THE EFFECT OF PUBLIC DEBT ON KENYA'S NATIONAL SECURITY BUDGET

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Reg. No. C50/9540/2017

A Research project submitted to the Department of Political Science and Public Administration in partial fulfillment of the requirements of the award of the degree in Master of Arts in Strategy and National Security Studies of The University of Nairobi.

NOVEMBER, 2022

DECLARATION

I Kennedy Odanga declare that this research project on Implications of Public Debt on Kenya's National Security is my original work and has not been presented for a degree in any other University or any other award. Every effort was made to clearly recognize contributions of others and all those involved through due reference to the literature and acknowledgement of collaborative research and discussions.

Signature:………………………….. Date:13-11-2022……

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This research paper was submitted for examination with approval of Dr. Martine Oleche as a university supervisor.

Signature: ________________________Date: __11/11/2022_________________

ACKNOWLEDGEMENT

I wish to express my appreciation to my employer National Intelligence Service for extending a full scholarship that financed all my study programs. I'll forever be grateful to NIS for the opportunity, and it is my prayer that the program will be sustained into the future to continue enhancing the organization's capacity.

I also wish to thank my supervisor Dr. Martine Oleche for the patience and encouragement during the process. He always rose to the occasion when I was almost giving up. My gratitude is also extended to the economic research assistants for their conceptualization and simplification of economic ideas into simple social science concepts.

DEDICATION

This research project is dedicated to my family for the financial and psychological support, work colleagues for the intellectual input and friends for their encouragement to push-on to finalize the project.

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LIST OF ABREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency System
CIA	Central Intelligence Agency
CBK	Central Bank of Kenya
DC	Developed Countries
ECB	European Central Bank
EDA	European Develoment Agency
ERS	Economic Recovery Strategy
GDP	Gross Domestic Product
KNBS	Kenya National Bureau of Statistics
LCD	Least Developed Countries
USAID	United States Agency for International Development
UNCTAD	United Nations Conference on Trade and Development
UNCED	United Nations Conference on Environment and Development
TOC	Transnational Organized Crimes
FY	Financial Year
NS	National Security
NSO	National Security Organs

ABSTRACT

The relationship between Public Debt and National Security budget is premised on a country's economic situation. Generally, economics is the driving force behind any country's pursuance of National Security interests. Therefore, Public Debt is viewed as one of the major factors influencing a country's economics and consequently impacting on National Security budget. Kenya's Public debt has been on an increasing trend since independence in 1960's and was observed to be on the precipice of economic crisis. By the end of December 2020, the public debt in Kenya had accumulated to Ksh. 7.28 billion, representing an estimated 68.7 percent of GDP. This is beyond the recommended IMF debt to GDP threshold of 60 percent. Kenya has however, shifted the threshold to 9 trillion (about 87 percent) and was considering to further shift it to 11 trillion. The burgeoning public debt is a source of public concern on its looming implications on general wellbeing of the country and especially national security. The effect of public debt to national security has been associated with adverse effects it has on National Security sector especially during its repayment periods. In this regard, the study sought to establish the relationship between Public Debt and National Security sector budgets by examining the debt profile of Kenya. Further, the study estimated the effect of public debt on national security budget. The relationship between Public Debt and National Security was evaluated using trends in figures of annual budgetary allocation to the three National Security Organs enshrined in the Constitution of Kenya (2010). Public debt and Realism Theories were embraced in the study to conceptualize the relationship between the variables of Public debt and National Security. Public Debt Theory focuses on the political, economic, and social impacts of borrowing funds on National Security and general wellbeing of the State. The theory argues that borrowing leads to irresponsible expenditures because of being an easy source of income and causes deterioration in the functioning of economic life. Realism Theory that is premised on role of human behavior in policy decision making process within government, was adopted to explain the relationship between Public Debt and annual budget allocations to National Security sector. Realism Theory plays a major role in performance of National Security Organs since most of the principles governing the security sector are derived from the theory. The study adopted a mixed method, combining descriptive analysis, correlation research design, and regression analysis that exploits secondary data on public debt accumulated by the government and data from National Treasury on government revenues, debt servicing, and GDP. Most of the data was gathered from the National Treasury, CBK and KDF, NPS and NIS. The study established that despite

a consistent increase in public debt over time, the budgetary allocations to National Security Organs are lower (7.7 percent) than the proportion of the increase in Public Debt (18.3 percent). In addition, the share of national security budget to the total national budget has been on a declining trend from 11.8 percent in 2014 to 8 percent in 2020. This trend is the same across the budgetary allocations to the three national security organs. As allocation to debt servicing increases, it exerts pressure on the revenue kitty and the country's budget and therefore the government tend to prioritize servicing due debts over allocation to National Security Organs as the budget increases. The study further estimated that public debt decreases national security budget by 6.4 percent holding other factors constant. Additionally, it established that debt servicing, affects budgetary allocation to national security by about 10.2 percent. This implies that the adverse effect from increase of debt servicing supersedes the positive effect of additional public debt on budgetary allocation to National Security. In this regard, the study recommends the need to diversify sources of financing national budget to avoid over-reliance on public debt. In addition, the study recommends that the government that public debt growth rate should not exceed the revenue growth rate of the country. This will ensure the budgetary allocation to annual debt servicing does not increase over time and that a bigger share of budget is left to finance National Security sector and other government departments. Further, the study recommends the reduction in uptake of public debts especially on the external debt portfolio and prioritize uptake of domestic debt which enables the lenders to re-invest back into the country's economy and generates more revenue to the country, thus increasing total revenue which translates to an increase in budgetary allocation to National Security sector and other public sectors. This is because some components in external debt are associated with high interest repayments and are highly volatile to changes in exchange rates. In addition, reducing public debts has an ultimate effect on reduction in debt servicing over time.

CHAPTER ONE

INTRODUCTION

1.1 Background

This study is an interdisciplinary process that endeavors to unravel the relationship between economics and national security in Kenya by focusing on effects of public debt variable on national security variable. Economics is charged with organizing all variables of national security, while other factors are viewed to be intervening, if not interdependent variables. Kenya's public debt as an economic factor, has been increasing over the years since independence in early 1960s, and had reached a level whereby it was viewed as heading towards an economic crisis. The situation prompted reaction from concerned development stakeholders, partners, global lending institutions and leaders within domestic political cycles. The effect of public debt on the society prompts the need to securitize it since it is an element of National Security. Maana & Mutai (2008) argued that it was important to securitize economic features such as public debt, Gross Domestic Product (GDP), Debt Servicing, Government Revenue and Economic policies among others because they are interdependent and have an impact on national security budget. Though all elements of Economic security have diverse implications on National Security, the study narrowed focus on securitizing and discussing the element of public debt because of the public interest the implication on National Security of Kenya.

Conversely, Public debt is not all that bad since it is among ways a government exploits to fund development programs that uplift socio-economic wellbeing of its people. Açıkgöz (2019) stated that borrowing has an important place among public revenues; since it has great political, economic and social impacts. He evaluated the literature on the nexus between Public Debt and National Security and came up with practical conceptual aspects that proved existence of a relationship between Public Debt and National Security. Public debt being monies a government owes its domestic and external creditors, is said to be one of the key economic factors that define stability of a State. Guzzini (2017) argued that economics was the power driving organizations and behavior in societies and nations; therefore, economic forte of a country was a core attribute in pursuance of National Security interests.

According Caporaso & Levine (1992), political institutions, economic systems and the social environment in country greatly affects and influences performance of the National Security sector. The political effects of public borrowing are handled within the framework of political business cycle theory. According to the theory, public expenditures increase during the election period. The government in power is always worried about losing its vote base hence tend to increase public investments and prefer to finance these public expenditures with internal borrowing instead of tax or emissions. Citizens of any country view national security as one of their basic needs and would be seen to have been achieved when they feel a sense of safety and leading a positive quality life. Therefore, every country adopts strategic action plans in order to stabilize national security through various means including pursuing various socio-economic measures.

According to Holtfrerich & Tintemann (2016), public debt may become a source of public concern to a country when the growth rate of the public debt goes beyond economically safe level portfolio; portending serious adverse implications to National Security. This concern has prompted need to research on effects of growing public debt to Kenya's national security. This research examined the relationship between public debt and national security in Kenya by gathering necessary data on Public Debt variable, National Security variable and corresponding intervening variables that impact on National Security.

According to GoK(1965) economic data, Kenya has pursued development programs since 1963 aimed at eradication of poverty, illiteracy and diseases through various session papers that marked the commencement of Kenya's attempts at sustainable development. The sessional papers have been followed with other economic action plans such as Economic Recovery Strategy for Wealth and Employment Creation (ERS) and Kenya's development blueprint of Vision 2030. The reviewed Constitution of Kenya of 2010, legislations and appropriate economic frameworks have continued to be adopted and implemented over the years to ensure Kenya achieves sustainable development; however, in spite of the programs and processes, Kenya continues to grapple with public debt challenges that impact on national security.

In spite of all these legal and policy frameworks, Kenya is unable to expand economic activities that would guarantee enough national revenue to cater for citizens' development needs. The shortfall in revenue collections has prompted the government to engage in borrowing, leading to cumulated public debt that is associated with complex socio-economic challenges threatening National security.

A report by Focus Economics(2019), indicated that the increment in Kenya's Public Debt prompted reaction from a concerned public over debt portfolio in a cross section of the Kenyan society, and was more pronounced when International financial institutions picked it up as a critical issue and raised concern over Kenya's public debt level that had reached Ksh 4.6 trillion in November 2017. Kenya's public debt level prompted IMF and World Bank to react by cautioning the government against high appetite for borrowing, arguing that it was heading towards levels of unsustainability. The warning attracted attention of parliamentary leadership that summoned the Bretton Woods institutions to expound on their statement. A presentation by IMF representatives in Kenya, Jan Mikkelsen, Ben Clements and Nike Hobdari to Kenya's National Assembly Budget and Appropriations Committee in March 2018; argued that Kenya's debt portfolio had reached risk levels and it would be unmanageable if the borrowing trend continues. The officials warned that Kenya risked losing investors and economic gains made if the government does not contain the runaway debt burden. To put the Kenyan public debt statistics into perspective, the ratio of the total debt relative to GDP in 2018, was the highest ever since independence in 1963.

Checherita & Rother (2010), stated that the turning point in public debt begins when growth of public debt level is above 70% and the negative effects are being felt within the economy; calling for prudent policy measures to counter indebtedness. There is evidence that the annual change of public debt ratio and the budget deficit to GDP ratio are negatively and linearly associated with per-capita GDP growth. The ratio of interest payments to overall tax revenue reflects the government's capacity to service its debt, and the higher the ratio of interest payments to tax revenue, the more difficult it is for a government to service its debt. It is also important to take note of the debt burden of the interest charged the government by its creditors, in that, the growth in interest rates has a direct proportionate increase in interests paid as well.

Therefore, the relationship between Public Debt and National Security is evaluated by identifying factors linked to both independent and dependent variables. National Security variable is conceptualized based on functions performed by the three National Security

Organs and the complementary institutions that assist in enhancing national stability. The traditional conceptualization of National Security has been about maintaining a military outfit and hardware to protect National Sovereignty and Territorial integrity. The State is the main consumer of security in that all strategies are intended to maintain stability of the State. KDF is a constitutionally recognized institution mandated to secure Kenya from external threat and is funded by the public through annual budget allocation to facilitate its operations to meet this mandate.

Similarly, a Nation-State must be able to fund operations of intelligence gathering and carry-out counter-intelligence operations to protect her from both internal and external threats; therefore, limitations in budget allocation to National Intelligence Service (NIS) undermines its capacity to carry-out its responsibility of protecting and preserving Kenya's national security interests.

As a constitutional obligation to its citizens on National Security, National Police Service (NPS) is mandated with the responsibility of enforcement of law and order, protection of life and property and adopting strategies to deal with all criminal activities in the country, among others. Some of the major crimes NPS is expected to tackle include Transnational Organized Crimes (TOC) like terrorism, drugs trafficking, money laundering, human trafficking and trade in counterfeits among others. This mandate requires adequate facilitation through funding operations of NPS to execute their mandate, and a country with high public debt situation may find it challenging to meet this obligation.

Blank (2011), argues that public debt can compromise the ability of Kenya to implement civil defense, emergency preparedness and provision of humanitarian services to vulnerable people, among others. Kenya is vulnerable to natural disasters such as drought, floods and hunger among others and enough budgetary allocations are required for key sectors such as Kenya Medical Research Institute (KEMRI) and National Disaster Management Authority (NDMA) among others, in order to complement KDF, NIS and NPS to mitigate against such threats to National Security.

The State is also expected to enhance economic development and meet economic demands of its people as one of its major objectives and goals. High public debt is viewed as a major factor that undermines the State's ability to achieve this objective. This has consequential effect of exposing citizens to economic hardships that may cause public discontent that could ignite revolutionary acts that undermine National Security.

1.2 Statement of Research Problem

CBK (2018) statistics on Kenya's debt portfolio indicate progressive growth in domestic and external debt, which has increased over the years reaching risk level of Ksh 5.4 trillion by March 2019, which is over 50% of GDP. The current debt service of Kenya is said to be already a burden and if the upward trend continues, then in the near future, it will be much greater. The burgeoning public debt is a source of public concern on its looming implications on general wellbeing of the country and to a greater extent National Security. From a national perspective for a developing country like Kenya, the effects of public debt to national security will be about undermining the ability to fund National Security sector to defend National sovereignty and territorial integrity, protect and ensure safety to its citizens against criminal activities, enhance its national interests and economic wellbeing of citizens by providing conducive environment to pursue opportunities and ensure social security to all citizens through enhancing ease of access to basic human needs.

Kenya's public debt situation ignited public apprehension over the ability of Kenya to meet its debt obligations from its GDP and be left with enough funds to pursue its National Security interests (CBK, 2019). CBK's statistical report of 2018 showed public debt as a percentage of GDP was 44.5 in 2013; while in 2014 it increased by approximately three percent to 46.7. In 2015 it moderately increased by 2.1 percent to 48.8, while in 2016 it crossed the 50 percent mark to reach 53.8. In 2017, it increased further by 3.5 percent to top at 57.3 and fairly stabilized at 57 percent in 2018, just to drastically shoot-up in 2019 and 2020, as demonstrated in table 1.

Table 1: Public Debt and Percentage Share to GDP

Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Public Debt (Trillions)	2.4	2.8	3.6	4.4	5.2	6.05	7.28	7.71
% Of GDP	46.7	48.8	53.8	57.3	57.0	56.5	69.0	69.0
Annual Total Budget to National Security Sector	156.2	170	174.6	214.6	216.9	226.6	240.7	272.9

(Billions)								

Source: Central Bank of Kenya and National Treasury

An evaluation of annual budget allocations over a period of time shows that even though Public Debt is increasing, budget allocations to National Security organs has also been increasing, but has fallen short of the target allocations as requested by the three organs of National security (KHRC, 2017). Further, in the FY 2019/20 budget statement presented to Parliament on 13th June 2019, budget shortfall continued to be experienced in Kenya with statistics showing notable fiscal shortfall from previous 7.4% to 5.6%.

1.3 Research Questions

The main research questions of the study included:

i) What is the profile of public debt in Kenya?

ii) What is the relationship between Kenya's public debt and National Security Budget?

1.4 Objectives of the study

The main objective of this study is to examine, assess and evaluate the relationship between public debt and National Security in Kenya. The following are the study specific objectives:

i. Examine the profile of public debt in Kenya

ii. Examine the relationship between public debt and National Security Budget in Kenya.

1.5 Justification of the study

The justification of this study is explained by operationalization of National Security elements and pursuing a holistic approach in understanding the effects of public debt on Kenya's National Security without narrowing focus to statistics of crime rates. It conceptualizes public debt effect on all variables that play a role in State security, guided by definition of NS and create a nexus between Public Debt and Dimensions of National Security.

1.5.1 Academic Justification

Paleri's (2008) definition of National Security played a key role in conceptualization of the nexus between public Debt and National Security variables. There are various definitions of National Security by different authors and for this case; Paleri's definition was adopted because of the bias towards the subject matter of public debt. According to Paleri, national security was defined as, "The measurable state of the capability of a nation to overcome multi-dimensional threats to the apparent well-being of its people and its survival as a Nation-State at any given time, by balancing all instruments of State policy through governance and extendable to global security by variables external to it" (Paleri, 2008). Paleris' definition and literature provided a relationship between economics and National Security, but did not go further to narrow down and look at how Public Debt could undermine national stability of a country. Therefore, the study added not only on the existing literature on the impact of public debt on National Security in Kenya, but also provided a foundation of literature to those who would like to carry out further research on how the variables of public Debt and National Security interact with each other.

1.5.2 Policy Justification

Data released annually by CBK in the eight year period of study on public debt showed glaring figures supportive of the concerns raised by various stakeholders on the challenge it poses to the country, in spite of reassurance from the Government that the public debt situation is within economically safe zone. The study findings are informative on the bigger picture of the threat emanating from high appetite for acquiring public debt to National Security and prompt economic policy decision makers to take proactive measures to moderate public debt uptake to safeguard National Security and by extension, National sovereignty.

The study also aimed at prompting economic planners to seek alternative ways of raising revenue by expanding its base instead of overdependence on borrowing to fund public programs; in addition to encouraging high domestic savings through encouraging its citizens to focus strongly towards domestic investment in order to cushion the country against risks of fluctuations in currency market.

1.6 Scope of the study

The study focused on exposition of the relationship between Kenya's increasing public debt and National Security of an eight year period between 2014 and 2021. Public Debt Statistics of Kenya within eight-year period (and considering quarterly data for regression model) were assessed and evaluated. The trends in Kenya's public debt data were observed and an analysis made on implications it has on Kenya's National Security. The data from National treasury and CBK on public debt and budgetary allocations to National security organs were important in pursuing the objectives of the study.

The study's limitation was lack of literature on the relationship between public debt and National Security in Kenya since most of the available literature discusses each of the variables as an independent economic and National Security discipline respectively. At the global level, the literatures on the subject matter are also scarce.

CHAPTER TWO

LITERATURE REVIEW AND THEORITICAL FRAMEWORK

2.1 Introduction

National Security and Public Debt are features that are closely linked to National power and are such interdependent that none can be talked about in isolation without reference to the other. A country's national power is sustained by the ability to build a strong economy and sustain competitive niche in the international system. Farlin (2014) argued that if a country's economy is weak, it will not be able to execute its instruments of National power in international system to pursue its economic interests and broadly National security interests.

In his write-up, Blank (2011) argued that Public debt situation of a nation is one of the variables that adversely impact on national power, whereby high public debt trends over a period of time have adverse significance on operations of national security organs and the security situation in general. An increasing public debt is an indicator that government is not able to raise enough revenue to meet its obligations to its citizens and engages in borrowing to bridge the deficit in revenue. This has an inevitable effect of reduction in budget allocations to various sectors of the economy, with allocation to National Security sector not being an exemption.

Panizza & Presbitero (2014) stated that the effect of public debt on national security varies from country to country based on variance in economic factors and level of development. While nearly all national security issues for developed countries have an international dimension, not all international issues are national security issues for developing countries. The effects of public debt on national security of developed countries are both at national and external levels; whilst the developing countries are faced with more threats to national security at domestic level.

In regard to measurement of National Security, it has been challenging to put figures on it and therefore it is evaluated and assessed based on performance of various factors that include effective use of diplomacy; sustenance of economic power; well-crafted effective legislation and policy frameworks on early warning mechanisms, establishment of strong institutions for detection of threats and counter-intelligence services; and effective implementation of law and order in a country.

According to Henriksen (1999), diplomacy is one of the tools exploited to evaluate achievement of National Security objectives, which entails influencing and rallying allies to support an international agenda and isolate threats within the international system. Diplomacy involves the State's ability to mobilize economic resource power to facilitate or compel cooperation from other countries. It is acknowledged that international law as a key factor in foreign policy and diplomacy, is most effective when it accords with the norms of international law. Jones & Treverton (2005), stated that polarity level of a country in international system was a determinant of National power, in that unipolar States have more influence on global affairs. The United States being a unipolar State, other nations will have little choice but to follow it, whether they like it or not. Similarly, Henriksen (1999), observed that a country's ability to carefully exploit diplomacy to influence other countries into building consensus on international law and support strong action against any threat was an indicator of its national power. Such consensus cannot be influenced by a country whose public debt situation is high since it lacks the required national power.

National Security is also measured by ability of the State to use intelligence services to gather information that assists in identification of economic opportunities and early detection of looming and emerging threats in order to develop pro-active measures to counter their effects. Additionally, the intelligence institution is mandated with protection of a State's classified information from espionage by hostile intelligence services by exploiting counter-intelligence techniques. These intelligence operations will require adequate funding to achieve their objective, hence the need to have a strong economy to facilitate their mandate.

Lippman (1922) argued that a State's ability to marshal economic power to facilitate or compel cooperation by maintaining effective armed forces is a measurement of a country's national security capacity. This is observed in the country's economic ability to maintain effective armed forces that have ability to defend National territorial integrity and sovereignty; and protection of its citizens from both internal and external threat. A nation is secure when it does not have to sacrifice its legitimate interests to avoid war, but is able, if challenged, to maintain them by war.

On his part, Blank (2011) observed that effective implementation of civil defense and emergency preparedness measures through legislation and policy frameworks is an indicator of a country's ability to tackle threats to security. This is exemplified in Kenya's situation whereby the disaster profile is dominated by droughts, fire, floods, terrorism, technological accidents, diseases and epidemics that disrupt people's livelihoods, destroy the infrastructure, divert planned use of resources, interrupt economic activities and retard development. In pursuit of reducing vulnerabilities to risks, the Government has formulated National Policy on Disaster Management to institutionalize mechanisms for addressing disasters (GoK, 2009). A country whose public debt has reached risk levels does not have capacity to effectively mitigate against natural disaster and other public distress.

National Security is also measured through State's capacity to secure itself from threats posed to critical national infrastructure. Critical infrastructure is vital for the essential functioning of a country and security is needed to avoid incidental or deliberate damage that can have a serious impact on the economy and essential services. These critical national infrastructure include airports, highways, rail transport, hospitals, bridges, transport hubs, network communications, media, the electricity grid, dams, power plants, seaports, oil refineries, and water systems. Infrastructure security seeks to limit vulnerability of these structures and systems to sabotage, terrorism and contamination. National Security is also measured by the ability of the State to protect classified information against espionage by directing enough resources for counterintelligence operations.

National Security is also measured by the State's ability to sustain a well-equipped uniformed police service to protect the nation from domestic threats linked to criminal activities; in addition to maintaining a undercover police to detect and protect the nation from emerging contemporary internal threats. This capacity of State security agencies is portrayed through periodical data evaluating crime statistics compiled by National Police Service (NPS) in Kenya, which indicate trends in threats facing the country. NPS will carry-out operations against all transnational organized crimes like drugs trafficking, money laundering and terrorism. For example in Kenya, the National Police Service will always release an annual report with details on various crime statistics that occurred in the country.

Public Debt also undermines the capacity of the State to provide services to its people, with consequential effect of causing public discontent that could ignite revolutionary acts that undermine National Security. The State is governed by political elites that have sought political power with various vested interests. Realism Theory contemplates that human beings will always be endowed with unique behavioral attributes that will be transposed in decision making process of State matters, such as a crucial economic decision of acquisition of public debt and its utilization. The greed in some political leaders pushes them to abuse and misappropriate funds acquired through public debt, compromising the intended objective; which ignites public discontent that undermines NS.

In regard to measurement of Public Debt, the data from government institutions especially in Kenya was available in measurable figures for collection, collation and analysis. The data for independent variable of Public debt and other influencing variables such as GDP, Government Revenue and Debt Serving payments, was available online for the eight year period under study from Central Bank of Kenya and National Treasury among others; as partially illustrated in Table 1.

2.2 Global Perspective on public debt

The threat of public debt to National security is well captured in this statement by former Deputy Director of Central Intelligence Agency (CIA) Michael Morell, “The Health of a nation’s economy is the single most important determination in its ability to protect itself, the single most important determinant in its ability to project power, the single most important determinant in its national security”. Morell’s statement was prompted by United States’ increasing public debt in 2011, that was feared to be heading to risk levels to the economy with consequential negative implications on national security. US public debt was then US $ 14.2 trillion in 2011; it was predicted to stretch to 17.4 trillion in 2015 and 21.4 trillion in 2020 by Congress Budget Committee. Public debt prompts a government to take radical policy measures that includes reduction in budget allocation to curb its growth; which may have adverse implication on NS. Blank (2011) stated that public debt effects on NS range from reduced influence in international affairs, diminished capacity to rally allies to support a global agenda, lost confidence from allies in capacity to protect common interest and weak capacity to tackle NS threats.

According to Windsor (2014), most countries in the world are struggling with management of their debt portfolio and one of the pronounced cases is Greece that had one of the worst public debt crises. During the Euro crisis of 2009 to 2010, Greece had the highest debt-to-GDP ratio globally of 152%; prompting it to seek two funding bailouts from the EU to avoid collapsing. The economic crisis did not just pose a threat to Greece but the entire Euro Region. Featherstone (2011) expunded that the Greek economic crisis exposed weaknesses of governance from successive regimes of Greece that exhibited lack of capacity to tackle underlying long-term challenges in fiscal management, enhancing trade competitiveness and investment imbalance; hence putting the country’s economy vulnerable to international shocks.

Mehmeti (2016) identified Albania as another country whose public debt reached threatening level to its national security. In 2015, the Ministry of Finance of Albania indicated that its public debt stood at dangerous level of 72.2 percent of its GDP and its deficit standing at 4.1 percent; pushing the country on the brink of a financial meltdown with consequential adverse impact on national security.

2.3 Public debt effects on developed countries' National Security

From a global perspective, the effects of public debt to US national security is viewed as a reflection of the situation that cuts across developed countries globally. McCarthy (2012) stated that the immediate action any country would take to react to the public debt burden is to effect financial austerity measures that involve taking steps to shelve some programs to reduce expenditure and budget allocation to various sectors that include security sector. This was exemplified by US in 2010 when President Barrack Obama was prompted to create a commission to study and moderate federal budget to strengthen fiscal situation. The President's action was prompted by the fear that competitors would undermine US global influence and polarity if they realize that US public debt to GDP ratio was weak, as observed in 2010 when the ratio was 62% and was approximated to reach 77% in 2021. The commission came up with recommendations that included reduction in expenditures on non-core services and merging some of the units in defense department for efficiency and effectiveness.

Hartley & Russett (1992) argued that the impact of reduced expenditures is felt on the national defense capabilities since diminished defense budgets determine type of actions taken by military decision makers. The reduction in budgets makes it difficult for defense policy makers to allocate the scarce resources to deal with numerous threats to national security. Some security challenges may require acquisitions of specific new technologies to deal with contemporary threats that keep on evolving and may have to be postponed or even cancelled due to lack of funds. In certain situations, further measures need to be undertaken such as prioritizing actions; reduction in maintenance and personnel expenses; downsizing measures planned by security forces.

According to data published by the European Defense Agency (EDA), it was observed that 16 of the 26 EDA participating member States decreased their investment expenses on equipment procurement and Research & Development, with an overall decrease from 42 billion Euros in 2008 to 41 million Euros in 2009. In this regard, Constantinescu (2011), observed that the decision had great adverse impact on both economic and military security among members.

Hayden (2012) observed that public debt did not just adversely impact on US defense budget, it also threatened the soft power effect of US in influencing international affairs. Soft power are instruments used by the US to assert its international influence through diplomacy, foreign aid, economic development, humanitarian assistance, governance-enhancing measures and strategic communication. The instruments are exploited by the State Department, the United States Agency for International Development (USAID) and the military.The decrease in funding of tools of soft power by US prompted emergence of rivalry to its influence in international affairs from China, Brazil, India, and Japan among others; that increased their expenditure towards funding instruments of soft power. Brazil challenged US global position by using health diplomacy to enhance its economic interests by exploiting the controversial position taken by US on access to generic medication on treatment of AIDS against manufacturers to negotiate for deals on patent rights. This led to lowering of prices for patented AIDS drugs and with spill-over beneficial effect to developing countries in Africa who also negotiated for the same deal with US manufacturers.

On the same note, Graaff & Apeldoorn (2018) stated that China had on its part effectively exploited soft power tool to challenge US global position by extending huge development funds to least developed countries in Africa, Latin America and South Asia. The recipients fast embraced the foreign aid because it had no conditions attached to it compared to funds from Bretton woods institutions, US and western countries; hence undermining US global influence.

Diane (2012) had on her part observed that public debt would lead to reduction in funding of other important national security functions such as the war against threat from transnational organized crimes (TOC). Organized groups engaged in TOC have continued to expand and embolden their activities globally, hence security agencies require enough funding to monitor and clamp down on their activities. Public debt will push a State to reduce resources allocated to deal with TOC hence limiting the capacity of the security agencies to tackle the threat.

Kibiy & Nasieku (2016) argued that high public debt adversely impacts on strength of a countries currency and undermines its international image. The undermining of its international image compromises its ability to influence and push for its interests in international system. Additionally, weak national currency adversely impacts on economic competitiveness of a country's goods in international market hence undermining its national power.

In the works of Milillo (2012), it was argued that an increasing public debt leads to lose of respect and confidence in the ability of the affected country to economically sustain itself and protect its national security interests. Elsewhere, a former US chairman of the Joint Chiefs of Staff Admiral Michael Mullen conceptualized this issues saying that upholding respect and confidence from other countries requires a nation to avoid high levels of public debt since they can neither sustain for long its military superiority in the world nor influence world affairs. His sentiments were influenced by the fact that half of US outstanding public debt in 2012 was owed to China and Japan; and that it could limit the country's leverage with foreign powers.

Horn, Reinhart & Trebesch (2021) stated that data from US National Intelligence Council for over two decades, showed that China had become the major global leader, with outstanding debt claims as of 2020 standing at more than 5 percent of the global GDP with the largest portion of these debts owed by the government and state-controlled entities. As of 2020, the Chinese state and its subsidiaries had lent more than US$ 1.5 trillion as direct loans and trade credits to more than 150 countries globally. According to Horn, et al (2021), the situation implied that China had surpassed the largest world creditors such as World Bank, IMF, or all OECD creditor governments combined. In addition, China is reclaiming global power rule across Asia, by strengthening their field military capabilities that puts US and allied forces in the region at heightened risk and press US allies and partners to restrict US basing access by 2040.

Gelpern, Horn, Morris, Parks & Trebesch (2021) observed that African countries such as Djibourit, Zambia, Niger and Republic of Congo have featured as countries, which owes debt of at least 20 percent of their nominal GDP to China. This was viewed as related to some adverse implications to the economy. For instance, the big lending development partners such as IMF and World Bank are usually conditioned on a plan to improve national policies, which may not be the case for Chinese lending, which gives rise to questions of creditor seniority. In addition, a country can take a loan from IMF for instance to repay China rather than use it blunt market strains.

2.4 Regional and National perspective on Kenya's public debt situation

According to Swionczek (2002), Kenya's debt situation was replicated in most of African countries since economic challenges faced by Kenya are mirror reflections of what happens in the region. An observation of public debt statistics of Kenya and other Least Developed Countries (LDC) indicate a progressive annual increase in borrowing from internal and external sources to meet budgets deficits to fund myriads of demands from their people.

Khan (2016) stated that the impact of public debt situation to Kenya and developing countries in general is portrayed in Pakistan situation, whereby during an eight-year period between 2008 to 2015, Pakistan added almost US$ 25 billion in external debt and over Rs.13 trillion in internal debt, making it unsustainable and orderly servicing of external debt obligations became a challenge.

In the East African Region, Kenya tops the EAC countries in terms of debt to GDP ratio in 2020. According to East African Economic Outlook (2021), the public debt-service costs will have increased to a record high of Ksh. 1.17 trillion by 2021, consuming about two-thirds of domestic revenue (National Treasury Debt Management Report 2021). While, its neighboring countries such as Uganda will approach 50 percent of debt to GDP by June 2021 (Nakaweesi, 2021). Tanzania on the other hand has been the most fiscally conserved country relative to its East African counterparts, planning to source externally about US$ 8 billion to fund the budget while sourcing about 60.9 percent locally (Tanzania Budget Framework and National Development Plan 2021/2022).

2.4.1 National Security and Government Revenue

The annual budget of Kenya is associated with huge deficits that force it to seek credit from domestic markets, bilateral partners and Bretton woods institutions such as World Bank and International Monetary Fund (IMF) to fill the gap. Since it does not utilize the funds in programs that generate revenue, it finds itself in a situation of persistent engagement in borrowing, leading to high public debt levels that have become a source of concern. The high rate of sourcing for credit by Kenya exposes it to serious threats to national security (Maana & Mutai, 2008). IMF recommends the use of contractionary fiscal policies such as raising taxes to generate additional revenues and cutting spending as a way of reducing national debt.

These policies however sacrifices economic growth, even though they are associated with long term positive effects of paying off debt obligations and securing future economic stability (IMF, 2021).

Omyonga argued that Kenya was faced with a myriad of National Security challenges ranging from domestic criminal activities to Transnational Organized Crimes(TOC), and hence require huge financial resources to facilitate security organs to counter their effects. Therefore huge public debt undermines the ability of NSOs to accomplish their mandate of effectively securing the country since repayments of debts depletes the limited resources that can be directed towards security functions. Kenya’s domestic threats are homegrown criminal activities emanating from internal socio-economic conditions that do provide employment opportunities to the massive youthful population in the country; who have become a source of insecurity linked to violent criminal activities. These criminal activities include murder, robberies, ethnic strife, economic crimes and cattle rustling among others.

Gastrow’s views on TOC stated that huge funding was required to tackle crimes linked to crimes such as drugs trafficking, terrorism, cyber-crime, counterfeit goods and money laundering among others; and public debt repayments may undermine the ability of the State to fund security operations against such crimes. The failure to manage TOC promotes corruption vice with consequential impact on breakdown in social fabric, breakdown of law and order, failure of governance structures with consequential ignition of civil unrest.

Bradbury & Kleinman (2010), observed that funding of the military is a key component of National Security for protection of territorial integrity and sovereignty, and public debt may compromise raising adequate resources to meet this obligation. The provision of humanitarian services to vulnerable people such as refugees, victims of civil strife and vagaries of weather conditions related to drought and floods will also require funding from the State; therefore, huge public debts will deny the sectors the critically required resources to counter the threat to National Security emerging from the situation. Kenya explores the relationship between aid and security by examining the widely-held assumption that humanitarian and development assistance promote security and stabilization, the effectiveness of using humanitarian and development assistance as a counterterrorism strategy, the efficacy of military aid projects in winning the hearts and minds of people in northern Kenya and along the coast, and policy implications of the strategy.

In Kenya, the outbreak and spread of COVID-19 to Kenya in 2020 affected the amount of revenues collected, failing to meet the country's revenue target by 11.59 percent between the quarter three of financial year 2019/20 and quarter two of financial year 2020/21 (KIPPRA, 2021). As a result, revenues collected including grants only financed about 70 percent of the budgetary needs (KIPPRA, 2021).

2.4.2 National Security and Debt Servicing

The debate on how debt servicing relates to national security is founded on the previous occurrences and experience from other countries. The proponent's view of debt as a threat to national security more often cite Congressional Budget Office (CBO) projections of an upcoming debt spiral that could lead to a fiscal crisis or expectations of inflation (CBO, 2020). The CBO summarized the relationship between debt servicing and national security as an indirect effect, where the high and rising debt could restrain policymakers from implementing deficit financed fiscal policies in response to unanticipated occurrences such as addressing the pandemic or responding to terrorist attacks and strengthening security.

In addition, other researchers such as Mullen (2010), argued that there is a direct relationship between debt servicing and national security. According to the study, the strength, support and the resources channeled to the military uses have direct impact on the health of a country's economy over time. The study further implied that when a country is peaceful, it attracts not only investors but also tourists, who in turn enhance countries revenues through remittances and other sources.

With the outbreak of the pandemic, some developing countries have benefited from the debt service initiative. This initiative suspended repayment of due debts to World Bank and IMF between December 2020 to December 2021. This increased the debt accumulation of the country, and more accumulation is expected in 2021 following the debt relief given by IMF and World Bank (World Bank, 2021). As a result, it is expected that during this period the country had additional monies to be channeled to other sectors such as national security organs.

2.4.3 National Security and GDP

Dalby (2009) stated that the creation of conducive economic environment included creating employment opportunities in order for people to earn income for survival through investments that generate income and employment. The increase of employment opportunities earns the citizens' income that enhances their purchasing power to be able to consume goods and services produced in the country. Economic security involves tackling economic inequalities that include income inequalities at individual, National and Regional levels.

Goodwin, Harris, Nelson, Roach, & Torras (2019), postulated that on relationship between public debt and social security, the State has an obligation to take care of its entire people by coming up with a functional social welfare system for its entire people irrespective of their economic status; however, the pursuance of the scheme is dependent on economic power of the State. Most of the Developed Countries (DCs) have enacted the social welfare systems that include catering for the unemployed until they get employed, a facility that is not practicable in Least Developed Countries (LDCs).

According to Lora & Olivera (2007), the LDCs have not embraced welfare systems because of the weak economic status linked to low GDP and high debt portfolio. The welfare system policies include taking care of the aged by setting up pension schemes for workers to cater for their social security during retirement to avoid the aged being a burden to the society. This phenomenon has been linked to global capitalism that has commercialized all basic requirements of life and destroying social fabric in communities since it promotes individualism and does not believe in the aspect of extended family. Capitalism is associated with cut-throat competition for business in international system and States that are not competitive enough like the LCDs, will be pushed into public debt situation to meet their obligations to its people.

Further, the effects of Covid-19 pandemic has been detrimental to the countries' GDP. The Kenyan economy declined to 1.4 percent in 2020 from 5.4 percent in 2019, and is projected to recover to about 4.5 percent by end of 2021 (Kenya Economic Outlook, 2021). The fiscal deficit is expected to widen to 8.3 percent of GDP, following the shortfalls in revenues and pandemic-related increased expenditures to deal with health issues and to mitigate the affected household incomes with minimal interventions towards national security organs.

2.5 Theoretical Frameworks

The study will engage Public Debt Theory (Salsman, 2017) and Realism Theory (Morgenthau, 1948) to explain and create relationship between public debt and National Security. Public Debt Theory classical views are mostly pessimistic since most authors on the issue believe that government borrowing is always wasteful, harmful to prosperity, and even morally unjust. According to Aybarc (2019), public debt was viewed as a burden on the back of future generation of a country, hence all kinds of debts were not only evil but public debt was absolutely evil. However, realists' argument on the issue stressed the context of borrowing by distinguishing productive versus wasteful spending. They argue that certain State services were legitimate, productive and indispensable to prosperity. Public debt optimists who are a minority in the debate, argued that public debt accumulation would enhance economic activities for greater development.

Salsman (2017) methodically categorized public debt theory and placed it in the context of historical debt practice by integrating the knowledge for better understanding of what to expect in the near future regarding public indebtedness and its consequences. He offered a new classification of public debt theory as comprising Pessimists; Optimists; and Realists; concisely categorizing the key fundamental beliefs in the field through its history to the present.

Salsman summarized his classifications stating that pessimists of the theory tend to argue that public debt can bring little to no economic good and that government debt will inevitably bring insolvency, and despite typically favoring free markets and limited government presence. Pessimists frequently show hostility to public creditors, often advising default. For optimists, Salman argue that market failures abound; deficit spending and public debt accumulation can boost economic activity without burdening either present or future generations. Salsman presents a persuasive case in favor of public debt realists, who assert government can and should provide an important but limited set of government services, that public debt should fund only services and projects that maximize its potential, but within the context of a nation's productive and taxable capacity, recognizing that borrowing need not be harmful, but is also not infinitely available. Unlike Pessimists and Optimists who tend to resent, Realists view public creditors as productive economic participants whose rights for repayment are to be respected.

Realism was based on conceptualization of the impact of human beings' behavior on a country's economics with consequential implications on National Security. Realism was also about the conceptualization of the role of the State in safeguarding National Security and Realists conceptualization of the relationship between International Systems and National security. The relationship between Realism and economics was that States will always pursue policies that protect their economic interests and a human being's behavior has a lot of influence in framing of the financial policies. Realists argued that Human beings' behavior was generally associated with selfishness; obstinateness, power hungry and greed among others, hence make economic policy decisions that are influenced by these characters. The human behavior is elevated to the State level since the State is only a collection of human beings that will transpose their behavior in State policies such as appetite for acquiring huge public debt. This human behavior will also be portrayed in the way countries relate at international level, whereby they tend to adopt economic policies that push for their own interests in international system such as lending rates to LCDs.

The behavior of human beings as a key principle in Realism was also portrayed in utilization of Public Debt in Kenya; such that the greed and obstinate of human nature leads to inequality in the society and igniting antagonism among ethnic and societal groups with consequential effect of undermining National Security. The political leadership in Kenya and LCDs in general, are associated with abuse of power in utilization of funds acquired through public debt by deviating from intended purpose and directing the funds to selfish interests through corruption. Since economics was viewed as the driving force of behavior and character in the society, the National resources should be fairly and equitably allocated, if not, it may be a source of discontent, social unrest and National instability.

Conceptually, National Security is a multi-dimensional aspect that comprises of both visible and invisible elements. These dimensions are not pursued in isolation but holistically. They envisage five human security aspects that comprises of political security, economic security, environmental security, social security and military security. Therefore, huge public debt poses the risk of denying these sectors the necessary funds thus undermining National Security.

The political element of National Security plays a major role in influencing the decision on public debt; therefore, David Easton's input and output model of political system was handy in defining the relationship between public debt and National Security. According to Easton, the political system plays a greater role in allocation of resources and values; and that all conflicts in a society are associated with resource allocation. Resources are always available in the society but are also always scarce, hence igniting conflicts. According to Shirin, Bogolubova, & Nikolaeva (2014), engagement in public debt by any State is a political decision influencing economic actions that strains the available scarce resources, which later turns out to be a source of conflict in a country

Regarding Public debt and political security, Holtfrerich & Tintemann (2016) explains politics as an authoritative process of allocating the scarce resources and values in a country, arguing that since the process is prone to misunderstanding, it can be a source of conflict. Since process of allocation of resources is associated with differences and disagreements because the resources are not able to meet all the demands of the public, they end up pushing the State to engage in public debts to meet its obligations; thus such actions may become a threat to National security. Barta (2018) adds that Political Security involves seeking authority from the people through a democratic and fair election process and is associated with expenditures that push levels of public debt higher. This was because politicians who ran governments will tend to improve their public outlook and position prior to elections by borrowing more to fund provision of more services and development projects.

Additionally, political security would involve strengthening institutions of law and order such as Judiciary, Legislature, Military, Police and other law enforcement agencies of the executive arm of Government to maintain peace and tranquility. If these institutions are weak, then it resultant outcome is political insecurity. However, there is need for each arm of government to oversight each other against idiosyncrasy attributes of leaders heading these institutions to avoid abuse and undermining the intended objective of strengthening them.

Political security also involves adopting principles of governance, such that decision making process is all inclusive and participatory, unfortunately, personalization of decision-making process on public affairs by a section of the political elite breeds discontent among the people and undermines security. Most political decisions are associated with vested political power and financial interests that promote corruption among the political elite, especially in developing countries. This undermines rule of law since the people do not own the decision, hence adversely affects effectiveness and efficiency of the political system, with consequential negative impact on service delivery to the citizenry. Corruption is a major contributor to public debt in developing countries because of looting of the scarce resources by those in position of power and pushing States to borrow to fill the deficit gap.

Based on Public debt and economic security, it involves securitization of economic issues by connecting issues such as food availability, inflation, public debt, GDP to National Security. Economic Security is linked to an extractive function that refers to activities that enhance economic development for improvement of socio-economic wellbeing of the people. The activities include creation of conducive environment to allow the people to exploit natural resources and be able to generate income that will facilitate access to basic needs such as food, water, shelter, health among others.

According to Lucia (2020), accessibility to basic needs is a fundamental right for every citizen as espoused in UN Human Rights Charter, therefore every State should endeavor to put in place policy measures to enhance accessibility to this rights. The activities also include building human capacity to extract natural resources and create employment opportunities that provide income to uplift the living conditions of the people. The lower the extractive capacity of flora and fauna, the lower the national power of the nation; and the higher the extractive capacity, the higher the national power. A country with low extractive capacity may engage in seeking for public debt to meet its obligations.

Looking at public debt and environmental security, Dalby (2009) stated that the extent to which the people have tamed nature has consequential impact of becoming a major threat to National Security. Environment Security is placed at the Centre of National Security because of risks posed to the people emanating from interference of the ecosystem. Depletion of environmental resources exposes the people to various environmentally induced threats that range from shortage of food, hunger, floods, drought, diseases and other related issues that affect human security.

Environment security therefore calls for the need to subject development projects to an Environmental Impact Assessment (EIA) to assess their effect on human security in terms of Green House effect, Global warming, environmental degradation, farming techniques, waste and sewerage disposal, forest destruction and depletion, among others. Public debt makes economic wellbeing of the people unbearable and forces the people to resort to destruction of the natural resources to meet their basic needs.

In respect to Public Debt and Social Security, it involves enactment of policies that enhance social cohesion to avoid conflicts among various groups in the society. Social Security is an aspect of human security that is linked to measures taken by the State to manage all threats to daily survival and dignity to human being. It is argued that all efforts of National Security without care of humanity as the first step to ensure a secure State are all in vain. Therefore, during policy formulation, the State should conceive every time that National Security is a public good that must benefit everybody irrespective of social standing.

National Security is not necessarily about the threat from external but also from internal sources that is linked to social security. In this respect, it is about taking care of the aged through provision of pension to the retired or the aged (Senior citizens) so that they are not a burden to the society. It is also about the strengthening of social cultural values that is positive in nature, such as stressing on need to empower the family unit as the foundation of the society and the nation in general. The phenomenon of street children in Kenya is an example of breakdown in social-cultural value systems of the family unit destroyed by contemporary individualistic culture of capitalism, which is hostile to African socialism.

On Public debt and military security, Hanlon (2009) stated that the use of military is the traditional approach of looking at National Security, adding that the conceptualization of security from this perspective was that of absence of war, violence and hostility. It was a perspective that deals with overt manifestations of security through military actions focusing on protection of territorial integrity of the State. The meaning of national security is viewed as static in nature with much emphasis on State as the reference point that is the main consumer of security and unit of analysis.

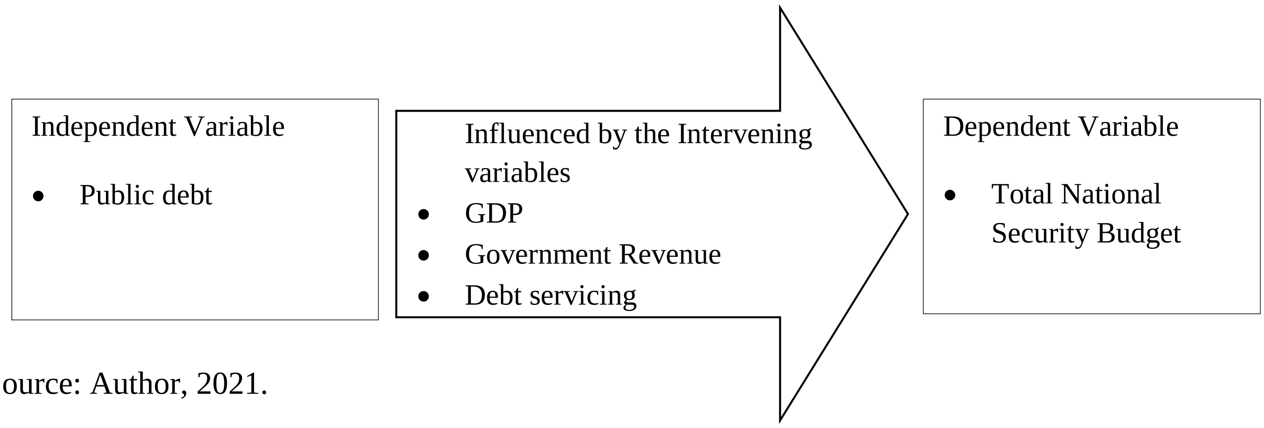
The State does not exist in isolation because it is a member of the State of nations hence subject of international relations. The traditional approach identifies threat to security of the State to be from external sources only and disregarding internal threats. The traditional approach is more militaristic and only aims to defend territorial integrity and sovereignty disregarding human security. Additionally, political leadership in LCDs exploit this security element to impose their behavioural attributes disguised as State policies for more funding from public coffers. The strengthening of military power was sometimes not intended for public interest but misused for intimidation of political opponents with a selfish agenda of holding onto power beyond legal terms. According Ahmed (2012), the Defense budgets are among the highest public expenditures for various States, with consequential impact of pushing the government to engage in borrowing to fund military operations. High public debt undermines capacity of a State to meet defense obligations.

In conclusion on National Security conceptual aspects linked to the theoretical framework, it can be observed that sustainable security of a State can only be possible where all the five dimensions of security are integrated during implementation. Therefore, any impact of public debt on National Security will be felt across all the sphere of the five NS elements.

2.5.1 Conceptualization

Mugenda & Mugenda (2003) works were adopted for the conceptual framework of the study, which represented the researcher's mental plan of thoughts that provide guidance on examination of the study's objectives. It reinforced and presented the connection of Public Debt as an independent variable and National Security budget as a dependent variable. Under the study, the conceptual framework presents the relationship between independent variable and the dependent variable as influenced by controlled variables. The independent variable of public debt was examined on how it impacts on budget allocation as a measurable factor for National Security, which was the dependent variable; and as influenced by other intervening variables such as Government Revenue, Debt Servicing and GDP (Figure 1)

Figure 1: Conceptual Framework



Source: Author, 2021.

2.6 Research Hypothesis

The study assumes that there is a direct relationship between Public Debt and NS, whereby lower public debt portends relatively enhanced stability of NS while higher public debt portends relative instability of NS. Realism theory portends that human being's behavior of selfishness and greed, is superimposed in their decision-making process and influencing their action of acquiring public debt; pushing a country to a situation of instability that undermines National Security. Alternately, public debt has no effect on National security, as situations remain constant irrespective of emerging changes in public debt.

Based on the specific objective two, the following null hypothesis was tested.

H_{20}: Public debt has no significant relationship with the National Security Budget.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

A mixed Method Design of Quall and Quant approach was utilized in data analysis. The study research design adopted both Qualitative and Quantitative design that employed different approaches. Secondary data on independent variables including public debt, government revenues, GDP and debt servicing, and dependent variable of National Security budget was collected through online sources in text and figures hence decision to adopt descriptive analysis. Quantitative design was adopted in collection of data through publicly available sources published by the National Treasury, CBK, KNBS and World Bank regional office in Kenya. Information from the security consultants and strategic officers in KDF, NPS and NIS was also gathered through interviews as a way to fill data gaps established after secondary data collection exercise.

3.2 Research Design

The study adopted a mixed research design, which incorporated both the descriptive design and the correlation research design. These two designs were essential to the study since it allows extensive research for both objectives. The descriptive research was essential in providing the implications of public debt on budgetary allocations to national security by enabling the study to establish the problem statement and the connection between the variables. While, correlation research design was important to the study in establishing the relationship between public debt and budget allocation to the national security. In addition, it enabled the study to estimate the extent and magnitude of the effect of public debt to the national security.

Qualitative and Quantitative design was adopted in exploitation of documents from public and private journals, publications, books and other documents on the subject matter. Audio-Visual and photograph materials on public debt level were gathered and collated for exploitation.

3.3 Data Sources and collection methods

The choice of mix-method for the research was informed by research problem and various related literatures, in that most of the data required for the research was viewed as readily available from institutional online sources, journals, research papers, media and periodicals, among others. A Descriptive and content analysis method was the primary research methods in order to exploit the massive statistics and literature available. Identification and classification of the type of data through a structured approach was the very first step towards data collection and the study reviewed various types of constraints in construction and their characteristics. The study also adopted correlation analysis technique to connect Public Debt and National Security.

Secondary time series data for the period from 2014 to 2021 (quarterly data considered for regression model) from the National Treasury, CBK, Kenya National Bureau of Statistics and other public institutions was collected and collated. Further, additional data was collected from publications and previous literatures on public debt and National security conditions in Kenya. In addition, the literature review of various sources of data such as books, journal, videos and audios among others was done. The data was subjected to further processing of collation, assessment, evaluation and analysis to create coherence and consistence in the data.

3.4 Target Population

The study collected a time series data of public debt and budgetary allocations to national security variable for the period from 2014 to 2021 (quarterly data). In cases, where the quarterly data was not available, the annual data was converted to quarterly data using recommended approaches in Eviews. The key variables of the model included total public debt as an independent variable and national security as a dependent variable. Other controlled variables included the GDP and government revenue. Online secondary data on public debt was sourced from National Treasury, CBK, and KNBS; while secondary data on budgetary allocations approved to KDF, NPS and NIS was also sourced from National Treasury. There was no sampling done since the research program adopted a holistic approach on the study topic.

3.5 Description of Variables used

The study collected secondary data from the various sources that have adopted a common measure for the variables. In most reports, public debt was measured in Kenya shillings monetary terms. Similarly, the budgetary allocation to National Security departments was measured in Kenya shillings monetary terms. The measurements for other variables is as presented in table 2 below.

Table 2: Study Variables

Variables	**Descriptions and Measurement**	**Expected Sign**
Dependent Variable		
Total National Security Budget Allocations	Aggregate budget allocation to national security organs (comprising of budgetary allocation to KDF, NPS and NIS) in Kshs	-
Independent Variables		
Total Public Debt (Trillion)	Aggregate public debt (comprising of external debt and domestic debt) accumulated in Kenya measured in Kenya shillings	Positive
Total Government Revenues (billions)	Include money received by Kenyan government from taxes and non-tax sources to enable it to undertake government expenditures measured in Kenya shillings.	Positive
Real GDP prices (Ksh. Trillion)	Is an inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year (expressed in base-year prices). Also referred to as constant-price GDP or inflation-corrected GDP.	Positive
Total Debt Service (TDS)	Is the sum of principal repayments and interest actually paid in currency, on long-term debt,	Negative

(billions)	interest paid on short-term debt, and repayments (repurchases and charges). Comprising of due external and domestic debts measured in Kenya shillings.	

Source: Author’s own construction

3.6 Data Analysis

Data collected was assembled, collated and sorted for relevance. The units of measurements for the variables included in the model was informed by the diagnostic tests conducted. Relevant diagnostic tests were conducted as presented in the diagnostic test section below. The data was processed using both excel and *STATA*, to derive the descriptive statistics and the coefficients for the model. The relationship between variables were presented in form of tables and charts.

3.6.1 Diagnostic Tests

Diagnostic tests were conducted to ascertain the reliability of the results and to ensure the assumptions of a linear model are not violated. The tests conducted included the Normality, Autocorrelation, and Heteroscedasticity tests.

i. Normality Test

The test was relevant to the study in ensuring that the assumption of normal distribution was not violated. For linear model, it is assumed that the residual of the response variable is normally distributed around the mean (Maas & Hox, 2004). Therefore, the normality test provided the evidence to ascertain that the assumptions were not violated.

ii. Autocorrelation Test

Durbin-Watson test is the recommended and commonly used test for auto-correlation. This is a measurement of the similarity between a certain time series and lagged value of the same time series over successive time intervals. The test reports a test statistic with a value 0 to 4, with the rule of thumb being, a value less than 2 implies there is positive autocorrelation, a value of 2 implies no autocorrelation, and a value greater than 2 depicts a negative correlation (Khan, 2008).

iii. Heteroscedasticity

The study applied Breusch Pagan to test for heteroscedasticity. This test determines the consistency of the variance across the observation. Heteroscedasticity occurs in situations where the variances vary across the observations. This may result in a biased estimation.

3.6.1 Empirical Model

To estimate the effect of public debt on budgetary allocation to the National Security, the study adopted an autoregressive distributed lag (ARDL) model to estimate the inferential statistics. ARDL model is an ordinary least square (OLS) based model, which was suitable for the study since it allows estimations of both non-stationary time series as well as time series with mixed order of integration. In addition, the model allows for estimation of long-run relationship between variables of the study. The following model was adopted.

$$Y = \beta_0 + \beta_i X_{i-1} + \beta_j X_{j-1} + \varepsilon \quad \text{.......} \quad (1)$$

Where, Y is the dependent variable (Total National Security Budget) while $\beta_j X_{j-1}$ represents the coefficients for the independent controlled variables and ε is the error term. The study lagged some variables in the model including the total government revenue variable and real GDP prices by one period, while total public debt and total debt service were not lagged. This is because in theory the effect of the change in government revenue variables, real GDP prices and total debt services affects the government's budgetary allocation to NS for the subsequent year. The model can be expanded as follows (model 2), to show the specific variables and controlled variables.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \quad \text{.......} \quad (2)$$

Where, Y represents Total National Security Budget. X_1 and X_2 represents the independent variables, that is the total public debt and total debt service respectively while X_3 and X_4 represents lagged total government revenue and real GDP. Government revenues and Real GDP are lagging variables. This means that the current budget allocation to National Security depends on the past values of revenues and GDP. For instance, how much revenue is generated this quarter is used in the next quarter's allocation. That is why in the model, the two variables were lagged. $\beta_{1,2,3...}$ represents the coefficients estimated by the model for each variable and ε denotes the error term.

Therefore, to establish the implications of Kenya's public debt burden on the National Security, the study adopted the above model and applied the conceptual framework presented in chapter two and the realism theory. The modified model therefore can be presented as follows.

$$Budget\ Allocation\ to\ NS = function\ of\ (Total\ Public\ Debt, Total\ Debt\ Servicing,\ Lagged\ Total\ Government\ Revenue,\ \ Lagged\ real\ GDP) \quad ..\ (3)$$

In theory, this implies that budgetary allocation to national security is a function of total public debt, total debt servicing, lagged total government revenues, and lagged real GDP. This can be rewritten as follows.

$$Total\ National\ Security\ Budget = Total\ Public\ Debt + Total\ Debt\ Servicing + Total\ Government\ Revenue + Lagged\ Real\ GDP \quad .\ (4)$$

To estimate the coefficients for the relationship between the Total National Security Budget (dependent variable) given the selected independent variables (total public debt, total debt servicing, total government revenue, and real GDP holding other factors constant. The study adopted the following model.

$$NSbudget_t = \beta_0 + \beta_{TPD}Totpublic\_debt_t + \beta_{ds}Totaldebtserv_t + +\beta_r Tot\_Govtrev_{t-1} + \beta_{gdp}GDPt_{t-1} + \varepsilon \quad \ldots\ (5)$$

Regression analysis was conducted to estimate the coefficients of the relationship between the total national security budget and independent variables (total public debt, total debt servicing, total government revenue, and real GDP). Analysis involved conducting the diagnostic tests to ascertain that there are no linear violations. The coefficients established were used to infer the extent of public debt on budgetary allocation to National security departments.

3.6.2 The fit of the model

Analysis of Variance (ANOVA) and F-test was used to determine the level of significance for the estimates derived from the model. The study considered a 95 percent level of significance. Correlation analysis was conducted to establish the kind of relationship that exists between the budgetary allocation to national security and public debt. The coefficient of determinant (R^2) was used to determine how much variations in budgetary allocations to national security could be explained by the independent variables included in the model.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.1 Introduction

In order to create a clearer and a reliable relationship between public debt and national security budget, data on budget allocations to National security organs over an eight-year period (considering quarterly data) was analyzed. Further, additional selected variables were introduced into the model to estimate their effects on budget allocation to national security over and above the effect of public debt. The National Security Organs (NSO) are mandated with maintaining and upholding security, peace and tranquility in Kenya as stipulated under Chapter 14 of the constitution. The constitution defines National security organs to comprise of Kenya Defense Forces (KDF), National Intelligence Service (NIS) and National Police Service (NPS).

The performance of the institutions is greatly influenced by budgetary allocations extended to them, therefore a country's public debt level impacts on ability of the institutions to execute their mandate. The budget allocation to each of the three institutions mandated with safeguarding National Security impacts on implementation of various activities including operational ground coverage, facilities and equipment, recruitment, Technology & Training among others. This section analyses the two objectives of the paper in section 4.2 and 4.3

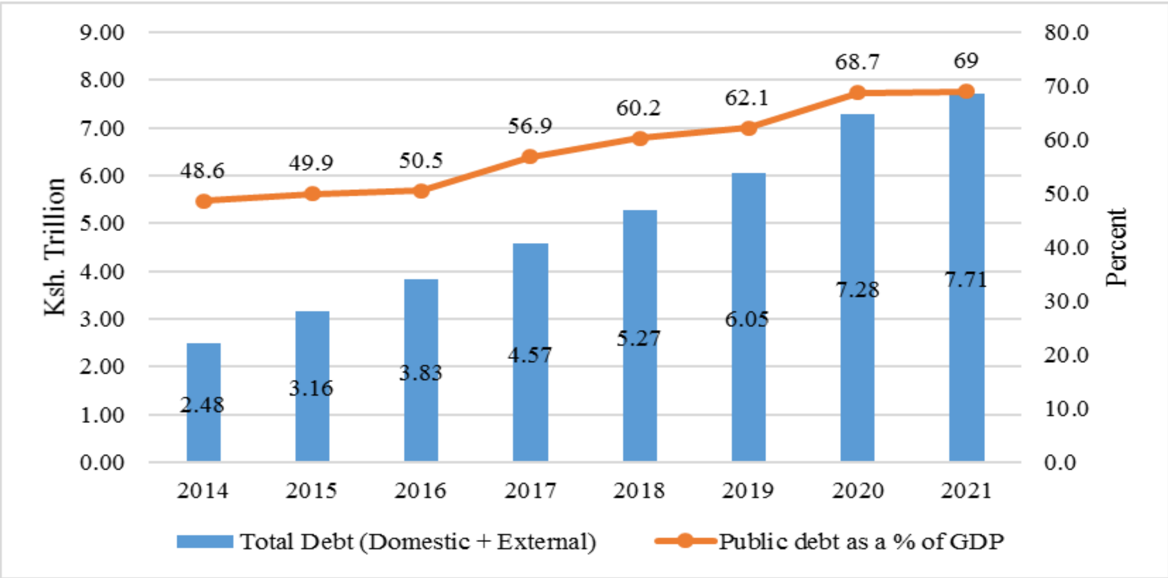
4.2The profiles of Public Debts and National Security in Kenya

Data on Budgetary allocations to KDF, NPS and NIS over a period of 8 years (2014 to 2021, considering quarterly data) was gathered and compared with public debt figures over the same period. The annual changes in budget allocations are assessed vis-à-vis the changes in public debt. The study adopted two approaches: the descriptive analysis and empirical analysis.

4.2.1 Profiles of Public Debts

Kenya's public debt has been on an increasing trend over time. Between financial year 2014/15, public debt had increased from 48.6 percent of GDP to an estimated 69 percent of GDP by the end of 2021 (Figure 1). Public debt has risen significantly from Ksh 2.48 trillion in 2014 to Ksh 7.71 trillion as at June 2021. This is largely as a result of the Government of Kenya's reliance on debt financing options purposed at financing ongoing infrastructure development.

Figure 1: Trend of Public Debt in Kenya between 2014 and June 2021.

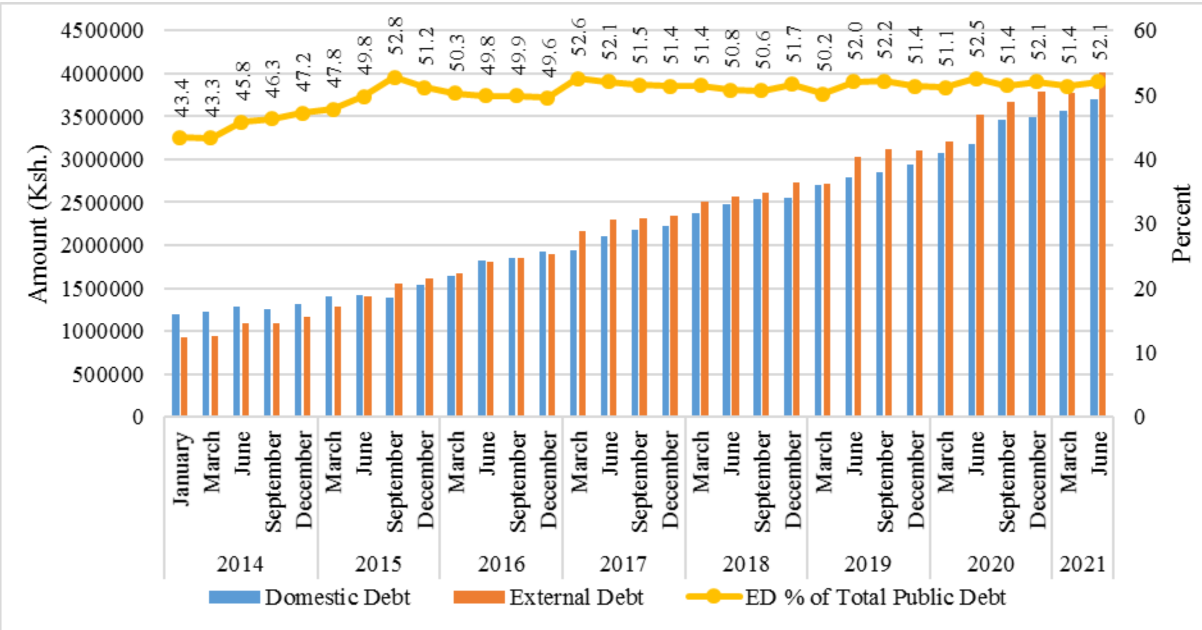


Source of Data: National Treasury and CBK, 2021.

The public debt as a percentage of GDP has also been increasing overtime (Figure 1). It increased from 48.6 percent in 2014 to 69 percent in June 2021, over and above the debt to GDP ceiling of 60 percent recommended by IMF and the 50 percent threshold earlier set by the government of Kenya under Section 50 (5) of the Public Finance Management (PFM) Act 2012. The Kenyan government in 2019 through parliament shifted the percentage threshold measure of debt to GDP to net present value of Ksh. 9 trillion (approximately 88 percent of GDP) (Public debt management report, 2019/20). This therefore implied that Kenya had more room to borrow more debt and still able to sustain the debt as long as it is still below Ksh. 9 trillion.

Debt composition is essential to an economy of a country and its ability to generate more revenues. An increase in domestic debt could be more beneficial to a country because of several factors including the fact that the interest rates paid will be lower because it is not affected by fluctuation in exchange rates. Additionally, domestic debt enables the lenders to re-invest back into the country's economy and generates more revenue to the country, thus increasing total revenue which translates to an increase in budgetary allocation to various departments and sectors such as National Security. In 2014, domestic debt constituted the largest share of public debt of 56.6 percent and has since then declined to 47.9 percent as of June 2021 (Figure 2). However, Kenya has taken a precaution by relying more on concessional loans (multilateral debts is one of the external debts components) which is characterized by cheaper loan interests and long maturity period (KIPPRA, 2021).

Figure 2: Trend of External and Domestic debt in Kenya between 2014 and 2021 (June)



Source of Data: National Treasury and CBK, 2021.

Public debt is one of the factors that influence budgetary allocations to government departments and sectors. To understand the relationship between public debt and budgetary allocation to national security, the study performed a descriptive statistics and trend analysis for the two variables and the findings are presented below.

4.2.2 Budget Allocation to National Security Sector

4.2.2.1 Kenya Defense Forces (KDF)

KDF main functions includes the duty of providing defense security, protection of the sovereignty, territorial integrity of the Republic and assist other authorities in situations of emergency or disaster. In addition, this docket of defense may also be deployed to restore peace in any part of Kenya affected by unrest or instability only with the approval of the National Assembly. To facilitate these activities, Kenya Defense Forces receive budgetary allocation from the national government and approved by parliament. Despite generating some monies in the course of exercising its power and functions as mandated in law, the budgetary allocation remains the major source of funds to finance KDF activities.

KDF has been receiving the largest share of budgetary allocation relative to two other national security departments (NPS and NIS). In 2014, KDF received Ksh.74.6 billion and has increased by 60.6 percent to Ksh.119.8 billion in 2021. Relative to the two other security departments, the 60.6 percent growth rate in budgetary allocation to KDF is the least compared to 65.7 percent growth in allocation to NPS and 185.9 percent growth rate in allocations to NIS (Figure 3).

4.2.2.2 National Police Service (NPS)

The NPS is a national service established under Act No. 11A of 2011 of Parliament to give effect to Articles 243, 244 and 245 of the Constitution. NPS comprises of three main divisions that include Kenya Police Service, Administration Police Service and the Directorate of Criminal Investigations Department. In addition, for effective administration and functioning of NPS, the service is divided into other smaller units (KLRC, 2011).

NPS is mandated mainly with preservation of peace, maintenance of law and order, protection of life and property, investigation of crime and enforcement of all laws and regulations with which it is charged; among others. The Service is funded by the exchequer based on allocation by the National Assembly for the purposes of the Service and other sources lawfully granted, donated or lent to the Service from any other source.

A Citywide Victim Survey in 2002 showed that the Kenya Police Force (KPF) (currently, NPS) was grossly under-resourced. Victims of crime also perceived the KPF to be incompetent, inefficient, corrupt and unprofessional, and therefore incapable of delivering its mandate in managing crime. In further damning the police performance, are a series of reports by Transparency International - Kenya that find the Police Force to be the most corrupt institution in the country (Stavrou, 2002).

Similar to other national security departments, allocation to NPS has been increasing overtime. In 2014, NPS received Ksh.66.8 billion and had increased by 65.7 percent to Ksh.110.6 billion in 2021. Relative to NIS, the growth in budgetary allocation to NPS grew at a lower rate of 65.7 percent compared 185.9 percent growth rate in allocations to NIS, and even at a higher rate than allocation to KDF (Figure 3).

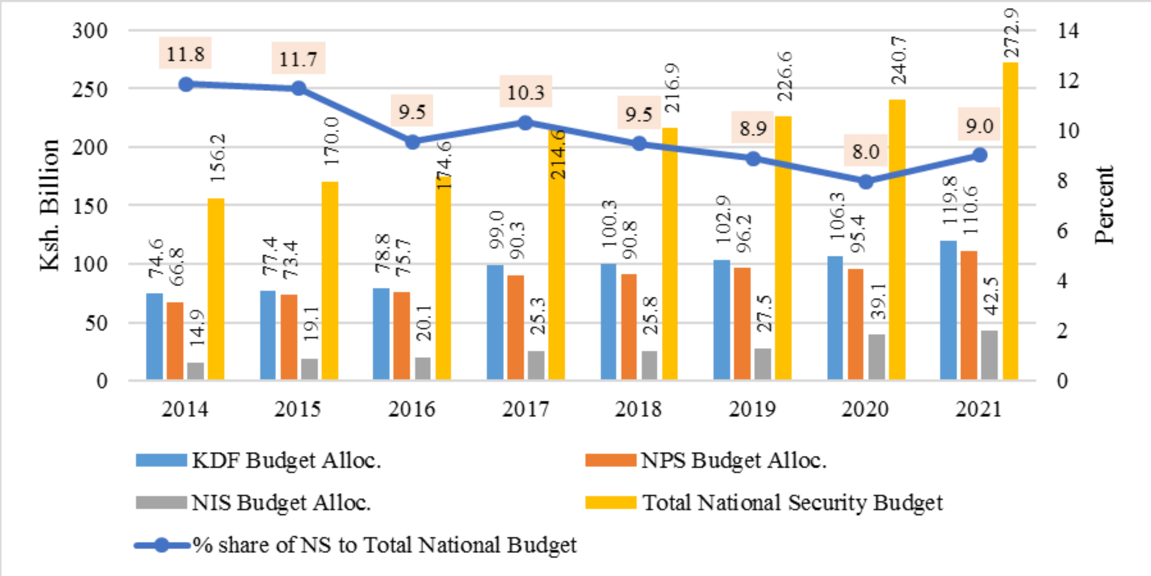
4.2.2.3 National Intelligence Service (NIS)

National Intelligence Service is established by Act of Parliament No. 28 of 2012, to provide for the functions, organization and administration of the National Intelligence Service pursuant to Article 239(6) of the constitution (KLRC, 2012). The Service is responsible for security intelligence and counter intelligence to enhance national security. NIS collects and analyzes intelligence that is shared with State agencies for action and detects and identifies threats on potential threats to national security, among others.

The operations of the Service are funded by allocations from Parliament and other monies or assets as may accrue to the Service in the course of the exercise of its powers or the performance of its functions. It shall also fund its operations by finances from any other source provided or donated to the Service.

NIS has been receiving the least share of budgetary allocation relative to two other national security departments (NPS and KDF). In 2014, NIS received Ksh.14.9 billion and has increased by 185.9 percent to Ksh.42.5 billion in 2021. Relative to the two other security departments, the 185.9 percent growth rate in budgetary allocation to NIS is the largest growth rate compared to 65.7 percent growth in allocation to NPS and 60.6 percent growth rate in allocations to KDF (Figure 3).

Figure 3 : Budgetary Allocation to National Security between 2014 and 2021

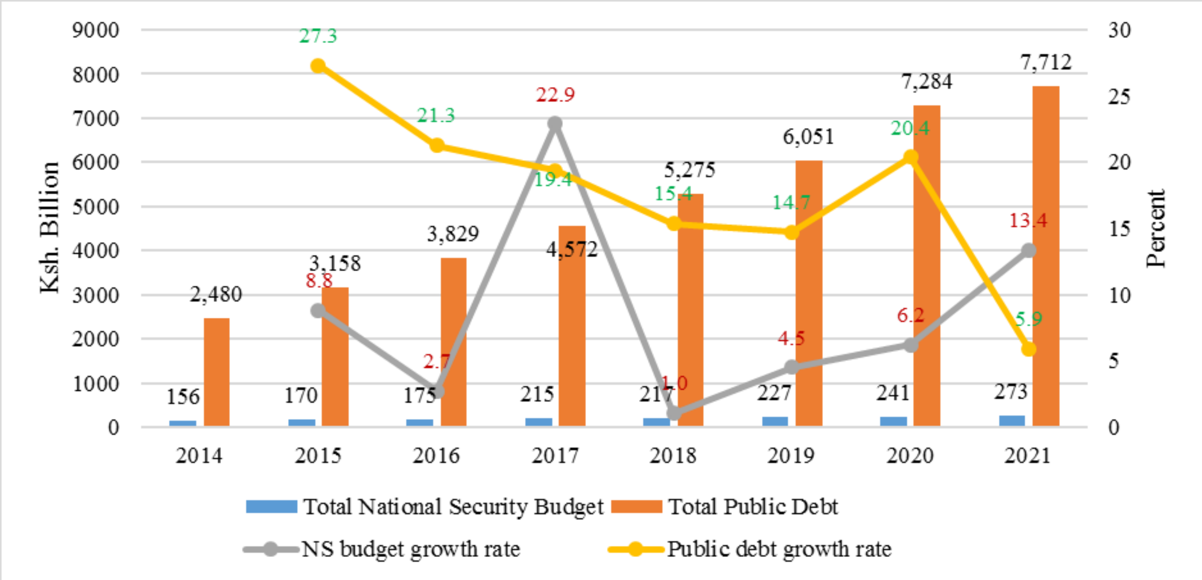


Source of Data: National Security Departments and National Treasury, 2021

Despite a continuous increase in budgetary allocation to national security sector in the period under study, the share of national security budget to the total national budget has been on a declining trend from 11.8 percent in 2014 to 8 percent in 2020, with one percent increase in 2021. This indicates that as government increases its national budget, other sectors benefits more relative to the increase in budget towards national security sector.

In relation to the public debt, national security budget is affected by several factors that influence the size of revenues and debt acquired in the country. To start with, the study assesses the relationship between public debt and national security budget.

Figure 4: Relationship between National Security Budget and Public Debt



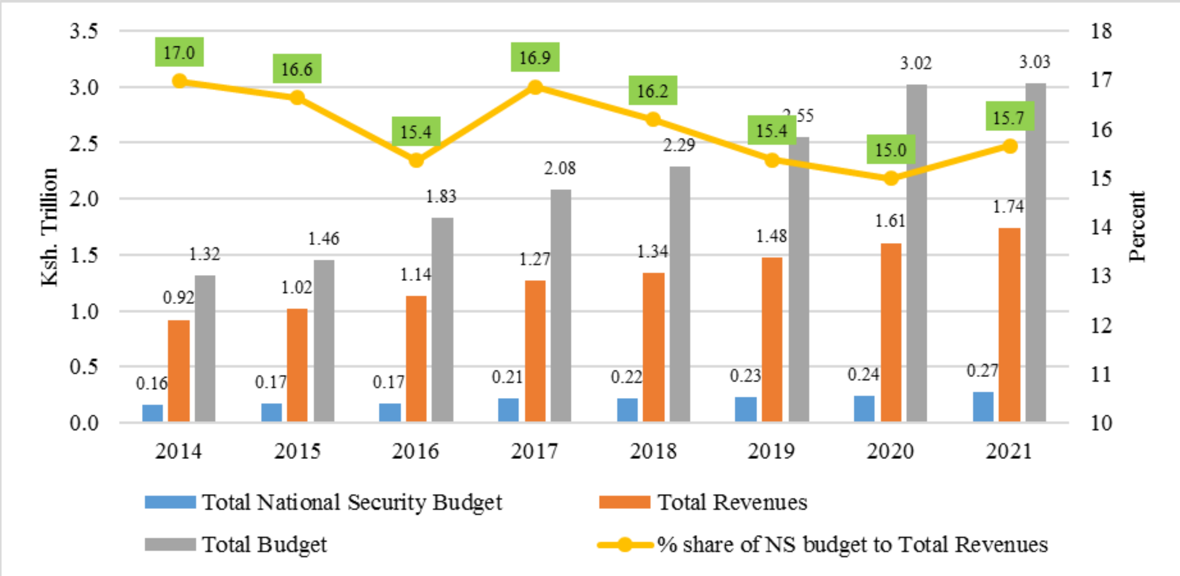
Source: Central Bank of Kenya and National Treasury

The variation in the amount of public debt relative to national security is huge in Kenya. In addition, since 2014 national security budget as a percentage of total public debt has been declining from 6.3 percent to 3.5 percent in 2021. The annual growth rate for public debt declined from 27.3 percent between 2014 and 2015 to 14.7 percent in 2019, before increasing to 20.4 percent in 2020 and declining sharply in 2021 (Figure 4). While on the other hand, the annual growth rate for budgetary allocation to national security has fluctuating overtime from 8.8 percent in 2014, to 13.4 percent in 2021, with a high growth rate of 22.9 percent in 2017 (Figure 4). It is evident that public debt has been growing a higher rate than the budgetary allocation to national security over the period under study. This implies that the increase in public debt benefits other sectors more relative to the benefits it accrues to national security in terms of budgetary allocations. That is, the annual increase in budgetary allocation to security organs does not correspond to the annual increase in public debt and therefore during debt repayment the sector may be affected at greater extent thus straining operations of the institutions.

4.2.3 Government Revenues and National Security

Government revenue contributes the largest share (61.3 percent to the national budget for the period under study. The revenues collected by government have been increasing over time, with 88.9 percent in the last 8 years (between 2014 and June 2021), relative to the 74.1 percent increase in budgetary allocation to national security. However, despite the upsurge in revenue collections, the share of national security organs budget has declined slightly from 17 percent to 15.7 percent between 2014 and 2021 (Figure 5). This indicates that as government revenues increases, the budgetary allocation to national security organs grows at a slower pace relative to revenue growth rate.

Figure 5: Relationship between National Security Budget and Government Revenues



Source of data: National Treasury and National Security organs reports, 2021

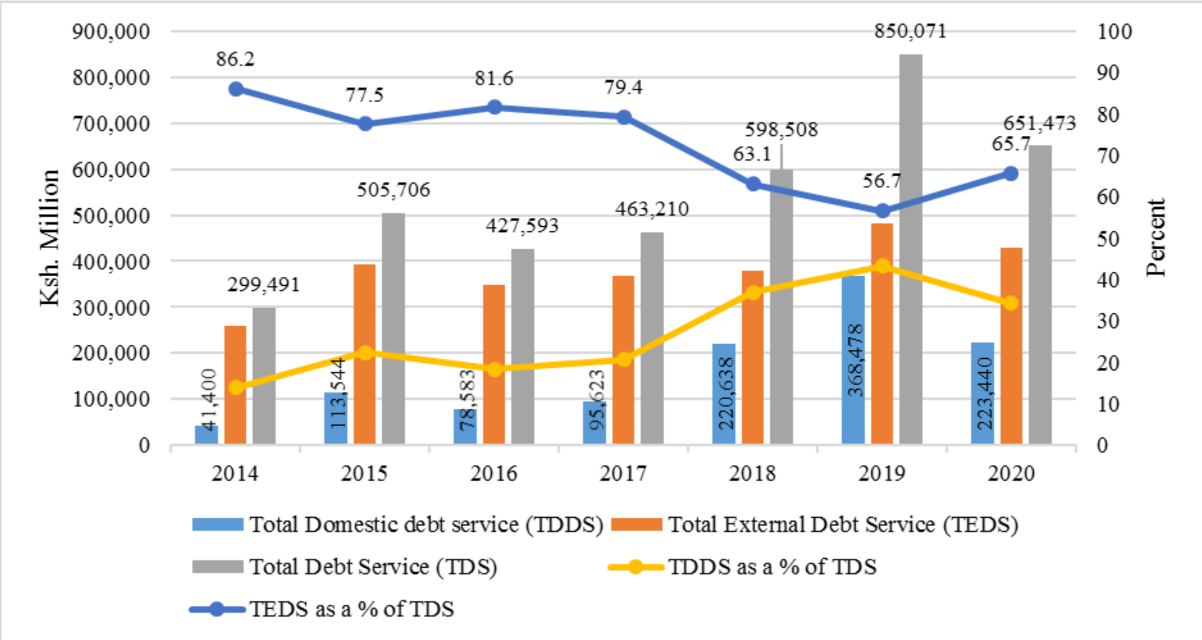
4.2.4 Debt Servicing and National Security

The government has continued to allocate a share of total country's budget to service due debts (both domestic and external due debts). As allocation to debt servicing increases, it exerts pressure on the revenue kitty and the country's budget. In the budget for FY 2021/22, both external and domestic debt servicing was estimated to take the largest share of revenue of about 22 percent (Ksh. 560.3 billion) (National Budget Policy Statement, 2021). This reduces the total budget, which would have benefited other sectors including the National Security sector.

Total debt service (TDS) has been increasing continuously since 2016 from Ksh. 427 billion to Ksh. 651 billion in 2020. Between 2014 and 2020, the debt service accounted on average 26.3 percent of the total budget. This leaves barely three-quarters of the budget to finance key government functions, departments and sectors such as national security organs. Literature shows that servicing external debt is more costly to the economy than servicing domestic debt because of various reasons including changes in exchange rates, and opportunity cost of not re-investing the money into the economy (Checherita, Rother &.

2010). Over the study period, Kenya has been financing external debt as the largest share of debt service, this means that more money is channelled outside the economy and has an associated adverse effect on country's GDP, revenues and potential to finance development projects and other vital government sectors such as national security (Figure 6).

Figure 6: Relationship between National Security organs budget and Debt Servicing



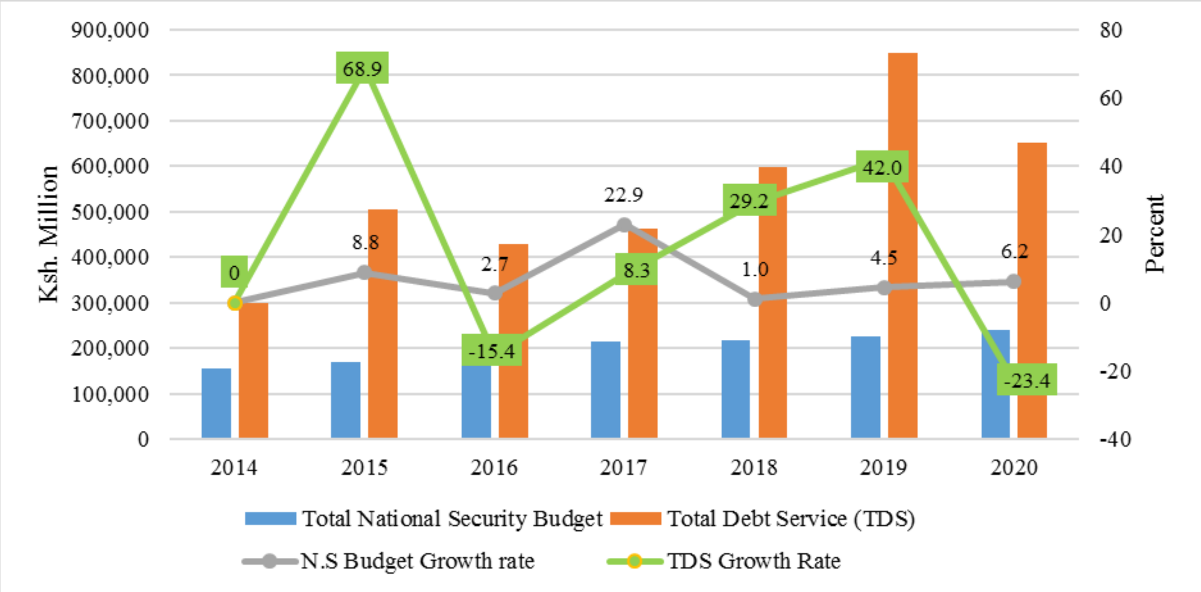
Source of Data: National Treasury reports

**Debt relief was extended to cover 2021 period, hence there was no data for debt service for 2021.*

The World Bank and the International Monetary Fund in December 2020 urged G20 countries to establish the Debt Service Suspension Initiative (World Bank, 2021). This initiative is meant to help countries concentrate their resources on fighting the effects of pandemic and safeguarding the lives and livelihoods of vulnerable people. This has helped Kenya defer repayment of due debts amounting to Ksh. 99.73 billion for its external debt for the year ended June 2021 (National Treasury, 2021).

Further, the growth rate in total debt servicing has been higher on average (18.3 percent) relative to the growth rate in budgetary allocation to national security organs of 7.7 percent average growth rate (Figure 7). This implies that the government prioritizes servicing due debts over allocation to national security organs as the budget increases.

Figure 7: Relationship between National Security Organs Budget and Total Debt Servicing



Source of Data: National Treasury reports

**Debt relief was extended to cover 2021 period, hence there was no data for debt service for 2021.*

Despite public debt being beneficial to the extent of facilitating accelerated development, especially regarding infrastructural projects, as is the case in Kenya, was meant to catalyze economic growth, the repayment expenditures result is in adverse consequences. This arises in part due to a situation where the country's debt accumulation grows at a higher rate than the growth in revenues, resulting in increased pressure on debt servicing commitments hence lessening the budget, which ought to have benefited other sectors and departments such as National Security organs.

4.3 Kenya's Public Debt and National Security Budget

This section carries out a regression analysis of public debt on national security budget allocations and other control variables

4.3.1 Descriptive Statistics

The study used summary statistics to describe and understand the elementary characteristics of the data used by the study. Descriptive statistics provided the study with basic summaries in form of measures of central tendency and measures of dispersion, which enabled easier interpretation, and analysis of data. The summary statistics for the variables is presented in the table as follows:

Table 3: Descriptive Statistics

Variable	**Observations**	**Mean**	**Median**	**Standard Deviation**	**Kurtosis**	**Skewness**	**Min**	**Max**	**Sum**
Total National Security Budget (billions)	32	209.06	215.74	39.62	-0.83	0.15	156.20	272.90	1672.51
Total Public Debt (Trillion)	32	4.93	4.88	1.79	-1.08	0.23	2.34	8.21	152.94
Total Government Revenues (billions)	32	1314.05	1306.50	284.37	-1.08	0.12	920.00	1738.40	10512.40
Real GDP prices (Ksh. Trillion)	32	7.84	7.74	0.69	-1.63	0.22	6.94	8.74	62.74
Total Debt Service (TDS) (billions)	32	474.51	484.46	252.65	1.22	-0.61	299.5	850.07	3796.05

Source: Authors own computation from the dataset of CBK and National Treasury

The study conducted the descriptive statistics for the variables used in the study covering the period starting in 2014 to 2021 as indicated in Table 3. On average, national security budget for the period under study was about Ksh. 209.06 billion. The total public debt average for the period is Ksh. 4.93 trillion, with total government revenues averaging Ksh. 1.314 trillion and total debt servicing averaging Ksh. 474.5 billion. The maximum amount of budgetary allocation to national security during the period was Ksh. 156.2 billion, while the maximum amount of total public debt was Ksh. 8.21 trillion; Ksh. 850 billion to total debt servicing and Ksh. 1.74 trillion received as government revenues.

Further, the general guidelines for skewness is that if the result for a variable is greater than one (+1) or lower than one (-1), it indicates the variable is substantially skewed. The study's findings showed that all the variables were normally distributed (between -1 and 1). Similarly, the study's findings showed that all the variables prove to have normal univariate distributions (between -2 and 2). While the standard deviation for national security is estimated to be Ksh 39.62 billion, with total government revenues deviation at Ksh. 284.37 billion and Ksh. 252.65 billion deviation in debt servicing. This shows that the changes in public debt and debt services is higher over time relative to budgetary allocation to national security organs. Other summary statistics are presented in table 3.

4.3.2 Diagnostic Tests

To estimate objective two of the study on the effect of public debt on the budgetary allocation to the national security organs, the study conducted an inferential statistic using a linear model. Therefore, to ensure the data used was not violating the linear model assumptions, the following tests were conducted and results presented in the sections below.

4.3.2.1 Test for Normality

Normality was estimated using the measure of skewness and kurtosis. This is to affirm that the data used in the estimation is normally distributed around the mean. Since the sample of the data was small (eight-year period) the data was converted into a quarterly data, and therefore the suitable test adopted was Shapiro-Wilk Test. The rule of thumb is that a variable is reasonably close to normal if its skewness and kurtosis have values between -1.0 and + 1.0 (Mishra, Pandey, Singh, Gupta, Sahu, & Keshri, 2019). The results are presented in Table 4.

Table 4: Shapiro-Wilk Test for Normality

Variables	Statistic	Df	Significance
Total National Security Budget	0.894	28	0.083
Total Public Debt	0.951	28	0.221
Government Revenue	0.905	28	0.154
Debt Servicing	0.956	28	0.280
Real GDP	0.892	28	0.046

The findings according to Shipiro-Wilk test values were 0.894 for total national security organs budget, 0.951 for total public debt, 0.905 for government revenues, 0.956 for debt servicing, and 0.892 for real GDP. Based on the decision rule of between -1.0 and + 1.0. and supported by p-values greater than 0.05, it can be observed that all the variables are within a reasonable range of a normal distribution and therefore the ordinary linear square method assumption is not violated.

4.3.2.2 Test for Heteroscedasticity

Testing for heteroscedasticity is essential to the study in establishing whether the error term of the variance is different across the observed data or not. The study applied Breusch Pagan to test for heteroscedasticity. This test determines the consistency of the variance across the observation. Heteroscedasticity occurs in situations where the variances vary across the observations. This may result in a biased estimation. The results are presented below.

Table 5: Test for Heteroscedasticity Results

Variables	Unstandardized coefficients		Standardized coefficients		Sign
	Beta	Std. Error	Beta	Std. Error	
Total National Security Budget	1.025	0.013	0.102	0.251	0.108

Total Public Debt	0.087	0.054	0.341	0.419	0.087
Government Revenue	0.105	0.075	0.141	0.321	0.037
Debt Servicing	0.102	0.069	0.112	0.391	0.069
Real GDP	0.841	0.041	0.091	0.501	0.112

a. Dependent variable: Total National Security Budget

The statistics in the table above show that the calculated probability for all the research variables were greater than 0.05. These values ranged between 0.091 for real GDP and 0.341 for total public debt variable. Therefore, it can be concluded that the variances were significantly equal as argued by Warner (2008), and therefore the assumption of homoscedasticity was not violated.

4.3.2.3 Test for Auto-Correlation

This test was conducted to establish the relationship between national security organs' budget and independent variables (total public debt, government revenue, debt servicing and real GDP). The correlation results are presented in matrix table below.

Table 6: Correlation Results

	NS Budget	T. Pub. Debt	Revenue	Debt Serv.	Real GDP
Total National Security Budget	1.000				
Total Public Debt	0.823	1.000			
Government Revenue	0.747	0.762	1.000		
Debt Servicing	-0.608	0.819	0.68	1.000	
Real GDP	0.402	0.318	0.701	0.51	1.000

The results presented in the correlation matrix above shows that there is a significant correlation between the dependent variable (total national security budget) and all the independent variables. A very strong positive relationship was established between the budgetary allocation to national security organs and public debt as indicated by the Pearson's r = 0.82, while a weak relationship was established between real GDP and national security budget of Pearson's r=0.40. A negative relationship was noted between budgetary allocation to national security and debt servicing indicated by a Pearson's r= -0.61. Once, it was ascertained that no OLS assumptions were violated, the study estimated the coefficients and the results discussed below.

The public debt is composed of both internal and external debts while the national security is composed of budget allocation to KDF, NIS and NPS. This section gives empirical results of the relationship between the public debt and national security. It also introduced other control variables, which possibly influences allocation budget to national security such as total government revenues collected, total debt servicing, and real GDP, which acts as a proxy for the country's economic status.

The assumption is that public debt affects budgetary allocation to national security organs equally, therefore, by estimating total national security budget we shall have estimated the effect to budget allocation to national security organs. Additionally, the study also assumed that both external and domestic debts affect budgetary allocation to national security organs, similarly to the effect of servicing domestic and external due debts. Therefore, total debt servicing was used as a proxy for the effect of the two variables.

4.3.3 Empirical Regression Results

The study estimated ARDL model based on OLS comprising of total national security budget as the dependent variable and independent variables comprising of total public debt, total debt servicing, total government revenue, and real GDP, assuming other factors constant. The regression model summary is presented in table 7 below.

Table 7: Regression Coefficients Results

	R-Square	Adjusted R-Square	Root MSE
	0.787	0.765	0.221
Model	Sample	No. of Obs.	Log likelihood

ARDL Regression	2014q1 - 2021q4	32	5.155	
Variables	Coefficients	Std. Error	t – statistic	P-values
(Constant)	0.208	0.413	-2.4	0.022
Total Public Debt	0.064	0.181	2.59	0.014
Total Government Revenue	0.087	0.432	7.42	0.046
T_Debt Servicing	-0.046	0.312	-6.75	0.358
T_Debt Servicing (-1)	-0.102	-0.93	1.97	0.062
Real GDP	0.012	0.166	-2.51	0.933
Real GDP (-1)	0.025	0.259	1.23	0.229
Real GDP (-2)	0.168	0.368	1.81	0.08

a. Dependent variable: Total National Security Budget

b. Predictors: Total Public Debt, Total Government Revenue, Debt Servicing (Lag), and Real GDP (Lag)

The results presented in table 7 shows that the model explains about 78.7 percent (R-square of 0.787) changes in relationship between total national security budget and total public debt, considering other variables such as total debt servicing (lagged by one period), total government revenue and the previous economic status of the country. Therefore, it can be concluded that the variables included in the model are sufficient to infer the effect of public debt on budgetary allocation.

In addition, the study estimated the coefficients using the quarterly data for the period 2014 quarter one to 2021 quarter 4, resulting in 32 observations. The study's root mean square error (Root MSE) of 0.221 indicates that the data for the variables spread out around the line of best fit by about 22 percent. The log likelihood for the model, which informs on how best the model fits the data, was estimated as 5.15. The higher the value the better the model is (Nagelkerke, 2012).

The study estimated a positive coefficient of 0.064 (6.4 percent) on the relationship between total public debt and total national security budget. This implied that a one-shilling increase in accumulation of total public debt increases national security budget by 6.4 percent, at 5 percent significant level (supported by p-value of 0.014, which is less than 0.05).

The Realism Theory argues that States will always pursue policies that protect their economic interests and individual human being's behavioral attributes will always play a major role in influencing such decisions supported the findings. The theory further indicates that the actions of the State is important not only in allocation of resources, but also formulation of policies as influenced by the behavioral attributes of the political leadership, such as appetite for acquiring huge public debt to support specific programme. The results are aligned to the findings espoused by Panizza and Presbitero (2014), which established that there exists a positive correlation between public debt and national security budgets in developing economies.

Additionally, the findings estimated a negative coefficient of 0.102 on the relationship between total debt servicing (lagged by one period) and total national security budget. This meant that a one-shilling increase in the total debt servicing done in the last period (quarter) causes a declined in the amount of money budgeted to the national security organs by 10.2 percent, significant at 10 percent (p-value of 0.062, which is less than 0.1). This shows that the effect of debt servicing on national security budget is higher relative to the effect caused by additional revenues. This is an indication that the government of Kenya focus only on the aspect of Realism theory of providing security for the citizens regardless of the imperfect state of financial ability, not taking into consideration the depletion effect brought about by the debt repayments. The findings conform to the results estimated by Mullen, 2010. According to the study, the strength, support and the resources channeled to debt repayment over security needs have direct impact on the health of a country's economy over time.

On the relationship between total government revenues and total national security budget, the study estimated a positive coefficient of 0.087. This implied that a one-shilling increase in the total government revenues result in an increase in national security budget by 8.7 percent ceteris paribus, with 5 percent level of significance (p-value of 0.046 which is less than 0.05). Similarly, the findings are supported by the Realism Theory, which argues that the States will always prioritize policies that protect their economic interests as influenced by human being's attributes in State leadership. Further, the study aligns with the findings of Maana and Mutai (2008), which estimated a negative relationship between the total government revenues and national security budget.

The study established total national security budget has a positive relationship with real GDP of 0.168. It implied that a one-shilling changes in real GDP prices for the last two periods (two-quarters – a period of 6 months) causes an increase in national security budget for the subsequent year by 16.8 percent. The coefficient was significant at 10 percent (p-value of 0.080). The Realism Theory also supports the relationship between national security and economic status of the country. The findings of the study conform to the results established by Kibiy and Nasieku (2016), which indicated that weak national currency and lower GDP adversely impacts on economic competitiveness of a country's goods in international market hence undermining its national power to support national security.

In conclusion, the coefficients estimated in the model shows that accumulation of public debt, total government revenues and economic growth in Kenya influences positively the amount of money received by the national security organs through budgetary allocation.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

This chapter presents summary, conclusion, contributions of the study to knowledge, recommendation for policy implication of public debt on National Security and finally recommended areas for further research

5.1 Summary of the Findings

The profile of Public debt in Kenya is objective one of the study that has been demonstrated in Figure 1 as having been on an increasing trend over time. By the end of December 2020, the public debt in Kenya had accumulated to Kshs 7.28 billion, representing an estimated 68.7 percent of GDP. Kenya has however, shifted the threshold to 9 trillion (about 87 percent); beyond the recommended IMF debt to GDP threshold of 60 percent. The burgeoning public debt is a source of public concern on its looming implications on National Security and to a greater extent, the general wellbeing of the country.

On external component of public debt, the trend shows growth at higher rate compared to the domestic component as illustrated in Figure 2, which is viewed as exposing Kenya to greater risk in terms of debt repayments that are more costly. External component is very volatile due to fluctuations in exchange rates and other economic factors that make repayments of the debt to be more expensive. Additionally, such external repayments do not assist since they get financial resources out of the local economy compared to the domestic debt repayment which circulates within the economic borders of Kenya.

On profile of the Total National Security sector budget as compared to National Budget as illustrated in Figure 3, the findings indicate that despite a progressive annual increase in budgetary allocation to national security sector, the share of national security sector budget to total national budget has been on a declining trend from 11.8 percent in 2014 to 8 percent in 2020.

The effect of public debt to national security has been associated with adverse effects to National Security sector especially during debt repayment. In this regard, the study sought to establish the relationship between public debt and national security budget. In summary, the findings of objective one of the studies showed that the consistent increase in public debt over time, adversely impacts on budgetary allocation to national security organs in spite of relative annual increase in budgetary allocation. This trend is the same across the budgetary allocations to the three national security organs. This implies that the increase in public debt benefits other sectors more relative to the benefits it accrues to national security in terms of budgetary allocations. That is, the annual increase in budgetary allocation to security organs does not correspond to the annual increase in public debt and therefore during debt repayment the sector is affected at greater extent thus straining operations of the institutions.

On objective two of the study, it creates a relationship between Public Debt and National Security, as illustrated in figures 4, 5, 6 and 7. The findings showed that accumulation of public debt, government revenues and economic growth in Kenya influences positively the amount of money received by the national security organs through budgetary allocation. It is estimated that as public debt increases, national security sector budget allocations increase by 6.4 percent, holding other factors constant. Additionally, it established that debt servicing affects budgetary allocation to national security by about 10.2 percent. This implies that the adverse effect from increase in debt servicing supersedes the positive effect of additional public debt on budgetary allocation to National Security.

On the relationship between National Security Budget and Public Debt, the findings indicate that the variation between the two variables is huge in Kenya. Since 2014, national security sector budget as a percentage of the total public debt has been declining from 6.3 percent to 3.5 percent in 2021. This shows that the annual increase in budgetary allocation to national security sector does not march the annual increase in public debt; therefore, debt repayments will be higher and adversely impact on funds extended to the sector. The growth rate in total debt servicing has been higher on average over the period under study relative to the growth rate in national security organs budget. As allocation to debt servicing increases, it exerts pressure on the revenue kitty and the country’s budget in general; and therefore the government tend to prioritize servicing of due debts over allocation to national security organs as the budget increases.

5.2 Conclusion

Accumulation of Kenya's public debt is not detrimental to the national security organs budget since it is one of the instruments the State uses to acquire revenue. However, public debt servicing depletes most of the much needed resources required by Kenya's NSOs to fulfill their constitutional mandate of effectively protecting its national security interests through defending its territorial integrity, enhancing peace, tranquility and harmony; identifying potential threats and securing all Kenyans. In addition, accumulation of more revenues through enhancement of country's economy would improve the availability of resources that can be channeled towards national security sector without necessarily resorting to borrowing.

5.2 Contribution to Knowledge

The study contributes knowledge to the debate on the effects of public debt on government's functions such as accumulation of resources, budgets and economic position. The study advances the discussion on public debt to the relationship between budgetary allocation to national security organs and public debt, debt servicing and revenues holding other factors constant.

5.3 Recommendations

The study has shown that there is a positive relationship between additional revenues of the budgetary allocation to the national security sector and national stability. The study recommends the need to diversify sources of financing national budget to avoid over-reliance on public debt. This will ensure the pressure on the available resources is reduced and key government sectors are given priority during allocation of resources.

To address the problem caused by increased public debt servicing on revenues, which results in a diminished budget, the study recommends that public debt growth rate should not exceed the revenue growth rate of the country. This will ensure the budgetary allocation to annual debt servicing does not increase over time and that a bigger share of budget is left to finance key sectors that include National Security.

Further, the study recommends reduction in uptake of public debt especially on the external debt front. This is because some components in external debt are associated with high interest repayments and highly volatile due to changes in exchange rates. In addition, reducing public debts has an ultimate effect on reduction in debt servicing over time.

5.2 Area (s) for Further Studies

Further studies can be done on the effect of public debt on budgetary allocation to other public sectors to establish whether the effect is uniform across the sectors or not. In addition, a study can be done to establish differences in the effect caused by servicing external debt over domestic debt on budgetary allocations to government sectors, considering the differences in interest payment rates and other differentiating factors.

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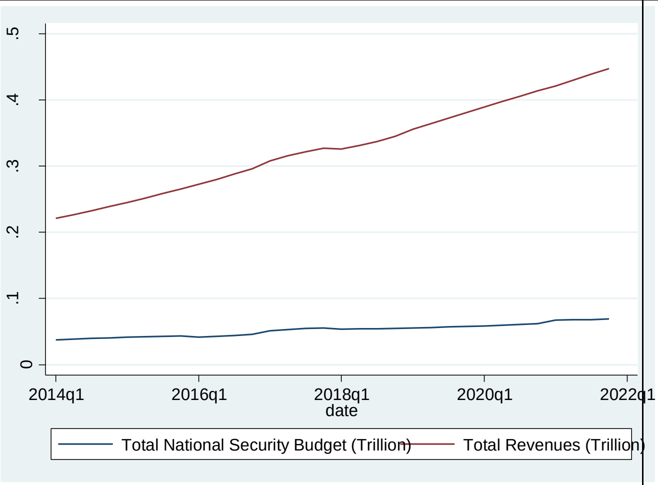
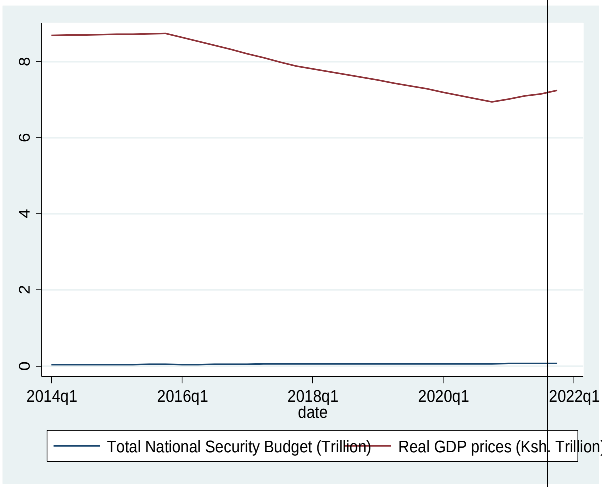
Appendix

Appendix 1: Plot Line Graphs

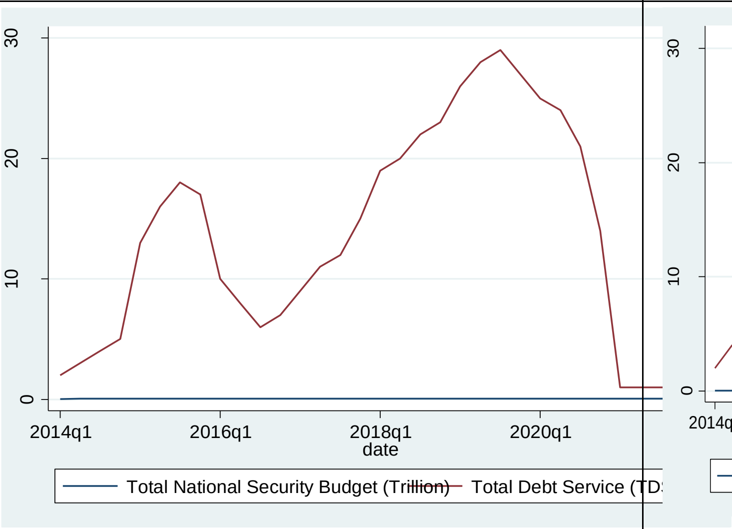
a. National Security Budget and Revenues



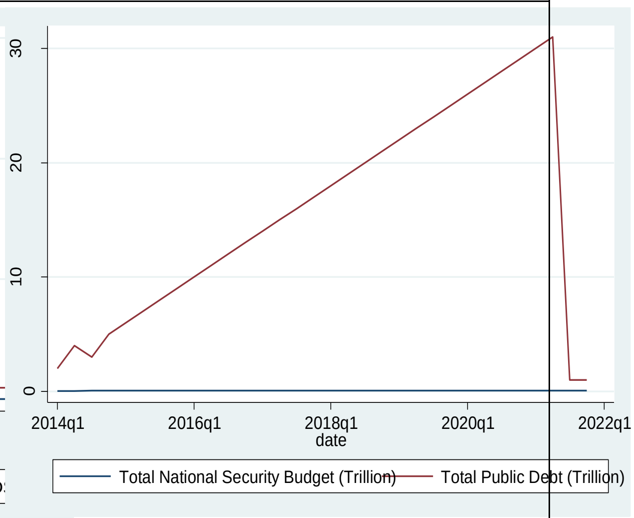
b. National Security Budget and GDP



c. National Security Budget and Debt services



d. National Security Budget and Debt



Appendix 2: Raw Data

	2014	2015	2016	2017	2018	2019	2020	2021
KDF Budget Alloc (billion)	74.6	77.4	78.8	99.0	100.3	102.9	106.3	119.8
NPS Budget Alloc (billion)	66.8	73.4	75.7	90.3	90.8	96.2	95.4	110.6
NIS Budget Alloc (billion)	14.9	19.1	20.1	25.3	25.8	27.5	39.1	42.5
Total National Security Budget (billion)	156.2	170.0	174.6	214.6	216.9	226.6	240.7	272.9
Domestic Debt (Trillion)	1.31	1.54	1.93	2.22	2.55	2.94	3.49	3.70
External Debt (Trillion)	1.17	1.62	1.90	2.35	2.72	3.11	3.79	4.02
Total Public Debt (Trillion)	2.48	3.16	3.83	4.57	5.27	6.05	7.28	7.71
Total Revenues (billion)	920	1,022	1,137	1,273	1,340	1,475	1,607	1,738.4
Total Budget (Trillion)	1.32	1.46	1.83	2.08	2.29	2.55	3.02	3.03
Public debt as a % of GDP	48.6	49.9	50.5	56.9	60.2	62.1	68.7	69.0
Total Debt Service (TDS) (billions)	299.5	505.7	427.6	463.2	598.5	850.1	651.5	-
Real GDP prices (Ksh. Trillion)	8.71	8.74	8.33	7.88	7.59	7.29	6.94	7.25

Appendix 3: Refined Data

Observ.	Total National Security Budget (Trillion)	Total Public Debt (Trillion)	Total Debt Service (TDS) (Trillion)	Total Revenues (Trillion)	Real GDP prices (Ksh. Trillion)
2014Q1	0.037	2.172	0.040	0.221	8.693
2014Q2	0.039	2.370	0.066	0.227	8.700
2014Q3	0.040	2.349	0.088	0.233	8.707
2014Q4	0.041	2.478	0.105	0.239	8.714
2015Q1	0.042	2.675	0.118	0.245	8.721
2015Q2	0.042	2.829	0.127	0.252	8.728
2015Q3	0.043	2.938	0.131	0.259	8.735
2015Q4	0.043	3.156	0.130	0.266	8.742
2016Q1	0.042	3.312	0.110	0.273	8.638
2016Q2	0.043	3.619	0.107	0.280	8.535
2016Q3	0.044	3.704	0.105	0.288	8.431
2016Q4	0.046	3.827	0.106	0.296	8.327
2017Q1	0.051	4.104	0.109	0.308	8.216
2017Q2	0.053	4.406	0.112	0.316	8.105
2017Q3	0.055	4.483	0.118	0.322	7.994
2017Q4	0.055	4.570	0.125	0.327	7.883
2018Q1	0.054	4.884	0.132	0.326	7.811
2018Q2	0.054	5.039	0.143	0.331	7.739
2018Q3	0.054	5.146	0.155	0.338	7.666
2018Q4	0.055	5.273	0.169	0.345	7.594
2019Q1	0.056	5.425	0.207	0.356	7.517
2019Q2	0.056	5.809	0.215	0.365	7.441
2019Q3	0.057	5.963	0.217	0.373	7.364
2019Q4	0.058	6.049	0.211	0.381	7.287
2020Q1	0.059	6.283	0.199	0.389	7.201
2020Q2	0.060	6.694	0.180	0.398	7.115
2020Q3	0.061	7.121	0.153	0.406	7.028

2020Q4	0.062	7.282	0.120	0.414	6.942
2021Q1	0.067	7.340	0.340	0.421	7.024
2021Q2	0.068	7.712	0.270	0.430	7.105
2021Q3	0.068	7.990	0.340	0.439	7.152
2021Q4	0.069	8.206	0.370	0.448	7.250

Appendix 4: Secondary Data of Public Debt from CBK, National Treasury 2014 -2021 and National Security Organs

Public Debt (Ksh Million).xlsx - 2013 t

Data on National Security.zip

Budget allocations by National Treasury