THE EFFECT OF PUBLIC SECTOR BORROWING ON ECONOMIC GROWTH IN KENYA

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DECLARATION

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

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This research project has been submitted for examination with my approval as the Candidate's university supervisor.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATION

ADF : Augmented Dickey-Fuller

ARDL : Auto Regressive Distributed Lag

CBK : Central Bank of Kenya

FDI : Foreign Direct Investment

GDP : Gross Domestic Product

IMF : International Monetary Fund

PFMA : Public Finance Management Act

ABSTRACT

Public sector borrowing is the debt owed by a central government. In federal states, government debt may also refer to the debt of a state or provincial, municipal or local government, the borrowing resource as one of the main supplements that fill the financing gap should yield at least an interim period growth for many developing countries The effect of external debt on growth may also be obtained from the efficiency of external debt management, when the debt funds are channeled into growth promotion orientations with effective usages that can make the positive effect of debt on growth more than the negative effect. The study sought to determine the effects of public sector borrowing on economic growth in Kenya. The research was based on Debt Overhang Theory, Theory of Expenditure, and Neoclassical Growth Theory. This study adopted a descriptive research design, secondary data was collected in this study. The study used secondary data on external borrowing from the Ministry of Finance, Kenya National Bureau of Statistics, and Central Bank of Kenya (CBK), internet, world development indicators and World Bank data. The data was collected from 1964 to 2014. Data was analyzed using SPSS version 21.0. The study established a significantly strong positive correlation between economic growth (GDP) and domestic debt (r=0.990, p=0.000), external debt (r=0.963, p=0.000), domestic interest (r=0.954 p=0.000), domestic debt redemption (r=0.923, p=0.000) external interest (r=0.707, p=0.000), external debt redemption (r=0.692, p=0.000). The study also established a significantly weak and negative correlation between the rate of inflation and economic growth (GDP) (r = -0.385, p= 0.039. The study concludes that Kenyan economic growth rate is significantly influenced by public borrowing. Particularly, debt payment and interest negatively influence economic growth in Kenya. The study recommends that the Kenyan government should encourage sustainable external borrowing provided the funds are utilized in productive economic avenues. The government should institute efforts to channel domestic debt revenue to productive activities in the economy so that debt does not rise to become unsustainable. This would require funding well appraised productive projects to foster economic growth. Excessive domestic borrowing can be inflationary and may crowd out private sector borrowing; therefore close monitoring of government borrowing through the domestic market is therefore necessary. The study revealed that moderate inflation rates can yield gains in GDP growth; therefore policy makers in Kenya should low rates of inflation in order to foster higher economic growth.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

During the three decades beginning in the 1950s, deficits in the current account were considered normal. According to Adepoju (2007), Countries were encouraged to borrow abroad and create an environment conducive to foreign investment to boost their economic growth. In the process, little attention was paid to the liabilities side of the current account deficit which increased the external indebtedness of these countries, until when Mexico, despite being an oil exporter, declared in August 1982, that it could not service its borrowed finances.

Krumma (2005) noted that the likely cause of the crisis rooted back to the economic and political conditions of many poor countries in 1970's.During that period, many developing countries got an expanded access to private financial and other trade credits and spend more on public expenditure. Beside this many of the countries were not in a good position to hold out the second oil shock which happened in the late 1970's.During the early 1980's (1980 - 1983) the overall world recession following the oil shock and a response from lender countries (high interest rate, a decline in official lending and a delayed adjustment program) makes the situation very difficult for many developing countries. As a result the economic condition of many sub-Saharan countries declines adversely.

Although it is stated that Kenya is expected to reach sustainable levels of debt without special help (IMF 2001), this is unlikely to happen, given the country's current economic situation. While the country is grappling with high poverty levels, economic performance continues to deteriorate. For the first time since independence, the country recorded a negative growth of 0.3 per cent in gross domestic product (GDP) in 2000. In fact, the exclusion of Kenya from the heavily indebted poor African countries debt initiative is likely to have been partly based on its poor record of reforms and economic performance rather than its ability to attain sustainable levels of external debt (Adepoju, 2007). Kenya's external debt indicators debt-to-GDP ratio and debt-to exports ratio have risen from an average of 38.5 per cent and 121.1 per cent for the 1970-80 period to 89.2 per cent and 268.2 per cent for period 1991-99, respectively.

According to the World Bank Debt Sustainability Analysis report (2013) Kenya's debt outlook has strengthened. The report noted that despite weaker than projected economic growth, all debt indicators have improved as a result of lower fiscal and current account deficits in 2011 and 2012, and more favorable exchange rate developments. The World Bank finally notes that Kenya's risk of external debt distress remains low, while overall public sector debt dynamics continue to be sustainable. Moreover, the report noted that under the baseline scenario and all the stress tests, Kenya's external debt burden indicators do not breach any of the relevant policy-dependent thresholds.

1.1.1 Public Sector Borrowing

Public debt can be classified as sum of external debt and domestic debt (Akram, 2010). Public sector borrowing is the debt owed by a central government. In federal states, government debt may also refer to the debt of a state or provincial, municipal or local government. According to Patillo, Poirson and Ricci (2004), public debt can influence economic growth through total factor productivity (TFP). As a country funds its deficits by foreign external debt, it dedicates a larger fraction of the future output to foreign entities. This in turn can reduce the incentives for higher productivity as people will not be motivated to innovate and become more efficient because foreign investors would benefit most. With dangerously high levels of debt, investments decrease and uncertainty increases. This change in expectations has a structural change in investments, which become predominantly short-term rather than long-term. These changes have a negative effect on the sustained capital accumulation since the investments bear a higher risk and uncertainty. Intuitively no investor would like to tie a big portion of capital in an investment that may be risky. This may have a negative effect on productivity in the economy (Patillo *et al.,* 2004)

Empirical studies have established that public debt can have negative or positive effects on economic growth. Akram (2010) argue that the positive effects of public debt relate to the fact that in resource-starved economies debt financing if done properly leads to higher growth and adds to their capacity to service and repay external and internal debt. Al-Zeaud (2014) examined the impact of public debt on the performance of the Jordanian economy. The study established that public debt promoted economic growth in Jordan.

Similarly Pattillo, Ricci, and Poirson (2002) argued that reasonable levels of borrowing by a developing country is likely to enhance its economic growth. This becomes effective as long as borrowed funds and some internally ploughed back funds are properly utilized for productive investment. Growth therefore is likely to increase and allow for timely debt repayments. When this cycle is maintained for a period of time growth will affect per capita income positively.

On the other hand, studies (e.g. Siew and Yan 2015, Atique and Malik, 2012, Cerra, Rishi and Saxena, 2008) have established that public debt has negative effects on economic growth. Siew and Yan (2015) examined whether public debt contributed to Malaysia's economic growth for the period 1991 to 2013. The study established that a rise in public debt is associated with a drop in GDP. Similarly, Atique and Malik (2012) established that existence of high debt had negative impact the economic growth of Pakistan.

According to Siew and Yan (2015), the dramatic increase of public debt in developing countries has raised concerns as to whether the borrowings could help to improve economic growth or whether it could become a burden of responsibility that future generations would have to pay. When a country has a heavy public debt burden, the investors would worry about the ability of that country to pay the debts of the creditors. This would cause crowding out of investments. In addition, the creditors may also demand higher interest rates, as a safety measure due to increased risk, for them to keep financing the deficits (Cerra et al., 2008). This is not a good situation because a sharp increase in interest rate can harm the economic growth and would create a financial crisis.

1.1.2 Economic Growth

Economic growth is the increase in the market value of the goods and services produced by an economy over time either due to quantity or quality. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Adam and Bevan (2005), argued that the external borrowing crisis during the early 1980s severely affected the economic performance of many low-income developing countries and debt-relief initiatives were taken to reduce the deleterious impact of high external indebtedness on the growth of indebted countries. Actually, the repayment of external debt depletes already scarce capital resources, including tremendous government shares and grabs the opportunities from growth orientations such as profitable investments, export production support, human capital and infrastructure development expenditures. Additionally, as the ratio of external debt to GDP increases, the marginal real cost of external borrowing (which is the sum of the risk-free interest rate and a risk premium) accordingly increases. This would lead to liquidity and solvency problems, which may even result in financial crisis. All in all, the over-surge of external borrowing leads to investment slowdown and reduced economic growth rate effect.

However, with other conditional variables constant, the borrowing resource as one of the main supplements that fill the financing gap should yield at least an interim period growth for many developing countries, which are plagued by the lack of domestic savings and high current account deficits. The effect of external debt on growth may also be obtained from the efficiency of external debt management, when the debt funds are channeled into growth promotion orientations with effective usages that can make the positive effect of debt on growth more than the negative effect. Laubach (2009),

considered that a situation in which the gross burden of national borrowing may be offset in part or in total is when external borrowing finances government expenditure that could contribute to the real income of future generations, such as productive public capital formation. Diamond (2005), adds the effect of taxes on the capital stock and differentiates between public external and internal borrowing. Diamond concludes that, through the impact of taxes needed to finance the interest payments, both types of public debt reduce the available lifetime consumption of taxpayers, as well as their saving, and thus the capital stock. In addition, Laubach (2009), contends that internal borrowing can produce a further reduction in the capital stock arising from the substitution of government borrowing for physical capital in individual portfolios resulting in the crowding effect.

1.1.3 Effects of Public Sector Borrowing on Economic growth

According to Rusike (2007), the effects of public debt accumulation on investment and economic growth of a country are always questioned. There is no consensus on the role of external debt on growth. It has both positive and negative effect effects. Different experts are in view that public debt will have favourable effect on economic growth because it increases capital inflow. When used for growth related expenditures external debt can accelerate the pace of economic growth. It not only provides foreign capital for industrial development but also managerial know-how, technology, technical expertise as well as access to foreign markets for the mobilization of a nation's human and material resources.

Soludo (2003) stated that countries borrow for two broad categories, macro-economic reason (higher investment higher consumption i.e. education and health or to finance transitory balance of payment deficit to lower nominal interest rates abroad lack of domestic long term credit or to circumvent hand budget constraint. Thus that economy indulges in debt to boost economic growth and reduce poverty and do not suffer from macro-economic instability polices that distort economic incentive or sizeable adverse shocks. As a result of this, growth is likely to increase and allow for timely debt payment. When the circle is maintained for a period of time growth will affect per capital positively which is a prerequisite for poverty reduction. The predictions are known to hold even in theories base on the more realistic assumption that countries may not be able to borrow freely because of the risk of debt denial.

Krumma (2005) argued that, if the available external public debt improves the productive capacity of the borrowing country. It is unnecessary to take extra external loan to service the original debt. According to Soludo (2003), if marginal productivity of each available external debt is greater than or equal with the principal and the interest payment, external public debt will have a positive impact on the economy of the borrowing country. This in turn will require the foreign debt to be used in productive sectors and in basic infrastructures which can enhance the productivity of other sectors. Under this condition external debt servicing doesn't affect economic growth. But, if the borrowing country failed to service its debt, it will lose its' credit worthiness; and this in turn might affect the economic performance of the borrowing country by reducing the availability of foreign debt.

1.1.4 Public Sector Borrowing and Economic growth in Kenya

Sustainable economic growth is of major concern for all economies, especially in developing economies. These economies commonly face burgeoning fiscal deficits mainly driven by external debt servicing and widening current account deficits (Reinhart, 2012). Kenya as a country has not attained a continuous economic growth duration for a long period of time. The Kenyan growth rate has been fluctuating from 1960s with more economic growth rates being noticed in 1960s and beginning of 1970 before economic performance started declining in the mid-1970.

The public sector borrowing in Kenya has been rising across the period 1964-2014. Total debt (in million KShs.) debt in Kenya rose from 1,722.20 in 1964 to 5,309.40 in 1974, 44,208.00 in 1984, 287,205.60 in 1994, 697,804.00 in 2004 to 2,217,312.00 in 2014. The country acquired maximum external debts of KShs. 1362.40 million in 1964 and the minimum external debts of KShs. 1138504.70 million was acquired in 2014. Minimum value of domestic debt at KShs. 359.80 million was recorded in 1964 while the maximum value of domestic debt at KShs. 1078807.30 million was recorded in 2014.

The real GPP growth rate has been fluctuating across the period 1964-2014. The average real GDP growth was 5.77% in the period 1963-1978. The average real GDP growth dropped to 3.07% in the period 1979-2001.

The country recorded a slight increase in the average real GDP growth to 4.39% in the period 2002-2014. The minimum rate of real GDP growth (0.2%) was recorded in 1993 while the maximum rate of real GDP growth (7.3%) was recorded in 1971. The statistics shows that whereas real GPP growth rate had been fluctuating across the period 1964-

2014, the value of both external and internal debts had significantly risen across the same period. The value of external remained higher that domestic debt across the period 1964-2014.

Public debt in Kenya is regulated by the Constitution of Kenya 2010, the Public Finance Management Act, 2012 and the Public Finance Management (Amendment) Act, 2014. Article 214 (2) of the Constitution of Kenya 2010 defines the public debt as all financial obligations attendant to loans raised or guaranteed and securities issued or guaranteed by the national government. Article 214 (1) of the Constitution of Kenya 2010 states that the public debt is a charge on the Consolidated Fund, but an Act of Parliament may provide for charging all or part of the public debt to other public funds. In this regard, parliament enacted the Public Finance Management (PFM) Act, 2012 to regulate government borrowing. (PFM) Act, 2012 was later amended to the PFM (Amendment) Act, 2014.

Section 50 of the PFM Act, 2012 outlines the obligations and restrictions on national government guaranteeing and borrowing. The PFM Act, 2012 places a control of government guaranteeing and borrowing in the hands of parliament. According to section 50 (2) of the PFM Act, 2012, the national government may borrow money in accordance with this PFM Act, 2012 or any other legislation and shall not exceed a limit set by Parliament. Section 50 (3) of the PFM Act, 2012 further state that the national government may borrow money only for the budget as approved by Parliament and the allocations for loans approved by Parliament.

Moreover Section 50 (5) of the PFM Act, 2012 state that parliament shall provide for thresholds for the borrowing entitlements of the national government and county governments and their entities.

The amendment of the Section 50 of the PFM Act, 2012 as enacted in Section 50 of the PFM (Amendment) Act, 2014 resulted in empowerment of the cabinet secretary for finance in regards to management of government borrowing. Section 50 (7) (b) of the PFM (Amendment) Act, 2014 states that the Cabinet Secretary shall ensure that the proceeds of any loan raised under the Act are paid into any other public fund established by the national government or any of its entities as the Cabinet Secretary may determine in accordance with regulations approved by Parliament. Section 50 (5) of the PFM (Amendment) Act, 2014 states that the Cabinet Secretary shall ensure that the proceeds of any loan raised under the Act are disbursed directly to the suppliers where the loan is a government to government loan and is raised for the purpose of financing goods and services provided by a supplier outside Kenya.

In the 1980s and the years preceding, Kenya was among the major aid recipients in Africa, largely to put up infrastructure so as to integrate the large rural economy into the then emerging import substitution Kenyan economy (Putunoi & Mutuku, 2013). The 1990s witnessed a steady decline in development assistance to Kenya occasioned by a perception of poor governance and mismanagement of public resources and development assistance. Other factors include the end of the cold war and the collapse of the Soviet Union. These led to a debt crisis in the country in the early 1990s which turned Kenya into a highly indebted nation.

1.2 Research Problem

The increase in advanced countries' external debt as result of global economic and financial crisis has led to a serious concern of debt sustainability and the economic impact. Public debt may affect economic growth through different channels for example; long term interest rates, higher future tax distortion, a rise in inflation, uncertainty and vulnerability to crisis (Reinhart, 2012). If economic growth is negatively affected, fiscal sustainability issues are likely to be exacerbated which further affects fiscal adjustment efforts to reduce debts to more sustainable levels.

While Kenya is grappling with high poverty levels (with 56 per cent of the population living below the poverty line), economic performance continues to deteriorate. For the first time since independence, the country recorded a negative growth of –0.3 per cent in gross domestic product (GDP) in 2000. According to Manundu (2004), the exclusion of Kenya from the heavily borrowing poor countries debt initiative is likely to have been partly based on its poor record of reforms and economic performance rather than its ability to attain sustainable levels of external debt.

Kenya's external borrowing indicators-debt-to-GDP ratio and debt-to exports ratio—have risen from an average of 38.5 per cent and 121.1 per cent for the 1970-80 period to 89.2 per cent and 268.2 per cent for 1991-99 period, respectively. Meanwhile, there have been significant net outflows since 1991 to service the debt obligations. This implies that Kenya has been paying out more funds than it receives, thereby reducing domestic resources available for development.

At the same time, there are very limited options for government to co-finance development activities through domestic borrowing. Although domestic borrowing constitutes less than a third of the total formal borrowing, it is almost ten times as expensive as external borrowing. The motivation for public borrowing must always be distinguished from the reason for borrowing.

The recent amendment to Section 50 (7) of PFMA 2012 makes the interrogation of the borrowing motives imperative. From the time the amendment was done in May, 2014, public debt has increased by 34% from Kshs. 2,190.39 billion to Kshs. 2,933.69 billion in August, 2015. The sections 50 (7) (c) and (d) of the PFMA (Amendment) Act, 2014 allows eternal parties to motivate national borrowing with the intention to benefit from fees, commissions and expenses associated with money borrowed. The external parties include financial arrangers, book runners, fiscal agents, trustees, paying agents, exchange and information agents, syndicate agents, counsel, clearing systems, listing agents and rating agencies [PFMA (Amendment) Act, 2014, sections 50 (7) (d)].

The debt repayment capacity and sustainability of government debt in Kenya has also elicited substantial public debate. Debt obtained should be used efficiently, in a way that secures economic growth and efficient allocation of resources in the long run. Debt is used efficiently if the ratios of debt service to total revenue and external debt service to exports fall or remain constant. The projects for which borrowed money is used would generate sufficient output and exports for debt repayment. However, a section of the public, financial experts and legislators criticized government for rising public debt, increased wage bill and grand development project which are yet to be implemented despite government borrowing to finance such projects. Government critiques cite

examples such as KENREN project in which the intended fertilizer manufacturing company was not established, the Anglo leasing and the recent debate on the management of proceeds from Eurobond.

Limited empirical studies in Kenya have examined economic growth. For instance, Kamau (2001) analyzed debt servicing and economic growth in Kenya. The study established a negative relationship between debt servicing and economic growth rate. Mwau (2014) examined the relationship between growth and inflow of foreign capital in Kenya. The result indicated that capital formation was the major driver of economic growth while private capital inflows had a positive effect on the balance of payment. None of the empirical studies above has investigated the relationship between external borrowing and economic growth in Kenya. This study sought to bride the research gap by examining the effect of public sector borrowing on economic growth in Kenya. The study sought to seeks to answer the question: what is the effects of public sector borrowing on economic growth in Kenya?

1.3 Research Objective

To determine the effect of public sector borrowing on economic growth in Kenya.

1.4 Value of the Study

The government and other institutions involved in the country's policy formulation cannot overlook the economic sector as one of the major contributor to the country's GDP. The findings from this study will therefore be of importance because they will have the capacity of being used to formulate positive fiscal policies which are relevant and sensitive to the forces influencing the economic growth in Kenya. The study will enable

policy makers obtain knowledge of financial sector dynamics and the appropriate strategies to be applied to enhance economic performance and therefore obtain guidance from this study in designing appropriate policies that will regulate the economy of the country.

The study will be beneficial to various stakeholders; it will be a source of information to the profit making companies and organizations. To profit making companies and organizations, the realization of economic status of the country will enable them to carry out competitive business locally and globally. To the economic sector of the country, this study finding will be of great importance because through them, these profit making companies and organizations will be better positioned to gauge their performance and make improvements where necessary to boost their market performance and overall ranking in the securities exchange.

To the academicians the study will contribute to the existing literature in the field of economic practices and growth of the country. It should also act as a stimulus for further research to refine and extend the present study especially in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the related literature on effects of public sector borrowing on economic growth as presented by various researchers, scholars, analysts and authors. The chapter also provides the theories underpinning the study.

2.2 Theoretical Review

This section examines the various theories that will be used to inform the study on effects of public sector borrowing on economic growth. The theories include; debt overhangs theory, theory of expenditure and neoclassical growth theory.

2.2.1 Debt Overhang Theory

Debt overhang is the condition of an organization (for example, a business, government, or family) that has existing debt so great that it cannot easily borrow more money, even when that new borrowing is actually a good investment that would more than pay for itself. Debt overhang, first formalized by Myers (1977), captures the insight that investment often leads to external benefits that accrue to the firm's debt claims. These external benefits consequently lead equity holders (or equivalently managers who are paid in equity) who make investment decisions to internalize only part of investment benefits, and hence to underinvest relative to the level that maximizes the total value of the firm.

The theory is based on the premise that if debt will exceed the country's repayment ability with some probability in the future, expected debt service is likely to be an increasing function of the country's output level. Thus some of the returns from investing in the domestic economy are effectively 'taxed' away by existing foreign creditors and investment by domestic and new foreign investors are discouraged.

Borensztein (2001) found that debt overhang had an adverse effect on private investment in Philippines. Iyoha (2006) found similar results for Sub-Saharan Africa countries. He concluded that heavy debt burden acts to reduce investment through both the debt overhang and the 'crowding out' effect. However, Cohen's (1999) results on the correlation between developing countries debt and investment in the 1980s showed that the level of stock of debt does not appear to have much power to explain the slowdown of investment in developing countries during the 1980s. It is the actual flows of net transfers that matter. He found that the actual service of debt 'crowded out' investment.

Elbadawi (2006), also confirmed a debt overhang effect on economic growth using cross-section regression for 99 developing countries spanning Sub-Saharan Africa, Latin America, Asia and Middle East. They identified three direct channels in which indebtedness in Sub-Saharan Africa works against growth: current debt inflows as a ratio of GDP (which should stimulate growth), past debt accumulation (capturing debt overhang) and debt service ratio. The fourth indirect channel works through the impacts of the above channels on public sector expenditures. They found that debt accumulation deters growth while debt stock spurs growth. Using data for Cameroon, Mbanga and Sikod (2001), found that there exist a debt overhang and crowding-out effects on private

and public investments, respectively. Other studies that have found a negative effect of external debt on growth include. Some studies simply use simulation analysis to show the impact of the debt burden indicators on economic growth under different scenarios. The theory is relevant to the study since it explains the situation based on the premise that if debt will exceed the country's repayment ability with some probability in the future, expected debt service is likely to be an increasing function of the country's output level.

2.2.2 Theory of Expenditure

Peacock and Wiseman's study (1990), is one of the best known analyses of the time pattern of public expenditures. They founded their analyses upon a political theory of public determination namely that governments like to spend more money and citizens do not like to pay taxes, and that government need to pay some attention to the wishes of their citizens. The duo saw taxation as setting a constraint on government expenditure. As the economy and thus incomes grew, tax revenue at constant tax rate would rise, thereby enabling public expenditure would show a gradual upward trend even although within the economy there might be a divergence between what people regarded as being desirable level of public expenditure and the desirable level of taxation. During the periods of social upheaval however, this gradual upward trend in public expenditure would be disturbed.

A war is not paid for from taxation; no nation has such large taxable capacity. Countries therefore borrow and debt charges have to be not after the event. Another effect that they thought might operate was the "imperfection effect" thus they suggested arise from the people Keener awareness of social problems during the period of upheaval. The

government therefore expands its scope of services to improve these social conditions and because people perception to tolerable levels of taxation does not return to its former level, the government is able to finance these higher levels of expenditures originating in the expanded scope of government and debt charges (Cohen, 1999).

The theory is relevant to the study because it explains what is required when a rapid increase in public expenditures is experienced; the government is forced to raise taxation levies. The rising of taxation levels would, however, is regarded as acceptable to the people during the period of crisis. Peacock and Wiseman (1990), referred to this as the "displacement effect". Public expenditure is displaced upwards and for the period of the crisis displaced private for public expenditure does not however fall to its original level.

2.2.3 Neoclassical Growth Theory

The neoclassical growth theory which has its origin from the Harrod Domar 1956 model explains the relationship between investment, growth rate and employment in an economy. According to this theory, production capacity is proportional to capital stock. Solow (1956) in his contribution to economic growth focused on the process of capital formation and assumed that production was a function of capital, labor and technology. He argued that if there were capital constraints growth, then capital can be substituted for labor. In this case, long run growth is determined by technological change and not by savings or investment. Saving only affects temporal growth or when the economy is moving to the long-term path. This is because the economy will experience diminishing returns as the ratio of capital per work increases. In his analysis, the long-term economic growth is possible through labor augmenting technological change and increase of capital per worker.

According to Claessens (2000), the level of economic growth in the exogenous growth model is explained through the process of transitional dynamics. Capital accumulation will allow productivity to increase up to the point where the economy reaches its steady state. If the rate of investment in capital, increases more savings, increases. In the new situation, savings exceed the natural decrease in per worker capital as a result of depreciation, population and technological growth. A higher investment rate therefore leads to more capital available per worker, which causes the economy to move towards the right into a higher steady state level of growth. An economy beyond its steady-state however, will experience stagnation, or even a slowdown in future growth rates. The theory is relevant to the study since it explains relationship between investment, growth rate and employment in an economy

2.3 Determinants of Economic Growth

This section presents the literature review on ways through which debt determines economic growth. The section discuss the influence of debt overhang, credit rationing and debt service on economic growth.

2.3.1 Debt Overhang

Debt overhang is a condition when the debtor country failed to service its foreign debt obligation fully with the existing resources, and undertake a negotiation with creditors to determine actual debt payment; this time the payment linked to the economic condition of the debtor country (Borensztein, 2001). As a result, part of the increase in output will be used to pay the forthcoming debt. This in turn creates a dis incentive on private investment and poses a hindrance on the government to pursue the right policies. Public debt might affect economic growth through the debt overhang effect; this is the case

when debt servicing discourages current as well as future investment plans (Classens and Diwan, 2000).

Borensztein (2001) argue that debt overhang create an adverse effect on private investment and become strong when private debt used as measure of debt overhang. Even in the condition all public debt is owned by government, debt overhang has a negative effect on private saving and investment. In the other side government become preventative; to formulate policies that promote domestic capital formation or to decrease domestic consumption for a higher future economic growth, as the benefit goes to creditors in the form of debt payments.

2.3.2 Credit Rationing

According to Borensztein (2001), another way that public debt affects investment is through the credit rationing effect. This is a condition faced by countries that failed to get a new loan because of their inability or willingness to pay.

Classens and Diwan (2000) also categorized the effect of external borrowing on investment and economic growth in to two. First, debt servicing might put away (take) the limited resource of poor countries that could be used in public spending. More specifically, resources used to service the accumulated debt may crowd out public investment and also private investment due to complementarities between private and public investment.

2.3.3 Debt Service To Export Ratio

For Ajayi (1997), the disincentive effect on investment comes when indebted countries fail to service their debt based on the contractual obligation. Therefore it is not vital to measure debt overhang based on the amount of accumulated debt. Ajayi (1997), also suggested that, to maintain a stable and unaffected trend in production and investment, a high debt service export ratio should be serviced regularly.

Heavy debt servicing put many countries on a fiscal deficit, which will lead to numerous problems: First, servicing a debt may demand an increase in tax to raise resources (Ajayi, 1997). The expectation of a higher tax may discourage investment; this is the case for debt overhang. Second, as payments are made using foreign exchange; most indebted countries transfer domestic resources to foreign exchange. To raise large sum of foreign currency, countries might use aid income. And this will in turn affect overall economic performance. Third, when Poor countries faced a high debt service payment request, they might be forced to reduce spending on public investment. This in turn related to the crowding out effect of foreign debt (Ajayi, 1997).

According to Elbadawi (2006), the channels through which the public debt affects growth have been identified as: stock of public debt as a ratio of gross domestic product which should stimulate growth; past debt accumulation (lagged debt- gross domestic product ratio) which impacts negatively on growth; the debt-service ratio, which captures the crowding out effect. As the stock of debt and cost of external borrowing servicing rise, there is little left to finance public development projects and social services. This leads to severely compressed budgets and/or fiscal deficits. These fiscal deficits aggravate further

external borrowing as a source of financing the deficits. Besides these variables, the model also incorporates other policy, fundamental and shock variables. The model adopted is based on Elbadawi's (2006) model. Like in similar studies, the debt burden indicators enter the production function directly.

2.4 Empirical Literature Review

The review of existing empirical studies of external borrowing and economic growth relationship indicate that there is an adequate relationship between economic growth and external borrowing. Were (2001), carried out an empirical assessment on the impact of external debt on economic growth in Kenya. The findings of the study indicate that Kenya's external debt is mainly from multilateral sources. External debt accumulation has been rising over the years with debt burden indicators increasing steadily in the early 1990s. Using time series data for the period 1970- 95, the empirical results indicated that external debt accumulation has a negative impact on economic growth and private investment.

Kamau (2001), analyzed debt servicing and economic growth in Kenya, The study employed a single equation model with real GDP growth rate as a function of debt servicing among other factors and simultaneous equation model consisting of several structural equations. The results from both models indicated that there is indeed a negative relationship between debt servicing and economic growth rate.

Clements (2003), examined the channels through which external borrowing affect economic growth in 55 LICs over the time 1970-1999. The study suggested that beyond a certain threshold, higher external borrowing is associated with lower rates of growth of

per capita income. The results indicated a threshold level of around 30–37 percent of GDP or around 115–120 percent of exports. The study observed that the negative effect of borrowing on growth works not only through its impact on the stock of debt, but also through the flow of service payments on borrowing, which are likely to 'crowd out' public investment. This is so because service payments and repayments on external borrowing soak up resources and reduce public investments. The damaging impact of debt servicing on economic growth is attributable to the reduction of government expenditure resulting from debt induced liquidity constraints.

Boopen (2007), investigated the relationship between external public borrowing and the economic performance for state of Mauritius over the period 1960-2004. The results suggested that external borrowing have been negatively associated with the output level of the economy in both short and long run. Bicausality between public debt and economic development was also reported. Moreover, there were also evidences that public borrowing have negative impact on both private and public capital stock of the country thus confirming the debt overhang and crowding out hypotheses. Patenio and Tan-Curz (2007), studied the relationship between external borrowing servicing payments and economic growth in Philippine for period 1981 to 2005. Results showed that economic growth was not very much affected by external borrowing servicing. This was probably because external debt servicing in Philippines was not yet a threat in economic growth and thus, Philippines should not fear of experiencing debt overhang in the near future.

On a Similar line Cholifihani (2008), analyzed the short run and long run relationship between external borrowing and income in Indonesia from 1980 to 2005. The findings showed that GDP, DSR, capital stock, labour force and human capital inputs have a long run equilibrium relationship. External borrowing servicing showed a significant negative relationship with GDP, which indicated that debt overhang phenomenon, has occurred in Indonesia in the long run. While labour force and human capital was main supporting variables of GDP in the long run; however capital stock is significant variable in boosting economic growth.

Hasan and Butt (2008) explored the association between external borrowing and economic growth in Pakistan for the period of 1975-2005 using Auto Regressive Distributed Lag (ARDL) approach to cointegration. Results indicated that labor force and trade both in the long run and the short run mainly determined economic growth in Pakistan. Total borrowing was not to be an important determinant of economic growth either in the short-run or the long run mainly due to inefficient use of external borrowing.

Safdari and Mehrizi (2009) investigated the impact of external borrowing on economic growth in 24 developing countries from 1976 to 2003.The study applied random effect and fixed effect estimation. The results showed that debt servicing to gross domestic product negatively affect the economic growth and may leave less funds available to finance private investment in these countries leading to a crowding out effect.

Adesola (2009), examined the effect of external borrowing service payments on the economic growth in Nigeria by using ordinary least square multiple regression method for his analysis. It was found out that debt service payments have negative impact on

economic growth. Abu Baker and Hassan (2008), focused to analyze the impact of external borrowing on economic growth in Malaysia. The analysis was conducted both at aggregate and disaggregate level. The empirical results indicated that total external borrowing positively affected the economic growth at aggregate and disaggregate level. In the short run, total external borrowing had positive effects on economic growth. It also revealed that Malaysia had not suffered from debt overhang problem.

Putonoi and Mutuku (2012), concentrated on the effects of domestic debt owing to the shifting composition of public debt in favour of domestic debt in Kenya. The study used advanced econometric techniques and quarterly time series data from 2000 to 2010. The Jacque Bera (JB) and Augmented Dickey-Fuller (ADF) tests were used to investigate the properties of the macroeconomic time series in the aspect of normality and unit roots respectively, while the long run relationship between the variables was investigated using the Engel-Granger residual based and Johannes VAR based cointegration tests.

Mweni (2013), did a study on critical review of external debt and economic growth in Kenya, GDP growth, inflation, and official exchange rates. Despite the availability of numerous studies globally on the relationship between external debt and macroeconomic variables, the findings vary from country to country due to the differences in macroeconomic environments. Further, the policy environment plays an overriding role in determining the effect of external debt on macroeconomic indicators and debt sustainability, and not the size of debt relative to GDP.

Mwau (2014), examined the relationship between growth and inflow of foreign capital in Kenya. His analysis focused on the effects that foreign capital has on investment, foreign trade and balance of payment, money supply and economic growth. The finding showed that the proportion of gross capita formation that comes from FDI was very low in Kenya and that could possibly explain the reason as to why the extent of influence on economic growth is not very strong. However, the result indicated that capital formation was the major driver of economic growth while private capital inflows had a positive effect on the balance of payment.

Siew and Yan (2015) examined the relationship between public debt and economic growth in Malaysia. The study examined whether other indicators of debt burden, such as budget deficit, budget expenditure, and external debt service and government consumption, have an impact on economic growth. The results indicate that public debt over time has a negative impact on GDP. In addition, it is found that the budget deficit, government consumption and external debt service are a decreasing function of GDP. Mohd Daud et al. (2013) find that external debt has a negative impact on Malaysia's long-run economic growth. They also find the existence of short run causality linkages between external debt and economic growth.

2.5 Summary of the Literature Review

The objective of this study is to determine the effects of public sector borrowing on economic growth in Kenya. The results of most studies have reported the effects of external borrowing of different countries at different time's majority three decades beginning in the 1960s. Most studies tend to confirm debt overhang/crowding-out effects. Nonetheless, the empirical literature is mainly focused on evaluating the impact of

external debt on investments rather than on economic growth per se. Moreover, these studies are mainly based on data across countries in disregard to each country's uniqueness. While the findings are quite revealing, there is need for case-by-case studies in view of each country's unique characteristics. This is particularly important given the stringent conditionalities for debt relief initiatives. In addition, most empirical studies suffer from methodological limitations in the sense that there is a tendency to ignore the non-stationary of time series data. This is despite the fact that working with non-stationary variables lead to spurious regression results. That notwithstanding, very few empirical studies on Kenya's external debt exist and, even then, they do not focus on the analysis of external debt and economic growth (Rono, 2002).

Local studies on the other hand have mainly dealt with the impacts of the external debt on the economy beginning in the 1960s and 1970s. The findings on External debt accumulation have been rising over the years with debt burden indicators increasing steadily in the early 1990s. Using time series data for the period 1970-1995, the empirical results indicated that external debt accumulation has a negative impact on economic growth and private investment. This confirms the existence of a debt overhang problem in Kenya. However, the results also indicated that current debt inflows stimulate private investment. Debt servicing does not appear to affect growth adversely but has some crowding out effects on private investment, thus given these findings in the literature and lack of substantive local study on external borrowing on economic growth. This study seeks to establish the effect of public sector borrowing on economic growth in Kenya for a period hence the research gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is a blueprint of the methodology that was used by the researcher conduct the study. In this chapter the research methodology was presented in the following order; research design, data collection, and finally the data analysis.

3.2 Research Design

This study adopted a descriptive research design which according to Schindler (2003) is appropriate where the study seeks to describe the characteristics of certain groups, estimate the proportion of people who have certain characteristics and make predictions. The primary purpose of the study was to study the effects of public sector borrowing on economic growth in Kenya.

3.3 Data Collection

The secondary data was collected in this study. The study used secondary data on external borrowing from the Ministry of Finance, Kenya National Bureau of Statistics, Central Bank of Kenya (CBK), internet, world development indicators and World Bank data. Since the data might not be harmonious, the study will reconcile and try to use most correct and consistent data for the analysis. The data was collected from 1964 to 2014

3.4 Data Analysis

The researcher collected data on public sector borrowing. From the secondary data sources, the study used the following model to analyze the relationship between public sector borrowing and economic growth.

3.4.1 Analytical Model

The study adopted that following multivariate regression model:

$$\mathbf{EC = \beta o + \beta_1 INF + \beta_2 ED + \beta_3 DD + \beta_4 EDR + \beta_5 DDR + \beta_6 EI + \beta_7 DI + ę}$$

Where:

EC = Economic Growth measured by (GDP growth rate)

(GDP is calculated as C + I + G + (Ex - Im), where "C" equals spending by consumers, "I" equals investment by businesses, "G" equals government spending and "(Ex - Im)" equals net exports, that is, the value of exports minus imports).

INF=Inflation Rate (annual %)

ED = External debt measured as natural log of total external debt stocks in USD

DD = Domestic Debt (annual amounts in million Kenya Shillings)

EDR= External Debt Redemption (annual amounts in million Kenya Shillings)

DDR = Domestic Debt Redemption (annual amounts in million Kenya Shillings)

EI= External Interest (annual amounts in million Kenya Shillings)

DI= Domestic Interest (annual amounts in million Kenya Shillings)

βo= constant term of the regression

B_1– β_5 are the regression co-efficient

ę= standard error

3.4.2 Test of Significance

The results are said to be statistically significant within the 0.05 level, which means that the significance value must be smaller than 0.05. The significance was determined by the t-value, which indicates how many standard error means the sample diverges from the tested value (Kothari, 2004). In addition, the Pearson Product Moment Correlation Coefficient was used to test the direction and magnitude of the relationship between the dependent and independent variables at 95% confidence level. The model significance was tested using the analysis of the variance (ANOVA) which showed the relationship between public sector borrowing and economic growth at 95% confidence. Statistical inference techniques were used in making conclusions relating to the accuracy of the model.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and findings of the research. The objective of this study was the objective of this study is to establish the effect effects of public sector borrowing on economic growth in Kenya. The study used secondary data GDP, external debt, domestic debt, external debt redemption, domestic debt redemption, external interest and domestic interest. With the exceptions of debt redemption and interests, data was collected for the period 1964 -2014. The data on debt redemption covers the period 1964-2014 while data on interest covers the period 1986-2014. The study could not access the data on debt redemption for the period 1964-1979 because the available data was inclusive of interest payments and the study could not derive the values of debt redemption due to unavailability of data on interest rates for the period 1964-1979.

4.2 Descriptive Statistics

The study findings in Table shows the mean and standard deviations for the dependent and independent variables. The GDP is in both annual percentage and million Kenyan Shillings. The rate of inflation is in annual percentage. The remaining variables external debt, domestic debt, external debt redemption, domestic debt redemption, external interest and domestic interest are in million Kenyan Shillings.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
GDP (annual %)	51	0.2	7.3	4.19	2.01
GDP (KShs. Mn)	36	45540	5357671.7	1154639.447	1430957.217
Inflation (annual %)	51	-0.17	45.98	12.66	9.82
External Debt	51	1362.4	1138504.7	204683.36	261365.24
Domestic Debt	51	359.8	1078807.3	144074.19	244957.26
External Debt Redemption	35	728.2	85253	15849.73	15239.24
Domestic Debt Redemption	35	342.4	150000.9	40995.39	41004.71
External Interest	29	2040.8	24512.52	7490.51	4293.4
Domestic Interest	29	3963.4	122928.11	36740.9	31112.9

Source: Research Findings

The study findings in table 4.1 shows an average GDP of 1154639.447 million Kenyan Shillings and an average annual rate of GDP at 4.19%. The standard deviation (4.37% and KShs 1430957.217 million) shows a wide dispersion of the GDP across the period 1964 to 2014 (majority of the GDP rates are within 2 standard deviation). The minimum rate of GDP (0.2%) was recorded in 1993 while the maximum rate of GDP (7.3%) was recorded in 1971. The average rate of inflation was 12.66% with a minimum of -0.17% in 1966 and 45.98% in 1990. The standard deviation was 9.82 indicating a small dispersion of the inflation rates across the period 1964 to 2014.

The average external debt was KShs. 204683.36 million with a maximum and minimum external debts at KShs. 1362.40 and 1138504.70 in 1964 and 2014 respectively. The standard deviation of 261365.24 indicates a small dispersion of external debt across the period 1963-2014 (majority of values on external debt are within 1 standard deviation). The average domestic debt was KShs. 144074.19 million with a minimum and maximum of KShs. 359.80 and 1078807.30 million in 1964 and 2014 respectively. Domestic debt registered a standard deviation of 244957.26 which indicated a small dispersion across the period under investigation.

The average value of external debt redemption was KShs. 15849.73 million with a minimum of KShs. 728.20 million in 1980 and a maximum of KShs. 85253.00 million in 2013. The standard deviation of 15239.24 indicates a wide dispersion of external debt redemption values. The average domestic debt redemption was KShs. 40995.39 million. The minimum and maximum values of domestic debt redemption were KShs. 342.40 million in 1983 and KShs. 150000.90 million in 2014 respectively. The standard deviation of 41004.71 indicates a wide dispersion of domestic debt redemption.

The external interest averaged at KShs. 7490.51 (minimum KShs. 2040.80 million in 1986 and a maximum of KShs. 24512.52 million in 2014). The domestic interest averaged at KShs. 36740.90 (minimum KShs. 3963.40 million in 1986 and a maximum of KShs. 122928.11 million in 2014). The standard deviations for external and internal interests (4293.43 and 1112.90 respectively) indicated a wide dispersion of both variables over the period under investigation.

4.3 Correlation Analysis

The study used Pearson Product Moment Correlation to examine the relationship between the dependent and independent variables. Table 4.2 shows the Pearson Product correlation coefficient and their respective significance values.

Table 4.2: Correlations Coefficients

		GDP	INF	ED	DD	EDR	DDR	EI	DI
GDP	Pearson Correlation	1	-.385*	.963**	.990**	-.692**	-.923**	-.707**	.954**
	Sig. (2-tailed)		.039	.000	.000	.000	.000	.000	.000
	N	36	29	29	29	29	29	29	29
INF	Pearson Correlation	-.385*	1	-.435*	-.378*	-.335	-.407*	-.273	-.291
	Sig. (2-tailed)	.039		.018	.043	.075	.028	.151	.125
	N	29	29	29	29	29	29	29	29
ED	Pearson Correlation	.963**	-.435*	1	.966**	.671**	.935**	.801**	.940**
	Sig. (2-tailed)	.000	.018		.000	.000	.000	.000	.000
	N	29	29	29	29	29	29	29	29
DD	Pearson Correlation	.990**	-.378*	.966**	1	.668**	.934**	.719**	.936**
	Sig. (2-tailed)	.000	.043	.000		.000	.000	.000	.000
	N	29	29	29	29	29	29	29	29
EDR	Pearson Correlation	-.692**	-.335	.671**	.668**	1	.630**	.547**	.773**
	Sig. (2-tailed)	.000	.075	.000	.000		.000	.002	.000
	N	29	29	29	29	29	29	29	29
DDR	Pearson Correlation	-.923**	-.407*	.935**	.934**	.630**	1	.668**	.859**
	Sig. (2-tailed)	.000	.028	.000	.000	.000		.000	.000
	N	29	29	29	29	29	29	29	29
EI	Pearson Correlation	-.707**	-.273	.801**	.719**	.547**	.668**	1	.807**
	Sig. (2-tailed)	.000	.151	.000	.000	.002	.000		.000
	N	29	29	29	29	29	29	29	29
DI	Pearson Correlation	.954**	-.291	.940**	.936**	.773**	.859**	.807**	1
	Sig. (2-tailed)	.000	.125	.000	.000	.000	.000	.000	
	N	29	29	29	29	29	29	29	29

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research Findings

The results of correlation analysis in Table 4.2 shows a significantly strong positive correlation between economic growth (GDP) and domestic debt (r=0.990, p=0.000), external debt (r=0.963, p=0.000), domestic interest (r=0.954 p=0.000). All the significance values were positive and less than 0.05 at 95% level of confidence. The study findings indicate a strong negative correlation between economic growth (GDP) and external interest (r=-0.707, p=0.000) domestic debt redemption (r=-0.923, p=0.000) and external debt redemption (r=-0.692, p=0.000). The study also established a significantly weak and negative correlation between the rate of inflation and economic growth (GDP) as indicated by a Pearson's r = -0.385 and p= 0.039.

4.4 Regression Analysis

The study adopted that following multivariate regression model:

$$\mathbf{EC = \beta_0 + \beta_1 INF + \beta_2 ED + \beta_3 DD + \beta_4 EDR + \beta_5 DDR + \beta_6 EI + \beta_7 DI + \varepsilon}$$

Where:

EC = Economic Growth measured by (GDP growth rate)

INF=Inflation Rate (annual %)

ED = External debt measured as natural log of total external debt stocks in USD

DD = Domestic Debt (annual amounts in million Kenya Shillings)

EDR= External Debt Redemption (annual amounts in million Kenya Shillings)

DDR = Domestic Debt Redemption (annual amounts in million Kenya Shillings)

EI= External Interest (annual amounts in million Kenya Shillings)

DI= Domestic Interest (annual amounts in million Kenya Shillings)

βo= constant term of the regression

B_1– β_5 are the regression co-efficient

ẹ= standard error

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.996[a]	.991	.988	161381.36283

a. Predictors: (Constant), Inflation, External Debt, Domestic Debt, External Debt Redemption, Domestic Debt Redemption, External Interest and Domestic Interest

Source: Research Findings

The coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R Square in the study is 0.991 (Table 4.3). The R Square value (0.991 or 99.1%) indicate that the predictor variables (external debt, domestic debt, debt service payment, interest rate, inflation) explains 99.1%% of the observed change in the dependent variable (economic growth measured in terms of GDP). The high composite effect of predictor variables on the dependent variable shows that the variables were suitable for the study. The study therefore proceeded to analyze the fitness of the regression model using ANOVA and to test the significance of the relationship between the variables as shown in Tables 4.4 and 4.5 respectively.

Table 4.4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.090E+13	7	8.700E+12	334.042	.000[b]
	Residual	5.469E+11	21	2.600E+10		
	Total	6.145E+13	28			

a. Dependent Variable: GDP

b. Predictors: (Constant), Inflation, External Debt, Domestic Debt, External Debt Redemption, Domestic Debt Redemption, External Interest and Domestic Interest

Source: Research Findings

The "F value" and the "Probability (p) value for F-statistics " test the overall significance of the regression model, that is whether the model is fit for analysis of the variables. From the Analysis of Variance in Table 4.4, the value of F-calculated was 334.042. The value of F-critical (as read from read from F distribution tables) is 2.370. The F-calculated (334.042) is greater than the value of F-critical (2.49). Therefore, the study rejected the null hypothesis that all of the regression coefficients are equal to zero. Instead, the study conclude that none of the regression coefficients is equal to zero thus the model is fit for analysis. Similarly, the p-value was 0.001, which is less than 0.05, indicating that the model term is significant at the 95% level of confidence. The regression model is therefore fit for data analysis.

Table 4.5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	224746.438	116866.936		1.923	.068
	INF	-5681.553	3452.657	-.044	-1.646	.015
	ED	.404	.700	.071	.577	.570
	DD	3.288	.538	.629	6.110	.000
	EDR	-5.376	3.676	-.055	-1.463	.018
	DDR	.105	2.415	.003	.043	.966
	EI	-47.607	14.596	-.138	-3.262	.004
	DI	20.779	4.776	.436	4.350	.000

a. Dependent Variable: GDP

Source: Research Findings

The incorporation of the regression coefficients in Table 4.5 into the model results in the following regression equation:

EC = 224746.438 - 5681.512INF + 0.404ED + 3.288DD - 5.376EDR + 0.105DDR - 47.608EI + 20.779DI + 116877.022

The constant 224746.438 in Table 4.5 shows that if all the independent variables (Inflation, external debt, domestic debt, external debt redemption, domestic debt redemption, external interest and domestic interest) are rated at zero, the dependent variable (profitability) would be rated at 341632.815 (224746.438 +116877.022).

The significance (sig.) or probability (p) values shows the significance of the relationship between independent and dependent variables. The level of confidence was set at 95% (0.05). Therefore, the probability values in Table 4.4 show that economic growth (GDP) is significantly influenced by domestic debt (p=0.000), external interest (p=0.004), domestic interest (p=0.000), inflation (p=0.015), external debt redemption (0.018) and domestic debt redemption (0.016). However, the study findings shows insignificant relationship between economic growth (GDP) and external debt (0.570) and domestic debt redemption (0.966).

The nature of regression coefficients shows whether the dependent and independent variables have direct (positive coefficients) or inverse (negative coefficients) proportionality. The study findings show that economic growth varies proportionately with external debt (coefficient 0.404), domestic debt (coefficient 3.288), domestic debt redemption (coefficient 0.105) and domestic interest (coefficient 20.779).

On the other hand, the study findings show that economic growth inversely varies with inflation (coefficient -5681.553) external debt redemption (coefficient -5.376) and domestic debt redemption (coefficient -0.105) and eternal interest (coefficient -47.608).The study findings imply that the rise in inflation external debt redemption and eternal interest slows down the economic growth.

4.5 Interpretation of the Findings

The study findings revealed a significantly strong positive correlation between economic growth (GDP) and domestic debt (r=0.990, p=0.000), external debt (r=0.963, p=0.000), domestic interest (r=0.954 p=0.000), domestic debt redemption (r=0.923, p=0.000). The

study findings indicate a strong negative relationship between economic growth (GDP) and external interest (r=-0.707, p=0.000) and external debt redemption (-r=0.692, p=0.000). Regression results revealed that economic growth is significantly influenced by domestic debt (p=0.000), external interest (p=0.004) and domestic interest (domestic interest), external debt redemption (0.018) and domestic debt redemption (0.016). The results from regression analysis also indicate that the rise in external and domestic debt redemption and eternal interest slows down the economic growth.

The study findings indicate that acquisition of both external and internal debts in Kenya presents a means through which the country can improve economic growth. However, the study findings indicate that external debt does not result in economic growth while the repayment of public debt adversely affect the growth of Kenyan economy. The rise in external and domestic debt redemption and eternal interest slows down economic growth in Kenya. The findings indicate that Kenya is facing a challenge in resource utilization whereby the funds borrowed from both domestic and international financial institutions are not optimally spent to enhance economic growth.

The study findings resonate with the ongoing debate on government expenditure especially the rising wage bill in Kenya. Reports that since the year 2008/09, there has been a steady increase in the share of revenue allocated to payment of salaries and wages of civil servants. In 2009/10, this percentage was 47.3, which is way above the internationally desirable level of 35 percent. This went up in the fiscal year 2011/12 to 48.1 percent and further on in 2012/13, to be at 55 percent. Therefore, a small percent of the available funds are left for development purposes and to cater for other recurrent expenditures. The resultant effect is the slow economic growth as government pays for

services the public debt from the constrained revenue. The study findings point towards an expansionary fiscal policy in Kenya characterized by an increase in consumption.

The study findings imply that if the county continues to increase its domestic debt, the move would cripple economic growth. Domestic borrowing only transfers' resources within the country, incurrence of domestic debt results in the postponement of the tax liability from current to future generations, moderate levels of marketable domestic debt as a percentage of GDP have significant positive effects on economic growth, mounting volume of public debt is a necessary feature of a strong and healthy financial structure of an economy and some secular increase in public debt should be planned by every government.

Further the study revealed that, debt overhang also depresses growth by increasing investors' uncertainty about actions the government might take to meet its onerous debt-servicing obligations. High level country's debt is expected to exceed the country's repayment ability with some probability in the future; expected debt service is likely to be an increasing function of the country's output level. Therefore, some of the returns from investing in the domestic economy are effectively "taxed away" by existing foreign creditors, and investment by domestic and foreign investors is discouraged (Patenio and Tan-Cruz, 2007).

The study established a weak negative correlation between economic growth rate and both domestic debt redemption ($r=-0.923$, $p=0.000$) and external debt redemption ($r=-0.692$, $p=0.000$). The study findings imply that an increase in Debt Service payment would cripple the economic growth in Kenya. Further the study established that debt

servicing shifts spending away from the social sector, health, and education. This shows that the aim of taking debt for development is depressed by debt service payments that cut resources available. Large debt service payments impose constraints on a country's growth path, either it drains limited resources or restricts financial resources for domestic development. Even if debt service payments do not reduce saving and investments significantly, they could decrease output growth directly by diminishing productivity as a result of the adverse changes in investment mix.

The study findings indicate a strong negative correlation between economic growth and external interest ($r=-0.707$, $p=0.000$). The study findings implies that increase in interest rate would lead to a decrease in economic growth in Kenya. A long-run costs due to a period of low interest rates will tend to be slightly offset by a period of high productivity growth. Conversely, long-run benefits during a period of high interest rates will be offset by low productivity growth.

Further the study revealed that increase in the interest rates will cause the consumers to save their money for two major reasons, the first is to conserve their money due to the perceived scarcity of such finance, and the second is to take advantage of high interest rates offered by the banks as a means of encouraging savings, when this happens, the activity in the economy will decrease, and the rate of inflation will go down as a result. Just the same, when the central bank decreases the interest rates consumers will have easier access to finances, and the rate of consumption will go up, stimulating the economy.

As interest rates are lowered, more people are able to borrow more money. The result is that consumers have more money to spend, causing the economy to grow and inflation to increase. The opposite holds true for rising interest rates. As interest rates are increased, consumers tend to have less money to spend. With less spending, the economy slows and inflation decreases.

The high debt burden in Kenya had an adverse effect on the nation income and per capital income of the nation. High level of external debt lead to devaluation of the nation currency, increase in retrenchment of workers, continuous industrial strike and poor educational system. The study findings are in tandem with Siew and Yan (2015) who established that the impact of the public debt on GDP is negative and significant. The study establish that government consumption and external debt service are a decreasing function of GDP. This means that a rise in public debt is associated with a drop in GDP. When a country has a heavy public debt burden, the investors would worry about the ability of that country to pay the debts of the creditors. This would cause crowding out of investments. In addition, the creditors may also demand higher **interest rates, as** a safety measure due to increased risk, for them to keep financing the deficits (Cerra et al., 2008). This is not a good situation because a sharp increase in interest rate can harm the economic growth and would create a financial crisis.

The study findings are also in agreement with Mohd Daud et al. (2013) who established that external debt has a negative impact on long-run economic growth. They also find the existence of short run causality linkages between external debt and economic growth. Similarly, Ajayi and Oke (2012) who investigates the effect of the external debt burden

on economic growth and development of Nigeria and found that external debt burden had an adverse effect on the nation income and per capital income of the nation.

Public debt management is about efficient acquisition and prudent application of the debt for the benefit of the nation. Debt is manageable as long as the cost of acquiring debt is reasonably low and the repayment affordable. The Public Finance Management Act, 2012, 50 (1) call for sustainable government debt by stating that the national government shall ensure that its financing needs and payment obligations are met at the lowest possible cost in the market which is consistent with a prudent degree of risk, while ensuring that the overall level of public debt is sustainable while ensuring that the overall level of public debt is sustainable. Debt obtained should be used efficiently, in a way that secures economic growth and efficient allocation of resources in the long run. Debt is used efficiently if the ratios of debt service to total revenue and external debt service to exports fall or remain constant. The projects for which borrowed money is used would generate sufficient output and exports for debt repayment.

The motivation for public borrowing must always be distinguished from the reason for borrowing. The recent amendment to Section 50 (7) of PFMA 2012 makes the interrogation of the borrowing motives imperative. From the time the amendment was done in May, 2014, public debt has increased by 34% from Kshs. 2,190.39 billion to Kshs. 2,933.69 billion in August, 2015. The PFMA Act, 2012 ensured that parliament have full control of national borrowing and management of public debt. The PFMA Act, 2012, 50 (3) states that the national government may borrow money only for the budget as approved by Parliament and the allocations for loans approved by Parliament.

PFM Act, 2012, 50 (5) ensures that parliament controls the limits of national budget by stating that parliament shall provide for thresholds for the borrowing entitlements of the national government and county governments and their entities.

Nevertheless, the PFMA (Amendment) Act 2014 allows the cabinet secretary for finance to bypass parliament in the repayment of loans. The Public Finance Managernent (Amendment) Act, 2014 amended section 50 of the principal Act by deleting, subsection (7) (c) disbursed directly to the suppliers where the loan is a government to government loan and is raised for the purpose of financing goods and services provided by a supplier outside Kenya. The PFMA (Amendment) Act, 2014 also allows eternal parties to motivate national borrowing with the intention to benefit from fees, commissions and expenses associated with money borrowed. Section 50 (7) (d) of the PFMA (Amendment) Act, 2014 state that in the case of an external loan or external government security, applied, in part, to pay at closing, prenegotiated expenses associated solely and exhaustively 'with the borrowing, including but not limited to, the fees, commissions and expenses of lenders, financial arrangers, managers and book runners, fiscal agents, trustees, paying agents, exchange and information agents, syndicate agents, counsel, clearing systems, listing agents, and stock exchanges, rating agencies and other expenses of a similar nature arising from the external loan or external government security.

The sustainability of government debt in Kenya has elicited substantial public debate. The government fronted an argument that national debt was sustainable and used for development purposes. However, a section of the public, financial experts and legislators argued that the government was over borrowing money which, instead of funding the intended projects, was embezzled through corruption. Government critics argued that

Kenyan tax payers were burdened with debt repayment which left limited funds to run development projects. Debt payment is a first charge on the Consolidated Fund. The Article 214 of the Constitution of Kenya 2010 states that the public debt is a charge on the Consolidated Fund, but an Act of Parliament may provide for charging all or part of the public debt to other public funds. Moreover, PFM Act, 2012, 50 (6) provides that a public debt incurred by the national government is a charge on the Consolidated Fund, unless the Cabinet Secretary determines, by regulations approved by Parliament, that all or part of the public debt is a charge on another public fund established by the national government or any of its entities. Therefore, the government is obliged to execute debt repayment from the Consolidated Fund leaving limited funds for development purposed. The problem is further exacerbated by huge public wage in Kenya and alleged grand corruption like the case of Anglo leasing.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the study findings, conclusion and recommendations. The objective of this study was to establish the effects of public sector borrowing on economic growth in Kenya

5.2 Summary

The main objective of the study was to determine the effects of public sector borrowing on economic growth in Kenya. The study findings revealed a significantly strong positive correlation between economic growth (GDP) and domestic debt (r=0.990, p=0.000), external debt (r=0.963, p=0.000), domestic interest (r=0.954 p=0.000), domestic debt redemption (r=0.923, p=0.000). The study findings indicate a strong negative relationship between economic growth (GDP) and external interest (r=-0.707, p=0.000) and external debt redemption (-r=0.692, p=0.000).

Regression results revealed that economic growth is significantly influenced by domestic debt (p=0.000), external interest (p=0.004) and domestic interest (domestic interest), external debt redemption (0.018) and domestic debt redemption (0.016). The results from regression analysis also indicate that the rise in external and domestic debt redemption and eternal interest slows down the economic growth.

The study findings imply that increase in external debt would lead to an increase economic growth in Kenya, the study further established that debt burden had an adverse effect on the nation income and per capital income of the nation, high level of external debt led to devaluation of the nation currency, increase in retrenchment of workers, continuous industrial strike and poor educational system, this led to Kenya's economy getting depressed.

Further the study revealed that external borrowing can increase a country's access to resources, Gurley and Shaw (1956) observed that mounting volume of public debt is a necessary feature of a strong and healthy financial structure of an economy and some secular increase in public debt should be planned by every government.

The study findings on the relationship between economic growth rate and domestic debt in Kenya imply that if the county continues to increase its domestic debt, the move would have cripple the economic growth in the study also established that domestic borrowing only transfers' resources within the country, incurrence of domestic debt results in the postponement of the tax liability from current to future generations, moderate levels of marketable domestic debt as a percentage of GDP have significant positive effects on economic growth, mounting volume of public debt is a necessary feature of a strong and healthy financial structure of an economy and some secular increase in public debt should be planned by every government.

Further the study revealed that, Debt overhang also depresses growth by increasing investors' uncertainty about actions the government might take to meet its onerous debt-servicing obligations. High level country's debt is expected to exceed the country's

repayment ability with some probability in the future; expected debt service is likely to be an increasing function of the country's output level. Therefore, some of the returns from investing in the domestic economy are effectively "taxed away" by existing foreign creditors, and investment by domestic and foreign investors is discouraged.

The study established that an increase in Debt Service payment would cripple the economic growth in Kenya. Further the study established that debt servicing shifts spending away from the social sector, health, and education. This shows that the aim of taking debt for development is depressed by debt service payments that cut resources available. Similarly, an increase in interest rate would lead to an decrease in economic growth in Kenya Further the study revealed that increase in the interest rates will cause the consumers to save their money for two major reasons, the first is to conserve their money due to the perceived scarcity of such finance, and the second is to take advantage of high interest rates offered by the banks as a means of encouraging savings, when this happens, the activity in the economy will decrease, and the rate of inflation will go down as a result. Just the same, when the central bank decreases the interest rates consumers will have easier access to finances, and the rate of consumption will go up, stimulating the economy.

The research revealed that as interest rates are lowered, more people are able to borrow more money. The result is that consumers have more money to spend, causing the economy to grow and inflation to increase. The opposite holds true for rising interest rates. As interest rates are increased, consumers tend to have less money to spend. With less spending, the economy slows and inflation decreases.

The study established that an increase in Inflation rate would lead to a decrease in economic growth in Kenya. Inflation can lead to uncertainty about the future profitability of investment projects (especially when high inflation is also associated with increased price variability). This leads to more conservative investment strategies than would otherwise be the case, ultimately leading to lower levels of investment and economic growth. Inflation may also reduce a country's international competitiveness, by making its exports relatively more expensive, thus impacting on the balance of payments. Moreover, inflation can interact with the tax system to distort borrowing and lending decisions

5.3 Conclusions

The study attempted to fill the remarkably gap that exists in the formal study of the effect of public sector borrowing on economic growth in Kenya, it covered the period 1963 to 2014 and revealed that, external debt expansion has a positive, long run and significant effect on economic growth, the study also found that a strong positive correlation coefficient between economic growth and external debt (correlation coefficient factor 0.350, this is consistent with the findings of Barro (1978), Gurley and Shaw (1956) and Maana *et al*. (2008). Thus the study concludes that External debt has positive impact on economic growth.

The study concludes that Kenyan economic growth rate is significantly influenced by domestic debt, external debt, domestic interest, domestic debt redemption, external interest, external debt redemption. Domestic borrowing only transfers' resources within the country, incurrence of domestic debt results in the postponement of the tax liability

from current to future generations. Therefore, domestic debt has negative impact on economic growth.

The study concludes that debt service payment and interest rate negatively impact on Kenyan economic growth. Debt servicing shifts spending away from the social sector, health, and education, creates a hindrance to economic growth of a country due to high interest payments on the external debt, and foreign exchange repayments. The long-run costs due to a period of low interest rates will tend to be slightly offset by a period of high productivity growth.

The study concludes that inflation can lead to uncertainty about the future profitability of investment projects (especially when high inflation is also associated with increased price variability). This leads to more conservative investment strategies than would otherwise be the case, ultimately leading to lower levels of investment and economic growth in Kenya.

5.4 Recommendations for Policy and Practice

The study recommends that the Kenyan government should encourage sustainable external borrowing provided the funds are utilized in productive economic avenues. The government should institute efforts to channel domestic debt revenue to productive activities in the economy so that debt does not rise to become unsustainable. This would require funding well appraised productive projects to foster economic growth. Excessive domestic borrowing can be inflationary and may crowd out private sector borrowing; therefore close monitoring of government borrowing through the domestic market is therefore necessary. The study revealed that moderate inflation rates can yield gains in

GDP growth; therefore policy makers in Kenya should low rates of inflation in order to foster higher economic growth.

5.5 Limitation of the Study

The research encountered several limitations this descriptive and correlation study relied on secondary data which had already been compiled. Data was used as they were obtained from the sources and the researcher had no means of verifying for the validity of the data which were assumed to be accurate for the purpose of this study. The study results are therefore subject to the validity of the data used, the study used the ordinary least square regression method of analysis which may have its own weaknesses compared to other methods which may limit the general applicability of the study results

5.6 Recommendations for Further Studies

The study investigated the effects of public sector borrowing on economic growth in Kenya for the period 1964-2014. The study recommends that there is need to assess the effect of the study variables in on economic growth in short to run. There is need to test for Co integration as to establish more verifiable implication of long run relationship between economic variables.

REFERENCES

Abu Bakar, N. A. & Hassan, S. (2008). Empirical Evaluation on External Debt of Malaysia. *International Business & Economics Research Journal, Vol., 7,* No 2, pp 95-108

Adam, C. S. & Bevan, D. L. (2005). Fiscal deficits and Growth in Developing Countries." *Journal of Public Economics, Vol. (4),* pp. 571-597

Adepoju, A. A. (2007). The Effects of External Debt Management on *Sustainable Economic Growth and Development:* Lessons from Nigeria. Munich Personal RePEC Achieve (MPRA). Paper No. 2147

Adesola, W.A. (2009). Debt Servicing and Economic Growth in Nigeria: An Empirical Investigation. *Global Journal of social sciences, Vol.8,* No.2, 1-11

Ajayi, L.B. & Oke, M. O. (2012). Effect of External debt on Economic Growth and Development of Nigeria. *International Journal of Business and Social Science Vol. 3* No. 12 [Special Issue – June 2012]

Ajayi, S.I. (1997). Macroeconomic Approach to External Debt: The case of Nigeria, *Africa Economic Research Consortium*, research number 8

Akram, N. (2010). Impact of Public Debt on the economic growth of Pakistan. *Journal of Economic Literature (JEL),* H63, O43, E22, C22.

Al-Zeaud, H. A. (2014). Public Debt and Economic Growth: An Empirical Assessment. *European Scientific Journal*, 10 (4), 148-158.

Atique, R. and Malik, K. (2012). Impact of Domestic and External Debt on the Economic Growth of Pakistan. *World Applied Sciences Journal*, 20(1): 120-129.

Boopen, S. (2007). External Debt and Economic Growth: A Vector Error Correction Approach. *International Journal of Business Research*, pp 211-233

Borensztein, E. (2001). 'Debt Overhang, Debt Reduction and Investment: The Case of the Philippines'. *International Monetary Fund Working Paper No; WP/90/77,* September; Washington, DC: IMF.

Cerra, V., Rishi, M., and Saxena, S. C. (2008). Robbing the Riches: Capital Flight, Institutions and Debt. *Journal of Development Studies*, 44(8): 1190-1213.

Cholifihani, M. (2008). A Co-integration Analysis of Public Debt Service and GDP in Indonesia. *Journal of Management and Social Sciences, Vol. No.* 4, No. 2

Claessens, S. (2000). The Debt Laffer Curve: Some Empirical Estimates. *World Development*, 18 (12), 1-5.

Clark, B. (2000). *Creating Entrepreneurial Universities: Organizational Pathways of Transformation.* Pergamon: IAU Press

Classens, P. & Diwan, R. (2000). *International Debt Re-examined*. Washington DC: Peterson Institute for International Economics

Clements, B. (2003). *External Debt, Public Investment, and Growth in Low-Income Countries*. IMF Working Paper; 03/249

Cohen, D. (1999). 'Low Investment and Large LDC Debt in the 1980s. *The American Economic Review*, June.

David, B. (2002). Globalization and the Developing Countries: Emerging *Strategies for Rural Development and Poverty Alleviation.* CABI. p. 136. ISBN 978-0-85199-575-5

Diamond, P. (2005). National Debt in a Neoclassical Growth Model, *American Economic Review*, 55 (5), pp. 1126-1150.

Elbadawi, A. I. (2006). Debt Overhang and Economic Growth in Sub-Saharan Africa' Paper presented at the IMF/World Bank Conference on External *Financing for Low-income Countries*, December; Washington, DC: IMF/World Bank

Elmendorf, D. & Mankiw, N. (2009). "Government Debt", in Taylor, J. and Woodford, M. (eds.). *Handbook of Macroeconomics, vol. 1C, 1615-1669*, North-Holland

Hasan, A. & Butt, S. (2008). Role of Trade, External Debt, Labor Force and Education in Economic Growth Empirical Evidence from Pakistan by using ARDL Approach. *European Journal of Scientific Research*, Vol. 20 No. 4, pp 852-862

Himbara, D. (2003). Myths and Realities of Kenyan Capitalism. *Journal of African Political Economy* 31 (1): 93–107

IMF (International Monetary Fund) (2001). 100 Percent Debt Cancellation, A *Response from the IMF and the World Bank*; a Factsheet, July; Washington, DC: IMF

Iyoha, M. A. (2006). External Debt and Economic Growth in Sub-Saharan African Countries: *An Econometric Study*. Paper Presented at AERC Workshop, Nairobi.

Kamau, B. (2001). *Debt Servicing and Economic Growth in Kenya*. Unpublished M.A Research Paper, Nairobi: University of Nairobi.

Kitching, G. (2012). *Class and Economic Change in Kenya*; Yale University Press; ISBN 978-0-300-02385-5

Krumma, K.L. (2005). *The External Debt of Sub-Saharan Africa: Origins, Magnitude and Implications for Action.* World Bank, Staff Working Papers 741.

Laubach, T. (2009). New Evidence on the Interest Rate Effects of Budget Deficits and Debt. *Journal of the European Economic Association*, Vol. 7(4), pp. 858-885.

Manundu, M. (2004). *Debt Management Strategies for Kenya*; Summary of Findings of a Workshop Organized by Friedreich Ebert Foundation in November

Mbanga, G. N. & Sikod, F. (2001). *The Impact of Debt and Debt-Service Payments on Investment in Cameroon.* Final report presented at the AERC Biannual Research Workshop, May 26 –31 Nairobi: AERC.

Mohd Daud, S. N., Ahmad, A. H., and Azman-Saini, W. N. W. (2013). Does External Debt Contribute to Malaysia Economic Growth? *Economic Research*, 26(2): 51 - 68.

Mutasa, C. (2003). *Regional Integration and Debt in Africa: A* Comparative *Report of Africa's Regional Groupings*. AFRODAD Research Series; March

Mwau, G. (2014). *The Impact of Foreign Capital Inflows on the Kenyan Economy.* University of Nairobi: School of Economics.

Mweni, F. (2013). *A Critical Review of External Debt and Economic Growth in Kenya*. United States International University.

Patenio, J. A. S. & Tan-Cruz, A. (2007). *Economic Growth and External Debt Servicing of the Philippines: 1981-2005*, 10th National Convention on Statistics (NCS)

Pattillo, C. H. (2004). *External Debt and Growth*. IMF Working Paper 02/69.

Pattillo, C., Poirson, H. and Ricci, A. L. (2002). External Debt and Growth. *Finance Development*, 39: 32-35.

Pattillo, C., Poirson, H. and Ricci, R. (2004). What Are the Channels Through Which External Debt Affects Growth? *IMF Working Paper*, No. 04/15.

Peacock, H. & Wiseman, K. (1990). The Pure Theory of Public Expenditure. *The Review of Economics and Statistics*, Vol. 36, No. 4. (Nov., 1990), pp. 387-389

Putonoi, L. & Mutuku, M. (2006).*The Choice Between External and Domestic Debt in Financing Budget Deficits: The Case of Central and West African Countries*. International Monetary Fund (*IMF*) Working Paper 02/79.

Reinhart, C. M. and Rogoff, K. S. (2010). Growth in a Time of Debt. *American Economic Review*, 1000(2): 573 -578.

Rifaqat, A. & Usman M. (2000). External debt accumulation and its impact on economic growth in Pakistan. *Asian Economic and Financial Review*, 2015, 5(1): 214-219.

Rono, J. K. (2002). The Impact of Structural Adjustment Programmes on Kenyan Society. *Journal of Social Development in Kenya*, 2002.

Rusike, D W. (2007). Did the Debt Crisis Cause the Investment Crisis? Further Evidence, *Applied Economics*, Cilt 26, S S. 731-738.

Safdari, U. & Mehrizi, P. (2009). External Debt and Economic Growth in Iran, *Journal of Economics and International Finance* Vol. 3(5), Pg. 322–327

Schindler, M. (2003). Communities of Practice: A Research paradigm for the Mixed Methods Approach. *Journal of Mixed Methods Research*. 2(3) 270-283.

Siew, P. L., and Yan, L. N. (2015). Public Debt and Economic Growth in Malaysia. *Asian Economic and Financial Review*, 2015, 5(1): 119-126.

Soludo, W.R. (2003). *International Debt Re-examined*, Washington DC: Peterson Institute for International Economics.

The Constitution of Kenya 2010.

The Public Finance Management (Amendment) Act, 2014 Section 50

The Public Finance Management Act, 2012, Section 50

Were, M. (2001). The Impact of External Debt on Economic Growth in Kenya; *An Empirical Assessment; Discussion Paper* No. 2001/116

Williamson, J. (1996). Constraints on Macroeconomic Management Imposed by *Heavy External Debt'*; Paper presented at the IMF/World Bank seminar, December. Washington, DC: IMF/World Bank.

APPENDIX 1: DATA FOR THE STUDY VARIABLES

Year	Real GDP Growth (annual %)	GDP (KSHs. Mn)	Inflation, consumer prices (annual %)	External Debt	Internal Debt	Public Debt Redemption External	Public Debt Redemption Internal	External Interest	Internal Interest
2014	5.30	5357672	6.88	1138504.7	1078807.3	27478.65	150000.9	24512.52	122928.1
2013	5.70	4730801	5.72	843562.2	889180.8	85253	128700	12761.23	119065
2012	4.60	4261151	9.38	763971.9	768569.3	34336.7	128408.43	10805.96	82144.68
2011	4.40	3725918	14.02	722888.3	624752	25666.08	66829.09	10039.44	85151.68
2010	5.80	3169302	3.96	569138.3	533971.9	23521.74	98134.92	8283.81	67878.82
2009	2.60	2366984	9.23	488203.3	401741.09	20460.54	62553.18	6183.12	49887.39
2008	1.70	2107589	26.24	413460.3	334996.13	18134.06	73580.53	6496.68	44067.81
2007	7.10	1833511	9.76	397138.8	318402.12	17374.48	57986.88	6998.23	42854.44
2006	6.30	1622434	14.45	431236.7	286450.76	16833.59	75435.83	4747.17	34250.21
2005	5.80	1415724	10.31	434453	253501	13146.92	77806.07	8283.43	27303.92
2004	4.90	1274328	11.62	443157	254647	11469.32	60003.34	5327.86	28076.74
2003	2.80	1141780	9.82	353264.1	245630.4	11351.93	70187.83	5822.54	21920.92
2002	2.30	1038764	1.96	359370.5	235968.83	20912.06	65723.6	9849.2	25828.67
2001	1.20	1025918	5.74	366127.4	211813	21384.89	33678.34	6948.21	22902.76
2000	0.20	967838	9.98	302608.7	206126.69	23142.29	39619.58	3848.58	20576.91

1999	1.40	740330	5.74	325261.2	174305	12199.42	43209.93	7508.4	21409.4
1998	1.80	690842.1	6.72	254388	27295.8	26471.52	23460.34	8186.4	27903.2
1997	2.30	623235.1	11.36	231038.8	27422	23028.24	39052.5	7775.7	32037.1
1996	4.60	528739.5	8.86	234708.4	32753.2	18359.2	6956.6	8101.2	25544.2
1995	4.80	455700	1.55	246027	30674	19206.6	10072.6	10670.4	29330.8
1994	3.00	400720	28.81	208071.2	79134.4	18897.4	12695	9471	25897
1993	0.20	333620	45.98	271568.2	47403.2	20374	28853	10310.6	44448.8
1992	0.50	264480	27.33	122259.6	44672.4	5391.2	28057.8	4077.4	23775.8
1991	2.30	226320	20.08	89179	31837.8	7201	15601.2	4777	10920.2
1990	4.50	198780	45.98	68380	26782.8	7825	7009.8	4632	7504
1989	4.90	172860	27.33	51931.4	24820	4243	4823.8	3217.8	6786.6
1988	5.20	151200	20.08	54348.2	23287.8	4245.4	5811.2	3131	6137.4
1987	4.90	132300	17.78	45613	17463.6	3260	344	2417	4990
1986	5.70	116640	13.79	40580	14458.8	3125.4	722.4	2040.8	3963.4
1985	4.10	98280	12.26	30851.6	13820	2920	478.8		
1984	0.90	87780	8.64	30638	13570	2415	1278		
1983	3.90	78540	2.53	23354	13418	1771.8	342.4		
1982	3.40	67980	13.01	17186	9086	1482.6	1521.2		
1981	4.80	60780	10.28	12886	8266	1129.2	8757.2		
1980	3.00	52640	11.40	10008	7144	728.2	7142.4		

1979	3.10	45540	20.67	5179.2	6378.8				
1978	5.70		11.60	4852.4	5671.4				
1977	7.30		13.86	4578.8	4269.2				
1976	5.10		7.98	4197.4	3817.4				
1975	4.00		16.93	3350.2	2882				
1974	3.60		14.82	2726.8	2582.6				
1973	6.50		11.45	2530	2199				
1972	6.90		19.12	2115.2	1770				
1971	7.30		17.81	1897.6	1504.8				
1970	6.30		9.28	2040.8	1162				
1969	6.70		5.83	1865.6	982.8				
1968	6.60		3.78	1709.8	723.4				
1967	5.10		2.19	1822.4	549.8				
1966	6.30		-0.17	1722	386.8				
1965	0.80		0.37	1538.2	370.6				
1964	5.30		1.76	1362.4	359.8				