

EFFECT OF PUBLIC DEBT ON ECONOMIC GROWTH IN KENYA

BY

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ADMISSION 111473

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DECLARATION

I confirm that this work has not previously been submitted for a degree by this or any other university. To the best of my knowledge, the research proposal contains no previously published or written material, except where the research proposal itself makes appropriate reference.

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.....26/02/2022..... [Date]

Approval

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

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Date 27/02/2022

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DEDICATION

I'd like to dedicate this project to my entire family, as well as the Strathmore University fraternity, for their ongoing support and guidance.

ABSTRACT

Borrowing from the public sector is vital because it helps to bridge the resource gap between government receipts and expenditures. It is one method of funding government operations, but it is not the only one; the government can also create money to monetize its debts, eliminating the need for interest payments. As a result, public debt is one of the most important macroeconomic factors in determining a country's reputation in international markets. When people take resources and reorganize them in more productive ways, economic growth occurs. Kenya's revenue is supplemented by the export of primary commodities, as it is a developing country. In order to supplement domestic resources, successive governments have taken on massive amounts of public debt to fund National Development Plans. The objective of this study was to establish the relationship between public debt and economic growth in Kenya for the period 2010 to 2020. Data gathered in the study was estimated using descriptive statistics. Discoveries from the study suggests that external debt exerts a positive effect while domestic debt exerts a negative effect on economic growth. Based on these findings, the study suggested that policymakers should develop a sound financial plan to ensure that public debt accumulated does not overweight future generation and the government use public debt it as a last resort to finance its economy.

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ABBREVIATIONS AND ACRONYMS

GDP	Gross Domestic Product
CBK	Central Bank of Kenya
ARDL	Autoregressive Distributed Lag
OLS	Ordinary Least Squares
FDI	Foreign Direct Investment
KRA	Kenya Revenue Authority
EAC	East Africa Community
ANOVA	Analysis of Variance

CHAPTER ONE

INTRODUCTION

1.1 Background of study

Governments need resources for public outlay so as for sectors of the economy to proceed with success and for social development to take place. Usually, country development happens to coincide with a decrease in local savings and lack of local investments, forcing the employment of debt as an essential supply of funding. The government's inability to fund deficiencies in domestic savings as a result of constant borrowing has resulted in an exceedingly high debt scenario (Al-Adayleh et al., 2015).

The government will raise revenue by printing extra money, increasing taxes, buying back previous budget surpluses, or having to borrow across the country or overseas. Once the government decides to finance a budget deficiency through obtaining a loan instead of extra taxes, a liability referred to as debt is made (Moki, 2012). Debt is categorized into two types: productive debt and unproductive debt. Once debt is employed for helpful outcomes like infrastructure, manufacturing plants, refineries, and so on, it's considered the productive debt. This debt is critical to monetary development and the economic process. Unproductive debt, on the other hand, is used to finance a war and current expenses. This does not imply that there is a gain and a loss associated with intense exercise (Chowdhury, 2001).

Obademi (2012) defines debt structure as the sum of domestic and external debt. External borrowing, once invested in productive investments, will facilitate to keep up standard economic stability. Furthermore, it will contribute to a rise in domestic saving, which inspires investment. Consequently, external borrowing will profit the economy by increasing capital inflows. External borrowing, once used for development functions, has the potential to accelerate the speed of economic process (Reinhart et al.2012). External debt, on the other hand, will place countries in serious trouble. Debt compensation is also tough if countries borrow to a fault or their economies experience external shocks. This might end in crises within the monetary and economic systems (Fosu, 2010). According to Nautet and Meensel (2012), high levels of external debt create an economic condition risk that raises the risk premium on external debt, making it more expensive for countries to borrow and repay the debt. The risk premium raises the interest payment and rate

on government borrowing, leaving the government with very little room to satisfy its social and financial responsibilities.

Domestic debt that's not well balanced with expected economic process will have serious economic consequences. Domestic debt service consumes a big portion of presidential earnings that would preferably be spent on development initiatives to spice up economic process, leading to fewer resources available for development comes (Ochieng, 2013). Internal debt servicing, as a results of decreasing resources obtainable to finance development comes, is additional damaging to economic process than the stock of external debt (Abbas & Christensen, 2007).

The key purpose of fiscal policy is stimulation of economic and social growth by pursuing a policy guideline that ensures a sense of balance between taxation, expenditure and borrowing that is consistent with sustainable economic development and growth. For this reason, taxation policies and government spending (fiscal policies), just like public debt, can be perceived as a tool of economic growth in a country. Fiscal policy is defined as the government's use of public expenditure and taxation to influence the flow of economic activity in a country. It is still an important tool for governments to use in order to stabilize their countries' economic conditions.

1.1.1Public debt

The issue of debt is not new in developed countries. In line with Reinhart and Rogoff (2010), a public debt-to-GDP quantitative relation larger than ninetieth is related to slower economic process. The general public debt, additionally referred to as the debt owed by the government, is that the total of all borrowings created by all government units, together with the federal, state, and native governments (Idenyi, Igberi and Anoke, 2016). According to Idenyi, Igberi, and Anoke (2016), debt is one in every of many strategies for funding government expenditures; whereas governments will instruct the financial institution to supply and unleash funds to them so as to avoid the interest payments connected to government debts, this technique can beyond question management interest prices however won't eliminate the debt.

There is very little proof that corruption affects government debt in an exceedingly sort of ways in which. In line with Kaufmann (2010), so as to maximize rent-seeking, official may prefer massive capital investments over labor-intensive ones. As a result, if a government finances its

expenditures through accumulated debt, corruption necessitates a bigger stock of debt, leading to higher debt union prices.

Large amounts of debt, in line with accepted theory, have a negative impact on the economy. However, in recent years, we've seen various instances wherever massive amounts of debt in certain countries haven't resulted in inflation (Shalor, 2018). This is often associated with the belief of Ricardian equivalence that holds that a rise in public debt might end in a rise in gross domestic product within the short run, particularly if production levels are square measure but full capability. However, in the long run, the increase in private savings does not match the decrease in government savings because consumers do not exhibit Ricardian equivalent behavior.

1.1.2 Economic growth

Economic growth has been outlined as the increase in a country's final output in a given year as measured by the market value of the product, taking into consideration price variation and therefore the imputed value of the economy's made merchandise and services less profit from abroad (Favor et al., 2017).

Economic growth can be measured using the Gross Domestic Product or Gross National Product. It is measured in this case as a percentage rate increase in real gross domestic product when compared to the population. The primary distinction between GDP and GNP is that GDP focuses solely on output derived from within the country, whereas GNP includes output derived from sources outside the country.

The determinants of economic process are interconnected factors that influence associate economy's rate of growth (Boldeanu & Costantinescu, 2015). Chirwa and Odhiambo (2017) investigate key economics determinants of economic process in developing and developed economies by qualitatively measuring previous empirical studies. Consistent with the study's findings, the key economics determinants that are considerably related to economic process in developing countries, so as of importance, are as follows: economic aid and foreign direct investment, economic policy, trade, physical capital, human capital, demographics, financial policy, natural resources, and geographic, regional and national boundaries.

In the long-term, a rise in public debt can result in a decrease in investment, that reduces the quantity of capital, a rise in interest rates, and a decrease in employee productivity. Consistent with Shalor (2018) within the same study, massive amounts of debt create expectations of inflation within the short run, that disrupts the economy by increasing uncertainty, disrupting economic activity, and hampering growth.

Economic growth can be both positive and negative. While positive economic growth can be explained by an economy expanding, negative economic growth can be explained by an economy contracting and is typically associated with both economic recession and depression. (Kobey, 2016)

1.1.3 Public debt and Economic growth in Kenya

The impact of public debt on economic growth continues to be a controversial issue in both academic and policymaking circles. According to Shalor (2018), the relationship between the size of the public debt and economic growth has been measured in many empirical studies and has been found to be non-linear. Reinhart and Rogoff (2010), for example, studied the relationship between economic growth and public debt in 44 countries over a 200-year period using the debt-to-GDP ratio. The study's findings indicate that there is no clear relationship between debt level and growth up to 90%. However, above 90%, the results clearly show that the marginal effect of debt becomes negative. The researchers explain that when a country's debt to GDP ratio reaches a certain level, lenders downgrade the country's creditworthiness and demand higher interest payments.

In another study, Presbitero (2012) investigated the relationship between economic growth and the level of public debt using the following additional variables in the study model: GDP in the previous period, capital investment, human capital, and inflation as a measure of uncertainty, and imports and exports as measures of how open an economy is to foreign markets. Presbitero (2012) discovered that the 90 percent of GDP threshold at which the effect of debt on growth changes, and that debt in excess of this ratio has a negative effect on the economy.

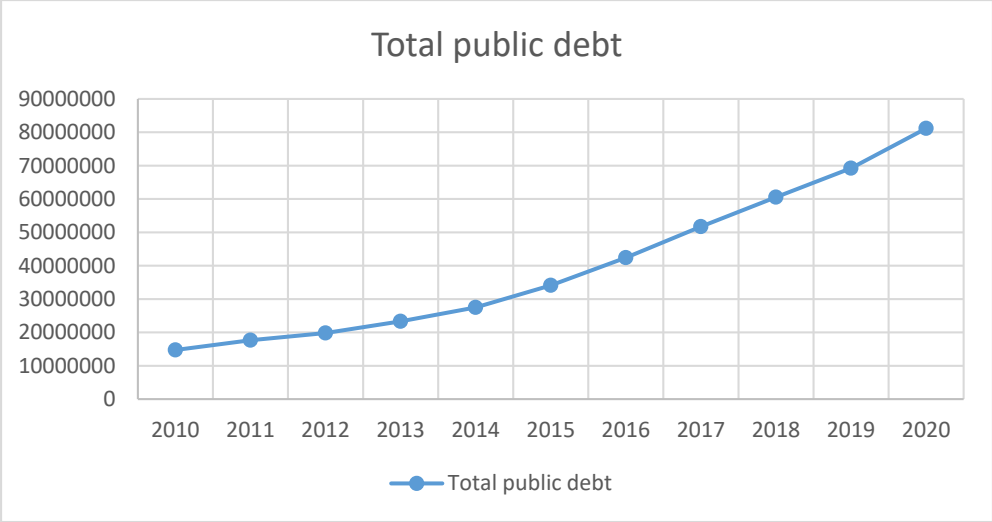
The Constitution of Kenya, the Public Finance Management Act, the Public Finance Management Regulations 2013 (National Government), and the Public Finance Management Regulations 2015 govern public debt in Kenya (County Government). The Internal Loans Act

(Cap420) establishes the legal framework for the Cabinet Secretary to Finance by borrowing from the domestic market on behalf of the government through the issuance of Treasury Bills and Treasury Bonds. Similarly, the External Loans and Credit Act (Cap422) limits Kenya's total indebtedness in terms of principal to Ksh 500 billion or such higher sum as the National Assembly may approve by resolution.

The persistent increase in the stock of public debt, on the other hand, has had a negative impact on Kenyan private investment levels. By raising the cost of capital, it has reduced current and future investment (Ngugi, 2012). When domestic debt is used to service external debt, it has an effect on the current flow of resources in the economy (Karazijene & Saboniene, 2009). Kenya's debt has been increasing in recent years. Kenya's public and publicly guaranteed debt increased by 15.3 percent during the fiscal year 2018/19, with both domestic and external debt increasing by 12.4 percent and 18.1 percent, respectively. External debt rose to Ksh 3,023.1 billion, owing primarily to a US\$ 2.1 billion Eurobond issued in June 2019 and loans from the Chinese government to fund the Nairobi–Naivasha Standard Gauge Railway. Similarly, the 12.4 percent increase in domestic debt was primarily driven by increased demand for Treasury bonds, which is consistent with the government's goal of increasing the average time to maturity of domestic debt securities (CBK, 2019).

During the fiscal year 2019/20, Kenya's public debt and publicly guaranteed debt increased by 15.2 percent, with domestic and external debt increasing by 14.1 percent and 16.3 percent, respectively. Public debt accounted for 47.5 percent of domestic debt and 52.5 percent of external debt, respectively. The increase in domestic debt was primarily due to a 27% increase in Treasury bonds. Kenya's public and publicly guaranteed external debt rose to Ksh 3,515.8 billion, owing primarily to USD 750 million from Development Policy Operations (DPO) in July 2019, USD 1.0 billion from the World Bank in May 2020, and the IMF Rapid Credit Facility (RCF) in support of COVID-19 interventions. Following that, the proportion owed to multilateral lenders increased by 7.3 percent, while the proportion owed to commercial and bilateral lenders decreased by 4.9 percent and 2.4 percent, respectively (CBK, 2020).

Figure 1



Source; CBK, 2020

Figure 1 above shows how Kenya's public debt has risen from 2010 to 2020, and if nothing is done to control it, it may rise significantly further by 2022. The sharp increase from 2019 to 2020, for example, the total public debt at the end of the fiscal year was Ksh 69,238,092.84 and Ksh 81,139,031.59 in millions for 2019 and 2020, respectively.

1.2 Research problem

Development projects are undertaken with the goal of improving citizens' well-being as well as the economy as a whole. In order for this to be possible, proper governance, efficient revenue collection and utilization of the same need to be put in place for a sustainable economic growth and subsequently economic development. (Kobey, 2016)

Most countries in Africa, Kenya included have resorted to public borrowing with the goal of improving citizens' well-being as well as the economy as a whole. Unfortunately, this has resulted in an increase in the level of public debt as a result of overreliance (Ngugi, 2012).

Several academics have examined the link between public debt and economic development. Harmon (2012) investigated the impact of Kenya's public debt on inflation, GDP growth, and interest rates. The study concluded that there was no link between the public debt, inflation, GDP growth, and interest rates in a single analysis. Moki (2012) examined the relationship between African public debt and economic growth. According to Moki's (2012) findings, public debt has a significant positive relationship with economic growth. Makau (2008) conducted an empirical

study on external public debt servicing and Kenyan economic growth. In the short run, empirical results showed that the coefficients of external debt to GDP, savings to GDP, and debt service to GDP were significant, whereas the coefficients of interest to GDP and labor force growth were insignificant. Koka (2012) examined the relationship between government bond issues and Kenyan economic growth. The findings indicate that the issuance of government bonds has a positive impact on the level of economic growth. The previous studies that have been conducted to establish the relationship between public debt and economic growth have yielded different findings. Despite different studies been conducted on this similar topic, there hasn't been one which looks at the effect fiscal policies, that is taxation policy and government spending, has on the economic growth. This study therefore attempts to fill this void

1.3 Research objectives

This study includes both general and specific objectives, which are listed below.

1.3.1 General objective

The study's main objective is to establish the effect of public debt on economic growth in Kenya.

1.3.2 Specific objective

- i) To assess the effect of external debt on Kenyan economic growth.
- ii) To examine the effect of domestic debt on Kenyan economic growth.

1.4 Research Questions

- i) What are the effects of external debt on economic growth of Kenya?
- ii) What are the effects of domestic debt on economic growth of Kenya?

1.5 Significance of the study

Although the majority of the resources needed for public spending are raised through taxation, governments in developing countries such as Kenya rely heavily on borrowing to enable higher spending without necessarily raising taxes. Other sub-reasons for borrowing could include political pressures from leaders who promised lower taxes in their manifestos. Several stakeholders will find this study useful.

1.5.1 The citizens

The study will be useful to citizens because it is critical that everyone is aware of the effects that large debt deficits can have on their income and national savings. Because wages are primarily determined by worker productivity, a reduction in investment would reduce wages as well, reducing people's incentive to work.

1.5.2 Students

To the students, this study will serve as a resource for future researchers.

1.5.3 The Government

This study will also be useful to the government, because the analysis of the impact of Kenya's public debt on economic growth will lay the groundwork for policy development aimed at a successful debt management strategy.

1.6 Scope of study

The study's scope was limited to determining the impact of public debt on Kenyan economic growth. This included annual time series data spanning the years 2010 to 2020. The MS Excel analysis tool pack's multiple linear regression model was used, with economic growth as the dependent variable and external and internal debt as independent variables. The period 2010-2020 was chosen because the key and significant changes caused by massive deficits were visible. The data for the study were obtained from the World Bank, Kenya National Bureau of Statistics, and the Central Bank of Kenya, the International Monetary Fund, and other relevant secondary sources.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will give an insight on the theoretical literature on foreign borrowing and its effect on the economic growth of Kenya, empirical studies done by other researchers, research gap as well as conceptual framework.

2.2 Theoretical foundation of the study

Different theories have developed different viewpoints on the significant relation between public debt and economic growth in order to fully understand the implications of borrowing on economic growth as well as public's standard of living. The majority of theoretical and empirical findings from classical economists including such Ricardo, J.S. Mill, and Hume have analyzed how public debt negatively affects the economy in theories such as the Keynesian theory, Ricardian equivalence theory, and neoclassical theory (Aero & Ogundipe, 2016; Duran, 2017; Eze & Ogiji, 2016; Renjith & Shanmugam, 2018). On the other hand, there are those that demonstrate positive relationships, such as the Harrod-Domar growth model, which states that accumulation of capital in the form of savings is necessary for growth.

As a result, the goal of this research is to look into how the government deficit tends to affect economic growth, as well as other macro - economic variables like unemployment, interest rates, and inflation, to mention a few. The study will look at the different theories to examine the relationship between public debt and economic growth in Kenya.

2.2.1 Ricardian Equivalence Theory

David Ricardo developed the Ricardian equivalence theory in the early nineteenth century, and later Barro and other neoclassical economists reinvestigated the idea, which has been widely interpreted as another criticism of fiscal policy. This economic hypothesis implies that any government efforts to stimulate the economy by increasing public spending will be ineffective because consumers understand that the deficit will be paid for by them in the form of future taxes (Renjith & Shanmugam, 2013). The theory claims that it makes no difference whether the government chooses to fund its expenditure through borrowed funds or taxation because the

outcome is the same and aggregate demand remains unchanged (Karazijiene, 2015). The assumption of this speculation is that if households have a rational expectation that a change in government budget will affect private consumption and saving behaviors, they will save more in anticipation of a tax increase in the near future (Renjith & Shanmugan, 2013). For example, whenever the government of Kenya applies for or acquires additional loans and international assistance from China as well as other lending institutions, people usually begin preparing their minds because they know they will now have to pay for them soon or in the coming days through taxes.

However, the relevance of this theory has been criticized that it is based on unrealistic assumptions when it comes to matters of economic and population growth. Feldstein (1976) argued that public debt depresses savings in a growing economy in that there is increased taxation which increases the cost of living and growth starts to decline. From this study therefore, the government should avoid having huge deficits to avoid interfering with private investment.

2.2.2 Crowding out theory

The crowding out effect theory, developed by Frank Knight, states that even a small rise in interest rates can cause a significant drop in investment and growth. A decrease in available resources for funding investment opportunities and macroeconomic operations in a country, according to Claessens (1996), results in a decrease in investments. It takes into account how individuals plan their consumption decisions over the course of their lives. Borrowing boosts current consumption by transferring the tax burden to future generations. Borrowing increases present consumption by shifting the tax burden to future generations (Ngugi, 2012)

There are some economists who argue that the crowding out effect is small or maybe even non-existent. For instance, Ricardo (1820) through the Ricardian equivalence theory argues that whether the government finances its public spending through borrowing or taxing, the outcome will be the same. Similarly, Keynes (1936) also argued that government borrowing does not crowd out private consumption.

Crowding out starts to take effect when there are increased interest rates at the point where only the government can afford repayment of loans. This phenomenon reduces the amount of saving

available for investment making it difficult for individuals and businesses to survive in that market (Carlson & Spenser, 1975). Governments borrow money for purposes of increasing demand for goods and services. However, during such consumers tend to be cautious of being forced out of the market and risk of being subjected to higher taxes in future.

The crowding out effects hypothesis suggests that government debts waste a bigger portion of national savings earmarked for investment due to the fact that there is growth in demand while supply remains constant. As a result, the cost of money rises.

2.2.3 Debt Overhang Theory

Debt overhang theory was initially postulated by Myers (1977) United Nations agency points out that a prime quantity of debt could distort a company's investment by reducing its incentives and suggests short-run debt as an attainable resolution to debt overhang. Once the debt burden is thus massive to a degree where a government cannot take extra debt, there's underinvestment that makes it onerous for companies to snap back from the loss. During a more study, Krugman (1988) outlined debt overhang because of the negative relationship between foreign debt and investment. In addition, Reinhart & Rogoff (2012) conjointly outlined it because of the deterioration of the economy because of increase public debt.

In different words, debt overhang is that the scenario wherever a corporation incorporates a large existing debt that it cannot simply take extra debt to fund new investment comes even once that new borrowing may be a sensible investment that might see the compensation of the debt. Levy – suffragist and Chowdhury (1998) state that repaying these debts exhausts up such a lot of the country's revenue. For example, there's the next probability that an African country would possibly fall within the scenario wherever its liability can outgrow the compensation capability because of the many loans it's been receiving these recent years. This hypothesis is critical to the study as result of it shows that increasing borrowing might lead to a debt overhang, going away the government unable to pay the loan once it comes due.

2.3 Empirical Review

External debt is acquired with the intention of contributing to the economy, but the future debt service payment threatens the debt's sustainability as well as economic growth.

The relevant empirical research on external debt stock, debt service, government expenditure, and economic growth were reviewed in this section

2.3.1 The relationship between external debt and economic growth.

Mustafa and Rifaqat (2012) looked at the influence of external debt buildup on economic growth in Pakistan in Asian countries. Gross domestic product (GDP), human capital, capital formation, total labor force, and foreign debt were employed as study variables. The extended production function model was used in the research, which revealed a long-term association between foreign debt and economic growth. This meant that a high external debt stock to GDP ratio resulted in a poor rate of economic growth, indicating that Pakistan had a debt overhang. In contrast to this study, Chowdhury (2001) examined the dual relationship between foreign debt and economic advancement in two Asian economies and found that there was a bi-directional relationship between foreign debt stock and GDP growth, but no causal relationship between GDP growth and external debt stock. The disparities in results could be attributable to the various variables employed in the various models. The current study estimated the association using a different model, ARDL.

Using the Ordinary Least Square (OLS) approach, Shah and Pervin (2012) investigated the effect of external debt stock on economic development in Bangladesh in the short- and long-run from 1974 to 2010. The findings showed that external debt had a positive effect on GDP in the near run, indicating that there was no evidence of a debt overhang as long as the external debt stock did not negatively impair economic growth. Nevertheless, there was a crowding out effect as a result of the negative effect of debt service on creditors as a result of debt stock building, causing the service payment to rise.

Faraji and Makame (2013) used time series data on external debt and economic performance from 1990 to 2010 to study the impact of external debt on Tanzania's economic growth. The Johansen co-integration test revealed that there is no long-run link between external debt and GDP. Foreign debt and debt service, on the other hand, have a large impact on GDP growth, with the total external debt stock having a positive effect of around 0.36939 and debt service payment having a negative effect of about 28.517, according to the data. Further research on the impact of external debt on foreign direct investments (FDIs) and domestic income is also needed, according to the report.

Muinga (2014) conducted research in Kenya to investigate into the relationship between foreign public debt and economic growth. For stationarity, she utilized the Augmented Dickey–Fuller Unit Root test, and for data analysis, she used the OLS method. External debt and interest payments on external debt payments contribute negatively to economic growth in Kenya, according to the study, which used data from the World Bank from 1970 to 2010. The simulation results showed that any percentage increase in external debt while holding other factors constant will reduce GDP, resulting in slow economic growth. The study suggested that Kenya's debt management strategies be examined and improved.

The results of Zaman and Arslan's (2014) estimation suggested that external debt services had a beneficial link with Pakistan's economic growth. Given such, external debt services have a favorable impact on economic growth; nevertheless, the issue arises when governments are required to repay these debts in the future. The crowding-out impact of foreign debt resulted from greater debt service costs, which increased interest costs and the budget deficit, diminishing savings and leading to higher interest rates or credit competition, which crowded out private investments and slowed economic growth (Clements et al., 2003). Debts accrued as a result of the principal loan repayment and interest servicing. In developing nations, external indebtedness has become a never-ending source of poverty (Nakitami & Herera, 2007).

Al-Shatti (2014) researched on the impact of public expenditure on economic growth in Jordan by determining the contribution of current and capital expenditures as a percent of the total public expenditures. The Keynesian theory was used to measure this impact. According to Keynesian theory, public expenditures can add positive value to economic growth in that increased external borrowing increases domestic production which further boosts investment sentiments thereby maintaining a full employment. The investigation found out that current expenditure exerts significant impact on the capital expenditure.

Mbah, Umunna, and Agu (2016) used the ARDL approach to examine the influence of external debt on economic development in Nigeria from 1970 to 2013. The goal was to see whether there is a long-term link between the variables, which included employed GDP, the ratio of external debt to GDP, the ratio of debt service to GDP, the ratio of national expenditure to GDP, and the real exchange rate. The study found that there was a long-run link between the variables and that debt overhang and crowding-out effects existed in Nigeria.

Babu, Kiprop, Kailio, and Gisore (2014) looked into how external debt affects economic growth in East African countries (EAC). The study analyzed annual data from 1970 to 2010 and applied the Solow growth model with debt adjustments. Terms of trade, openness, and external debt were the study's variables. The findings revealed that EACs' external debt stock had a negative impact on per capita growth. The study was distinctive of the regional setting, the use of time series data, the variables employed, and the model used.

Faraji and Makame (2013) used time series data on external debt and economic performance from 1990 to 2010 to study the impact of external debt on Tanzania's economic growth. The Johansen co-integration test revealed that there is no long-run link between external debt and GDP. Foreign debt and debt service, on the other hand, have a large impact on GDP growth, with the total external debt stock having a positive effect of around 0.36939 and debt service payment having a negative effect of about 28.517, according to the data. Further research on the impact of external debt on foreign direct investments (FDIs) and domestic income is also needed, according to the report.

2.3.2 The relationship between internal debt and economic growth

Idris and Ahmad (2017) looked at the relationship between public debt borrowing productivity and economic growth in Sub-Saharan Africa. The autoregressive distributed lag model was used in this investigation. In the study, secondary time series data spanning 35 years was gathered. The investigations revealed that domestic debt had a detrimental impact on economic growth, using econometrics estimate techniques. Based on these findings, the study recommends that fiscal policymakers and other related policymakers pay close attention to the productive use of any internally borrowed funds, ensuring that resources are allocated to specific growth-oriented programs and that adequate loan-repayment capacities are in place.

Putunoi and Mutuku (2013) used the Engle-Granger (1987) residual based and Johansen (1988) VAR based co-integration tests to examine the impact of domestic debt on Kenyan economic growth from 2000 to 2010, and found that domestic debt markets play an increasingly important role in supporting economic growth. They discovered that increasing domestic debt has a long-term and large positive impact on economic growth.

Maana and Owino (2018) examined the evolution of Kenyan domestic debt and its impact on the economy from 1996 to 2007. The study relied on secondary data, which was then analyzed using regression. Their findings indicate that domestic debt expansion had a positive but not statistically significant effect on economic growth during the period.

Lotto (2018) examined the impact of domestic debt on Tanzanian economic growth from 1990 to 2015, using the standard least relapse method to assess its assets. The investigation discovers a backwards but insignificant link between domestic obligation and Tanzania's financial development as measured by gross domestic product annual growth.

Adofu and Abula (2010) looked at the relationship between domestic and economic growth in Nigeria for the period 1986-2005. Their findings revealed that domestic debt has had a negative impact on the Nigerian economy's growth, and they suggested that it be avoided. Instead, they proposed that the Nigerian economy focus on broadening the tax income base.

Maana et al. (2018) use an altered Barro development relapse model to investigate the impact of domestic debt on Kenya's economy from 1996 to 2007. The study found that domestic debt growth had a positive but not critical impact on monetary development during the period. Regardless, the investigation discovered no evidence that the increase in domestic obligation swarms out private area lending in Kenya.

Checherita and Rother (2010) calculate the average impact of government debt on per capita GDP growth for twelve euro area countries between 1970 and 2009. Private savings, public investment, total factor productivity, and real interest rates are all routes through which government debt affects economic growth. The analysis reveals that government debt has a non-linear negative influence on economic growth.

2.4 Research gap

In this empirical review, numerous research have consistently found an unfavorable relationship between public debt and economic development, while others have found a positive relationship. However, there were also situations where there was no association at all. Because most individuals prefer to deposit savings in banks, which are then employed for non-production purposes, public debt and investment are negatively connected. Hence, if bank deposits rise, so will non-production loan borrowing, which will primarily be used for consumption. If investment

in the manufacturing and industrial sectors rises, capital in banks falls, reducing banks' borrowing power and lowering domestic debt levels.

Were (2001) found no negative impact of debt servicing on economic growth in his study on the Impact of Public Debt on Economic Growth. It did, however, confirm that there is some crowding out of private investment; Checherita and Rother (2010) confirmed that the public debt and economic growth have a non-linear connection; Kumar and Woo (2010) discovered a negative link between public debt and economic growth; According to Reinhart and Rogoff (2009), public debt has a detrimental impact on economic growth.

Getinet and Ersumo (2020) did a study on the impact of external debt on economic growth in Ethiopia. This was conducted to determine both short-run and long-run impact of public external debt on economic growth in Ethiopia with a time series data. Jalles and Aponso (2011) did a study to show relevance of government debt and its effects on productivity and output growth for both developed and developing countries. In this study they used growth equations and growth accounting techniques to get a cross-sectional data for 155 developed and developing countries. The results showed a negative effect of the government debt ratio.

Figure 2: Summary of Literature Review and Research Gaps

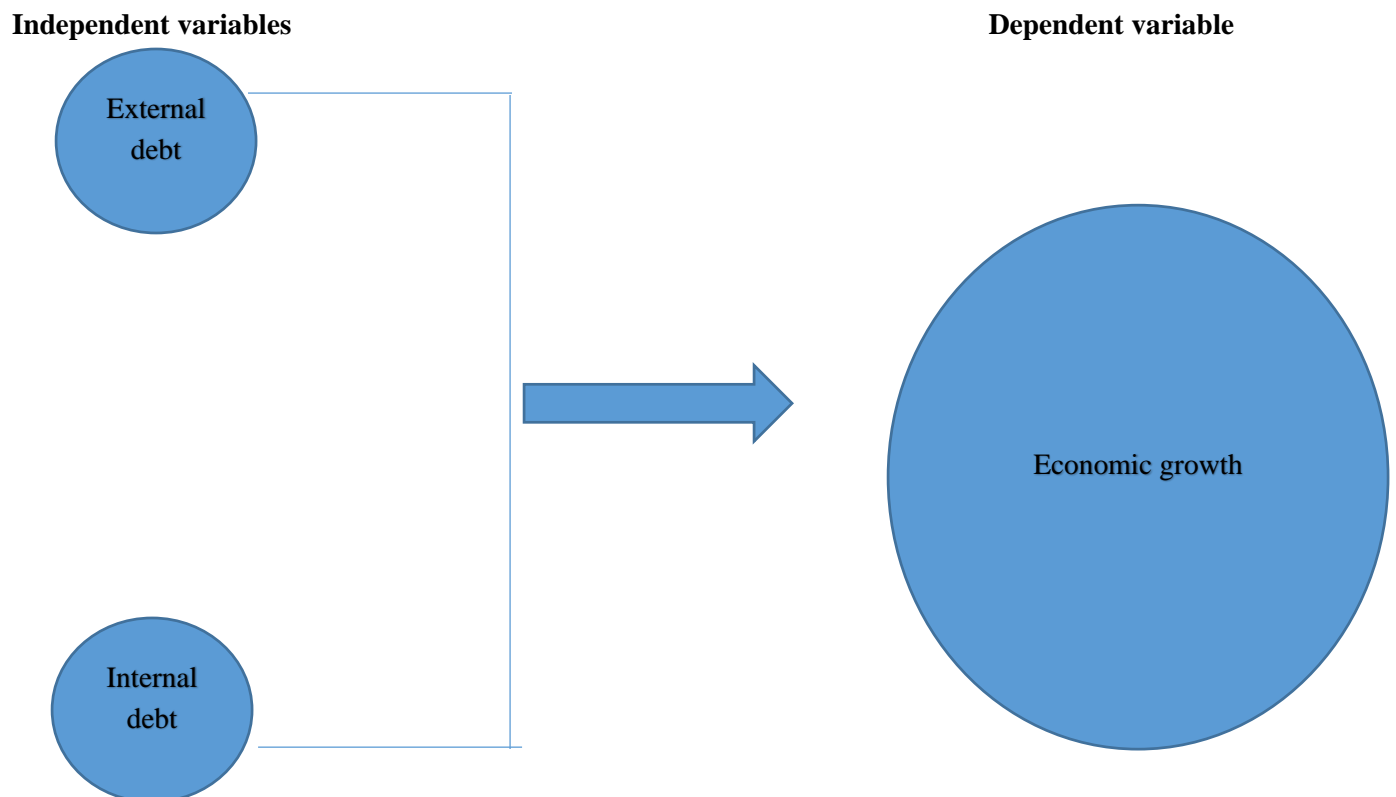
Research	Variables used	Methodology and Findings	Research gap
Impact of external debt on economic growth of Pakistan Author : Awan & Qasim (2020)	Employed labor forces, exports, gross capital formation, external debt, gross domestic product output and imports	Used Solow growth model. It indicated a negative relationship between external debt and economic growth.	The study was done in Pakistan perspective
Impact of public external debt on economic growth in Ethiopia Author : Getrinet & Ersumo (2020)	Public external debt stock to GDP, rate of inflation, public expenditure to GDP ratio and trade openness.	Used ARDL approach using the time series. It indicated that there is significant negative impact of public external debt on	The study was conducted in Ethiopia, a Kenyan perspective is needed.

		economic growth.	
Impact of Government debt on per capital GDP for Euro countries. Author : Checherita & Rother (2010)	Private saving, public investment and total factor productivity.	Used multiple regression model. It indicated that government debt and economic growth have a non-linear connection	The research focused on effect of government debt on GDP
Impact of External debt on Economic Growth in Kenya Author : Were (2001)	Real GDP growth rate, net foreign finance, rate of inflation, public investment as a ratio of GDP, debt servicing and terms of trade.	Used time series regression. It indicated that external debt accumulation has a negative impact on economic growth and private investment.	The study did not incorporate external debt variable.
Impact of high public debt on long-run economic growth. Author : Kumar & Woo (2010)	GDP, population, investment, government size, private saving and terms of trade growth rates.	Used OLS regression model. It indicated an inverse relationship between public debt and economic growth.	The variable slightly differed with the current study.
Effects of external debt stock on economic development in Bangladesh Author : Shah & Pervin (2012)	Gross domestic product, external public debt, total debt service payment	Used the Ordinary Least Square approach. It showed that external debt had a positive effect on GDP	The study did not incorporate internal debt variable.
Effects of public debt on economic growth in Kenya Author : Ngugi (2016)	Economic growth, external debt, domestic debt, inflation rate, public debt service, real exchange rate and real interest rate.	Used time series regression model. It indicated that increasing the levels of domestic debt crowd out private investment and effect real GDP negatively.	There is need to investigate other effects of public investment in Kenya

2.5 Conceptual Framework

In this study the conceptual framework we look at the effect of public debt and the economic growth in Kenya. The independent variable is economic growth and while dependent variable is internal debt and external debt. The study seeks to ascertain the impact of independent variables on the dependent variable.

Figure 2.1



Source: Racheal (2021)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was adopted and used for this study. The chapter discusses research design, data collection, data analysis techniques used, validity testing, and ethical considerations.

3.2 Research Design

A research design is a blueprint, framework, or arrangement used to find answers to a research problem. It is a method of collecting and analyzing data that is suitable for research purposes (Creswell & John, 2003). The study used a descriptive research design, which is defined as the procedures for gathering, analyzing, interpreting, and reporting data in research design (Baru, 2018).

Descriptive research design is a scientific method that entails observing and describing a subject's behavior without influencing it in any way. The goal of descriptive analysis is to explain a development and its characteristics. This analysis is a lot involved with what instead of how or why one thing has happened (Nassaji, 2016).

Descriptive design is the best choice for this study because it is able to ascertain the changes observed at each point in time and can employ quantitative research technique which is helpful in measuring the changes in data trends through statistical methods

3.3 Population and sampling

The term population refers to a group of people, components, services, or households that ~~will be~~ **were** explored and evaluated in order to reach a conclusion whereas sampling is a process of selecting a sample unit from data set in order to measure the characteristics, beliefs, and attitudes of people (Cooper & Schindler, 2014). The population for this study is the Central Bank of Kenya annual reports. The research depends on annual data from 2010 to 2020. The study selects years with complete data entry for all variables to ascertain which years to include in the

assessment. The number of observations, on the other hand, should be greater than the number of independent variables in the model. The sample size for this research was ten observations.

3.4 Data Collection

The research examined the impact of public debt on economic growth in Kenya employing annual secondary data from the Central Bank of Kenya. The data was collected using a soft copy data collection sheet that was modified and cleaned, and it covered the years 2010 to 2020. This time period was selected because it noticed the most economic changes as a result of government actions.

3.5 Data Analysis

Data analysis is the application of descriptive and inferential statistical procedures to comprehend the consistency of gathered data (Zikmund, Babin, Carr, & Griffin, 2013). Descriptive statistics was used to analyze quantitative data, which included measures of central of tendencies (mean, medium, mode), as well as measures of dispersion (standard deviation, variance and range). The overall goal is to determine the impact of public debt on Kenyan economic growth. Descriptive statistics entails presenting the study variables in the form of tables, graphical charts, and trends. GDP growth was used to represent economic growth as the dependent variable, while external debt stock and domestic debt were used as the independent variables. Correlation analysis was used to determine the strength of the relationship between the independent variables and the dependent variable, whereas regression analysis determined whether economic growth could be predicted based on external and internal debt.

3.5.1 Analytical Model

The researcher used a multiple regression analysis to ascertain the relationship between Kenyan public debt and economic growth. To investigate the relationship between Kenyan public debt and economic growth. The model is a regression model that regressed all economic growth indicators against economic growth. Multiple linear regression is used in the model. The model is listed below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Where; Y = Economic growth (measured by GDP)

X1= Domestic debt (measured by the total value in Ksh)

X2 = External debt (measured by the total value in Ksh)

€ = Error term

3.5.2 Test of significance

An Analysis of Variance was used in this research to examine the model's relevance in assessing the relationship between public debt and economic performance (ANOVA). The level of significance was analyzed by the researcher after the ANOVA statistics was retrieved. The study was assessed at a 95% confidence level and a 5% significance level. The model is found to be statistically significant in explaining the relationship if the discovered significance number is less than the critical value.

3.6 Ethical Issues

The information obtained from the government, Central Bank of Kenya, Kenya Revenue Authority and the World Bank is purely academic in nature. Plagiarism was strictly prohibited, and all scholars cited in this study were properly credited.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter contains a detailed presentation and discussion of the data analysis and study results. The findings are organized into three sections: descriptive statistics, inferential statistics, and findings interpretation.

The quantitative data analysis involved the use of Excel, which aided in screening, editing and entering, coding and categorizing, and generating both descriptive and inferential statistics from the data.

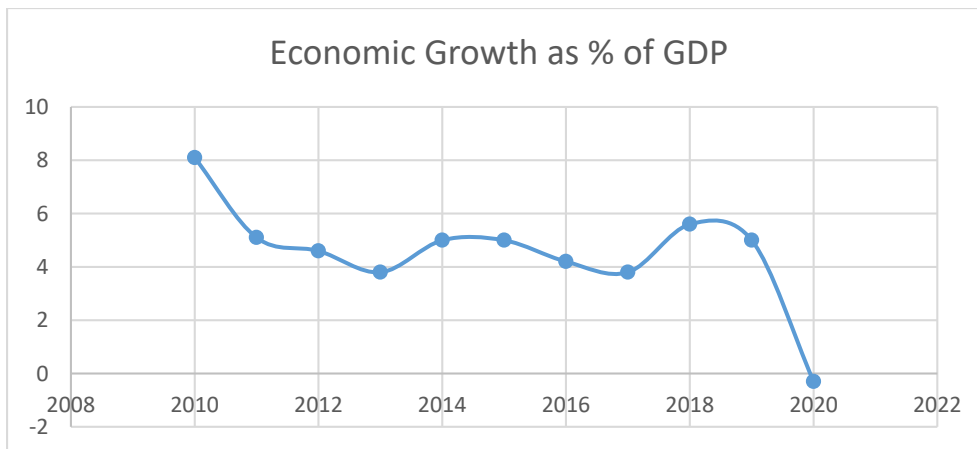
4.2 Descriptive Statistics

The purpose of this research was to look into the impact of public debt on economic growth in Kenya. This section provides descriptive analysis of Kenya's economic growth and public debt in order to better understand the data's fundamental characteristics. Data was analyzed in order to identify, describe, and investigate the relationship between public debt and economic growth. The data was obtained from the Central Bank and consisted of eleven observations.

4.2.1 Economic Growth

The study sought to determine the country's economic growth rate expressed as a percentage of GDP from 2010 to 2020. The GDP trend is depicted in Figure and Table below.

Figure 4.1



Source; Research findings

Figure 4.1 above shows that the country's economic growth shows both an increasing and decreasing flow at various points during the study period. 8.1 percent economic growth was recorded at the start of the fiscal year 2010, the highest during the study period. Since 2011, the values have been rising and falling in turns. 2020, on the other hand, recorded a negative value of -0.3 percent.

The calculated values of Economic Growth during the study period are shown in table 4.1 below.

Table 4.1

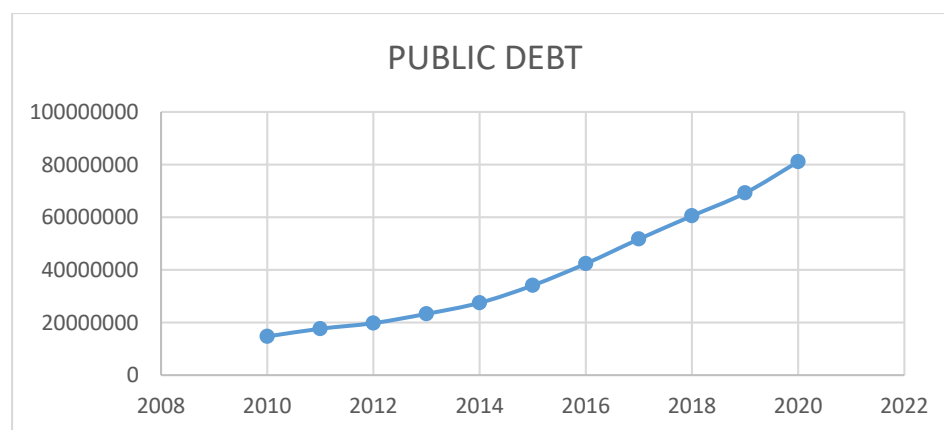
YEAR	Annual GDP%
2020	-0.3
2019	5
2018	5.6
2017	3.8
2016	4.2
2015	5
2014	5
2013	3.8
2012	4.6
2011	5.1
2010	8.1

Source; Research findings

4.2.2 Public Debt

The study sought to determine the country's public debt level from 2010 to 2020. The public debt trend is depicted in Figure and Table below.

Figure 4.2



Source; Research findings

Figure 4.2 depicts the country's public debt steadily increasing from the start to the end of the study period. Borrowing levels were not that high from 2010 to 2014, so there is very little difference in how it flows from 2014 to 2020. For example, in 2014, Ksh 27,509,050.39 was recorded as public debt, which increased to Ksh 34,127,168.43 in 2015, a Ksh 6,618,118.04 increase. The yearly calculated values of the total public debt during the study period are shown in table 4.2 below.

Table 4.2

YEAR	PUBLIC DEBT in KSH MILLION
2020	81,139,031.59
2019	69,238,092.84
2018	60,548,103.11
2017	51,727,459.22
2016	42,391,947.72
2015	34,127,168.43
2014	27,509,050.39
2013	23,332,318.81
2012	19,796,741.62
2011	17,675,754.26
2010	14,744,365.28

Source; Research findings

4.3 Inferential statistics

The study on the effect of public debt on economic growth thus used a multiple regression analysis to determine the influence of the dependent variable and a number of independent variables to investigate how public debt could have a significant relationship on economic growth in Kenya. A model summary, Analysis of Variance (ANOVA), and coefficients tables were produced as a result of the multiple regression analysis.

Table 4.3 Model Summary

<i>Regression Statistics</i>	
Multiple R	0.648765253
R Square	0.420896354
Adjusted R Square	0.276120442
Standard Error	1.688500086
Observations	11

The model has R square of 0.420 and an adjusted R-squared of 0.276, indicating that the explanatory variables collectively explain 42% of the variability in economic growth, with the remaining 58% indicating that other factors exist, and thus additional research can be conducted to investigate those factors.

Table 4.4 Analysis of Variance

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	16.57719421	8.288597105	2.907226411	0.112467
Residual	8	22.80826034	2.851032542		
Total	10	39.38545455			

The T test determines if a single variable is statistically significant, whereas the F statistic examines the combined effect of all variables.

The overall F-test examines whether or not all of the predictor factors are jointly significant if none of the predictor variables are statistically significant. Because the study used an alpha value of 0.05, the confidence level will be 95%, which means you can be confident that the estimate will fall between the upper and lower values indicated by the confidence level 95 times out of 100 times. The results in Table 4.4 above show that the model had an F-value of 2.907 and P = 0.11. Since the value is greater than either 5% for the 95% level of confidence then this means that the relationship is not significant.

Table 4.5 Coefficients table

COEFFICIENTS

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.29791129	2.202589505	3.767343516	0.00548643	3.218731	13.37709
Domestic debt	-6.08417E-07	6.59266E-07	-0.922869439	0.383064993	-2.1E-06	9.12E-07
External debt	4.23215E-07	5.66021E-07	0.747702561	0.476041098	-8.8E-07	1.73E-06

There are two coefficients, domestic debt and external debt, according to the results in Table 4.5. Domestic debt has a coefficient of -6.08 in the table. This implies that there is a negative link

between domestic debt and economic growth. This implies as one rises the other one reduces. The coefficient for external debt is 4.23, indicating a positive relationship between external debt and economic growth. As the independent variable rises, so does the dependent variable, and vice versa.

P-values indicate how likely it is that your data occurred under the null hypothesis. A p-value of less than 0.05 is considered statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% chance that the null hypothesis is correct. A p-value greater than 0.05 is not statistically significant and suggests strong support for the null hypothesis.

P-value = 0.38 > 0.05

P-value = 0.47 > 0.05

Therefore from the conclusion if $p > 0.05$, the null hypothesis fails to reject.

4.4 Interpretation of findings

The outcome of Table 4.3 explains the goodness of fit measure. The R square in the regression model is 0.420, and the Adjusted R square is 0.276, implying that variation in domestic and external debt explains 42 percent of the variation in economic growth. According to the regression results, all variables are statistically insignificant in determining the GDP growth rate.

Table 4.4's ANOVA results indicate whether the regression coefficients were statistically different from 0.112. The significance level must be less than the conventional level of statistical significance in order to be statistically significant (i.e. 0.05). $F = 907$ in the model. Domestic debt and economic growth have a negative relationship, which means that as the independent variable rises, the dependent variable falls, and vice versa. External debt and economic growth have a positive relationship, which means that as the independent variables rise, so does the dependent variable.

Domestic debt has a negative effect on economic growth, according to the regression model, as indicated by the negative value of its coefficient in table 4.5. As a result, increasing domestic debt reduces economic growth. As a result, increasing domestic debt reduces economic growth. A 1% increase in domestic debt is associated with a 6.084 percent decrease in Kenya's GDP

growth rate. Table 4.5, on the other hand, shows that External Debt is positively related to Economic Growth. A one-percentage-point increase in external debt is associated with a 4.2-percentage-point increase in economic growth.

The p-value is a proportion; if your p-value is 0.05, it means that you would see a test significance at least as extreme as the one you found 5% of the time if the null hypothesis was true. If the p-value is less than your significance threshold ($p < 0.05$), you can reject the null hypothesis.

The p-values in the table were 0.38 and 0.47, which are greater than the level of significance. This means they are not statistically significant and provide strong support for the null hypothesis.

CHAPTER FIVE

SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This section of the study provides a summary of the study's findings, policy recommendations conclusions, limitations of the study and areas for further research.

5.1 Summary of findings

The primary goal of the study was to determine the impact of public debt on Kenyan economic growth over a ten-year period from 2010 to 2020, using multiple regression analysis. The Kenyan constitution, the Public Finance Management Regulation 2013 and the Public Finance Management Regulation 2015 establish the legal framework for the government to borrow from both domestic and foreign markets through the issuance of Treasury Bills and Treasury Bonds.

The first aim of the research was to ascertain the impact of external debt on Kenyan economic growth. External debt and economic growth have a positive relationship, according to the regression analysis, which implies that when the independent variables rise, so does the dependent variable. This is in contrast to the conclusions of Babu, Kiprop, Kailio, and Gisore's (2014) study on how external debt affects economic growth in East African countries from 1970 to 2010, which found that EACs external debt had a negative influence.

The second objective of this study was to determine the effect of domestic debt on economic growth in Kenya. Domestic debt and economic growth have a negative relationship, according to the regression analysis, which implies that when the independent variable rises, the dependent variable declines, and vice versa. These results are similar to those of Adofu and Abula (2010), who looked at the relationship between domestic and economic growth in Nigeria from 1986 to 2005. Their findings revealed that domestic debt has had a negative impact on Nigerian economic growth, and they urged that it be discouraged in order to concentrate on expanding the tax revenue base.

Because the data was purely quantitative, descriptive and inferential statistics were used to understand the data's consistency. This study relied on secondary data gathered from the Central Bank of Kenya. In order to establish the relationship between public debt and economic growth, the study used multiple regression analysis to explain the rates of change in the dependent variable following a unit change in each independent variable.

The study's findings show that the model was not statistically significant, with a p-value less than 0.05 indicating that there was strong evidence for the null hypothesis. Furthermore, the findings show that external debt has a positive long-run and short-run effect on Kenya's economic growth. This suggests that an increase in Kenya's external debt would result in positive economic growth. External debt, as an economic policy aimed at enhancing the productive capacity of the nation through the delivery of long-term assets and the implementation of quality policies aimed at increasing the nation's growth, has the potential to increase the nation's economic growth.

Again, the findings show that domestic debt has a negative long-term and short-term impact on Kenyan economic growth. This implies that an increase in domestic debt will result in lower economic growth and vice versa.

5.2 Policy recommendations

The purpose of this study was to look into the effects of public debt on economic growth in Kenya. According to the regression results, domestic debt has a negative impact while external debt has a positive impact. Aside from concerns about sustainability, high levels of public debt may have an adverse effect on economic growth, either directly or indirectly. As a result, the government must develop strategies to reduce debt stocks and the problems associated with debt service. These strategies include debt rescheduling, debt restructuring, and debt servicing reduction.

This study recommends that public borrowing from international markets and internal borrowing be limited, even if there is no debt overhang, because it leads to high interest rates and crowds out private sector investment. Governments should ensure that the level and rate of growth of their public debt are fundamentally sustainable and can be serviced under a variety of conditions

while meeting cost and risk objectives. Finally, the government should provide a policy framework that credibly creates an environment that encourage both domestic and foreign investors to invest in the country.

This study concludes that Kenya's high level of public debt inhibits economic growth and the government should only use it as a last resort to finance the country's economic development.

5.3 Conclusion

Debt levels in Africa have become a major concern as most African governments attempt to improve infrastructure and provide other social services in order to relieve poverty. The goal of the study was to see if public debt helped Kenya's economic growth from 2010 to 2020. Economic growth as measured by GDP per capita has a negative relationship with government debt.

Kenyan officials and the government should play an active role in monitoring the country's public debt status, paying special attention to avoid becoming trapped in the debt overhang.

5.4 Limitations of the study

A study of this scope necessitates consultation with a variety of stakeholders in order to obtain correct data. It proved to be quite cumbersome to acquire data from the Central Bank of Kenya.

The study had to rely on data provided by the National Treasury on soft copy excel sheets to assess if payments due for various debts were entirely satisfied and in what proportion. Because this information is never made public, its accuracy cannot be assured.

5.5 Areas for further research

The study of economic growth factors is wide and multifaceted, encompassing all aspects of government finance and politics. Some of the areas that should be considered for further research are the impact of corruption on economic growth, impact of political instability on economic growth, impact of government expenditure on economic growth. Furthermore, research should focus on public debt repayment, as well as the uses of public debt and how they affect economic growth.

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APPENDIX

	KSH in MILLION	KSH in MILLION
Year	Domestic debt	External debt
2020	39127833.29	42011198.3
2019	33624513.12	35613579.72
2018	29494330.52	31053772.59
2017	24948057.73	26779401.49
2016	21230103.62	21161844.1
2015	17049886.98	17077281.45
2014	15099067.66	12409982.73
2013	12992446.33	10339872.48
2012	10773682.03	9023059.59
2011	9198353.92	8477400.34
2010	7989837.6	6754527.68

Source; Central Bank of Kenya

	KSH in MILLION
Year	Total public debt
2020	81,139,031.59
2019	69,238,092.84
2018	60,548,103.11
2017	51,727,459.22
2016	42,391,947.72
2015	34,127,168.43
2014	27,509,050.39
2013	23,332,318.81
2012	19,796,741.62
2011	17,675,754.26
2010	14,744,365.28

Source ; Central Bank of Kenya

YEAR	Annual GDP growth (%)
2010	8.1
2011	5.1
2012	4.6
2013	3.8
2014	5
2015	5
2016	4.2
2017	3.8
2018	5.6
2019	5
2020	-0.3

Source; The National Treasury