THE INFLUENCE OF FISCAL POLICY INSTRUMENTS ON THE LEVEL OF PUBLIC DEBT IN KENYA

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DECLARATION

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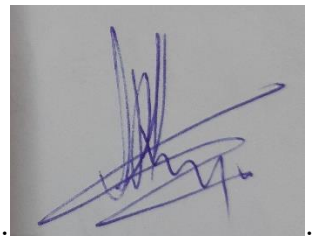
This thesis is my original work and has not been presented for a degree in any other university.

…  ……

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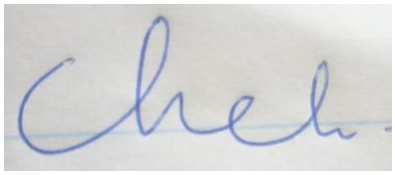

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DEDICATION

This research project is dedicated to my parents Mr. & Mrs. Bedan Kihara for their unwavering support in my academic journey. To my dear wife Grace Njeri Irungu for her many words of encouragement and moral support. I also dedicate it to my children Roy Kihara Irungu, Adrian Mugo Irungu and Jeremy Mwangi Irungu. It is my prayer that in the fullness of time, they will reflect on the work and ignite their own flame for academic excellence.

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May the almighty God bless you all.

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DEFINITION OF TERMS

Balance of Payment- A record of all transactions between the local economy and the global economy in a particular period of time (Yang, 2011).

Counter-cyclicality- Reduction of spending and raising of taxes when the economy is in upswing and increasing spending and cutting taxes to stimulate the economy when its in recession (Westerberg, 2011)

Crowding out Effect- A situation when the Government borrows heavily in the local economy, to finance government expenditure leading to increased interest rates and a reduction in private investments (Larch & Nogueira, 2009)

Current Account- A record of net trade in goods and services, net earnings on its net trade in goods and services, net income from investments and unilateral transfers within a given period (Funke & Nsouli, 2003)

Domestic Debt (Internal Debt) - The part of total government borrowing from lenders inside a country (Alawneh, 2017).

External Debt (foreign Debt)-The part of total government borrowing from foreign lenders such as banks, governments or internal financial institutions (Sardoni, 2013)

Fiscal Deficit-The surplus of government expenditure over government revenues for a period (Uguru, 2016)

Fiscal policy instruments - Utilization of government revenues and spending to stimulate the country's economy (Evans, 2018).

Fiscal surplus-Excess of government revenues over government expenditure in a given period (World Bank, 2019)

Pro-cyclicality-Increasing spending and reducing taxes during an economy upswing and reducing spending and increasing taxes during a recession thus magnifying economic fluctuations (International Monetary Fund, 2019)

Public debt- Sum of all borrowings by the government comprising of total internal debt and total foreign debt (Matiti, 2013)

LIST OF ABBREVIATIONS AND ACRONYMS

CA	Current Account
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IMF	International Monetary Fund
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
LAPSSET	Lamu Port South Sudan-Ethiopia Transport project
OLS	Ordinary Least Square
SGR	Standard Gauge Railway
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
VAR	Vector Autoregressive
VIF	Variance Inflation Factors

ABSTRACT

Many researchers have had interest in conducting studies on the rising level of public debt. This is mainly attributed to the fact that although debt avails massive resources to an economy it accumulates over time and leads to a rise in debt servicing burden. If the borrowing is not well managed, it brings negative repercussions to the economy since more resources are used for debt repayment as opposed to being deployed to vital government projects. Although many empirical studies have been done on public debt levels, not many have focused on the role of fiscal policy in debt management. Fiscal policy is a key factor that is theoretically expected to influence the country's public debt level. The government utilizes this tool to stimulate the economy by varying the levels of spending and revenue. This study sought to establish how fiscal policy influences the level of Kenya's debt. The independent variables were the fiscal policy instruments as characterized by government expenditure, taxation and balance of payment. The level of Kenya's public debt was the response variable which was the core focus of the study. It was given by the change in total public debt on a quarterly basis. Secondary data was collected for 20 years (January 2000 to December 2019) on a quarterly basis. A descriptive design was used in the study. A time series model was used in analyzing the variables. Regression of coefficients results showed that government debt expenditure measured as expenditure on infrastructure and levels of public debt was positively and significantly related. Taxation and levels of public debt were negatively and significantly related. The results also showed that balance of payment (as current account deficit) and levels of public debt were negatively and significantly related. The findings of the study will help policy makers understand the implication of the various fiscal policy measures on the level of public debt and therefore help ensure debt sustainability. The government should therefore come up with relevant policies which ensure that the levels of public debt continue to be sustainable. The study recommends the need for policy makers to monitor the prevailing levels of government expenditure and current account deficit while at the same time working to improve the tax revenues collected, since this would go a long way in stabilizing the prevailing levels of public debt.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

A detailed description is given in the chapter for background of the study, statement of the problem, research objectives, research questions and significance of the study. The scope of the study was also highlighted.

1.1 Background of the Study

Despite the fact that debt avails massive resources an economy, it accumulates over time and attracts massive interest cost. If not well managed, the borrowings bring negative repercussions to the economy since more resources are used for debt repayment as opposed to other vital government projects (Abbas & Christensen, 2007). As per economic theory, public debt impacts positively to the nation's growth of the economy as well as FDI inflows. This is however limited to a certain extent beyond which its effects adversely affect the economy. According to Krugman (1988) theory over indebtedness clearly shows how accumulated public debt leads to low investments hence low economic growth of a country. This point to the need for governments to come up with fiscal measures aimed at maintaining public debt at sustainable levels.

Fiscal policy is crucial in influencing the performance of an economy and involves intended actions by the government using taxation and spending aimed at influencing the economy's direction in an effort to achieve specified objectives (Musgrave & Musgrave, 1989). It is aimed at ensuring the macroeconomic environment is stable, promoting a sustained growth and providing conditions appropriate to innovate and invest. A reliable policy should create sufficient fiscal space to counter cyclicality caused by economic shocks that would destabilize it (Mutuku, 2015). Several countries suffer from insufficient local revenues to attain their required expenditure demand that forces them to engage in borrowing to fill the extra capacity caused by this insufficiency, which further creates an accumulation of public debt. Rational borrowing by a nation has the probability of enhancing its economic growth because its productive capacity is extended and capital accumulated (Poirson, Ricci & Pattillo, 2004).

The Kenyan Vision 2030 recognized how fiscal policy can assist the country in attaining a high growth in the economy, reduce inflation, reduce public sector shortfalls, stabilize

exchange rates and lower the rates of interest and has aimed at maintaining a deficit lower than five percent of Growth Domestic Product, in conformity with the desire to ensure Kenya's debt is sustainable. Kenya has witnessed instability in fiscal policy witnessed by as demonstrated by the changes in budget balance that deteriorated from 0.2 percent surplus in GDP in 1963 to a 14.8 percent deficit in 2018. The instability in fiscal balance was as a result of see sawing oil price in 1973-1974 and 1979-1980, famine food shortage, instability in the middle east that increased oil prices, a fall revenue from tourism, depreciation of the rates of exchange and soaring interest rates. The election chaos of 2007 to 2008, the global financial crisis in 2008 together with soaring worldwide price of food and oil. The shocks adversely effected the government revenues and spending while fiscal balance uncertainty lowered the economic performance by causing public debt to accumulate together with its corresponding high rates of interest (Republic of Kenya, 2018).

According to the World Bank (2019), the national Treasury (NT) data on fiscal out turn released in September 2019 reveals a considerable rise in the public debt for FY2018/19 and the urgent need for taking a decisive action to Kenya back to a fiscal consolidation path. There was a growth in fiscal deficit from 7.4 percentage (previous years) to 7.7 percent of GDP in FY2018/19 but the target was missed in FY2018/19 (of 6.8 percent of GDP) by nearly a full percentage point of GDP. This sequentially resulted in driving out of the private sector, an unforeseen rise in budget deficit, and the moderate credit growth in private sector This showed the need reliable adjustment standards by the public administration to position cash flow back to a well-judged track. Measures proposed include deliberate efforts to grow income, control leakages in expenditure, improve cash management and make realistic revenue projections. To forestall negative effects arising from market instability and fiscal space, it was recommended that the government should opt for long-term maturity debt to lower the cost of debt. These developments motivated the current study to interrogate the influence of the fiscal policy instruments on the level of public debt in Kenya.

The study by Burger et al. (2012) applied the annual time series data from 1974 to 2008 to estimate fiscal reaction function for South Africa to rate how its administration responds to changes in its debt position. According to the study, South African government ran a viable fiscal policy by increasing the surplus or by reducing the primary deficit in regard to

ascending debt although the public administration had a tendency to run fiscal balances in excess of those need to just have its public debt stabilized.

Mupunga and Roux (2014) used data from 1982 to 2012 to evaluate empirical and theoretical determinants of public debt dynamics in Zimbabwe that ensure sustainable public debt position.. The study involved identifying key macro-economic and fiscal variables that influence the ratio of debt to GDP in the country. The study found out that Zimbabwe would need a huge primary balance gap if gap between growth rates and interest rates are low. The study recommended that a primary surplus of 6.03 percent or 4.98 percent of annual of Gross Domestic Product would be needed to achieve optimal debt portfolio of 20 percent or 50 percent by year 2030 respectively and would be within the maximum acceptable debt to GDP ratio of 60% by 2030.

A study by Melou, Sumlinski and Geiregat (2014) approximated a fiscal reaction to determine the connection of budget deficit and real GDP growth, real interest rate, capital gains/losses external debt using data for thirty-three countries that are beneficially of high public debt poor countries and the multilateral debt relief initiative from 2001 to 2011. The outcome showed that there was a reverse relationship between debt falling behind and primary balance which indicated that even in times of debt relief along with macroeconomics adjustment, the fiscal approach may not be a well-judged measure since it speeds up the debt..

Mutuku (2015) applied the annual time series data from 1970 to 2013 to determine Kenya's fiscal response function to find out whether the fiscal policy is on a viable track by demonstrating how it reacts to business cycles and if the government applied suitable policies to avert high public debt. The government's fiscal behavior was found to be immethodical to the rising debt and that the fiscal policy was recurrent in nature as per the results. This suggested that equalization aim was not a priority in the long haul if fiscal adjustments were not acted on.

1.1.1 Fiscal Policy

It is the utilization of government tax and spending in influencing the economy (Funke & Nsouli, 2003). The two primary tools in fiscal policy by the government are tax and expenditure. This tool are used by the governments to influence the economy's aggregate demand level, achieve the economic objectives like stability of prices, full employment,

and growth of the economy. Keynesian economics states that, an increase in the spending by the government with a corresponding lowering of taxes is the best mechanism of stimulating gross demand and lowering spending while rising taxes following the start of an economic boom. The conventional tool used in demand management has been fiscal policy. This can be taken to mean that variations such as direct and indirect taxation and budget balance can be used "counter-cyclically" to smoothen out the national's output volatility specifically when external shocks have been witnessed in the economy and it has fallen into a recession (Steven, 2003).

Tax is one of three crucial policy tools. A decision by the government to raise or lower taxes increases or lowers amounts of money available for consumer spending which can be substantial to the general direction of the economy. Lowering the taxation level has the effect of availing more disposable income to consumers that can potentially increase spending. This in effect increases revenues for business owners thereby allowing them to expand and create more employment. Lowering taxes is a common fiscal policy tool that stimulates economic growth (Heyne et al., 2002).

Government expenditure is the other key tool in fiscal policy. The expenditure promotes economic activities thereby creating employment. For example, when the government provides funding for a project to construct a high-speed train across the country, the availed funds will the funds will be used to hire workers thereby reducing unemployment and injecting funds in the economy. Increased government spending promotes employment creation and economic growth (Larch & Nogueira, 2009). Lowering taxes and raising spending both promote economic growth, but if the government spends higher than what it taxes, it is operating on a deficit, meaning money is gradually being lost. Operating on a deficit causes the government to accumulate debt (Heyne et al., 2002).

The balance of payment (BOP) mirrors all payments and receipts between the two countries for goods, services, interests and dividends. A negative balance of payment or a deficit in the current account depicts that the country is importing or spending more on foreign trade than it is exporting or earning from foreign countries, while a current account surplus indicates that a country is exporting more goods and services than it is importing. A country with a current account deficit requires more foreign currency than it receives from its exports whereas a country with a current account deficit has more foreign currency than it requires for imports (Westerberg, 2011). The current study will operationalize fiscal policy

into tax revenues collected, government expenditure (infrastructure expenditure) and balance of payments as used by Evans (2018).

1.1.2 Public Debt

These are amounts owed to creditors by the government (Akram, 2010) and can either be internal or external. External borrowings are from external creditors such as bilateral and multilateral creditors and private entities like the Chartered Bank UK. Bilateral creditors are primarily nations like Germany, Japan, France, Italy, USA, and others. Multilateral creditors are the IDA, IFAD, European Economic Community, World Bank, IMF, European Investment Bank and AFDB. Domestic debt is amounts borrowed from government instruments like Treasury bills, bonds, and others (UNCTAD, 2017).

Domestic debt is a tool used to implement monetary policy (Ariyo, 1997). The Central Bank using open market operations engages in buying and selling public securities in an effort to control the liquidity of the market liquidity and offer stability to the local currency. Additionally, certificate of indebtedness plays a key role in developing financial markets. Government debt pricing is the bench mark which the private sector relies on in the issuance of private securities like corporate bonds. The issuance of securities by corporations takes place after the consideration of prevailing rates of interest on government securities like bonds. The government uses debt instruments to build investor confidence and obtain a secure return (Klein, 2010).

One way to measure debt is by comparing it to the economy's production or gross domestic product. Measuring debt in absolute terms does not consider wealth and productivity of a nation. A wealthy and increasingly productive country can counter and incur massive public debt compared to a poor one. Thus, a better measure of this debt is relative to a nation's GDP instead of absolute terms. Debt-GDP ratio allows for useful comparisons across countries over time with regards to the ability of a government to service its debts and manage its general fiscal situation. Faster GDP growth relative to the growing debt is helpful in keeping the debt-GDP ratio under control. Low economic growth, alternatively, causes an increased debt-GDP ratio. The current study will apply debt to GDP ratio to indicate the measure of public debt (Matiti, 2013).

1.1.3 Global Perspective of Fiscal Policy and Public Debt

As fiscal policy measures, Governments have at times have reduced their corporation tax rates in the recent past. Germany, in January 2008 drastically reduced its government expenditure and essential duty rates from 25% to 15%, lowering its actual corporate income tax rate from about 39% to about 30%. In April 2008 England decreased its corporate income tax rate from 30% to 28%. The corporate income tax rates of Europe's key countries as of now averages 30%. Between 2005 and 2007 Europe's Second-level nations, including, Finland, Netherlands and Denmark, decreased their corporate income tax rates, and their tax rates average 25%. Czech Republic, Poland, Slovakia, Hungary, and other nations that joined the EU in 2004, decreased their corporate income tax rates in the years 2004 and 2008, with their actual corporate tax rates now averaging 20% (UNCTAD, 2017).

In the meantime, several Asian countries; Hong Kong, Singapore, and other countries have decreased their corporate income tax rates, joining the worldwide trend of diminishing corporate income tax rates. It is important to note, be that as it may, that a number of nations have expanded their tax bases to mitigate the revenue gap created by decreasing their corporate income tax rates. Both Germany and Britain expanded their tax bases, for instance by overhauling their deterioration guidelines, so as to restrain the diminishing in assessment incomes because of the decrease in the corporate duty rate (Chaves, 2010).

The Washington consensus of the international financial institutions in 1989 impute new rules, aided by the IMF and the World Bank, to help third world countries to make up for lost time with the developed nations. They designed a rundown of ten proposals, which included the privatization of government entities, stringent fiscal policy, the progression of internal FDI and liberalization of trade. These arrangements were intended to lessen the contribution of public administration and enhance dependence on the private sector. Several developing nations have embraced probably a portion of these neoliberal arrangements, be that as it may, with easily proven wrong outcomes (Westerberg, 2011).

Evidence shows that the debt limit is significantly low in developing nations compared to the developed ones. Reinhart et al. (2003) demonstrate "debt intolerance" which is a characteristic in developing nations that increases sensitivity on creditor's part who may then limit accessibility to credit markets. In dire cases, the effective marginal rates of interest on debt may become infinite thereby shutting out countries from credit market (Ghosh et al., 2011). Accessibility to credit markets is thus a key fiscal policy element in

developing nations. Their argument has gotten support from Alberola and Montero (2006) who stated that the sustainability of public debt accounts for the entire cyclical fiscal policy in South America. This may hence describe the same findings in developing nations.

In Sub Saharan Africa, the International Monetary Fund (2019) economic outlook report highlighted that in the past year's unsustainable buildup of public debt has moderately become distressing over the last few years, with stimulants contradicting debt legibility. The mean public debt raised from 40 to 59% of GDP over the period 2010 to 2018, thus accelerating sub-Saharan Africa's debt accumulation beyond the average for other developing regions. Except for nine counties in which in which the debt to GDP ratio declined, nearly all other sub-Saharan African countries contributed fiercely to the raise of the ratio of debt-to-GDP. It is alarming that public debt as a percent of GDP has measurably doubled in Angola, Cameroon, Equatorial Guinea, and Nigeria and others. The mean conceals some diversity as some in the Sub Sahara-region experienced a swift increase than others. For example, the average debt-to-GDP ratio has doubled in Angola, Burundi, the Central African Republic, Cameroon, the Republic of Congo, Democratic Republic of Congo, Gabon, Equatorial Guinea, Nigeria, and Sao Tome and Principe from as low as 26.7% in 2010 to 53.4% in 2018, while same rate accumulated by an average of 40% in Botswana, Comoros, Eritrea, Swaziland, Ethiopia, Lesotho, Madagascar, Mauritius, Mozambique, Namibia, Seychelles, South Africa, South Sudan, and Sudan

1.1.4 Local Perspective of Fiscal Policy and Public Debt

Historically, the government of Kenya has had a mixed fortune in terms of fiscal performance. The country has had budget deficits since independence which is mainly attributed to over expenditures due to dwindling resources caused by poor macroeconomic performance, and other factors. This has weakened overall development performance, and high public debt and comparable high rates of interest. The Government of Kenya like most developing countries has for the past several years been a perpetual victim of poor fiscal performance leading to budget deficit. However, over time, the government has adopted several strategies aimed at reducing the budget deficits so as to attain surplus. The strategies include measures to widen the tax base and various austerity measures to cut down on recurrent expenditures (Republic of Kenya, 2018).

There is a mix in fiscal policies applied in Kenyan government as more of the resources are directed towards infrastructural projects such as construction of roads, hospitals, education,

electricity connectivity in rural areas and irrigation. In addition, there is increased taxation of luxurious items as well as reduced taxation on consumption expenditure. This therefore involves both expansionary and contractionary fiscal policies which are geared towards stabilization of the economy (M'Amanja, 2005).

The measure of public debt has been persistently ascending with the budget achieving an incredible KES 3.1 trillion in the 2018/2019 budget while the assessed national revenue remained at 1.7 trillion which is only somewhat over a large portion of the aggregate use (CBK, 2018). Borrowing is one of the roads through which Treasury can fund a shortage. The debt levels rose considerably higher with the National Assembly approving the raising of the external debt ceiling to KES 2.5 trillion from KES 1.2 trillion. The money was to fund the second phase of standard gauge railway, build roads and fund the big four agenda comprising of food security, health, housing and manufacturing (Were, 2018).

Kenya's public spending increased by about 0.6 percentage points to 25.8 percent in FY2018/19 from 25.2 percent of GDP in FY2017/18. This is a fundamental increase a given that income has been stagnated at 17.9 percent of GDP over the two previous fiscal years. The minimal increase in spending results from the administration choice to ensure completion of existing projects and defer new development projects. This has created space to fix development projects to the Big 4 agenda without hastening overall development spending. Additionally, there is low involvement of budget caused by delays in procurement, project design, and execution (World Bank, 2019).

Interest payments, wages and salaries spending, and county transfers accounted for 70.8 percent of ordinary income in FY2018/19. While ongoing process to curb the wage bill (as well as restricting new recruitment for critical services) has reduced growth of the same to 4.5 percent of GDP in FY2018/19 from 5.5 percent of GDP in FY2013/14 , expenses increment on interest payments balances the gains from controlled wage bill. Interest payments rose to 4.0 percent of GDP in FY2018/19 by one percent in the last five years, while county transfers constant at 3.9 percent of GDP. There was an increase in Development spending from 5.5 percent in FY2017/18) to 5.9 percent of GDP in FY2018/19. However, challenges remain and if addressed could make public expenditure management more the efficient (World Bank, 2019).

There has been a structural decline in the recent years in tax income (excl. other government revenue) as a share of GDP from 16.8 percent in FY2013/14 to 15.0 percent of GDP in FY2018/19. This has arisen due to many elements. First, the economy structure has in supportive of non-tax revenue prosperous quarter such as agriculture — which has developed as a share of GDP to 34.2 percent in 2018 from 27.5 percent in 2014— and investments in public sector. For instance, while agriculture share to revenue is just about 2.6 percent it attribute to about 34.2 percent of nominal GDP in 2018 contrasting with manufacturing that attributed to 7.7 percent of nominal GDP but about 18.2 percent of tax revenue. Second, the tax base have been eroded through ample depreciation allowances, investment deductions and tax holidays, especially for export processing zones and special economic zones due to voluntary changes to the income tax code both corporate and personal . Finally, a huge part of unofficial sector and preference of firms are undetected by the tax collecting agency (World Bank, 2019).

The current account deficit narrowed from 5.4 percent in August 2018), to 4.0 percent of GDP August 2019. This was driven by diaspora remittance inflows, minimized imports (food and Standard Gauge Railway related imports), and raised receipts from tourism. nevertheless, Kenya's manufacturing exports to Africa (which attributed to 35.3 percent of its commodity export in 2018) have reduced for the third consecutive year to Ksh.216.2 billion in 2018 from Ksh.242.2 billion in 2015) with a mean of 3.6 percent yearly in part due to escalated market competition signifying a need to uplift competitiveness manufacturing in Kenya. The official borrowing and private investment inflows (portfolio and direct investment) continuously finances the current account deficit ,causing a yearly increase in official foreign reserves by 6.8 percent to US$ 9.6 billion in August 2019 (or 6.0 months of import cover). This is anticipated to furnish a comfortable cushion against external short-term shocks (World Bank, 2019).

1.2 Statement of the Problem

In achieving Vision 2030 targets, Kenya began implementing a series of infrastructural projects like the Standard Gauge Railway (SGR), Lamu Port South Sudan-Ethiopia Transport project (LAPSSET) and geothermal project that need substantial amounts of funds that exceed the revenue collecting capacity of the government. The government resorted to borrowing to fill the revenue and required expenditure gap. Financing deficit is an appropriate tool when effectively financed and used wisely on programs that encourage

self-sustenance (Were, 2018). Fiscal deficit indicates the magnitude by which revenue from the government cannot fund spending placing a reliance on borrowed funds that makes the economy vulnerable to economic shocks (Republic of Kenya, 2017). Annual deficit caused by excessive spending that is not complemented by increasing revenues has caused a debt stock-piling in Kenya and thus the major risk faced by Kenya in sustaining external debt arises from disturbances in rates of exchange and less favourable public-sector loan terms (KIPPRA, 2013).

World Bank (2019) posits that the growth in fiscal deficit from 7.4 percent in the previous to 7.7 percent of GDP in FY2018/19 year has resulted in an unexpected accumulation in public debt, crowding out the private sector, leading to moderate credit growth in private sector. These calls for reliable adjustment actions by the public administration to place its cash flow back on a prudent path. These should include actions to make income projections more practical, expand revenue, tighten spending controls and cash management. Additional measures to adjust the government's borrowing plans are also highlighted as important to readjust the public debt portfolio towards lower cost and longer-maturity debt. These happenings influence the current study to investigate the influence of fiscal policy instruments on levels of public debt in Kenya.

Debt stabilization indicates the efficiency of government policies in achieving viable debt (Sardoni, 2013). Debt to GDP ratio in Kenya escalated from 25.4 to 56.2 percent from 1963 to 2015 with the target set at of 41.4 percent in 2015 implying debt stabilization has not been a priority to the government but escalation of public debt may have negative repercussions in achieving several targets like GDP growth of 10.6 percent and a debt-GDP reduction to 39.2 percent by 2017 (Republic of Kenya, 2018). With fluctuating fiscal balance, it will be challenging for the government to institute policies meant to keep debt level steady.

Most of the present researches on public debt have not focused on the influence of fiscal policy on debt levels. Mutuku (2015) focused on testing for fiscal policy sustainability determine if Kenya instituted effective policies preventing the accession of excess debt while Nandelenga (2010) discovered optimal level of debt required for 10 percent GDP growth. These two studies did not take into account the influence of fiscal policy on debt stabilization in Kenya. Although Makau, Ocharo and Njuru (2018) conducted a related study that estimated the optimal fiscal balance-GDP ratio needed to keep debt levels steady

and establish government reaction to changes using fiscal reaction function in order to ascertain if the government was concerned with stabilizing debt, they operationalized fiscal policy differently from what will be adopted in the current study.

1.3 Objectives of the Study

1.3.1 Broad Objective

The major goal of this study was to establish the influence of fiscal policy instruments on the level of public debt in Kenya.

1.3.2 Specific Objectives

1. To assess the influence of government expenditure on Kenya's public debt level.
2. To assess the influence of tax revenues on Kenya's public debt level.
3. To assess the influence of balance of payments on Kenya's public debt level.

1.4 Research Questions

The following research questions were to be addressed:

1. What is the influence of government expenditure on Kenya's public debt level?
2. What is the influence of tax revenues on Kenya's public debt level?
3. What is the influence of balance of payments on Kenya's public debt level?

1.5 Scope of the Study

The study looked at the effect of fiscal policy instruments on public debt in Kenya. The factors considered were government expenditure, taxation and balance of payments. In particular, under government expenditure, the study focused on % yearly change in infrastructure expenditure on a quarterly basis as most of the government borrowings were aimed for capital investment expenditure, with a bias towards infrastructure development projects. For taxation, the study considered the quarterly % change in total taxes (direct and indirect) levied as this was likely to influence the level of public debt. Under balance of payment, the study considered quarterly % change in current account (deficit and surplus) as Kenya had a deficit for almost all the years under study where the goods and services Kenya imported exceeded the value of the products it imported. For public debt, the study focused on quarterly % change in total government borrowings (Direct and Indirect) to the GDP. Over the years, government debt had been gradually rising and this was of interest since increased government debt would potentially lead into increased taxes for the purpose

of raising additional funds to service the outstanding loans. The fiscal policy factors considered were the independent variables while Kenya's public debt level was the response variable. The study was carried out for the last 20 years (2000-2019) on a quarterly basis.

1.6 Significance of the Study

The study results will be used as a reference point by academicians, researchers and students who wish to conduct studies in this or related areas. More so, scholars and researchers will benefit as this study would help them identify other areas of future studies through listing associated topics which would need further studies and gaps that would need to be bridged. Further, the study will help scholars in testing and developing theories on fiscal policy and public debt.

To government and institutions such as the Central Bank and the National Treasury, in forming and instituting policies and regulations that govern operations in the financial system. Good policies in terms of government expenditure, taxation and balance of payments would stabilize public debt and improve the economy as a whole. The government may use the findings of the current study in its management of taxation policies, government spending policies and BOP as this would have an impact on the level of public debt prevailing in the country.

Investors in the financial markets will benefit since they will get a deeper understanding on how fiscal policy instrument influence the level of public debt and take the necessary actions to maximize their returns. They will understand the effect of fiscal policy on the levels of public debt and therefore make informed decisions regarding their investment policies. The investors will better appreciate how borrowing by the government in the domestic and foreign markets would potentially crowd them out and limit their capacity to attract funds for scaling up their operations. Taxation policies pursued by the government will inform investors on whether to invest locally or relocate to other tax friendly jurisdictions due to rising cost of doing business, thus impacting on the balance of payment.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This section shows the theories utilized in the study and a review of previous studies undertaken on fiscal policy and level of public debt. These include theories reviewed, empirical review, research gaps, a literature summary and the framework.

2.2 Theoretical Review

In this section, a thorough discussion on the work done and the framework of interpreting research findings aimed at overcoming the limitations of prior studies was carried out. The section provides a description of varied theories like the Keynesian theory, Musgrave Rostov's theory and crowing out effect theory.

2.2.1 Keynesian Theory

This study is anchored on Keynesian theory as developed by Keynes (1936). This is a model that is grounded on the Keynesian economics' principles used in identification of equilibrium levels, analysis of disruptions and aggregation of incomes and production (King, 1993). According to this model, the aggregated equilibrium of production and income fall at the convergence of the aggregate expenditure line at 45-degree line. There are three versions of Keynesian model. The categorization is done on the basis of the sectors included which are two, three and four sector respectively. The model is also illustrated in form of leakages and injections apart from the standard aggregate expenditures format. The Keynesian model is used in the analysis of many vital concerns, like business cycles, multipliers, monetary and fiscal policies.

The model was formulated in the aftermath of the Great Depression from 1929 to 1939. Keynes noted that the performance of the economy was below its maximum potential. Massive unemployment was witnessed during this period with many businesses failing and thus the economy was not at full employment.

The model argues that public debt is not associated with any form of real burden and it does not affect economic growth (Metwally & Tamaschke, 1994). The real burden is during the period of expenditure execution: that's during the consumption of real resources. Internal debt is "debt we owe to ourselves". It is valueless to real resource base. Substitution of public debt for current taxation has an instant impact on macro-expansion: increasing

public expenditure financed as a result of tax increases invokes a lower and different multiplier that is different from the debt-financed public expenditure and thus public debt invokes no contractionary forces (Savvides, 1992). The relevance of this theory in the study is its recognition of the theoretically expected relationship between taxation and the level of public debt. The theory relates between tax revenues and public debt and therefore provides a basis in testing whether tax revenues collected has an influence on public debt levels in Kenya.

2.2.2 Musgrave Rostov's Theory

Musgrave (1969) formulated this theory when he observed variations in the income elasticity of demand for public services according to three types of income. According to his observations, the rate of public sector growth tends to fall with the satisfaction of basic needs at the highest level of per capita income. This was observed in the developed economies. He also noted that with lower income, the demand for such services is very low. The reason for this is that according to his theory, this income is apportioned to fulfil the satisfaction of primary wants and as income rises, the demand for health, education and transport begins to increase, and therefore the government is forced to increase spending on them.

Musgrave (1969) indicated that a functional association exists between growth of the economy and government activities and thus the government sector growth is faster than that of the economy. This means that all manner of governments, notwithstanding their intent (Peace or war), and size, show a tendency to raise public spending. In the case of a progress in the economy, it leads to a rise in the development of urban centres, which comes with all manner of social evils like crime which necessitates the need for government intervention to reduce these social evils. Security is needed in large urban centres to uphold law and order. In order for the government to perform these functions it must incur costs, which increases public. Musgrave & Musgrave (1989) stated that with the industrialization of progressive nations, the public sector of such economies continue to grow.

In this regard, the theory states that with an increase in the level of government spending, more development is observed and this takes place because of the increased recurrent expenditure by the government. This however does not mean that an increasing recurrent spending will results to economic growth. Growth from a capital expenditure by the government occurs more when complemented with increased recurrent spending. Although

this theory was developed to show the theoretically expected relationship between government expenditure and economic growth, it also shows the hypothesized relationship between government spending and public debt levels as government are likely to borrow more if they realize that increased spending will enhance economic growth. The theory was therefore used in this study to establish the expected relationship between government spending and public debt.

2.2.3 Crowding Out Effect Theory

This was advanced by Keynes (1936). Crowding effect is brought about clearly by the presence of deficit in the fiscal policy by governments which results in a reduction in the investment spending, an increase on the rate of interest and a weakening of the stimulus of the fiscal policy. McConnel and Brue (1990) state that the idea is that interest will be forced to increase by deficits in the fiscal policy with reduced investments thus weakening the stimulus of the fiscal policy. When the money market finances deficits in governments, the increase in money demand raises the interest rates thus increasing the money borrowing costs. Additionally, some investments might be crowded out since investment spending changes with rates of interest.

Ahmed and Miller (2000) applied fixed and variable effect techniques in the case of some developing and developed economies. They established in developing countries, the expenditure by government on transportation and communication lead to crowding-in effect and expenditure on social security lead to reduced private investment. The relevance of this model is that it recognizes the fact that government borrowing for financing deficit budget is important for private investments since financial institutions are left with little finances to lend to private investors. If this theory was to apply, government debt would have negative impact in the long run economic development because it crowds out the private investment. Similarly, when there is increase in government spending by borrowing from banks, rate of interest might go up which badly affects the private investment and in essence economic development. The theory also hypothesize the relationship between public debt and balance of payments as increased government borrowing crowds out private credit which in essence reduces investments and exports and therefore enlarge the current account deficit.

2.3 Empirical Review

In the past studies investigating the factors affecting level of public debt have been conducted. Some of the studies found out that the prevailing relationship between some selected variables with level of public debt is positive; others found the relationship to be negative, while others obtained mixed results. None of these studies focused on fiscal policy as a whole. This section presents a review of previous studies and their findings.

2.4.1 Government Expenditure and Level of Public Debt

A study by Hussain et al. (2009) explored the association between government expenditure and private investment in the long run and findings showed that current government expenditures such as debt defense and debt servicing are the main cause of reduction in private investment and government expenditures which are used for development. The development expenditures facilitate health and education. Time series of between the time span 1975-2008 in Pakistan was used and the Johansen co integration technique was used. This study however did not explore the influence of government spending on the level of public debt.

Sinha et al. (2011) studied the influences on public debt in the middle and high income nations using panel data regression. Estimation was done using the Indian Market, with public debt-GDP ratio being the response variable and the predictor factors were government spending, rate of interest, FDI, population, current account balance, real GDP growth rate and inflation. According findings, government spending, rate of interest, real GDP growth rate, inflation, and FDI are substantial whereas current account balance and population were unsubstantial. In the analysis of middle income nations, the model findings revealed that total debt had a negative relation to growth of GDP while current account showed a positive relation to total public debt. The results indicated total debt is dependent on GDP growth rate. Although this study was related to the current study, it was conducted in a different context and therefore the finding cannot be generalized in the current context.

Another study conducted by Mah, et al. (2013), studied how government influences Greece's debt utilizing the VECM model and granger causality with yearly data from 1976 to 2011. In the findings of this study, a substantial positive relation exists between the gross of government debt and national expenditure. The recommendation was that nations need to revise their policies to lower and sustain debt levels. This study was conducted in a developed economy and therefore the findings cannot be used to reflect Kenya.

Uguru (2016) studied the relation between public debt and spending from the country of Nigeria from 1980 to 2013. The study utilized secondary data retrieved from the Central Bank of Nigeria for the time period. A model was estimated using public debt as the response variable and capital and recurrent expenditures being predictor variables. When the OLS regression model was applied, the t-test statistic revealed at 5% significance, that a substantial relation exists between public debt and spending from the government of Nigeria. The recommendation was that the Nigerian government should make efforts to lower recurrent expenses and invest more on capital expansion to accomplish Vision 2020. The study applied a multiple linear regression model while the current study employed the VAR model.

Karimi et al. (2016) studied the impact of utilizing government spending on stability of macro-economy from 1979- 2011 using the Johansen-Juselius methodology. Findings showed that price index of goods and services and government investments were positively related and of exchange free rate, consumption, and tax were negatively related to economic development. The study did not establish the relationship between government spending and public debt levels.

Abdul (2016) studied the government spending affected economic development and public debt in Iran using the Autoregressive Distributed Lag (ARDL) models. Findings showed that increasing construction expenditure by the government had a direct and substantial impact on development, but consumption spending by the government had no substantial impact on development. Furthermore, an increase in capital and recurrent expenditure had a positive impact on public debt level. This study was undertaken in a different context, so the findings should not be generalized in the current context.

Alawneh (2017) examined the impact of capital and current spending and external and internal public debt on taxation in Jordan from 2001–2014. A regression using E-views program was used to determine the impact of the predictor variables on the response variable. The statistical findings were that a substantial, positive impact of capital and the current expenditure on taxes was found. Findings also showed that statistically substantial, positive relation exists between foreign and domestic public debt on taxes in Jordan. There exist conceptual gaps though as the study considered different conceptual relationships and not necessarily government spending and public debt.

Kiminyei (2019) investigated the linkage between public debt, taxation and government spending from 1960 to 2011 economic survey data from KNBS. A VECM model, Cholesky forecast error variance decomposition, and dynamic forecasts were used in the study. The results from VECM model showed that 36 percent variations from the long term equilibrium are rectified in the following period for the public debt and government spending equations, compared to 8% for taxation. In the short term, the magnitude of expenditure from the government lowered debt while magnitude of tax revenue decreased the effect of debt. The model's functions indicated that public debt had positive relations to tax innovation and government spending in the long term. The predictions showed a sustained growth in the variables. This study applied a VECM model while the current study employed a VAR model.

2.4.2 Taxation and Level of Public Debt

Christie and Rioja (2012) studied how variations in financing elements of expenditures by the government impacted the economy in the long term. In particular, an analysis of how spending in form of taxes or borrowings impacted long term growth output. A dynamic macroeconomic model was adopted in the study. It was further measured to capture economic conditions in seven large South American economies from 1990 to 2008. It was found that in cases where taxes were relatively low, funding public investment through more taxation increased growth in the long term. A high rate of tax meant that public expenditure only enhanced growth if it was funded through a restructuring of the composition of public expenditure. The conclusion made from the study was that the use of debt to fund new investment derails growth, irrespective of the prior conditions. It showed that productive expenditure could be funded through an increase in taxes as opposed to debt irrespective of the existing stock of debt in the economy. Issuance of debt in massive debt conditions was an impediment to growth in the long term. According to the simulations produced, in the steady-state, the issuance of new debt to finance spending by the government lowered public investment and capital in the long term since the majority of the spending was allocated to service future debt. Contrarily, a productive expenditure by the government raised by taxes increased growth rate in the long-term as long equilibrium tax level had not been reached. This study provides a conceptual gap as it did not address the influence of taxation on public debt levels.

Banerjee (2013) utilized a dynamic general equilibrium closed economy model in computing the dynamic Laffer curves for four European countries for different tax categories. It was found that using reasonable parameters, the rates for consumption and labor could be altered. The economies studied were on the left of the Laffer peaks for income tax and were predicted to absorb marginal increases in tax rates. Therefore, this gave an avenue to generate the required resources to counter the key shortfall in the short term which together with structural variations requiring reduction in expenditure which was the correct mix that would lower debt to a sustainable level. This study presents a methodological gap as it was a review of literature while the current study was empirical in nature.

Stegarescu (2013) did a study on the long run relation between the composition of expenditure and sub-national government levels of debt. The study used Panel data for 10 West-German states from 1974 to 2010. Pooled OLS regressions were used as estimators in this study. The debt-to-GDP ratio was regressed against state and local government spending, while socio-economic and political factors, were control variables. The researcher found that the larger the expenditure, the lower the level of debt. Total expenditure had an overall effect of increasing debt. The recommendation made was that tax reforms were necessary together with an equalization system such as tax autonomy of the federal states. This study presents a methodological gap as it used panel data while the current study was of time series in nature.

Le et al. (2014) studied the relation between expenditure by the government, taxation, public debt and growth of the economy. Barro (1990) and Greiner's (2007) growth model was adopted in the study which utilized three sectors namely; government, firms and consumers. The Eigenvalues of the Jacobian matrix, showed that expenditure from the government, consumption, and local debt increased with a rise in tax. Meanwhile, a high capital productivity had a positive impact on external debt to a specific tax level, beyond this, it has a decreasing relationship. The study however did not establish the relationship between taxation and levels of public debt.

Stoilava and Patonov (2017) study the basic trend in total tax burden distribution among EU (27) countries from 1995 to 2010. A comparative analysis of the differences across the countries was made based on the total tax burden, given by the tax-to-GDP ratio and tax structural design, as illustrated by breaking down tax revenues to standard components like

direct and indirect taxes and charitable donations. An emphasis was placed on how taxation impacts growth of the economy. A regressed model was used to investigate this relationship and the conclusion made was that a structure based on direct taxes supported higher growth among EU countries. The study presents a conceptual gap as it did not focus the relationship between taxation and levels of public debt.

Using a similar methodology, Capelle-Blancard and Havrylchyk (2017) quantify the effects of the tax introduced in the Hungarian banking system in 2010. Again, using differences in differences, these authors show that the bank tax is fully transferred to the interest rates on bank loans and commissions, and that it falls much more heavily on loans for households than for firms. Their results also show that returns on assets are not affected, indicating that the increase of interest rates on loans fully compensates for the cost of the tax to banks. Similar results have been obtained by Banerji et al. (2017), who have analyzed the impact of the 2000 tax imposed on gross profits of large Japanese banks operating in Tokyo. The study presents a conceptual gap in regards to the relationship between taxation and levels of public debt.

Raghav and Shivani (2018) estimated how fiscal policy impacted the level of public debt from 2002 to 2013 in India. A regression model was used to analyze how the predictor variables given by government expenditure and taxation related to the response variable given by public debt across the time frame. A hypothesis test was made and results computed and subjected to an analysis. From the model obtained, an increase in taxation and expenditure by the government had an overall effect of reducing the debt to GDP ratio since both parameters had an inverse relation to public debt. It also showed the impact of positive distribution of expenditure, with supporting economic literature which proves the validity of the theoretical model. This study was undertaken in a different context, so the findings should not be generalized in the current context.

2.4.3 Balance of Payments and Level of Public Debt

Yang (2011) did an empirical examination of the long and short term impacts of initial stock of net foreign assets, magnitude of international trade, real rate of exchange and relative income on balances in the current account for a total of eight nations in Asia from 1980 to 2009, using the cointegrated VAR methodology. The study found out that the behavior of current accounts in emerging Asian nations is heterogeneous. Initial stock of net foreign assets and magnitude of international trade are crucial elements that explain the

long-term behavior of current accounts. Additionally, the current accounts of the sampled nations had a self-adjusting mechanism with the exception of China. Adjustments of short-term current account towards long-term equilibrium were gradual, and the disequilibrium term was the key reason for the short-term behavior of current account changes. The study presents a conceptual gap as it did not address the relationship between balance of payments and levels of public debt.

By utilizing a yearly data set from 1980 to 2010. Boateng and Ayentimi (2013) did an analysis of the Ghanaian balance of payments using a monetary approach using econometric models. From the findings of the study, the balance of payment disequilibrium in Ghana is not solely under the influence of monetary elements. From the four selected monetary predictor variables, three had a substantial influence. Findings also showed that domestic credit, growth in GDP, and rates of interest were found to be substantial. Local credit and rates of interest had a negative relation to foreign assets while GDP growth showed a positive impact. Inflation however showed an insignificant relation to foreign assets. It was concluded that government spending and public debt might influence Ghana's balance of payment. The study established how public debt influence balance of payment while the current study was interested in the reverse relationship.

Kaur, Yadav and Gautam (2014) examined the relationship between Current Account Deficit and FDI in India. The researchers analyzed data for the period 1975- 2009 and applied the Toda- Yamamoto granger causality method. The findings of the research exhibited a blend between current account and FDI in the long run. A corroboration of unidirectional causality exists from current account to FDI. Additionally, an examination of key components of current account, exports and imports which are also a part of FDI and international Trade endorsed the findings. There exists a conceptual gap as the study did not consider the influence of balance of payments on the level of public debt.

Siddiqui and Asim (2015) examined the link between current account and FDI in an empirical investigation for Pakistan economy. Using the Granger causality test and also application of Johansen-Juselius cointegration approach the research revealed that FDI and Current Account are cointegrated and confirmed a relative long run connection. The Granger causality test results expressed uni-directional causality between FDI and CA. Nonetheless, no short run causality was observed to be existing from FDI to CA and

contrariwise. The study focused on FDI as the dependent variable while the current study focused on the level of public debt.

Reed, Najarzadeh and Sadati (2019) conducted a study to analyze the dynamic relation between budget and current account deficit, and debt sustainability from 1974 to 2015 in Iran. A VAR model was used with impulse functions and variance decomposition in their analysis. The results showed that a long-term stable relation exists among the variables in the model showing that an improvement in the government debt sustainability reduced budget and current account deficits. Since Iran dependence on oil revenues was the underlying factor of the dependence of the variables on one another, a reduction of the dependence of the current account and the state allocation for oil revenues would reduce the two deficits and sustain the government debt. This study was undertaken in a different context, so the findings should not be generalized in the current context.

2.4 Summary of Literature Review and Research Gaps

The accumulation of public debt raises two critical issues regarding fiscal deficit finance, debt overhangs and loan repayments. Investors shy away from making any investments in a nation that may harm its future growth potential. This means that a negative impact on investment or a reduction of investment both in the present and in future is the reduction of growth. This arises because a lower stock of capital today implies a reduction of the size of the economy in future from its potential ceteris paribus (Kiminyei, 2019). An increase in efforts to repay debt can cause funds misallocation, poverty increase and reducing economic growth since major emphasis will be placed on servicing loans and interests at the expense of improving state and health of the economy. One of the factors that are theoretically expected to determine the country's level of public debt is fiscal policy and this explains why researchers are paying attention to this relationship (Afonso & Sousa, 2017).

Empirical literature shows that the relation between government spending, taxation, balance of payments and level of public debt has attracted major concerns most especially in the current period where most nations in the world face a lot of pressure because of increasing fiscal deficits and debt. However, the relation between fiscal policy as a whole and level of public debt still has very scant literature. Studies such as Hussain et al. (2009); Sinha, Arora and Bansal (2011) and Abdul (2016) focused on only one aspect of fiscal policy and its influence on the level of public debt while others such as Christie and Rioja

(2012); Banerjee (2013) and Le, Van, Nguyen-Van and Barbier-Guachard (2014) focused on relationship between other variables altogether.

Table 2.1: Summary of Literature Review and Research Gaps

Author	Focus of study	Key findings	Knowledge gaps	Focus of the current study
Kiminyei (2019)	The linkage between public debt, taxation and government spending	Public debt had positive relations to tax innovation and government spending in the long term	The study focused on the effect of public debt on taxation and spending without considering the reverse effect	This study applied a VECM model while the current study employed a VAR model.
Alwaneh (2017)	Impact of capital and current spending and external and internal public debt on taxation in Jordan	Statistically substantial, positive relation exists between foreign and domestic public debt on taxes in Jordan.	There exist conceptual gaps though as the study considered different conceptual relationships and not necessarily government spending and public debt.	The effect of government spending on public debt in Kenya
Abdul (2016)	Government spending effect on economic development and public debt in Iran	An increase in capital and recurrent expenditure had a positive impact on public debt level	This study was undertaken in a different context, so the findings should not be generalized in the current context	Government spending and public debt in Kenya
Raghav and Shivani (2018)	Impact of fiscal policy on public debt in India	an increase in taxation and expenditure by the government had an overall effect of reducing the debt to GDP ratio	This study was undertaken in a different context, so the findings should not be generalized in the current context.	The current study was conducted in Kenya
Stoilava and Patonov (2017)	The basic trend in total tax burden distribution among EU (27) countries from 1995 to 2010	A structure based on direct taxes supported higher growth	The study presents a conceptual gap as it did not focus the relationship between	The current study focused on the influence of taxation on public debt

		among EU countries	taxation and levels of public debt.	
Le et al. (2014)	The relation between expenditure by the government, taxation, public debt and growth of the economy	Expenditure from the government, consumption, and local debt increased with a rise in tax	The study did not establish the relationship between taxation and levels of public debt.	The influence of taxation on public debt levels
Reed et al. (2019)	The dynamic relation between budget and current account deficit, and debt sustainability from 1974 to 2015 in Iran	An improvement in the government debt sustainability reduced budget and current account deficits	This study was undertaken in a different context, so the findings should not be generalized in the current context.	The current study was conducted in Kenya
Siddiqui and Asim (2015)	The link between current account and FDI	FDI and Current Account are cointegrated and confirmed a relative long run connection	The study focused on FDI as the dependent variable	The current study focused on the level of public debt.

2.5 Conceptual Framework

The diagrammatic representation below demonstrates the hypothesized interconnection between the explained variable and the determining variables. The determinant variables under investigation were government expenditure (development and recurrent), taxation (direct and indirect taxes) and balance of payments (current account surplus and deficits). The outcome variable was the level of public debt as measured by quarterly changes in internal and external debt.

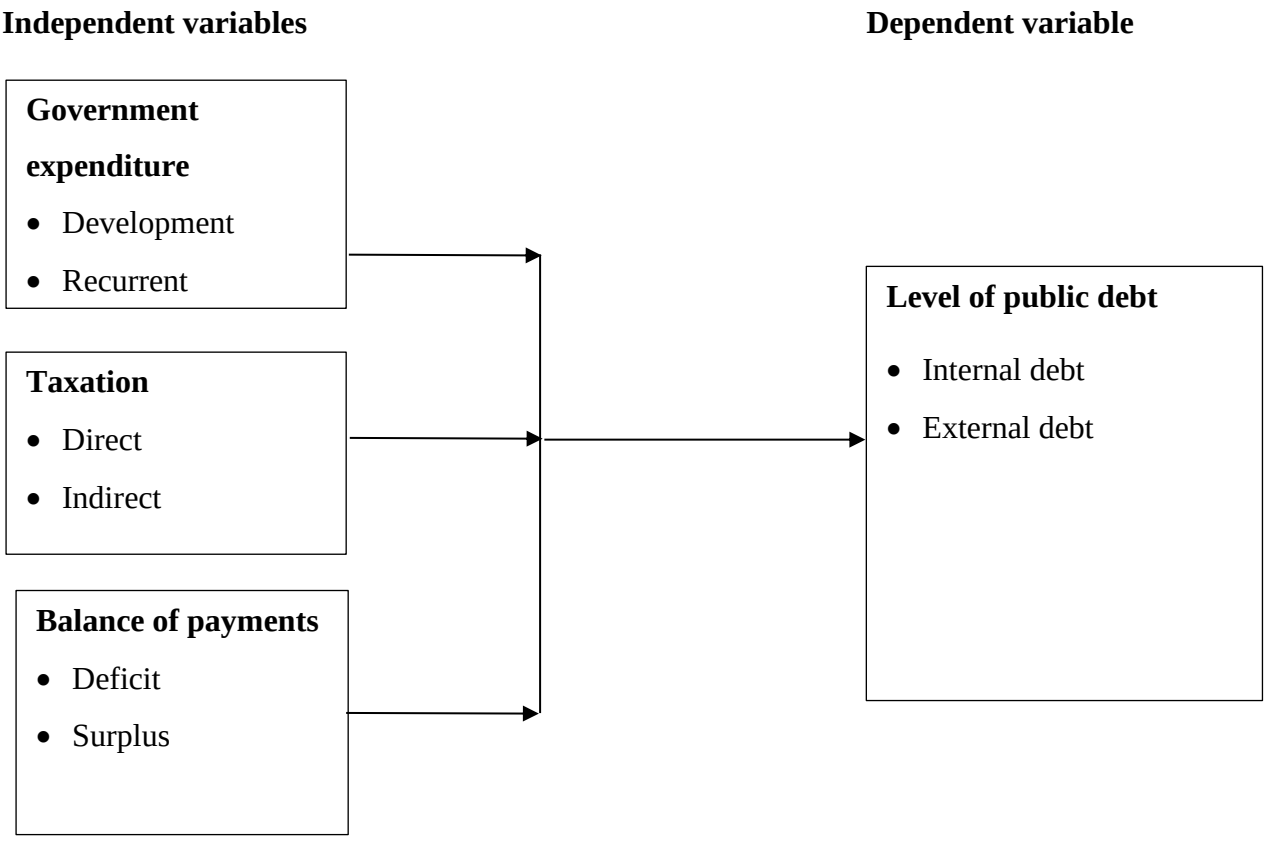

Figure 2.1: The Conceptual Model

Source: Researcher (2020)

2.6 Operationalization of the Study Variables

This part discusses how variables were operationalized. The response variable was the level of public debt. The predictor variables were; government expenditure, taxation, and balance of payments as illustrated in Table 2.2.

Table 2.2: Operationalization of Study Variables

Variable	Nature of Variable	Operational indicators	Supporting Theory	Source	Measurement and analysis
Level of public debt	Response Variable	Internal debt External debt	Crowding out effect theory	Raghav and Shivani (2018)	Descriptive, inferential analysis
Government expenditure	Independent Variable	Development expenditure Recurrent expenditure	Musgrave Rostov's theory	Alawneh (2017)	Descriptive, inferential analysis
Taxation	Independent Variable	Direct taxes Indirect taxes	Keynesian Theory	Capelle-Blancard and Havrylchyk (2017)	Descriptive, Inferential analysis
Balance of payments	Independent Variable	Current account deficit Current account surplus	Crowding out effect theory	Siddiqui and Asim (2015)	Descriptive, Inferential analysis

2.7 Chapter Summary

This section highlights a theoretical and empirical review of the subject matter, that is, fiscal policy and level of public debt. It provides an analysis of the topics' key concepts and highlights the nature of relationships amongst the variables. Research gaps have also been addressed, the basis for their research work and how this study will add value to the existing research studies carried out relevant to the subject matter. This is followed by a framework, which shows how the relation between fiscal policy and level of public debt variables are correlated.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes techniques of research that are applied to establish how fiscal policy influences Kenya's level of public debt. The research philosophy, research design, population, data collection and methodology applied are discussed in this section.

3.2 Research Philosophy

Research philosophy reflects the perceptions, beliefs and assumptions on how we get to know what we know. In social science, the two main paradigms used to guide research are positivism and phenomenology (Burns & Burns, 2008). Positivism is quantitative as opposed to phenomenology which is qualitative. According to Cooper and Schindler (2013), positivism is guided on the philosophy one realism existing though as a result of limitations of humanity it may be known imperfectly. This study is based on positivism approach. Positivism approach differentiates the researcher from the subjects as independent and cannot influence each other's outcome or results (Khan, 2008). The main reason for the study adopting the positivist philosophy was based on the argument that the study set to empirically analyze the relationship existing amongst the variables and also tests the hypothesis drawn from the theories, thus enabling acceptance or rejection on the same based on the tested results leading to further study.

3.3 Research Design

According to Khan (2008), a design enables a researcher to establish the research questions, methodologies, procedures to be implemented, collection and analysis of data for conducting the project. Research designs are of three types: quantitative, qualitative, and mixed methods design. The researcher selected an explanatory longitudinal design. The explanatory design was utilized in this research. It was deemed appropriate because of the researcher's desire to describe the interrelationship between fiscal policy and the level of Kenya's public debt. The study described the major variables associated with public debt in Kenya.

3.4 Target Population

Population is the sum of observed phenomena of interest in a collection such as people or events as explained in a research (Burns & Burns, 2008) The quarterly data for Total Debt

in millions of Kenya shillings was acquired from the Central Bank of Kenya (CBK) publication on economic review for twenty years from January 2000 to December 2019 as captured in Appendix-1. The Government spending, total taxes and Balance of Payment data in millions of Kenya shillings was acquired from Economic Survey publications from the Kenya National Bureau of Statistics (KNBS) for twenty years for the period January2000 to December 2019.

3.5 Data Collection

Time series data was collected exclusively from secondary sources. Quarterly data for 20 years (January 2000 to December 2019) was collected. The study focused on 20 years as it was deemed to provide sufficient data to answer the research objectives. The period was also considered to be of significant research interest, given that Kenya has had two successive government regimes that have pursued infrastructure led development policies that have led to a rise in the level of public debt. Data for the independent variables; government expenditure, taxation and balance of payments was obtained from KNBS website (www.knbs.or.ke). Data for the dependent variable, level of public debt on a quarterly basis was obtained from CBK website (www.centralbank.go.ke)

3.6 Data Analysis

Analysis of data was made using time series analysis. Stata version 13 was applied in the examination since it was more user-friendly. The study employed unrestricted vector autoregressive model in explaining the relation between level of public debt and predictor variables: government expenditure, taxation and balance of payments.

3.6.1 Model Specification

A linear relationship was assumed to exist between fiscal policy and level of public debt. The model was as follows:

$$Y= \beta_0 + \beta_1 GE_t + \beta_2 T_t + \beta_3 BOP_t + \varepsilon_t$$

Where;

Y= Level of public debt as measured by percentage change in the level of total public debt (internal and external) on a quarterly basis

β_0 = Constant Term

β_i = Beta Coefficient of variable i which measures the change Y to change in i

GE_t = Government expenditure as measured by the percentage change in government spending (recurrent and development) on a quarterly basis

T_t= Taxation as measured by percentage change in total taxes (direct and indirect) collected on a given quarter

BOP_t= Balance of payments as measured by percentage change in current account (deficit and surplus) on a quarterly basis.

ε =Error term

3.7 Diagnostic Tests

In order to ensure there was no violation of the VAR model assumptions before proceeding to estimation of the equations, diagnostic tests were performed. The violation of regression model's assumptions leads to arriving at biased and inefficient parameter estimates. Diagnostic tests were therefore performed so as to ensure that regression analysis assumptions were not violated. The study carried out diagnostic tests as explained below.

3.7.1 Heteroscedasticity

This is the situation whereby the variance of the error term changes with variations in the observed phenomena. Its occurrence does not influence unbiasedness and linearity of the regression coefficient because its effect is only on the OLS's best property, which invalidates the conclusions made on the tested hypothesis (Gujarati, 2004). The study tested this property using Breusch-Pagan-Godfrey test.

3.7.2 Autocorrelation

This exists where the error term has a relation to its precursory value. Its presence does not however influence the unbiasedness of estimates but makes invalidate hypothesis testing. This property only occurs in time series data. This is because this type of data makes the assumption that a specific trend occurs with the passage of time. This has no effect on the unbiasedness, linearity and asymptotic nature of parameters. The critical issue with this property is that it contravenes the Best property of OLS which concludes that hypothesis testing is wrong. The Breusch-Godfrey test was used to test for this property (Gujarati, 2004).

3.7.3 Multicollinearity

This property is also found in time series data because variables may follow a specific trend. It is a situation in which a number of the explanatory variables may be related. Such variables may be on the increase or decrease over time. This property causes the regression coefficient to be indeterminate. Because of its commonality among variables, its magnitude

is of major concern (Gujarati, 2004). The presence of this property in the study was verified by the variance inflation factors (VIF) test (Cooper & Schindler, 2008).

3.7.4 Stationarity

This is said to occur where the mean of the data does not depend on time factor. Unit root tests are used to test for the absence of this property among the variables. This property causes spurious estimates. Successful differencing is applied on non-stationary variables to eliminate the bias. The null hypothesis is that the variable being considered is non-stationary. Augmented Dickey Fuller test was used to ascertain this property (Gujarati, 2004).

3.7.5 Normality Test

A crucial assumption of the linear regression model is a normal distribution of the error term with zero mean and a constant variance denoted as μ (0, σ2). It is used denote all factors influencing the response variable outside the model. However, an assumption is made that the omitted factors may have a minute impact at best random. For OLS to be utilized, error term must be normal (Gujarati, 2004). In confirming normality of the error term, the Jarque-Bera was used.

3.8 Ethical Considerations

The study took a retrospective data analysis approach; as such, information collected was from published information that was publicly available. This approach thereby eliminated chances of breaching participants' confidentiality and anonymity.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESEARCH FINDINGS

4.1 Introduction

In this chapter the data collected is analysis is presented. The study objective was determining the influence of the fiscal policy instruments on the level of public debt in Kenya. The specific objectives of the study guided the data analysis. The trends were examined through both inferential and descriptive analysis. Thereafter interpretation was done and conclusion derived from the analysis made.

4.2 Descriptive Statistics

The outcomes on the measures of dispersion and central tendency of the different variables are presented in Table 4.1 below.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Total debt	80	594880	6035330	1879541	1571020	1.296	.479
Government Spending	80	32299	1929626	442349	464443	1.641	2.229
Total Taxes	80	23273	1139788	284044	261315	1.425	1.604
Balance of payments	80	-109313	-4850	-48367	33720	-.270	-1.436
Valid N (listwise)	80						

Source: Research Data (2020)

As indicated by the results the overall mean of total debt was KES 1,879,541 Million indicating the average of total debt in Kenya from the year 2000Q1 to 2019Q4. The minimum and the maximum of total debt between the year 2000Q1 and 2019Q4 were KES 594,880 Million and KES 6,035,330 million respectively. Its standard deviation was KES 1,571,020 Million that shown that total debt was different over the period of study.

The overall mean of Government spending (both recurrent and development expenditure) was KES 442,349 Million. The minimum and the maximum of government spending between the year 2000Q1 to 2019Q4 were KES 32,299 Million and KES 1,929,626 million respectively. Its standard deviation was KES 464,443 million indicating that government spending different over the period of study.

The overall mean of total tax revenue (revenue from taxes) was KES 284,044 million. The minimum and the maximum of tax revenue between the year 2000Q1 to 2019Q4 were KES 23,273 Million and KES. 1,139,788 Million respectively. Its standard deviation was KES. 261,315 Million indicating that total taxes varied throughout the measurement period.

The overall mean of balance of payment (BOP) (measured as current account deficit) was KES -48,367 Million. The minimum and the maximum of balance of payment between the year 2000Q01 to 2019Q4 were KES -109,313 Million and KES-4,850 million respectively. Its standard deviation was KES 33,720 Million indicating that balance of payment measured as current account deficit varied throughout the measurement period.

4.3 Trend Analysis

Trend analysis was done for total debt, balance of payment, government spending and total taxes. In the following section the various trend lines are presented

4.3.1 Total Debt

The study aimed to determine the trend in the movement of quarterly total debt of the government of Kenya over the study period. The findings are as shown in the Figure 4.1

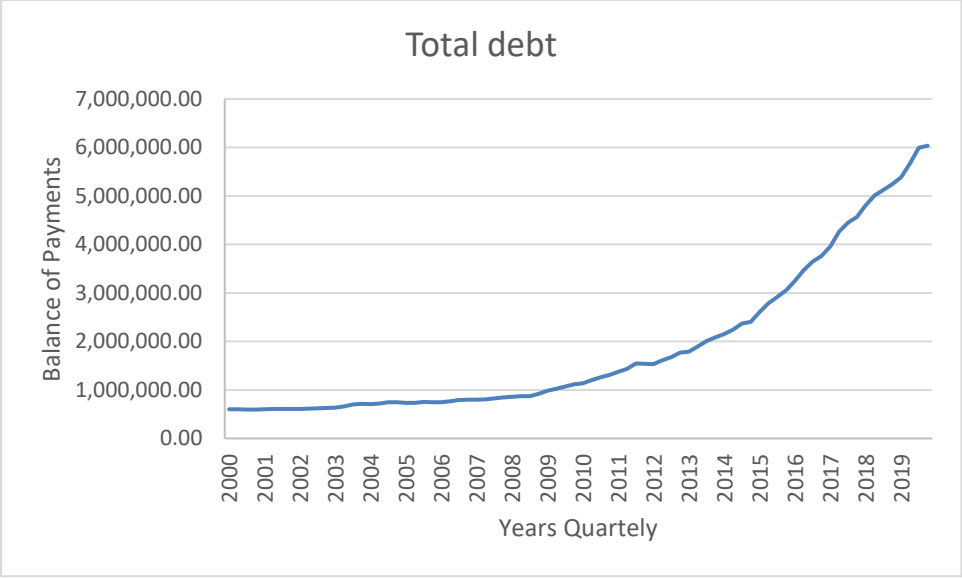

Figure 4.1: Quarterly Total Debt from 2000Q1 to 2019Q4

Figure 4.1 indicates that total debt has been growing on upward trend from the year 2000Q1 to 2019Q4. From the year 2000 to 2011 the total debt was increasing gradually but has been drastically increasing from 2014 to 2019. Total debt was highest in 2019 and lowest in 2000. This means that the level of public debt in Kenya has been on the rise.

4.3.2 Government Spending

The study aimed to determine the trend in the movement of government spending in Kenya over the study period. The findings are as shown in the Figure 4.2.

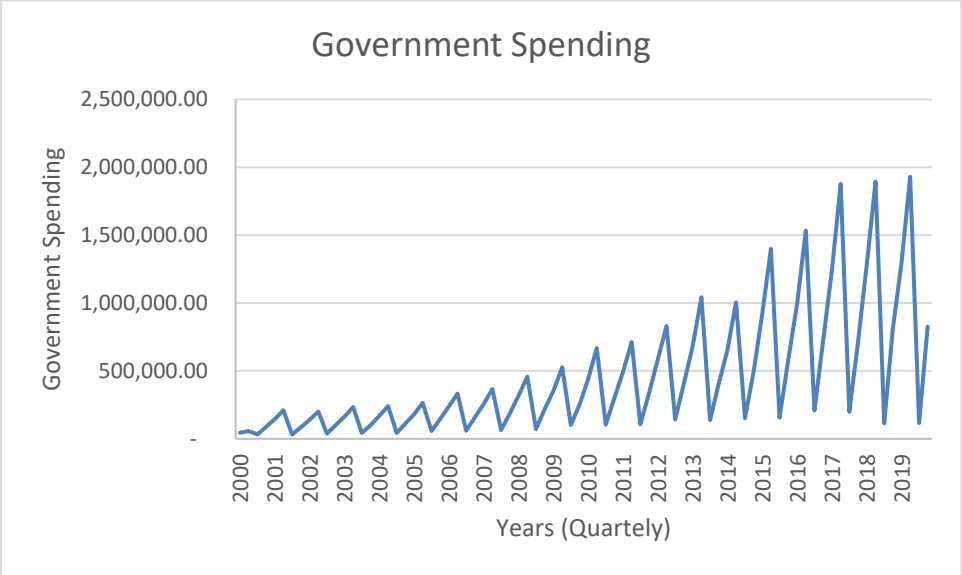

Figure 4.2: Government Spending from 2000Q1 to 2019Q4

Figure 4.2 indicates that government spending has been gradually rising over the years. From 2000Q1, the government spending has been increasing exponentially but in the third quarter of each year the government spending has been reducing and increasing in the first and second quarter in each year. The government spending has been on upward trend over the years. The highest government spending was recorded in quarter 2 of 2019 and lowest in quarter 3 of 2001. This implies that government spending in Kenya has been on the rise over the years.

4.3.3 Taxation

The study sought to establish the trend in the movement of total tax revenue over the study period. The trend line is as shown in the Figure 4.3.

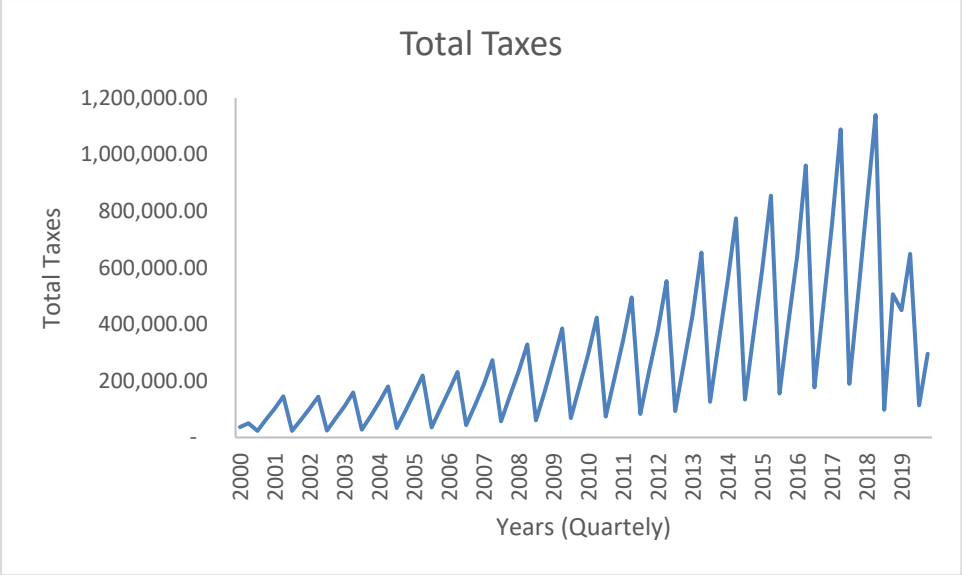

Figure 4.3: Total taxes from 2000Q1 to 2019Q4

Figure 4.3 indicates that the taxes collected have been increasing exponentially over the years. In all the years the taxes have been decreasing in the third quarter of the year and increasing in the first quarter of the year. In overall the total has been on upward trend over the years. The highest total taxes was recorded in quarter 2 of 2018 and lowest in quarter 3 of 2001. This means that over time, the government has been collecting more taxes.

4.3.4 Balance of Payments

The study sought to establish the trend in the movement of balance of payments measured as current account deficit in Kenya over the study period. The trend line is as shown in the Figure 4.4.

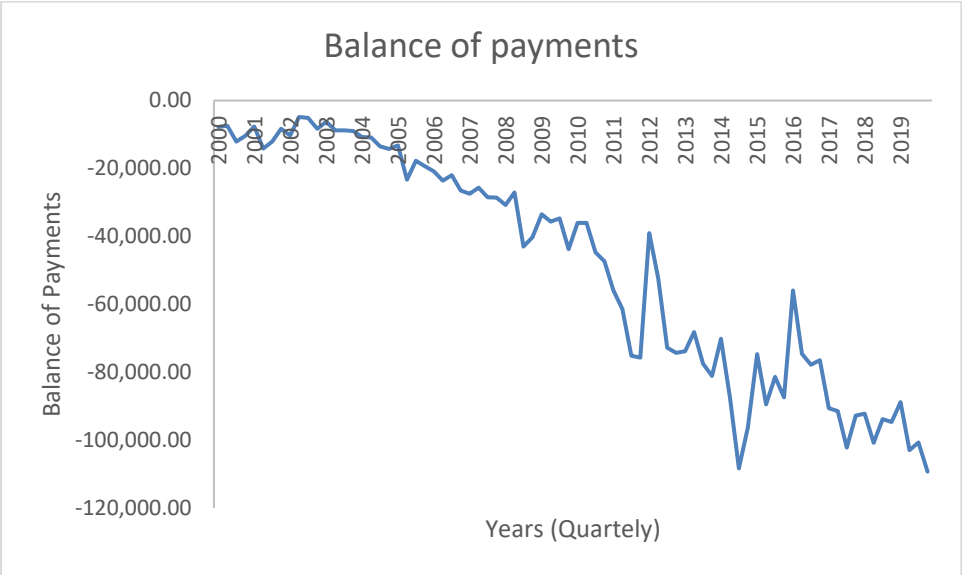

Figure 4.4: Balance of Payment from 2000Q1 to 2019Q4

Figure 4.4 indicates that the balance of payments has been fluctuating over the years. The highest balance of payment was recorded in Quarter 2 of 2000 while the lowest balance of payment was recorded in quarter 4 of 2019. The balance of payments on overall has been in a declining trend. The highest balance of payment was recorded in quarter 2 of 2002 and lowest in quarter 4 of 2019. This means that on average, the BOP for Kenya has been declining over the years.

4.4 Diagnostic Tests

In order to ensure there was no violation of the VAR model assumptions before proceeding to estimation of the equations, diagnostic tests were performed. The violation of regression model's assumptions leads to arriving at biased and inefficient parameter estimates. Diagnostic tests were therefore performed so as to ensure that regression analysis assumptions were not violated. The tests conducted in this case were Heteroscedasticity test, Autocorrelation test, multicollinearity test, the unit root tests test (Stationarity test) and normality test.

4.4.1 Heteroscedasticity Test

Heteroskedasticity was tested to establish if the error terms are correlated across the data observations. The error terms derived from the regression model should portray constant variance called Homoscedastic. Thus, for ensuring if the residuals met these criteria, the Breusch-Pagan test was employed for Heteroskedasticity whereby the null hypothesis stated that residuals are Homoscedastic. There is constant variance if p-value is >0.05.

Table 4.2: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	5.332026	Prob. F(3,77)	**0.1012**
Obs*R-squared	16.51327	Prob. Chi-Square(3)	0.0024
Scaled explained SS	27.94768	Prob. Chi-Square(3)	0.0000

Source: Research Data (2020)

Hence, the research failed to reject the null hypothesis at a critical p value of 0.05 because value attained was 0.1012. Therefore, the data was not affected by heteroskedasticity as exhibited in Table 4.2.

4.4.2 Autocorrelation Test

So as to test if the error terms correlated throughout the time period, serial correlation tests were undertaken. The study used Breusch-Godfrey serial correlation LM test in testing for autocorrelation. The null hypothesis suggests that there exists no first order autocorrelation.

Table 4.3: Breusch-Godfrey Serial Correlation LM Test

F-statistic	2.335277	Prob. F (2,78)	**0.1075**
Obs*R-squared	4.873269	Prob. Chi-Square (2)	0.0875

Source: Research Data (2020)

Since the p value was 0.1075 it showed that the null hypothesis should not be rejected, concluding that there is no serial autocorrelation. Table 4.3 above shows the outcomes.

4.4.3 Multicollinearity Test

Multicollinearity can be defined as a statistical state where more than one predictor in a multiple regression model have a high correlation. It is an unwanted situation where the independent variables are correlated strongly. A combination of variables is said to exhibit high Multicollinearity in case there is any 100% linear correlation among the study variables. VIF value and Tolerance of the variable were utilized where the values below 10 for VIF and values more than 0.2 for Tolerance imply no Multicollinearity.

Table 4.4: Multicollinearity test for Tolerance and VIF

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Government spending	0.380	2.632
Taxation	0.706	1.416
Balance of Payments	0.503	1.988

Source: Research Data (2020)

From the results, all the variables had a VIF values <10 and tolerance values >0.2 as illustrated in table 4.4 suggesting that no Multicollinearity.

4.4.4 Stationarity Test (Unit Root Test)

In nature, most economic variables before undertaking regression analysis are mainly non-stationary. Therefore, unit root test was therefore carried out using Augmented Dickey-Fuller (ADF) in testing whether the variables were non-stationary or stationary. The reason for undertaking this was preventing false regression outcomes from being found through use of stationary series.

Table 4.5: Unit Root Tests at Level

Variable name	ADF test	1% Level	5% Level	10% Level	Comment
Public debt	-5.180460	-3.515536	-2.898623	-2.586605	Stationary
Government spending	-5.619528	-3.515536	-2.898623	-2.586605	Stationary
Taxation	-2.976187	-3.516676	-2.899115	-2.586866	Stationary
Balance of payments	-1.748330	-3.517847	-2.899619	-2.587134	Stationary

Source: Research Data (2020)

As shown in Table 4.5 below, the variable at a 1%, 5% and 10% level of significance were stationary. Henceforth, there was no necessity of differencing some of the variables.

4.4.5 Normality Test

Normality test is conducted so as to make sure there is normal distribution of the variables used. Since Jarque-Bera test is more conclusive test it was used in testing for normality of the residuals. The Jarque-Bera statistic is divided into 2 degrees of freedom under the null hypothesis of normal distribution, the stated probability is the probability that the Jarque-Bera statistic exceeds (in absolute value) the observed value under the null a small probability value contributes to the rejection of the null hypothesis of normal distribution. The data is considered to be normally distributed if the probability is greater than 0.05.

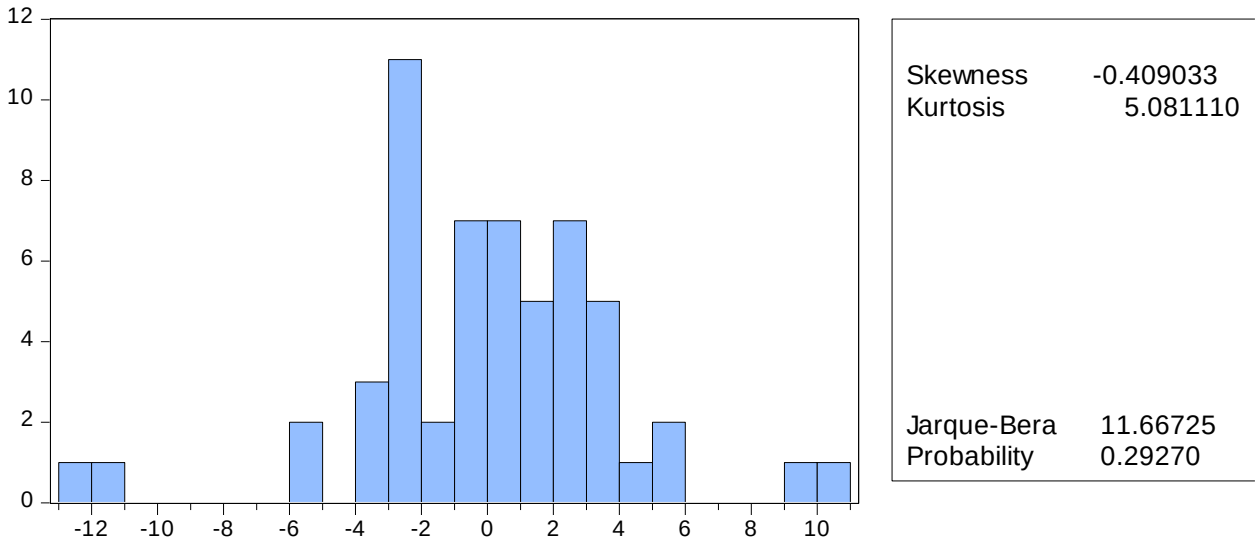

Figure 4.5: The Jarque-Bera Normality Graph

Figure 4.5 shows that the residuals from the model followed a normal distribution. This is due to the fact that Jarque-Bera statistic of 11.66725 and a p value of 0.29270 which was greater than 0.05. Skewness of -0.409033 implies that the data is negatively skewed to the left. The Kurtosis positive value of 5.081110 implies that the distribution is peaked and possesses thick tails.

4.5 Model Specification

After conducting the diagnostic tests, regression model was run. Results are presented in Table 4.6. Results revealed that balance of payment, government expenditure and taxation are found to be satisfactory variables in explaining level of public debt in Kenya. This is supported by coefficient of determination also known as the R square of 0.495880. This means that 3 variables: balance of payment; government expenditure and taxation explain 49.6% of the variation in the level of public debt in Kenya, while the remaining 50.4% is influenced by other factors not explained in the model.

Table 4.6: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Balance of payments	-0.124056	0.012506	-9.919719	0.0081
Government spending	0.097746	0.019127	5.110368	0.0039
Taxation	-0.051825	0.024428	-2.120256	0.0245
Constant	0.438283	0.192082	2.281748	0.0267

R-squared	0.495880	Mean dependent var	0.585690
Adjusted R-squared	0.404927	S.D. dependent var	0.548742
S.E. of regression	0.495412	Akaike info criterion	1.481852
Sum squared residual	18.65290	Schwarz criterion	1.600953
Log likelihood	-55.27409	Hannan-Quinn criter.	1.529603
Log likelihood	-70.15315		
F-statistic	17.74874		
Prob(F-statistic)	0.000391		
Durbin-Watson stat	1.381678		

Source: Research Data (2020)

More so, the overall model was statistically significant as indicated by the F statistic outcomes in Table 4.6. The outcomes suggest that the independent variables (balance of payments, government expenditure and taxation) are good predictors of level of public debt. The F statistic of 17.74874 and the p value of 0.000391 exhibited that were below the common 0.05 significance level.

Table 4.6 showing results of regression of coefficients indicates that balance of payment (measured as current account deficit) and level of public debt are negatively and significantly related (β=-0.124056, p=0.0081). This implies a reduction by a unit decrease in balance of payment by 1 unit translates to a subsequent increase in public debt in Kenya by 0.124056 units. The results also revealed that government expenditure measured as expenditure on both recurrent and development expenditure are positively and significantly related (β= 0.097746, p=0.0039). This implies that an increment of a in government expenditure by 1 unit translates to a subsequent increment in public debt in Kenya by 0.097746 units.

Further, regression results showed that taxation measured as total taxes collected (both direct and indirect) and public debt levels are negatively and significantly related (β= -0.051825, p=0.0245). This means that a rise in the units of taxation by one unit leads to a decrease in public debt by 0.051825 units. Therefore, according to the above outcomes, the estimated model was as below:

$Y= 0.438283 + 0.097746GE_t-0.051825T_t -0.124056BOP_t+\varepsilon_t$

Where:-

Y= Level of public debt as measured by percentage change in the level of total public debt (internal and external) on a quarterly basis

GE_t = Government expenditure as measured by the percentage change in government spending (recurrent and development) on a quarterly basis

T_t= Taxation as measured by percentage change in total taxes (direct and indirect) collected on a given quarter

BOP_t= Balance of payments as measured by percentage change in current account (deficit and surplus) on a quarterly basis.

4.6 Chapter Summary

This chapter included the descriptive statistics showing the means, standard deviation, skewness and kurtosis for each of the study variables. A trend analysis was also performed on all the four study variables. Before model specification, diagnostic tests were done to ensure there is no violation of the regression analysis assumptions. Under inferential statistics, the results of regression analysis are presented. The next chapter of the study presents the discussion, conclusions and recommendations.

CHAPTER FIVE
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the previous section results, conclusions, limitations encountered during study are presented. The chapter also presents areas of further study.

5.2 Discussion of Findings

In this section the key findings of the study are discussed. The study sought to establish the influence of fiscal policy instruments on level of public debt in Kenya. The specific objectives were to assess the influence of balance of payment on the level of public debt in Kenya, to assess the influence of government expenditure on level of public debt in Kenya and to assess the effect of taxation on level of public debt in Kenya. The descriptive research design was applied. The study focused on time series data for three independent variables for the period from 2000 to 2019 on quarterly basis. To achieve the objectives of this study, annual time series data from the year 2000Q1 to the year ending 2019Q4, was used which translated to 80 observations. The data was obtained from CBK and KNBS. The study used descriptive and inferential statistics in its analysis. Diagnostic tests were conducted before regression analysis was done. The inferential statistics include regression model and unrestricted VAR model. Further, stationarity tests were conducted before performing estimations on the model.

5.2.1 Government Expenditure and Level of Public Debt

The first objective of the study was to assess the influence of government expenditure on level of public debt in Kenya. The results revealed that government expenditure measured as both development and recurrent expenditure and level of public debt are positively and significantly related. This means that a unit increase in government expenditure leads to a subsequent increase in level of public debt. The findings support Musgrave Rostov theory that hypothesizes a positive relationship between government spending and level of public debt.

The study findings are in line with Sinha et al. (2011) who studied the influences on public debt in the middle and high income nations using panel data regression. Estimation was done using the Indian Market, with public debt-GDP ratio being the response variable. The

predictor factors were government spending, rate of interest, FDI, population, current account balance, real GDP growth rate and inflation. According to the findings, government spending, rate of interest, real GDP growth rate, inflation, and FDI are substantial whereas current account balance and population were unsubstantial.

The study further concurs with a study conducted by Mah, et al. (2013) who studied how government expenditure influences Greece's debt utilizing the VECM model and granger causality with yearly data from 1976 to 2011. In the findings of this study, a substantial positive relation exists between the gross of government debt and national expenditure. These findings are also upheld by Uguru (2016) who studied the relation between public debt and spending from the country of Nigeria from 1980 to 2013. The study utilized secondary data retrieved from the Central Bank of Nigeria for the time period. A model was estimated using public debt as the response variable and capital and recurrent expenditures being predictor variables. When the OLS regression model was applied, the t-test statistic revealed at 5% significance, that a substantial relation exists between public debt and spending from the government of Nigeria.

The findings of this study are also in lieu of Abdul (2016) who studied the government spending affected economic development and public debt in Iran using the Autoregressive Distributed Lag (ARDL) models. The findings showed that an increase in capital and recurrent expenditure had a positive impact on public debt level. Kiminyei (2019) while investigating the linkage between public debt, taxation and government spending from 1960 to 2011 economic survey data from KNBS came with similar conclusions. The model's functions indicated that public debt had a positive relation with tax innovation and government spending in the long term.

5.2.2 Taxation and Level of Public Debt

The second objective was to assess the influence of government taxation on the level of public debt in Kenya. The results revealed that total taxes and level of public debt are negatively and significantly related. This means that a unit increase in total taxes leads to a subsequent decrease in level of public debt. The findings support Keynesian theory which hypothesizes a negative relationship between taxation and level of public debt.

The findings of this study concur with Raghav and Shivani (2018) who estimated how fiscal policy impacted the level of public debt from 2002 to 2013 in India. A regression model

was used to analyze how the predictor variables given by government expenditure and taxation related to the response variable given by public debt across the time frame. A hypothesis test was made and results computed and subjected to an analysis. From the model obtained, an increase in taxation and expenditure by the government had an overall effect of reducing the debt to GDP ratio since both parameters had an inverse relation to public debt. It also showed the impact of positive distribution of expenditure, with supporting economic literature which proves the validity of the theoretical model.

The findings also support Capelle-Blancard and Havrylchyk (2017) who quantify the effects of the tax introduced in the Hungarian banking system in 2010. Again, using differences in differences, these authors show that the bank tax is fully transferred to the interest rates on bank loans and commissions, and that it falls much more heavily on loans for households than for firms. Their results also show that returns on assets are not affected, indicating that the increase of interest rates on loans fully compensates for the cost of the tax to banks. Similar results have been obtained by Banerji et al. (2017), who have analyzed the impact of the 2000 tax imposed on gross profits of large Japanese banks operating in Tokyo.

The findings of this study are in contrast with Le et al. (2014) who studied the relation between expenditure by the government, taxation, public debt and growth of the economy. Barro (1990) and Greiner's (2007) growth model was adopted in the study which utilized three sectors namely; government, firms and consumers. The Eigenvalues of the Jacobian matrix, showed that expenditure from the government, consumption, and local debt increased with a rise in tax. Meanwhile, a high capital productivity had a positive impact on external debt to a specific tax level, beyond this, it has a decreasing relationship.

5.2.3 Balance of Payment and Level of Public Debt

The third objective of the study was to determine the effect of balance of payment on level of public debt in Kenya. Regression of coefficients results shows that balance of payment (as current account deficit) and level of public debt are negatively and significantly related. This means that a unit increase in balance of payment leads to a subsequent decrease in public debt. This finding supports the crowding out effect theory that posits a negative relationship between BOP and level of public debt.

The findings of the current study concurs with Boateng and Ayentimi (2013) who did an analysis of the Ghanaian balance of payments using a monetary approach using econometric models and found a causal relationship between balance of payments and level of public debt. From the findings of the study, the balance of payment disequilibrium in Ghana is not solely under the influence of monetary elements. From the four selected monetary predictor variables, three had a substantial influence. The findings also showed that domestic credit, growth in GDP, and rates of interest were found to be substantial. Local credit and rates of interest had a negative relation to foreign assets while GDP growth showed a positive impact. Inflation however showed an insignificant relation to foreign assets. It was concluded that government spending and public debt might influence Ghana's balance of payment.

The study further agrees with Reed, Najarzadeh and Sadati (2019) who conducted a study to analyse the dynamic relation between budget and current account deficit, and debt sustainability from 1974 to 2015 in Iran. A VAR model was used with impulse functions and variance decomposition in their analysis. The results showed that a long-term stable relation exists among the variables in the model showing that an improvement in the government debt sustainability reduced budget and current account deficits. Since Iran dependence on oil revenues was the underlying factor of the dependence of the variables on one another, a reduction of the dependence of the current account and the state allocation for oil revenues would reduce the two deficits and sustain the government debt.

5.3 Conclusion

This section presents the conclusions drawn from the research findings for each of the research objectives.

5.3.1 Government Expenditure and Level of Public Debt

From the study findings, the study established government expenditure (measured as both recurrent and development spending) and levels of public debt are positively and significantly related. The study therefore concludes that increased spending on both recurrent expenditure and development affects level of public debt in Kenya. Government acquisition of goods and services intended to create future benefits, such as infrastructure investment is capital intensive and therefore government opts to borrow.

5.3.2 Taxation and Level of Public Debt

From the study findings, the study established total taxes collected and level of public debt are negatively and significantly related. The study therefore concludes that as government collects more taxes from either direct or indirect sources, the levels of public debt goes down. This can be explained by the fact that increased tax revenues imply that the government is able to meet its recurrent expenditure and may apply some part of taxes to finance development expenditure without seeking for external funding.

5.3.3 Balance of Payments and Level of Public Debt

From the study findings, the study established that balance of payment and level of public debt are negatively and significantly related. The study therefore concludes that balance of payment influences level of public debt in Kenya and in a negative way. A country's current account reflects balance of trade and earnings on foreign investment. A nation's international borrowing and lending; transactions in goods and services are registered in its balance of payment accounts. Hence, the current account balance is an account of a country's dealings with the rest of the world. A trade deficit occurs when a country imports more than it exports and this leads to borrowings to finance the deficit.

5.4. Recommendations

The results revealed that government expenditure influences level of public debt. This study recommends for the need to have a lean and efficient government as this will go a long way in reducing the levels of recurrent expenditures that pushes up the level of public debt. The government can also use public private partnerships in some development projects to reduce the number of projects that are being financed by borrowed funds. Some development spending can also be postponed to avoid piling up of excess public debt.

For Kenya to control the prevailing levels of public debt, the study advocates for favorable current account balance by reducing persistent deficits and achieving current account balance sustainability, several policy options should be applied including promoting local investment and improving ease of trade to attract foreign investment. The government should create a favorable investment environment to attract FDI into the domestic industries. The domestic investments will complement the foreign investments and thereby improving the balance of payment through the increase in economic capitalization and production.

The study found that taxation measured as total taxes collected and level of public debt are positively and significantly related. This study recommends implementation of taxation policies that are favorable to revenue collection and citizens in order to maintain favorable levels of public debt. More citizens especially those in small and medium enterprises should be added in the tax payers' bracket and this can be achieved through tax payer education and efficiency and effectiveness in utilizing public resources.

5.5 Limitations of the Study

This study focused on some factors that are hypothesized to influence level of public debt in Kenya. Specifically, the study focused on three explanatory variables. In reality however, there are other variables that are likely to influence level of public debt such as interest rates, exchange rates, unemployment rates, political stability, economic growth, financial development among others.

The study was confronted with limitations including; the data used was secondary in nature and the researcher is not aware of its authenticity and reliability based on its collection and storage and alterations that might have been done on it. The study adopted the analytical approach which is highly scientific. The research also disregarded qualitative information which could explain other factors that influence the association between fiscal policy instruments and level of public debt. The study should have considered utilizing focus group discussions, open ended questionnaires or interviews so as to come up with more concrete results.

The research concentrated on 20 years (2000 to 2019). It is not certain whether the findings would hold for a longer time frame. It is also unclear as to whether similar outcomes would be obtained beyond 2019. The study should have been executed over a longer time frame in order to incorporate major forces such as booms and recession.

To complete the analysis of the data, VAR model was used. Due to the disadvantages of using the model as incorrect and contradictory results arising from a shift in variable value, it would indeed be difficult for the researcher to generalize the findings with precision. The model performance might change in case of more data being added in the regression the model.

5.6 Research Areas for Further Studies

The study did not exhaust all the independent variables influencing level of public debt in Kenya and a recommendation is given that more studies be carried out to constitute other variables for instance interest rates, exchange rates, unemployment rates, political stability, economic growth, financial development among others. Determining the impact of each variable on level of public debt shall enable the policy makers to understand the tools that can be used to control prevailing levels of debt.

A suggestion is given that more research ought to include a qualitative analysis on how fiscal policy instruments and level of public debt in Kenya relate. That study would deal with interviewing of vital respondents and this would reveal concealed insights into the fine detailed relationship between fiscal policy instruments and level of public debt in Kenya.

The attention of this study was drawn to the latest 20 years because it was the readily available information. Subsequent studies may cover big time frame like level of public debt since independence which can be very impactful on this study by either complementing or disregarding the findings of this study. The advantage of a longer study is that it will enable the researcher to capture effects of business cycles such as booms and recessions.

Finally, this study was based on a VAR model, which has its own limitations such as erroneous and misleading results resulting from a change in variable value. Future researchers should focus on other models such as the Vector Error Correction Model (VECM) in exploring the various relations between fiscal policy instruments and the level of public debt.

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APPENDICES

Appendix I: Research Data

Year	Quarter	Total debt (shs. M)	Govt Spending (shs. M)	Total Taxes (shs. M)	Balance of payments (shs. M)
2000	1	598,263.22	45,920.33	36,612.00	-7,791.63
	2	601,821.00	58,373.00	50,814.67	-7,433.08
	3	594,880.72	32,299.00	23,273.00	-12,096.28
	4	596,802.70	86,881.67	63,444.00	-10,437.94
2001	1	601,022.47	143,814.00	102,514.67	-7,627.90
	2	609,887.29	209,660.00	144,980.33	-14,179.57
	3	605,607.98	32,369.67	23,638.67	-12,091.63
	4	608,670.18	85,144.67	62,508.67	-8,350.66
2002	1	607,809.46	140,134.33	102,386.33	-10,302.36
	2	611,910.44	201,445.67	143,814.67	-4,850.05
	3	622,898.42	39,005.67	24,664.67	-5,122.26
	4	626,807.40	99,556.33	66,908.33	-8,331.54
2003	1	633,440.19	164,036.67	110,526.00	-6,263.18
	2	659,593.01	233,162.00	158,551.00	-8,819.08
	3	699,538.39	42,177.67	27,481.67	-8,809.82
	4	710,919.68	100,696.00	74,381.67	-9,008.85
2004	1	710,414.91	167,356.67	124,057.00	-10,764.98
	2	722,804.87	242,188.67	180,372.67	-10,860.34
	3	749,465.42	42,918.33	33,601.00	-13,480.02
	4	749,552.32	111,891.00	93,641.00	-14,297.75
2005	1	732,136.00	179,446.33	156,073.00	-13,255.18
	2	736,502.19	264,817.00	218,849.33	-23,276.87
	3	755,772.95	56,123.67	35,381.33	-17,748.09

Year	Quarter	Total debt (shs. M)	Govt Spending (shs. M)	Total Taxes (shs. M)	Balance of payments (shs. M)
	4	748,715.44	145,940.00	99,946.67	-19,307.63
2006	1	746,769.63	237,820.67	164,863.67	-20,842.81
	2	766,603.85	333,006.33	231,477.33	-23,640.47
	3	796,267.30	59,879.00	43,647.33	-21,951.55
	4	799,589.93	160,083.00	114,539.67	-26,554.99
2007	1	797,758.05	257,599.33	187,723.00	-27,477.21
	2	807,516.76	366,434.00	273,586.33	-25,654.64
	3	827,075.02	64,587.00	57,428.00	-28,471.73
	4	844,504.92	184,438.33	145,702.33	-28,571.45
2008	1	862,269.92	318,727.00	233,551.00	-30,799.02
	2	868,923.95	459,150.67	329,273.67	-27,128.13
	3	870,135.01	71,409.67	60,509.67	-43,045.96
	4	921,237.75	216,437.67	160,902.33	-40,289.64
2009	1	982,882.23	350,348.33	270,138.33	-33,510.48
	2	1,023,361.69	525,475.00	385,880.33	-35,705.61
	3	1,071,799.88	101,148.67	67,946.00	-34,737.15
	4	1,117,708.23	251,535.67	180,961.33	-43,762.77
2010	1	1,138,810.11	439,118.67	293,445.33	-36,019.52
	2	1,202,999.20	667,149.67	423,783.67	-36,019.52
	3	1,264,628.46	103,726.67	74,453.00	-44,693.96
	4	1,308,350.66	301,257.00	207,884.00	-47,344.61
2011	1	1,373,256.36	494,488.67	342,675.67	-55,900.48
	2	1,432,569.58	711,607.67	495,270.33	-61,372.16
	3	1,545,223.90	106,408.33	83,703.00	-75,175.94
	4	1,540,868.24	333,098.67	231,404.57	-75,757.73

Year	Quarter	Total debt (shs. M)	Govt Spending (shs. M)	Total Taxes (shs. M)	Balance of payments (shs. M)
2012	1	1,533,513.57	588,645.00	378,258.76	-39,091.47
	2	1,613,471.03	830,269.67	553,101.67	-52,401.26
	3	1,679,299.44	142,836.33	93,675.11	-72,790.64
	4	1,772,629.84	405,979.33	260,508.13	-74,374.59
2013	1	1,792,191.44	674,605.67	431,072.41	-73,887.73
	2	1,894,544.20	1,042,355.00	654,013.62	-68,185.30
	3	2,005,166.36	136,688.33	126,334.64	-77,510.34
	4	2,085,537.59	405,267.67	338,323.78	-81,119.22
2014	1	2,153,244.43	651,029.00	544,497.42	-70,211.99
	2	2,242,643.66	1,005,535.67	774,624.31	-87,476.93
	3	2,368,960.24	150,592.00	134,124.42	-108,400.65
	4	2,404,835.14	492,523.33	367,268.61	-96,331.49
2015	1	2,607,759.43	920,718.33	595,794.04	-74,712.50
	2	2,786,764.29	1,399,811.33	855,507.78	-89,557.60
	3	2,921,328.60	156,834.00	155,149.08	-81,390.42
	4	3,059,870.51	591,937.00	407,525.57	-87,449.62
2016	1	3,247,134.36	995,429.33	639,779.62	-55974.78333
	2	3,474,664.61	1,531,954.33	961,008.13	-74,570.63
	3	3,643,034.56	208,972.67	177,553.56	-77,823.30
	4	3,765,815.72	719,687.67	457,948.31	-76,467.14
2017	1	3,962,068.80	1,249,343.67	754,364.59	-90,618.14
	2	4,262,087.59	1,876,146.00	1,089,268.67	-91,483.83
	3	4,452,690.13	199,255.33	190,073.67	-102,229.16
	4	4,565,639.89	709,882.33	496,811.00	-92,833.63
2018	1	4,803,395.57	1,272,403.67	816,696.00	-92,263.61

Year	Quarter	Total debt (shs. M)	Govt Spending (shs. M)	Total Taxes (shs. M)	Balance of payments (shs. M)
	2	5,012,383.04	1,894,763.00	1,139,788.67	-100,803.36
	3	5,121,798.62	114,873.00	98,251.00	-93,892.55
	4	5,245,123.80	810,997.00	505,952.32	-94,741.71
2019	1	5,385,485.97	1,295,815.89	449,276.75	-88,856.29
	2	5,666,489.00	1,929,626.64	648,735.50	-102,986.80
	3	5,992,058.94	116,986.66	113,202.13	-100,704.06
	4	6,035,330.37	825,919.34	295,885.62	-109,313.76