing locally of externally. When it borrows locally it increases it domestic debt. It is therefore expected that there is a positive relationship between independent variable budget deficit (BUDDFCT) and dependent variable domestic debt (DOMSDEBT), therefore increased budget deficit would result in increased domestic debt. When the government incurs budget deficit it borrows domestic debt to fill the budget deficit.

A positive relationship was expected between independent variables government expenditure (GOVTEXP) and the dependent variable domestic debt (DOMSDEBT), thus increased government expenditure would result in increased budget deficit and therefore increased domestic debt.

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A negative relationship was expected between government revenue (GOVTREV) and domestic debt, thus increased government revenue would result in budget surplus and therefore a fall in domestic debt as the government would contract domestic debt for development purposes but not for financing budget deficit.

A positive relationship was expected between interest rates and the domestic debt, thus increased interest rate would result in increased domestic debt.

A positive relationship was expected between inflation rates (INFLr) and the domestic debt. This implied that the rise in inflation rate would result in increased foreign exchange loss. The government in servicing its foreign debt would incur increased debt service cost due to foreign exchange loss and hence budget deficit and increased domestic debt in the following financial years.

CHAPTER FOUR
DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1. Introduction

The chapter discusses data analysis employed in this study, findings of the study and discussions of the findings.

4.2. Data Analysis

Multiple regression analysis was used to investigate the relationship between budget deficit and domestic debt. Before the data analysis was done the data was standardized to put all the variables on the same scale, to be able to compare the magnitude of the coefficients of the independent variables to see which one has more effect on the dependent variable.

4.3. Findings

Multiple regression analysis was used to investigate the relationship between the dependent and independent variables. Linearity and multicollinearity tests were carried out and following results found:

Findings1: Diagnostic Tests

Linearity Test

Multiple regression analysis was used to investigate the relationship between the dependent and independent. To see whether the data fits the regression model, scatter plot analysis was done because of the regression analysis assumption of linearity between the dependent and independent variables and linear trends in the data were observed.

Multicollinearity Test

Bivariate correlation between pairs of independent variables was carried out, the coefficient were   below 0.8 as shown in bivariate correlation table 4.1 below. The coefficients less than 0.8 means that the independent variables are not collinear and therefore tolerable.

Table 4.1 : Bivariate correlations

Independent variable	Budget deficit	Expenditure	Revenue	Inflation rate	Interest rate
Budget deficit	1.000	0.738	0.725	0.293	0.458
Government expenditure	0.738	1.000	0.797	0.351	0.531
Government revenue	0.725	0.797	1.000	0.372	0.573
Inflation rate	0.293	0.351	0.372	1.000	0.714
Interest rate	0.458	0.531	0.573	0.714	1.000

Note: Coefficients<0.8

Source:Research Findings

Further to test mullticollinearity variance inflation factor analysis was done , it was observed that the variance inflation factor was below ten as shown in table 4.2 and therefore acceptable. The variance inflation factor of less than ten is acceptable.

Table 4.2:Variance Inflation Factor(VIF)

Independent variable	Tolerance	Variance Inflation Factor(Vif)
Budget Deficit	0.271	3.693
Government expenditure	0.25	3.998
Government Revenue	0.25	3.997
Inflation rate	0.475	2.106
Interest rate	0.265	3.767

Note: if vif is below 10 acceptable.
Source :Research Findings

Findings 2: Regression Results

Multiple regression analysis was used to investigate the relationship between the dependent and independent variables and the results were as tabulated below:-

Table 4.3 : Domestic debt model regression results

Independent Variable	coefficient	t- statistics	Probability	
Budget deficit	0.010	2.715	.000	***
Expenditure	0.270	3.584	.000	***
Revenue	0.636	5.899	.000	***
Inflation rate	-.055	-2.250	.037	*
Interest rate	-.120	-3.758	.001	***

F=94.017***.
R^2=68.8%, Adjusted R^2=68.3%.
Standard error of estimate=0.00000000769

Constant (β_0) =Kshs.61,725.75 Millions.

Source:Research Findings

The results of the regressed domestic debt model were as shown above. The monthly domestic debt had been expressed annually in Kenya shillings and there were five independent variables; budget deficit, government revenue, government expenditure,

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inflation rate and interest rate. The annual budget deficit, government revenue and government expenditure were expressed in millions of Kenya shillings, while the annual inflation and interest rates were expressed in percentages and averages were used in there analysis. These variables were regressed against the domestic debt using the enter method of regression analysis and a significant model emerged as shown above. The F statistic of 94.017 was significant at the 0.1% level of significance. The probability value of 0.000 associated with this F value was very small and was compared with confidence level of 0.05, the lowest significance level possible and this indicated that the independent variables could predict the dependent variable domestic debt

The results of the regression analysis (coefficient of determination R^2 of 68.8%) indicated that the independent variables; budget deficit, government expenditure, government revenue, inflation rates and interest rates explained 68.8% of the variance in the dependent variable domestic debt. The model is well fitted as shown by the high level of adjusted coefficient of determination of 68.3%. The levels of confidences (probability values) for t-test were at 0.1% level of significance for budget deficit, government expenditure , government revenue and interest rates. Inflation rate was significant at 5%level of confidence. Based on the above results, each of the independent variables helped to explain some of the variations in the domestic debt. Standardized beta coefficients were obtained out of the regression analysis.

Budget Deficit

Budget deficit was measured by the difference between government revenue and government expenditure. The relationship between the budget deficit and domestic debt was positive as shown by it's coefficients of 0.010 with a significance level of 0.000. This implied that the budget deficit had a positive relationship to the domestic debt and an increase in the budget deficit resulted in an increase in domestic debt. On the other hand the significance level of 0.000 indicated that the budget deficit was critical in the determination of the level of domestic debt. The results were as per the model projections.

Government Revenue

The government revenue measured in Kenya shillings had a positive relationship with the domestic debt as shown by its coefficients of 0.636 with a significance level of 0.000. This implied that the government revenue had a positive relationship to the domestic debt and an increase in government revenue could result in increase in domestic debt domestic. On the other hand the significance level of 0.000 indicated that the government revenue was critical in the determination of the level of domestic debt. The results were not as postulated. The model projected a negative relationship, where increased government revenue would result in fall in budget deficit and therefore reduction in domestic debt. The result indicated that the government revenue had the highest coefficient, thus highest effect on the domestic debt.

Government Expenditure

Government expenditure measured in Kenya shillings, had a positive relationship with the domestic debt shown by it's coefficient level of 0.270 with a significance level of 0.000. This implied that increased government expenditure would increase domestic debt and the significance level of 0.000 indicated that the government expenditure was critical in the determination of the level of domestic debt. This was because a rise in government expenditure was expected to result in a rise in domestic debt because increased government expenditure was expected to result in increased in budget deficit and therefore increased domestic debt. The positive relationship between government expenditure and domestic debt was as projected in the model.

Inflation Rates

The inflation rates had   -0.055 coefficients and 0.037significance level. This indicated that the inflation rate had negative relationships to the domestic debt, as the inflation rates rise the domestic debt decrease. The significance level of 0.037 obtained indicated that

the inflation rate is critical in determining the level of domestic debt. The negative relationship obtained was not as postulated, because the model projected a positive relationship, where increased inflation rate would have resulted in increased domestic debt. This is because rise in inflation rates would result in the foreign debt payments rise due to devaluation of the local currency, this then result in budget deficit and therefore increased domestic debt to finance the budget deficit.

Interest Rates

Interest rates had -0.120 coefficients and 0.001 significance level. This indicated that the interest rate had negative relationships to the domestic debt, as the interest rates increased the domestic debt decreased. The significance level of 0.001 obtained indicated that the inflation rate was critical in determining the level of domestic debt. The negative relationship obtained was not as projected in the model, because the model projected a positive relationship between interest rates and domestic debt. The increased interest rates was expected to result in increased domestic debt because rise in interest rates would crowd out the private sectors which would then result in slowed economic growth, thus less tax revenue and therefore increased budget deficit and hence increased domestic debt in the following financial years.

Constant

The constant ($ß_{0)}$ is Kshs. 61,725.75 millions) and significant. This implied that there were other significant factors not captured in the model that explained the changes in domestic debt. These included economic growth and political stability. The relationship between economic growth and domestic debt may have been considered to be part of the factors not accounted for by the five independent variables discussed above. With good economic growth the government would collect enough revenue to cover for the expenditure and therefore contract less or no domestic debt for financing budget deficit.

4.4. Discussion of Findings

Budget Deficit

This was a study undertaken to determine the relationship between budget deficit and domestic debt in a 20 year period from 1991 to 2010. It was established that there was a positive relationship between budget deficit and domestic debt. This indicated that as the budget deficit rose domestic debt was expected to rise and the budget deficit was critical in determination of the domestic debt level. The positive relationship between budget deficit and domestic debt observed was as postulated in the domestic debt model.

This observation was supported by various studies;

Shekar et al (1999) did a study and observed that fiscal deficit can be financed by borrowing abroad, printing money or borrowing domestically. The sum of these three in any particular year equals the fiscal deficit for that year. This study supports the positive relationship between budget deficit and domestic debt. Muaka (2007) also observed that the fast rise in the Kenya domestic debt in the last decade has been attributed mainly to declining and unpredictable external inflows which has forced governments to borrow from the domestic markets to finance the gap. The positive theory of fiscal deficits and government debt in a democratic government by Alberto and Guido (1987) holds that budget deficits and debt accumulation can provide a means of redistributing income over time and across generations and they serve as a means of minimizing the deadweight losses of taxation associated with the provision of public goods and services. This is because budget deficit means the government spends future income today through borrowing domestic debt to be serviced by the future generations thereby redistributing income by letting the current generation spend the future generations incomes to be earned.

Adangah (1997) studied fiscal deficits determinants and macroeconomic effects on balance of payments in Kenya in 1967-1994. Regression analysis on government consumption expenditure, public investment, money, bonds, external financing of fiscal

operations, GDP labor cost or salaries, development expenditure or government investment, transfers and tax revenues was done. She concluded that the government investments and debt service charges played a significant role in persistent fiscal deficit in Kenya. She further concluded that there is need to further reconsider government participation on investment to provide enabling environment for reducing fiscal deficit.

Government Revenue

This study also found out that the government revenue had a positive relationship with the domestic debt, and was critical in the determination of the level of domestic debt. This implied that a rise in government revenue resulted in a rise in domestic debt. The results were not as projected in the domestic debt model, that an increase in government revenue was expected to result in a fall in budget deficit or occurrence of budget surplus and therefore reduction in domestic debt. The results further indicated that the government revenue had the highest coefficient therefore the highest effect on the domestic debt. This observation was contradicted by Milu (1998), who conducted a study on revenue, public spending and fiscal deficits in Kenya in 1965 to 1996. Regression analysis was used on revenue, expenditure and budget deficit and found that both government spending and revenue feed to each other. For fiscal gap to close or reduce focus should be on the both government revenue and spending.

Government Expenditure

The study also found out that government expenditure had a positive relationship with the domestic debt, and was critical in the determination of the level of domestic debt. This implied that as the government expenditure increased domestic debt increased too. The results were as projected in the domestic debt model, that an increase in government expenditure was expected to result in a rise in budget deficit and therefore rise in domestic debt. This observation was supported by the study by Milu (1998), who conducted a study on revenue, public spending and fiscal deficits in Kenya in 1965 to 1996. Regression analysis was used on revenue, expenditure and budget deficit and found

that both government spending and revenue feed to each other. For fiscal gap to close or reduce focus should be on the both government revenue and spending. This observation was further supported by Willem (1985) who developed the guide to public sector debt and deficits and noted that public debt and deficits in the long run and in the short run are endogenously determined by the interaction of the economic systems and government policy rules.

Interest Rates

The study found out that interest rates had a negative relationship with the domestic debt, and were critical in the determination of the levels of domestic debt. This implied that as the inflation and interest rates rose domestic debt rose too. The results were not as projected in the domestic debt model because the model projected a negative relationship between interest rates and domestic debt. The rise in interest rates was expected to crowd out the private sectors which would then result in slowed economic growth and hence less government revenue. The reduced government revenue results in budget deficit in the following financial years, which would then be financed by domestic borrowing with the results of increased domestic debt. This study was supported by observations by Juma (2010) who conducted a study on the domestic debt and private investment in Kenya between 1963 to 2009.She used regression analysis on inflation rate GDP growth, fiscal deficit, debt service, stock of domestic debt and export government expenditure ratio. She concluded that growth in stock of domestic debt crowded investment in Kenya.

Inflation Rates

In addition the study found out that inflation rates had a negative relationship with the domestic debt, and was critical in the determination of the levels of domestic debt. This implied that as the interest rates rose domestic debt rose too. The results was as projected in the domestic debt model. The negative relationships between inflation rates and interest rates obtained were not as projected in the model because the model projected a negative relationship between inflation rates and domestic debt where the increased

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inflation rates would result in increased foreign debt servicing cost and therefore increased budget deficit in following financial years which would result in increased domestic debt. The observation made was supported by the findings of Desmond (1994) who studied the budget deficits and public debt in Sweden and found that the deficits pose significant risks to medium term economic performance because of the prospects they raise for future crowding out and for future inflation.

The constant was significant which implied that there were other significant factors not captured in the model that explained the changes in domestic debt. These included and were not limited to economic growth, and political stability. The relationship between economic growth and domestic debt may have been considered to be part of the factors not accounted for by the five independent variables discussed above. With good economic growth the government would collect enough revenue to cover for the expenditure and therefore contract less or no domestic debt for financing budget deficit.

The results of the study of the relationship between budget deficit and domestic debt indicate that there is a positive relationship between budget deficit, government expenditure and government revenue and domestic debt. The relationship between domestic debt and government revenue being the highest of 0.636 coefficient of correlation. The relationship between budget deficit and domestic debt has a coefficient of .0.010 and a coefficient of 0.270 for the relationship between domestic debt and followed by the government expenditure.

It was further found out that there was a negative relationship between domestic debt and interest rates and inflation rates with a coefficient of correlation of -.120 and -.055 respectively.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter discusses the summary of the findings, conclusion of the study, policy recommendations, limitations of the study and areas for further research.

5.2. Summary

This was a study to determine the relationship between budget deficit and domestic debt. It found that the budget deficit had appositive relationship with the domestic debt. The budget deficit affected domestic debt directly because the government borrows domestically to finance budget deficit. From the domestic debt model a positive relationship exists between budget deficit and domestic debt. This observation was also made by (Muaka 2007) who studied domestic debt sustainability in Kenya and noted that the fast rise in the Kenya domestic debt in the last decade has been attributed mainly to declining and unpredictable external inflows which has forced governments to borrow from the domestic markets to finance the gap.

The government revenue and expenditure have a positive relationship with the domestic debt . They affected the domestic debt indirectly through the budget deficit, because budget deficit occurs when government revenue is not able to cover the government expenditure. With a budget deficit the government borrows domestically to finance the budget deficit.

The inflation rate had a negative relationship with the domestic debt. It affected the domestic debt indirectly because rise in inflation rates would result in the foreign debt payments rise due to devaluation of the local currency. This then result in budget deficit and therefore increased domestic debt to finance the budget deficit.

The interest rate had a negative relationship with the domestic debt because rise in interest rates would crowd out the private sectors which would   result in slowed economic growth. The slow economic growth was expected to result in less taxes from the private sector and therefore less government revenue which then results in budget deficit in the following financial years.

5.3. Conclusion

This study was carried out to determine the relationship between budget deficit and domestic debt. Regression analysis involving five independent variables; budget deficit, government expenditure and revenue and inflation rates and interest rates was carried out. The study found that there is a positive relationship between budget deficit and domestic debt , as the budget deficit level increased the domestic debt increased too. It was found that the   budget deficit was critical in determining the level of domestic debt. If the government put in place measures to enhance fiscal discipline and therefore maintain budget deficit at zero level then the government could borrow for development purposes and not for financing budget deficit.

It was further found out that there was a positive relationship between government revenue, expenditure and the domestic debt. As the government expenditure and revenue increased domestic debt increased and vise versa. It was further noted that the two independent variables were critical in determining the levels of domestic debts.

It was further found out that there was a negative relationship between inflation rates and interest rates and   domestic debt. As the inflation rates and interest rates increased domestic debt decreased and vise versa. It was further noted that the two independent variables were critical in determining the levels of domestic debts.

5.4. Recommendations

The government to ensure fiscal discipline to maintain budget deficit and domestic debt low. In addressing fiscal policy the government through mministry of finance to ensure

that revenue collection was improved by expanding the tax base as was recently seen in the inclusion of rental income to the taxable income and the attempt to tax members of parliament. The government to control expenditure by putting polices in place to curb unnecessary expenditure eexample the treasury circulars that were put in place to restrict government expenditure on fuel consumption by requiring state officers to use vehicles of 1800 cc engine capacity or below. The government through central bank to ensure manageable inflation and interest rates were achieved and maintained by setting fair base lending rates and following up on commercial banks charging exorbitant lending rates.

5.5. Limitations of the Study

The study to determine the relationship between budget deficit and domestic debt was done and the following challenges were faced during the study:

Data Accessibility

The study to determine the relationship between budget deficit and domestic debt, involved five independent variables; budget deficit, government expenditure and revenue and inflation rates and interest rates . The data for 20 years was not easily accessible because there was no one document that had all the data. The budget deficit, government expenditure and revenue were obtained from the ministry of finance treasury website, while the domestic debt, inflation rates and interest rates were obtained from the Central Bank of Kenya website, the two websites had data from 1994 and not 1991, therefore the other data had to be obtained from the printed reports the quarterly economic budget review and monthly economic reviews both of ministry of finance and Central Bank of Kenya respectively.

Data Inconsistency

This study involved review of secondary documents. Similar data from different institutions that is ministry of finance and central bank printed reports reviewed contradicted. As a result the study relied on Central Bank of Kenya data for the domestic

debt ,inflation rates and interest rates, and ministry of finance for budget deficit, government expenditure and government revenue.

Detailed Data

The study period of 1991 to 2010 included the early nineties when the government was not preparing detailed debt data reports therefore it was not possible to obtain the detailed data for period 1991 to 1999, the data available was only annual figures.

5.6. Areas for further Research

The study on the relationship between budget deficit and domestic debt had shown that the budget deficit has positive relationships with the domestic debt and was critical in the determination of the domestic debt levels. It was also found that government revenue and expenditure had a positive relationship to domestic debt and were also critical in the determination of the levels of domestic debt. It was further found that inflation and interest rates had a negative relationship with domestic debt and were critical in the determination in the levels of domestic debt. Out of these findings the following were areas scholars could consider for further research:

The relationship between government revenue and domestic debt because the government revenue and domestic debt had positive relationships.

The relationship between government expenditure and domestic debt because the government revenue and domestic debt had positive relationships.

The relationship between 91 day treasury bills and domestic debt because the it had a negative relationships.

The relationship between inflation rates and domestic debt because it had a negative relationships.

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APPENDIX I: GOVERNMENT GROSS DOMESTIC DEBT(SHILLINGS MILLIONS)

FISCAL YEAR	Total Domestic Debt***
Dec-91	59,798.00
Dec-92	59,985.00
Dec-93	25,763.00
Dec-94	125,900.00
Dec-95	184,,900.00
Dec-96	118,200.00
Dec-97	145,800.00
Dec-98	183,000.00
Dec-99	190,300.00
Dec-00	192,665.30
Dec-01	221,984.00
Dec-02	259,828.23
Dec-03	301,190.58
Dec-04	295,374.44
Dec-05	335,001.89
Dec-06	385,121.22
Dec-07	438,059.11
Dec-08	456,227.91
Dec-09	588,970.31
Dec-10	720,207.97
Dec-11	799,880.06

* The stock of Treasury bills includes Frozen Government Debt
** Other domestic debt includes Items in transit,Securities rediscounted and Tax Reserve Certificates

*** Gross Domestic debt excludes IMF funds on-lent by CBK to Government which are accounted for under External Debt

Source: Central Bank of Kenya and Treasury

	APPENDIX II:CENTRAL BANK OF KENYA INTEREST RATES		
	YEAR	**Average 91-Day Treasury bill**	
	1991	17	
	1992	18	
	1993	56	
	1994	25	
	1995	19	
	1996	23	
	1997	22	
	1998	23	
	1999	13	
	2000	12	
	2001	13	
	2002	9	
	2003	4	
	2004	3	
	2005	8	
	2006	7	
	2007	7	
	2008	8	
	2009	7	
	2010	4	
	2011	9	
Note: the average interest rates were obtained by summing up the monthly interest rates and computing the averages			

APPENDIX II B :CENTRAL BANK OF KENYA INTEREST RATES			
YEAR		**Average 91-Day Treasury bill**	
		Decimal	
1991		0.17	
1992		0.18	
1993		0.56	
1994		0.25	
1995		0.19	
1996		0.23	
1997		0.22	
1998		0.23	
1999		0.13	
2000		0.12	
2001		0.13	
2002		0.9	
2003		0.4	
2004		0.3	
2005		0.8	
2006		0.7	
2007		0.7	
2008		0.8	
2009		0.7	
2010		0.4	
2011		0.9	

Note: 1.the average interest rates were obtained by summing up the
monthly interest rates and computing the averages
2.The rates were converted to decimals by dividing with 100

APPENDIX III: INFLATION RATES

	YEAR	Consumer price inflation rates
	1991	19.60
	1992	27.30
	1993	45.60
	1994	28.80
	1995	1.60
	1996	9.00
	1997	11.20
	1998	6.60
	1999	5.60
	2000	10.01
	2001	5.87
	2002	1.96
	2003	9.82
	2004	11.62
	2005	10.31
	2006	14.45
	2007	9.76
	2008	16.27
	2009	6.82
	2010	3.96
	Source: Central Bank of Kenya	

APPENDIX III B : INFLATION RATES	
YEAR	Consumer price inflation rates
	Decimal
1991	0.1960
1992	0.2730
1993	0. 4560
1994	0.2880
1995	0.0160
1996	0.0900
1997	0. 1120
1998	0.0660
1999	0. 0560
2000	0.1001
2001	0.587
2002	0.0196
2003	0.0982
2004	0.1162
2005	0. 1031
2006	0. 1445
2007	0. 0976
2008	0. 1627
2009	0. 0682
2010	0.0396
Source: Central Bank of Kenya	