EFFECTS OF GOVERNMENT BORROWING ON ECONOMIC GROWTH IN KENYA

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DECLARATION

I declare that this is my work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed: _____ Date: _____22/11/2022_____

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This Research project has been presented for examination with my approval as the University Supervisor.

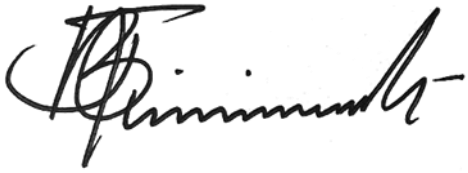

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TABLE OF CONTENTS

ABBREVIATION

Abbreviation	Word in full
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
Df	Degrees of freedom
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IMF	International Monetary Fund
Ksh	Kenya Shillings
MS Excel	Microsoft Excel
MS	Mean Square
SS	Sum of Squares
$	United States Dollar

ABSTRACT

The primary purpose of this research was to assess the impact of government borrowing on economic growth in the Kenyan economy. The effect that government borrowing has on economic growth has been a debatable issue among scholars, especially due to the increasing debt crisis in the world today. An analysis of macroeconomic indicators shows that government borrowing plays a key role in showing the status of a country economic growth. However, existing empirical studies and literature has been showing that there is a positive relationship between government borrowing and economic growth, whereas others have established that there is a negative correlation between these variables. Kenya is a developing nation that has been using public debt for financing a wide range of projects with the aim of increasing economic growth. A descriptive research design was adopted and existing data between the period of 2000/2001 and 2020/2021 was assessed with the aim of establishing the effect between government borrowing and economic growth. A multiple linear regression was the conceptual framework used in the examination of the relationship between the study variables. The findings of the study showed that there is a negative relationship that exist between government borrowing and economic growth. In spite of the increasing GDP and nominal GPD per capita, it is clear that unemployment rate, inflation rate, and direct foreign investments have not been positive or been able to produce desired results for enhancing growth in all aspects of the economy. Areas of further study have been established, including undertaking research on each of the study variables, differentiation of external and internal debt and how each affects economic growth in a nation, how corruption or misuse of borrowed resources, and government expenditure. Moreover, a primary data-based study can also be conducted on the effects of government borrowing on economic growth.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In contemporary nations, governments have been focused on generating sufficient resources for their public expenditure. Existing studies show that taxes have been providing a bulk of revenue, but this has been failing to meet the growing public expenditure (Eichengreen, El-Ganainy, Esteves, & Mitchener, 2021; Eichengreen et al., 2021; Belanger, 2021; Eusepi & Wagner, 2017). Most governments have been turning to borrowing in order to bridge the resource gap that exist between public receipt and expenditure. According to Lidiema (2017), public borrowing is mainly from domestic and foreign markets. This has been increasing public debt in different countries, which according to Eusepi & Wagner (2017), represents the amount of money that the government borrows from domestic and external sources. Government borrowing is focused on financing public expenditure and other projects that are focused on building sustainable economic growth, which is a key concern in all nations (Ndoricimpa, 2020; Lidiema, 2017). Existing studies show that macroeconomic policies are the key tools for driving economic growth because they help in the transformation of private and public investments, thus generating wealth, improving productivity, national income, increasing employment rate, funding public service provision, and reducing inflation (Mbalu & Matanda, 2021; Eusepi & Wagner, 2017; Ssempala, Ssebulime, & Twinoburyo, 2020). In this case, governments have been depending on borrowing for enhancing economic growth.

The Keynesian Model is a macroeconomic framework that is founded on Keynesian economics and plays a major role in the identification of the equilibrium level, analysis of disruptions, and assessment of aggregate production, and generation of income (Van Aarle, 2017). The model clearly shows there is a connection between expenditure and economic growth as it examines business cycles, fiscal and monetary policies, and multipliers in the economy which occurs when expenditure is made, and real resources are used up. Based on the theory, it is clear that most nations have been forced to borrowing in order to meet their public expenditure, as a result of limited revenues from taxes. On the other hand, the Debt Overhang Theory argues that there is an increase in fiscal crises today and this has been causing public debt overhang and the balance that

exist across public debt has been affecting economic growth (Albuquerque & Krustev, 2018). Based on the theory, debt overhand leads to a situation where the country is unable to make repayment on debts and this affects economic growth. Another theory known as the Dual Gap Analysis Theory examines the connection that exist between investments and savings, which are considered to be key determinants of economic growth (Adegboye, F., Adesina, T., Ojeka, S., Akinjare, V., Olokoyo, F., Amoo, E., 2020). The model also examines the country imports and exports and the role they play in economic growth. The theory shows government borrowing can affect investments, savings, exports, and imports, which can influence economic growth.

Most nations have been unable to generate enough revenue via taxes for financing national budgets and primarily depend on domestic and external debts to fund their economic growth, development, and expansion (Ndoricimpa, 2020; Kithinji, 2021). This has made government borrowing one of the most significant economic policy issues facing governments across the world today. Borrowed resources are expected to be utilized productively and effectively, for increasing the capacity of servicing debt via accretion through the government resources. However, there are many cases of misuse of borrowed resources, and this has been facilitating debt build-up leading to its unstainable levels, thus affecting economic growth (Mbalu & Matanda, 2021; Ssempala et al., 2020). This makes this research vital for understanding how borrowed funds can be used effectively in shaping economic growth. An analysis of public debt in most developing countries shows that they have been focused on external debt and countries use it to increase access to new resources. Due to the limited ability of central banks in the development of hard currency for repaying external debt, more often than not, external debt leads to debt crises and this has been evaluated in the current study (Heimberger, 2021; Ndoricimpa, 2020). This is evident in most countries in Africa, where nations are highly exposed to debt due to government borrowing, high unemployment rate, poverty, increased corruption, poor economic policies, and poor economic performance. This presents the question, does government borrowing contribute to economic growth? The same situation is reflected in Kenya, where public debt has been growing and therefore the study was carried out under this context. There are many scanty studies that have been conducted on this issue and the current research has addressed existing research and knowledge gaps.

1.1.1 Government Borrowing

Government borrowing in the current context represents public debt and it is defined as the total amount of money that is borrowed by the central government of a country for funding public services and benefits (Lidiema, 2017). On the other hand, it represents the total debt of a country, including local, state, and national government debt, that is used in financing public expenditure due to limited amount of finances from taxation (Kithinji, 2021). The Open Courses Library (2019) defines government borrowing as a process of financing public operations using the principal amount borrowed from domestic and external sources that is to be paid back with some interests. Based on these definitions, it is clear that government borrowing is the total amount of money that the government borrows from different sources for funding public expenditure.

Government debt is being created using different instruments, including bonds and treasury bills. It also included borrowing from financial institutions, and overdraft of central banks and other governments and international bodies, such as IMF and world bank, among others (Eusepi & Wagner, 2017; Lidiema, 2017). There is an increase in reliance on government borrowing in many nations but this has been failing in enhancing capital creation in the local economy, thus affecting economic growth. According to Lidiema (2017), government borrowing has been reducing government interest costs and leading to hyperinflation, which affects economic growth. Moreover, existing literature and studies have presented conflicting findings and evidence on the impact of government borrowing on economic growth, with some arguing that it leads to debt burdens for nations, whereas others argue that it helps in economic transformation and prosperity, (Kithinji, 2021; Mbalu & Matanda, 2021; Ndoricimpa, 2020). These conflicting results were addressed in the current studies. Besides, existing studies have failed in proposing the most effective strategies for enhancing proper utilization of borrowed money by the government and this paves the way for the current research. The aim is to enable nations to register high gross domestic product due to economic growth, instead of falling in debt crises.

Researchers that have conducted studies on the effect of government borrowing on economic growth have been examining the high interest payments, as well as the heavy deficit that is common in the current account for understanding whether government borrowing leads to economic growth or debt burden (Hilton, 2021; Ndoricimpa, 2020; Heimberger, 2021). Other

studies have examined debt in the context of sourced funds and their fixed contractual obligations, and the resources used as collateral (Mbalu & Matanda, 2021; Saungweme & Odhiambo, 2018). This can help in showing whether nations are able to meet servicing requirements, or it will lead to financial risk exposures, paving the way for high public debts. Moreover, researchers have been examining no-debt resources to understand how borrowed financial resources flow in the economy (The Open Courses Library, 2019; Heimberger, 2021). In addition, investors perception of the borrowing country environment has also been a key measure in government borrowing.

1.1.2 Economic Growth

According to Fraumeni (2019), economic growth represents an increase in the economic products and services that are produced in a nation as compared to various periods. On the other hand, Hudson (2020), economic growth is defined as the increase in consumption and production of goods and services in a given country within a given year. It is also defined as the increase in the goods and services that are produced in a given period in a nation as per head of the entire population (Das, Mourmouras, & Rangazas, 2018). It is therefore the process by which the country wealth increases over time based on produced goods and services, as well as population.

Economic growth can be positive or negative and this varies across nations. Existing studies have shown that public and private investments have been the most significant determinants of economic growth, and this has been confirmed by neoclassical economic models and other endogenous economic growth theories (Saungweme & Odhiambo, 2018; Howitt, 2018). Most countries have been undergoing a transitional period in terms of their economic growth, leaving permanent effects. In addition, Mbalu and Matanda (2021) and Fraumeni (2019), argues that investments are vital for economic growth. In spite of this, there are many conflicting findings on this issue. However, the results on economic growth have not been conclusive and the current study helped in closing existing knowledge and research gaps.

Most existing studies have been examining economic growth based on positive or negative growth (Saungweme & Odhiambo, 2018; Hilton, 2021). Notably, positive economic growth has been evaluating expansion of the economy, whereas studies examining negative economic growth evaluate the rate at which the economy is shrinking. These studies also measure economic growth

rate in terms of gross domestic product (GDP), recession, as well as the results of economic depression (Heimberger, 2021; Mbalu & Matanda, 2021; Kithinji, 2021). A comparison is also made across nations in terms of currency, exchange rates, purchasing power parity, as well as population size. Studies have also examined the value of money in terms of inflation and deflation for understanding changes in economic growth (De Carvalho, Ribeiro, & Marques, 2018; Ssempala et al., 2020). These have been helping in increasing understanding on changes in economic growth.

1.1.3 Government Borrowing and Economic Growth

Existing literature has shown that there is a positive connection between government borrowing and economic growth (Ndoricimpa, 2020; Kithinji, 2021). However, some studies show that low economic growth has been contributing to high level of public debt (Heimberger, 2021). This is because the link that exist between public debt and economic growth has been made casual and is not supported widely by available studies and research. In spite of this, Mbalu and Matanda (2021) notes that there is statistical evidence showing there is a positive relationship between government borrowing and economic growth.

Studies conducted by Hilton (2021) and Ndoricimpa (2020), established that government borrowing is negatively associated with economic growth and there is no link between public debt and economic growth as measured using GDP. However, this finding has been refuted by studies conducted by Mbalu and Matanda (2021) and Saungweme and Odhiambo (2018), which established that there is positive correlation between government borrowing and economic growth. A wide range of policymakers in different nations have been giving limited interpretations on these conflicting results and this can be blamed for the increasing debt burden in different nations across the world. The current research helped in addressing the existing research and knowledge gaps.

Based on the analysis, it is clear that empirical studies show that the connection between public debt and economic varies across nations (Kithinji, 2021; Ndoricimpa, 2020). This can be influenced by institutional quality across countries and proper utilization of borrowed resources from various sources. Some studies argue that there is no evidence for supporting the fact that government borrowing leads to economic growth, whereas others have disputed this finding

(Hilton, 2021; Kithinji, 2021). The current study has examined these conflicting findings and close existing knowledge and research gaps, thus showing if government borrowing has an impact on economic growth.

1.1.4 Government Borrowing and Economic Growth in Kenya

The fiscal policy space in Kenya has been changing significantly over the last few years and the current expansionary fiscal policy has been driven by the growing expenditure in infrastructural development (Doherty, J., Kirigia, D., Okoli, C., Chuma, J., Ezumah, N., Ichoku, H., Hanson, K., & McIntyre, D., 2018; Central Bank of Kenya, 2022). This has been contributing to the growing growth domestic product. However, debt levels have been growing as a result of the high deficit and the situation was exacerbated by the COVID-19 pandemic (Doherty et al., 2018; Nechifor, V., Ferrari, E., Kihiu, E., Laichena, J., Omanyo, D., Musamali, R., & Kiriga, B., 2020). The debt levels have been growing over the years as shown in figure 1 below:

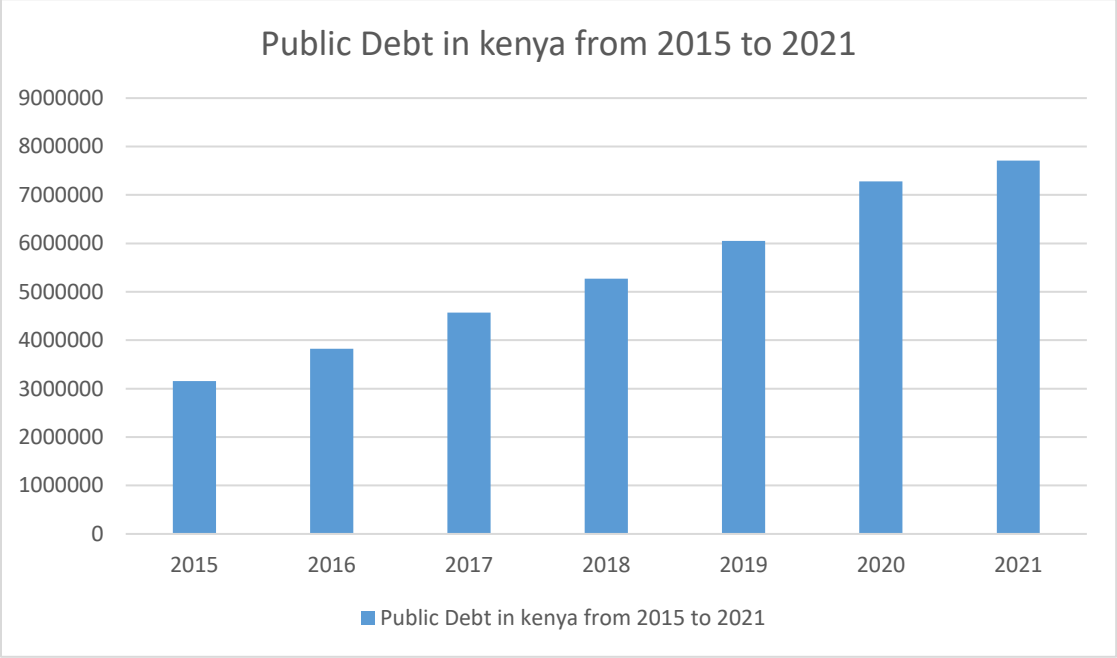

Figure 1: Kenya Debt Levels from 2015 to 2021 (Central Bank of Kenya, 2022)

As shown in figure 1 above, debt level in Kenya has grown from Ksh. 3,155,763.33 trillion in December 2015 to more than Ksh. 7,281,826.42 trillion in December 2020. As of 30 June 2021, the total debt stood at 7,712,392.57 and the trend is expected to keep growing unless effective measures and policies are implemented (Central Bank of Kenya, 2022). The Internal Loans Act

has been providing the legal framework that is followed by the government, specifically the cabinet secretary of finance for borrowing for the government in the domestic banks using treasury bills and bonds, whereas External Loans and Credit Act guides the process of external borrowing where the limits are approved by the National Assembly (Kenya Law, 2022). The debt has been growing in Kenya as the government looks for resources for financing public expenditure, which cannot be addressed by revenue collected via taxes by the Kenya Revenue Authority. This has been increasing the Kenyan debt burden, which poses numerous challenges to the country despite the government arguing that it has been helping in economic growth and transformation. According to Nechifor et al., (2020), the government has been facing various challenges in the creation of a strong economy that can compete in the region and global markets. However, in spite of the growing real gross domestic product, there is an increase in dependence on borrowing, as the governments focuses on reducing poverty and unemployment rate, as well as external debts overhand, and financing of different infrastructural projects (Nechifor et al., 2020; Doherty et al., 2018). The government has also been using borrowed funds for increasing exports, private sector development, promotion of foreign direct investments, and privatization. Kenya economic policies are focused on these issues as ways of enhancing economic liberalization, but this has been increasing debt burden.

1.2 Research problem

An analysis of existing studies shows that there are many researchers and scholars who have been undertaking research on the factors that influence economic growth, especially in developing nations and this have paved the way for continuous debate due to presentation of conflicting evidence and findings. According to studies conducted by Lidiema (2017), The Open Courses Library (2019), and Ndoricimpa (2020), proper utilization of debt can play a major role in the transformation of economic growth in developing nations. However, conflicting findings have been presented where it was established that government borrowing vary across nations and their impact on economic growth can be positive or negative (Hilton, 2021; Heimberger, 2021; Saungweme & Odhiambo, 2018). Based on these studies, it is clear that there are conflicting results on the impact that government borrowing has on economic growth, and these were investigated in the current study.

A contextual argument in Kenya based on available information and studies shows that there is a positive relationship between government borrowing and economic growth (Mbalu & Matanda, 2021; Ndoricimpa, 2020). According to the World Bank Group (2022), the current economic growth rate in Kenya stands at 5.6% as per the real GDP and this expansion is directly supported by government borrowing. In spite of this, debt crisis has been looming in the country as the government continues to borrow widely from various external sources. There are growing concerns that the increased government borrowing may lead to huge debt accumulation, which will negatively affect economic growth (Mbalu & Matanda, 2021). However, these studies have failed in showing the measures that policymakers need to undertake for addressing the current issues surrounding debt and economic growth and this was addressed in the study. Effective measures and strategies were suggested because an improvement in economic growth will be beneficial to citizens, due to economic stability, job creation, business success, improved public services, protection of the environment, improved healthcare, attraction of foreign direct investments, economic development, variety of quality products and services, and decline in poverty (Hudson, 2020; Hilton, 2021; Fraumeni, 2019; Saungweme & Odhiambo, 2018). It is therefore clear that the current study is ideal for addressing the issues surrounding government borrowing and economic growth.

Additionally, there are different studies that have been conducted on the area of study, though a gap exists since these studies have focused more on governments lack of finances but not on the factors that influence government borrowing, especially in developing nations and this is an area that was addressed in the current study (Kithinji, 2021; Mbalu & Matanda, 2021; Ndoricimpa, 2020). Several studies have been examining debt situation of a nation based on GDP growth rate in both developed and developing nations, but this varies significantly, and the current study has focused on the analysis of these differences for presenting useful information and insights on how government borrowing affect economic growth (Hilton, 2021; Heimberger, 2021). Variation in findings and research gaps were addressed in the current study, thus showing whether government borrowing affect economic growth.

Consequently, existing literature shows there are various studies that have been conducted on the issue of government borrowing impact on economic growth. Studies, such as Mbalu and Matanda

(2021) and Ndoricimpa (2020), have presented empirical evidence that establishes the link between debt and economic growth. However, other studies, such as Kithinji (2021) and Lidiema (2017), have pointed that debt has a negative relationship with economic growth. This study then intends to address these numerous research and knowledge gaps on this issue and various conflicting findings and evidence. The goal is to present accurate results on the impact of government borrowing on economic growth. This will either confirm or reject the findings of various empirical studies and analysis on the area of study. In this case, the current research focused on answering the research question, "what is the impact of government borrowing on economic growth in Kenya?"

1.3 Research Objective

The key objective of the study was to assess the impact of government borrowing on economic growth in the Kenyan economy. The research focused on addressing the conflicting evidence presented in this area of study, as well as existing research and knowledge gaps.

1.4 Value of the Study

The study provides diverse insights and information to different stakeholders on the impact of government borrowing on economic growth in Kenya. In terms of practice, currently, public debt has been growing in the Kenyan economy and the results of the research are useful to the government and policymakers in the Ministry of Finance because it highlights implications of public debts in the context of economic growth. The findings can help investors in understanding the environment of the Kenyan economy and how their funds can enhance economic growth and lead to positive returns on investments.

In terms of policy, the insights enable policymakers to understand the strategies that can be used in ensuring government borrowing contributes positively to economic growth. This will help in enhancing economic growth, stability, and prosperity in Kenya. It informs policies and optimal debt mix for the achievement of better economic outcomes. The research findings add knowledge and information on existing literature on the impact that government borrowing has on economic

growth in Kenya. The recommendations of the study can help in developing ways of mitigating the impact.

An analysis of theory shows that the findings of the current study can help in conforming and improving existing theoretical frameworks on government borrowing impact on economic growth. In addition, the findings help other scholars and academicians who wish to undertake research on this area of study, thus increasing the body of existing knowledge on government borrowing and economic growth. Besides, it transforms existing theories and knowledge on the area of study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter undertook a literature review on the effects of government borrowing on economic growth in Kenya. Chiefly, it examined diverse data sources, such as books, journal articles, and theses, among others, as well as past studies and research on the research topic. These helped in situating the current research in existing knowledge. The researcher was able to examine research and knowledge gaps, and any conflicting evidence and results from existing studies. The chapter was divided into different sections, including theoretical review, which examined theories and models that act as the foundation of this research. It also presented an analysis of empirical studies. These provided information and insights that were used in developing the conceptual framework. In addition, the chapter presented a summary of literature review, where research gaps from the literature analysis were presented.

2.2 Theoretical Review

The section has examined models and theories that have been accumulated in relation to the effect of government borrowing on economic growth in Kenya. According to Lee (2020), the theory of economic growth has been evolving at a rapid rate, leading to the introduction of more complex economic models as compared to the traditional simple economic frameworks. This is supported by a study conducted by Barber (2017), where it was established that developing and developed nations have been pursuing economic growth through the use of diverse strategies, leading to the development of complex economic models. There are different theories that were suitable to the current research on the effect of government borrowing on economic growth in Kenya.

The first theory that was examined is the Keynesian Model, which is a theoretical framework that focuses on the macroeconomic environment and will show whether government borrowing is necessary and effective in enhancing economic growth (Amadeo, 2021). The second theory that was examined is the Debt Overhang Theory which mainly assessed the inability of government to repay debts and how borrowing leads to debt crisis in a country (Karadam & Akin, 2021). On the other hand, the third theory that was examined in the section was the Dual Gap Analysis Theory, which plays a major role in enhancing understanding on the connection that exist between

investments and savings in the context of economic growth (Barber, 2017). It helped in showing the relationship that exist between imports and exports in the context of the current research.

2.2.1 Keynesian Model

Keynesian Model was introduced by a British economist, John Maynard Keynes in 1930s and it argues that the government should be focused on increasing demand for boosting growth (Amadeo, 2021). Notably, the theory believes that consumer demand is the key driving force for economic growth. According to Rowthorn (2020), Keynesian Model supports the use of expansionary fiscal policy, and the government is allowed to borrow and spend on infrastructural development, education initiatives, and unemployment benefits. For instance, supporters of this theory argue that the government can borrow and spend in order to maintain full employment. However, the model has been criticized because Keynesian policies lead to an increase in inflation rate (Van Aarle, 2017). In this case, critics from the supply-side economists argue that the role of the government should be on using fiscal policies for targeting companies and not the economy. In addition, fiscal policy as per the Keynesian Model has been found to benefit wealthy individuals in society, especially when analyzed in the context of trickle-down economics (Rowthorn, 2020). Monetarists and socialists have also criticized the model because it is not effective in the long-term (Amadeo, 2021).

In spite of this, the Keynesian Model is a macroeconomic framework with a strong foundation on Keynesian economics and plays a major role in the identification of the equilibrium level, analysis of disruptions, and assessment of aggregate production, and generation of income, which is vital in the current study (Van Aarle, 2017). The model is relevant in the current research because it clearly shows there is a connection between expenditure and economic growth as it examines business cycles, fiscal and monetary policies, and multipliers in the economy which occurs when expenditure is made and real resources are used up (Amadeo, 2021). Keynesian Model also shows that most nations have been forced to borrow in order to meet their public expenditure, as a result of limited revenues from taxes. In this case, the theory has played a significant role in the examination of the effects of government borrowing on economic growth in Kenya.

2.2.2 Debt Overhang Theory

The Debt Overhang Theory is a theoretical framework that has been applied widely in many nations across the world, especially developing countries and it was proposed and promoted by Paul Krugman in 1988 (Karadam & Akin, 2021). Government borrowing has become a key source of finances in many nations because it generates funds that are used in financing existing and planned investments (Eusepi & Wagner, 2017). However, according to Karadam and Akin (2021), growth in debt can become unsustainable because it may be greater in the future as compared to the present value of creditor expected resource transfer, thus affecting economic growth. The theory has been arguing that nations debt repayment ability is difficult in the future (Albuquerque & Krustev, 2018). High indebtedness has been affecting economic growth in many nations that are using internal and external debt. However, the theory has been criticized because it fails to consider renegotiation process between equity and debt holders, which is a costless approach that can help in the restoration of efficiency (Karadam & Akin, 2021).

The concept of debt overhang should be examined in the current research because it shows how government borrowing has been leading to debt burden in many countries. The Debt Overhang Theory is relevant to the current research because it argues that there is an increase in fiscal crises today and this has been causing public debt overhang and the balance that exist across public debt has been affecting economic growth (Albuquerque & Krustev, 2018). Based on the theory, debt overhang has been leading to a situation where the country is unable to make repayment on debts and this affects economic growth. The theory will help in showing how governments have been incurring too much debt over time because its collected funds via taxes is unable to fund its future projects (Karadam & Akin, 2021). The theory is relevant because it has enhanced the understanding and an in-depth analysis of the effect of government borrowing on economic growth.

2.2.3 Dual Gap Analysis Theory

The Dual Gap Analysis Theory is an economic model that is also known as the Harrod-Domar Model that was introduced between 1939 and 1946 by Sir Henry Roy Forbes Harrod and Evsey Domar (Barber, 2017). It is part of the post-Keynesian growth models that examines foreign aid and foreign borrowing in developing nations for the achievement of economic growth and

development (Adegboye et al., 2020). It helps in examining constraints that affect investment for realization of desired rate of economic growth in developing nations. The Dual Gap Analysis Theory has been criticized because of the assumptions it makes on the fixed nature of the relative price associated with labor and capital (Barber, 2017). It also argues that these elements are utilized in equal proportions. The model has also been assuming that saving rates and returns to capital remain constant. It also assumes productivity capacity is always proportion to capital stock, which is not realistic.

The Dual Gap Analysis Theory is relevant to the current study because it predicts that there is a relationship that exists between government borrowing and economic growth, especially in developing countries, such as Kenya. According to Adegboye et al. (2020), the Dual Gap Analysis Theory examines the connection that exist between investments and savings, which are considered to be key determinants of economic growth. Moreover, the model helps in the examination of country imports and exports and the role they play in economic growth, which aligns perfectly with the current study (Barber, 2017). The theory shows government borrowing can affect investments, savings, exports, and imports, which can influence economic growth. In this case, the theory has played a significant role in the examination of the relationship that exists between government borrowing and economic growth.

2.3 Determinants of Economic Growth

Economic growth describes an increase in production and consumption of goods and services in a nation within a given period (Fraumeni, 2019; Hudson, 2020). Das (2018) notes that economic growth is the process that increases wealth creation in a country in terms of population, products, and services. It varies across nations because there are some countries that register positive economic growth, whereas others generate negative economic growth. Existing studies have been showing that private and public investments play a key role in enhancing economic growth and this has been confirmed by different neoclassical and endogenous economic models (Saungweme & Odhiambo, 2018; Howitt, 2018). Over the years, there are many countries that have been undergoing a transitional period in economic growth and development. Studies have been investigating the key determinants of economic growth and these have been able to present these

factors and it is important to investigate them. These determinants were analyzed and presented below in the context of how they influence the dependent variable:

2.3.1 Government Borrowing

A study conducted by Hilton (2021) established that government borrowing is highly inevitable, especially in developing nations where taxes have been failing in raising the required financial resources for funding public expenditure. It has therefore become a key determinant of economic growth because it influences the ability of the government to finance its projects and initiatives geared towards economic transformation and development. This is supported by Belanger (2021), where it was established that government borrowing helps in stimulating economic growth because it helps in injecting money in the economy via internal and external debt sources. For example, the government can use bonds, treasury bills, and diverse forms of loans for acquiring financial resources for financing public expenditure. According to Sharma, Kautish, and Kumar (2018), government borrowing has been generating additional funds for financing projects that contribute towards economic growth.

However, some studies have disputed the findings because they argue that government borrowing does not contribute to economic growth but creates debt burden as established via Debt Overhang Theory making it difficult for the country to enhance its economic transformation and prosperity (Karadam & Akin, 2021; Hilton, 2021). Notably, public debt has long-term impacts on the economy and can affect operations and success of enterprises and social welfare in the future due to debt burden. It has also been affecting taxation systems and practices, thus lowering consumption, which has been slowing down economic growth. Moreover, according to Sharma et al. (2018), government borrowing has been putting more pressure on governments and public enterprises, thus making it difficult to maintain economic growth and financial stability. This has been leading to more borrowing, making it difficult to repay the debts and increasing interests and costs of managing these loans (Belanger (2021). As such, it is clear that government borrowing can positively or negatively affect economic growth.

2.3.2 Macroeconomic Status and Policies

The macroeconomic status and economic policies adopted in a nation can influence economic growth, development, and performance because they influence the nature and factors of production and consumption (Sharma et al., 2018). These can influence various aspects of the economy, including human capital availability, development of infrastructure, trade, political factors, and legal issues, among others. On the other hand, macroeconomic status and economic policies have been established to play a key role in economic growth but they are not sufficient (Hudson, 2020; Fraumeni, 2019; Doherty et al., 2018). Notably, stability in macroeconomic conditions help in enhancing economic growth but these factors are always changing. These uncertainties and instabilities have negative effects on economic growth and can lower production, investments, and consumption. Moreover, changes in these factors can affect trade practices, agreements, and operations, thus affecting economic growth (Sharma et al., 2018). This can influence exploitation of various factors, such as comparative advantages, technological transfer, exchange of knowledge, scale of economies, and market competition, thus positively or negatively affecting economic growth. On the other hand, De Carvalho et al. (2018) notes macroeconomic status and policies can affect inflation rate, leading to changes in prices, which can affect profitability from investment projects, thus influencing economic growth. In this case, it is clear that empirical studies have established that macroeconomic status and policies are important in enhancing economic growth, but these conditions are complemented by other factors for maintaining positive growth.

2.3.3 Human Resources

Human resources are key determinants of economic growth in developed and developing nations because they possess the skills, knowledge, and experiences required for execution of various roles and responsibilities in private and public sectors, thus making positive contributions towards economic transformation and development (Bucci, Prettner, & Prskawetz, 2019). Majority of existing studies, such as Alawamleh, Ismail, Aqeel, and Alawamleh (2019) and Diebolt and Hippe (2019) have established that human capital is vital for the achievement of desired economic growth rate. Other studies, such as Sarwar, Khan, Sarwar, and Khan (2021) and Bucci et al. (2019) have established that the level of skills and quality of human resources is the key determinant of economic growth. This shows there is an agreement on the fact that human resources help in

enhancing economic growth but the conflict arises on the level of skills, competencies, and quality of human capital. On the other hand, the level of employment and unemployment among the human resources have been playing a key role in influencing economic growth, where studies, including Alawamleh et al. (2019) and Diebolt and Hippe (2019) have established that unemployment has been hindering economic growth. Notably, high unemployment has been increasing economic costs, thus making it difficult for business and nations to maintain a positive economic growth rate. It also affects performance of the labor market, thus making it difficult for human capital to make positive contributions towards economic growth, development, and stability.

2.3.4 Investments

An analysis of Keynesian Model and Dual Gap Analysis Theory shows that investments are key determinants of economic growth because they have long-lasting impacts on the ability of generating income and creating wealth across production and consumption factors in a given country (Amadeo, 2021; Adegboye et al., 2020). Various studies that have been conducted on the relationship that exist between investments and economic growth, including Rahman, Ismail, and Ridzuan (2019) and Ribaj and Mexhuani (2021), have established that there is a positive relationship between these two variables. For instance, the studies show that foreign direct investments have been playing a significant role in the internationalization of economic and business activities and operations, thus paving the way for economic growth. Moreover, investments can influence human capital, availability of financial resources, innovation, and technological progress, which are key sources of economic growth (Schwartz, Fouad, Hansen, & Verdier, 2020). These are vital for supporting economic activities and development projects. Besides, they help in generating income and wealth, which is crucial in economic growth. The finding has been affirmed by studies, such as Ribaj and Mexhuani (2021) and Schwartz et al. (2020), which established there is a positive link between investments and economic growth. However, the quality of investment ratio plays a major role in influencing economic growth, as well as the nature of macroeconomic conditions and policies (Rahman et al., 2019). In spite of this finding, investments are key drivers of economic growth.

2.4 Empirical Studies

An analysis of the effect of government borrowing on economic growth has shown there are various studies and research that has been conducted on this area of study. Most of these studies have focused their attention on how external and internal debt impacts economic growth in developing countries and these have been supported by economic models and growth frameworks, thus generating results and evidence that can be evaluated in the current research. A study conducted by Nyakoe (2020) on the impact of public debt on Kenyan economic growth using secondary research and analytical framework in 2020 established that government borrowing does not contribute to economic growth. The study examined various variables where it found out that most projects being undertaken by the Kenyan government using external and internal debt have failed to break-even and this can be attributed to lack of effective macroeconomic policies and poor risk management practices (Nyakoe, 2020). An analysis of this study leads to the conclusion that government borrowing may fail to increase economic growth due to poor planning, management, and policies.

Research conducted by Mwangi (2017) on the impact of public debt on economic growth in Kenya using quarterly data from the period between 1995 and 2015 and the modified Solow's growth model established that domestic debt has insignificant but positive impact on economic growth and physical and human capital, inflation rate, and trade play a major role in influencing economic growth. In addition, using cointegration analysis it was established that proper investments of debt finance can improve gross domestic product (Mwangi, 2017). Based on the study, it can be concluded that economic growth can be affected by government borrowing but this depends on various economic variables and factors.

Additionally, a global study conducted by Saungweme and Odhiambo (2018) on the impact of public debt on economic growth using a literature review methodology established that there are existing research studies and literature that confirm that government borrowing has been affecting economic growth, whereas other studies have presented conflicting evidence and results that show that the two variables have a negative relationship. The research sample various nations, data, methodologies, and research variables but presented inconclusive results on the effect of government borrowing on economic growth (Saungweme and Odhiambo, 2018). This shows that

there are conflicting findings and results on whether government borrowing affect economic growth and this research and knowledge gap was addressed in the current study.

A working paper that was presented by Heimberger (2021) with the aim of examining whether higher public debt levels reduce economic growth using a literature review, where meta-regression methods were applied to around 826 estimates from 48 primary studies established that there is a positive linkage between government borrowing and economic growth. The study was global because data was collected from different sources from across the world. Based on the analysis of the study, it can be concluded that there is a positive relationship between government borrowing and economic growth. However, this will need to be confirmed considering there are numerous conflicting results on this area of study.

Moreover, a study conducted by Hilton (2021) was focused on the analysis of the issue of public debt and economic growth, using evidence from developing economies, where the key focus was on Ghana. The study utilized the dynamic multivariate autoregressive-distributed lag-based Granger-causality model in testing the causal relationship that exist between public dent and economic growth using annual time-series data from 1978 to 2018 (Hilton, 2021). The results shown that in the short-term there is not relationship between government borrowing and gross domestic product but there is a positive connection in the long run. It can be concluded that researchers need to consider short-run and long-run nature of government borrowing when determining if they influence economic growth.

Consequently, a study conducted by Kithinji (2021) with the aim of examining the effect of public debt composition and government expenditure on economic growth of Kenyan government applied causal research design and descriptive statistics and regression analysis for collecting and analyzing data between the period of 2002 to 2017. The research established that there is a positive relationship between government borrowing and economic growth. However, it was established that domestic public debt does not have a significant effect on economic growth (Kithinji, 2021). It can be concluded that there are conflicting results in the study but it has established that there is a positive link between public debt and economic growth.

A study conducted by Mohanty and Panda (2019) focused on investigating macroeconomic effects on the public debt in India using a Structural Vector Autoregression framework and examined data for the period between 1980 to 2017. The research examined the impact of various kinds of public debt and how this affects economic growth, investments, interest rates, and inflation rate in India (Mohanty & Panda, 2019). The study established that public debt has been having adverse impacts on economic growth, investment, and inflation. Unlike the other studies, the research establish that domestic dent has been having adverse impact on the Indian economy as compared to external debt. Moreover, using variance decomposition analysis it is clear that public debt has been affecting economic growth. The findings of the study were examined and confirmed in the current research.

In addition, Mbalu and Matanda (2021) conducted a study with the aim of evaluating the effect of external debt liability on economic growth in Kenya. The research adopted descriptive research design and the target population was National Treasury, Kenya National Bureau of Statistics, and the World Bank and data was collected with the period of 43 years between 1977 and 2019 (Mbalu & Matanda, 2021). The study utilized multivariate time series and panel data regression analysis and it established that only external private debt and debt servicing payment had a positive relationship with economic growth. In this case, it is clear that government borrowing from external sources has positive connection to economic growth and this is an area that needs further analysis because the results of the current study were not conclusive.

Moreover, a study that was conducted in Africa on the effects of public debt on economic growth by Ndoricimpa (2020) through the application of panel smooth transition regression approach on a sample of data from various regions across the Africa established that low debt has limited impact on economic growth. However, the research established that high public debt can have detrimental effect on economic growth, which can lead to the achievement of desired results in a country. Based on the study, it can be concluded that the level of debt determines its effect on economic growth and this finding were examined in the current research.

In addition, a research study conducted by Njoroge (2020) with the aim of assessing the impact of Kenya public debt on economic stability utilized archival data that was analyzed using vector error

correction model and autoregressive distributed lag methods. The findings were able to show that there is a positive long-run causal relationship between public debt and the real gross domestic product growth. The study lays a good foundation for the current research and was used in supporting the argument on how government borrowing has been affecting economic growth.

2.5 Conceptual Framework

This model encompasses the IVs as well as the dependent variable presented diagrammatically.

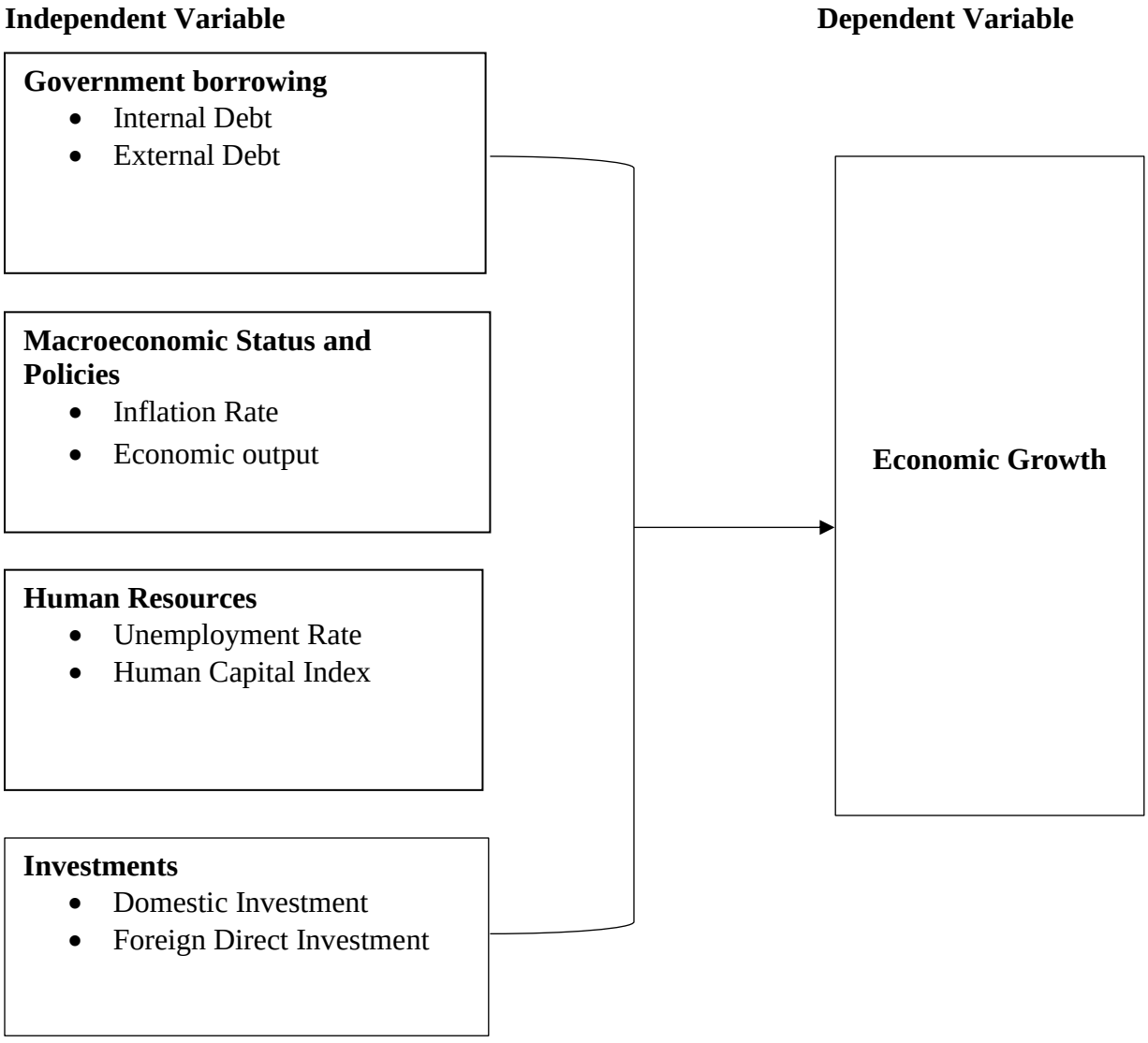

Figure 2: Conceptual Framework

An analysis of the conceptual framework shows there are different variables that influence economic growth. These variables have been extracted from various empirical studies and play a key determinant role in affecting economic growth. The key independent variables are government borrowing, macroeconomic status and policies, human resources, and investments. These have been affecting economic growth, which is a key dependent variable. The research focused on examining whether these factors have a direct connection and relationship with each other.

2.6 Summary of Literature Review

The literature review focused on the evaluation of various existing studies, research, and literature materials, such as book, in examining the effect of government on economic growth. Theoretical foundations of the research shown that there are positive and negative links between economic growth and government borrowing (Amadeo, 2021; Adegboye et al., 2020; Karadam & Akin, 2021). The determinants of economic growth were examined and empirical review, thus laying a strong foundation for the conceptual framework. These helped in the examination of whether there is a positive relationship between government borrowing and economic growth. The empirical review examined different studies that provided conflicting evidence and results on the effects of government borrowing on economic development. Some studies shown there is a positive link between government borrowing and economic development, whereas others have shown there is not connection between the two variables (Mohanty & Panda, 2019; Saungweme & Odhiambo, 2018; Mwangi, 2020; Kithinji, 2021; Ndoricimpa, 2020; Heimberger, 2021; Njoroge, 2020; Hilton, 2021; Nyakoe, 2020). This helped the researcher to understand that there is a need for conducting research on this issue for closing the identified research and knowledge gap on the nature of the relationship that exists between economic growth and government borrowing.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The section presented the methods and techniques that were used in facilitating data collection and analysis for addressing the issue of the effects of government borrowing on economic growth in Kenya. The section was divided into different sections, including research design, population, sample design, data collection, and data analysis.

3.2 Research Design

The researcher examined and evaluated various research designs and used descriptive research design which helped in obtaining information in a systematic manner that increases understanding on the research phenomenon (Sandra, 2020). Besides, it makes it easier for the researcher to empirically inquire into a given research issue and this will generate data and information for addressing the issue of the effects of government borrowing on economic growth in Kenya. It is also difficult to manipulate data, which is important for enhancing the validity and reliability of the study because data will be collected from existing sources (Aggarwal & Ranganathan, 2019). In this case, it will be easier to evaluate what, where, and how government borrowing impacts economic growth in Kenya, thus establishing if there is a positive, no, or negative relationship between the study variables. The selected research design has been utilized by other empirical studies, such as Mbalu and Matanda (2021), where the researchers were focused on investigating the effect of external debt liability on economic growth in Kenya. In the current research, the descriptive research design was utilized because it was effective in showing the relationship that exist between government borrowing and economic growth in Kenya.

3.3 Population

The study was secondary-based research, where data was generated from secondary sources. In this case, no primary data was collected. The population of the research was different existing studies, research, reports, government and non-governmental publications, books, and journal articles.

3.4 Sample Design

As established earlier, the current research was focused on collecting secondary data. The sample design that was used in the study included World Bank, Statistics Times, Trading Economics, Macrotrends, Kenya National Bureau of Statistics, the National Treasury, and government budgets, which are key secondary data sources that the researcher will utilize in generating data, information, and insights. The sample design and size were selected because they contained the information and data that aligns with the research variables.

3.5 Data Collection

Data collection accommodated the procedures that were used in collecting, measuring, and analyzing accurate data, information, and other insights for research, which were vital for enhancing research validity and reliability (Rose, McKinley, & Briggs, 2019). The research study utilized secondary data, which was collected from different data sources, including World Bank, Trading Economics, Kenya National Bureau of Statistics, the National Treasury, Statistics Times, Macrotrends, and government budgets for evaluating economic growth, government borrowing, unemployment rate, inflation rate, and foreign direct investments in Kenya. A data collection sheet was used by the researcher where all collected data was examined, edited, and cleaned for addressing the issue of the effects of government borrowing on economic growth in Kenya. The study period was from 2000/2001 to 2020/2021. The period was selected because it captured various economic changes, transformations, and government policies that have been taking place in the Kenyan economy, thus influencing the independent and dependent variables in the study.

3.6 Data Analysis

Data analysis is the process that involves cleaning, transformation, and modeling of data for discovering useful information for addressing a research issue or generating insights for supporting effective decision-making (Blanca, Alarcon, & Bono, 2018). In the current research, data analysis was divided into diagnostic tests, analytical model, and significance tests.

3.6.1 Diagnostic Tests

The study utilized MS Excel analysis tool pack, which plays a major role in aiding data analysis. Notably, the results of the regression analysis were provided using Excel analysis tool pack where various indicators in the study were examined for determining significance of the research variables. This was important for the prediction of the relationship that exist between dependent and independent variables (Daoud, 2017). The coefficients tests were used in showing whether independent variables have a positive or negative impact on the dependent variable. Besides, this helped to show if there is no correlation between the variables. In addition, R Square tests were conducted, which is a one indicator that helped in showing the percent of the model that can provide explanations for the variation that were shown in the context of the dependent variable. In addition, t-test were used in the current research because it can test any differences between the variables, which according to Rietveld and van Hout (2017) can be utilized as a test of significance in the study. The researcher was aiming at a 0.05 level of significance.

3.6.2 Analytical Model

The conceptual framework presented various variables that were examined to determine the relationship that exists between government borrowing and economic growth. In the current study, data was collected on economic growth versus internal and external debt, unemployment rate, inflation rate, direct foreign investment). Based on this, a multiple regression model was used in data analysis, where various variables of economic growth was regressed against economic growth. The model is mainly a multiple linear regression and is presented below:

$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$

Where:

Y = Economic growth (measured according to the Kenya GDP per capita income in Kenyan shillings)

X_1 = Government borrowing (this is the sum total value of internal and external debt in Kenyan shillings)

X_2 = Inflation rate (measured in terms of price level changes from one economic period to the next)

X_3 = Unemployment rate (measured according to percentage of the labor force. This is computed by taking the number of adults in the labor force and unemployed, divided by the total adult population and multiplying by 100 to get the percentage)

X4 = Foreign direct investments (This is the sum of equity capital, long term capital, and short-term capital as reflected in the balance of payments. It was measured according to growth rate from one economic period to the other)

$\beta 1$, $\beta 2$and $\beta 3$ = partial coefficients of GDP in line with X_1, X_2, X_3, and X_4 respectively

ε = Stochastic error term

α = Constant term

3.6.2 Significance Tests

The study conducted an Analysis of Variance (ANOVA) for testing the significance of the model in examining the relationship that exist between government borrowing and economic growth. The researcher extracted the ANOVA statistics with the aim of assessing the significant value. The researcher aimed at testing the variables at a confidence level of 95% and significance level of 5%. The significance test was crucial in the current research because it helped to show the critical value of the relationship that exists between the independent and dependent variable.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS, AND INTERPRETATIONS

4.1 Introduction

The current chapter presents the correlation that exists between government borrowing on economic growth in Kenya. All the collected data and information is interpreted in this chapter with the aim of addressing research problem and objective. Chiefly, 20 data points of between 2021/2020 and 2001/2000 have been collected from a wide range of sources, including World Bank, Trading Economics, Kenya National Bureau of Statistics, the National Treasury, and government budgets with the aim of evaluating economic growth, government borrowing, unemployment rate, inflation rate, per capita, and foreign direct investments in Kenya. Data on the different variables is presented in various sections in this chapter. The sections are divided into descriptive statistics on the variables, inferential statistics, interpretation of the findings, and summary.

4.2 Descriptive Statistics of Research Variables and Relationship of Interests

The section focuses on describing and summarizing the various characteristics of the sample/data set that was collected on various variables on the study. The descriptive statistics cut across economic growth in GDP and GDP per capita, government borrowing, unemployment rate, inflation rate, and foreign direct investments in Kenya. These variables were examined using the model that was identified in the research methodology section. The data is presented below:

4.2.1 Economic Growth

The economic growth rate of Kenya between 1991 and 2021 were assessed using the gross domestic product and per capita income. The results of gross domestic product are presented in table 4.1 and figure 4.1 below:

Table 4.1: Gross Domestic Product from 2001 to 2021

Year	Nominal GDP (Ksh in million)	Annual GDP Growth (percentage)	Real GDP (Ksh in million)
2021	12,098,200	7.50	9,391,684
2020	10,716,034	-0.30	8,735,040

2019	10,237,727	5.10	8,756,946
2018	9,340,307	5.60	8,330,891
2017	8,483,396	3.80	7,885,521
2016	7,594,064	4.20	7,594,064
2015	6,884,317	5.00	7,287,024
2014	6,003,835	5.00	6,942,157
2013	5,311,322	3.80	6,610,312
2012	4,767,191	4.60	6,368,448
2011	4,162,514	5.10	6,090,206
2010	3,597,630	8.10	5,793,514
2009	3,275,642	2.70	5,361,462
2008	2,107,589	1.50	1,357,262
2007	1,833,511	6.90	1,336,849
2006	1,622,565	6.50	1,249,470
2005	1,415,823	5.70	1,172,784
2004	1,274,328	5.10	1,109,338
2003	1,131,783	2.90	1,055,658
2002	1,035,374	0.50	1,025,583
2001	1,020,022	3.80	1,020,111

Table 4.1: Gross Domestic Product (World Bank, 2022; Central Bank of Kenya, 2022)

The data is also presented in the figure below as percentage:

Figure 4.1: Gross Domestic Product from 2001 to 2021

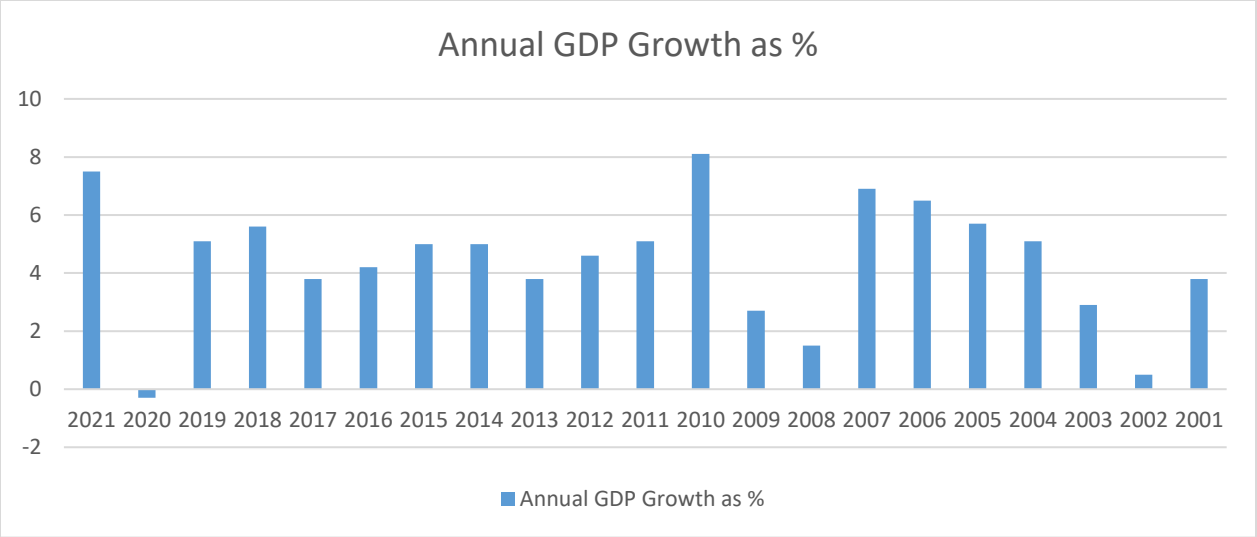

Figure 4.1: Gross Domestic Product (World Bank, 2022; Central Bank of Kenya, 2022)

As presented above, it is clear that economic growth in terms of GDP patterns has been growing and declining in different years across the study period. An analysis of 2001 shows that GDP annual growth rate in Kenya was 3.80% and at 2021 it stood at 7.50%. The highest value of the annual growth rate in Kenya was in 2010, which stood at 8.10%, whereas the lowest value stood at -0.30% in 2020. On the other hand, data on per capita income is presented in table 4.2 and figure 4.2 below:

Table 4.2: Nominal GDP per Capita from 2001 to 2021

Year	Nominal GDP Per Capita ($)
2021	2129
2020	1,838
2019	1,817
2018	1,708
2017	1,572
2016	1,411
2015	1,337
2014	1,316
2013	1,210
2012	1,237

2011	972
2010	952
2009	905
2008	902
2007	826
2006	686
2005	512
2004	452
2003	430
2002	390
2001	395

Table 2: GDP Per Capita – Nominal (Statistics Times, 2022; Macrotrends, 2022)

The data is presented in figure 4.2 below:

Figure 4.2: Gross Domestic Product from 2001 to 2021

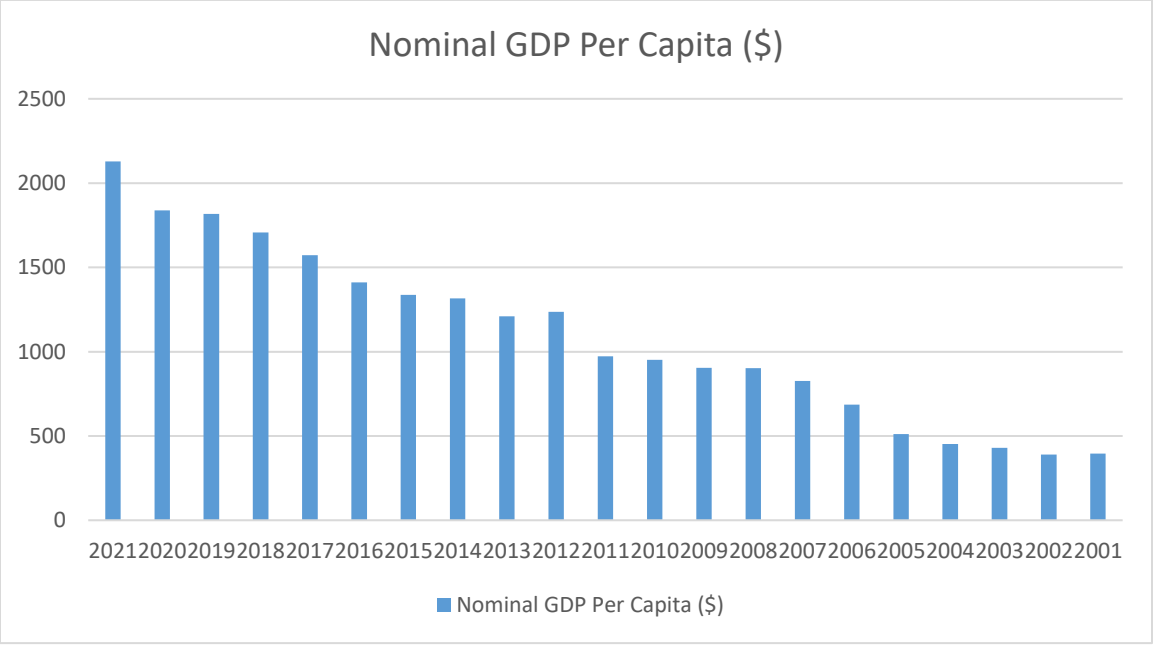

Figure 4.2: GDP Per Capital – Nominal (Statistics Times, 2022; Macrotrends, 2022)

As illustrated above, it is clear that the nominal GDP per capita in Kenya was very high in 2021 and low in 2002.

4.2.2 Government Borrowing (Public Debt)

Data was collected on government borrowing in Kenya and this helped in generating information/findings on public debt in the country. The data is presented in table 4.3 and figure 4.3 below:

Table 4.3: Government Borrowing from 2001 to 2021

Year	Government Borrowing (Ksh as per June every year)
2021	7,712,392.57
2020	6,694,232.06
2019	5,808,622.60
2018	5,039,034.52
2017	4,406,446.32
2016	3,618,726.80
2015	2,829,057.97
2014	2,370,255.82
2013	1,894,190.84
2012	1,633,379.55
2011	1,487,111.11
2010	1,225,719.68
2009	1,053,489.84
2008	870,578.73
2007	801,254.11
2006	789,075.78
2005	749,548.15
2004	749,392.09
2003	696,429.97
2002	613,739.00
2001	605,790.60

Table 3: Government Borrowing (Central Bank of Kenya, 2022; World Bank, 2022)

Based on the table above, it is clear that government borrowing in Kenya has been on the rise and this is also illustrated in figure 3 below:

Figure 4.3: Government Borrowing from 2001 to 2021

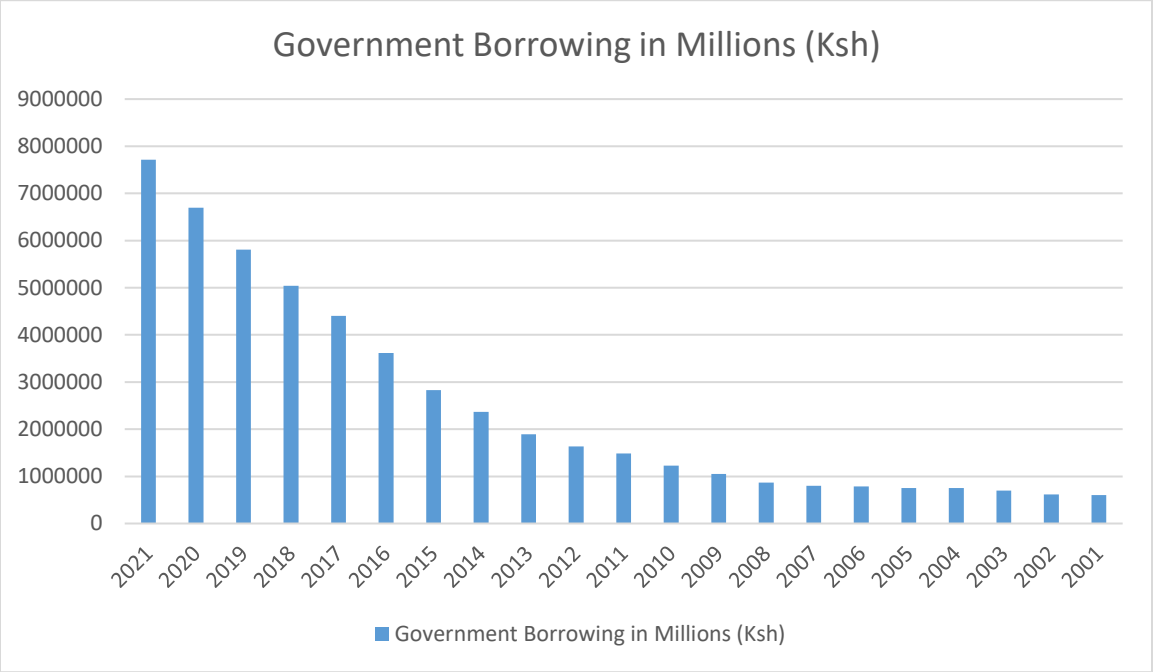

Figure 4.3: Government Borrowing (Central Bank of Kenya, 2022; World Bank, 2022)

As illustrated above, it is clear that government borrowing has increased from Ksh 605,790.60 million in 2001 to Ksh 7,712,392.57 million in 2021.

4.2.3 Unemployment Rate

Data was collected within the study period and data points on unemployment rate in Kenya. The findings are presented in table 4.4 and figure 4.6 below:

Table 4.4: Unemployment Rate from 2001 to 2021

Year	Unemployment Rate (%)
2021	5.7
2020	5.7
2019	5
2018	4.2
2017	3.5
2016	2.8
2015	2.8
2014	2.8

2013	2.8
2012	2.8
2011	2.8
2010	2.8
2009	2.9
2008	2.9
2007	2.9
2006	2.9
2005	2.9
2004	2.9
2003	3
2002	3
2001	3

Table 4.4 Unemployment Rate (World Bank; Kenya National Bureau of Statistics, 2022; Trading Economics, 2022)

The unemployment rate results are presented in figure 4.4 below:

Figure 4.4: Unemployment Rate from 2001 to 2021

Figure 4.4: Unemployment Rate (World Bank; Kenya National Bureau of Statistics, 2022; Trading Economics, 2022)

As illustrated above, it is clear that in 2001, the unemployment rate in Kenya stood at 3% before it declined to 2.9% between 2004 to 2009. It further declined from 2.9% in 2009 to 2.8% between 2010 to 2016. The unemployment rate increased between 2017 to 2021 from 3.5% to 5.7%. Based on the data, it is clear that the unemployment rate has been increasing in the recent years and this can show that the study variables have not improved as a result of government borrowing.

4.2.4 Inflation Rate

The results show the inflation rate in Kenya has been changing over the years. The inflation rate is presented in table 4.5 and figure 4.5 below:

Table 4.5: Inflation Rate from 2001 to 2021

Year	Inflation Rate (%)
2021	6.1
2020	5.4
2019	5.2
2018	4.7
2017	8
2016	6.3
2015	6.6
2014	6.9
2013	5.7
2012	9.4
2011	14
2010	4
2009	9.2
2008	26.2
2007	9.8
2006	14.5
2005	10.3
2004	11.6
2003	9.8

2002	2
2001	5.7

Table 4.5: Inflation Rate (Central Bank of Kenya, 2022; World Bank, 2022; Kenya National Bureau of Statistics, 2022)

A visual representation of inflation rate is presented below:

Figure 4.5: Inflation Rate from 2001 to 2021

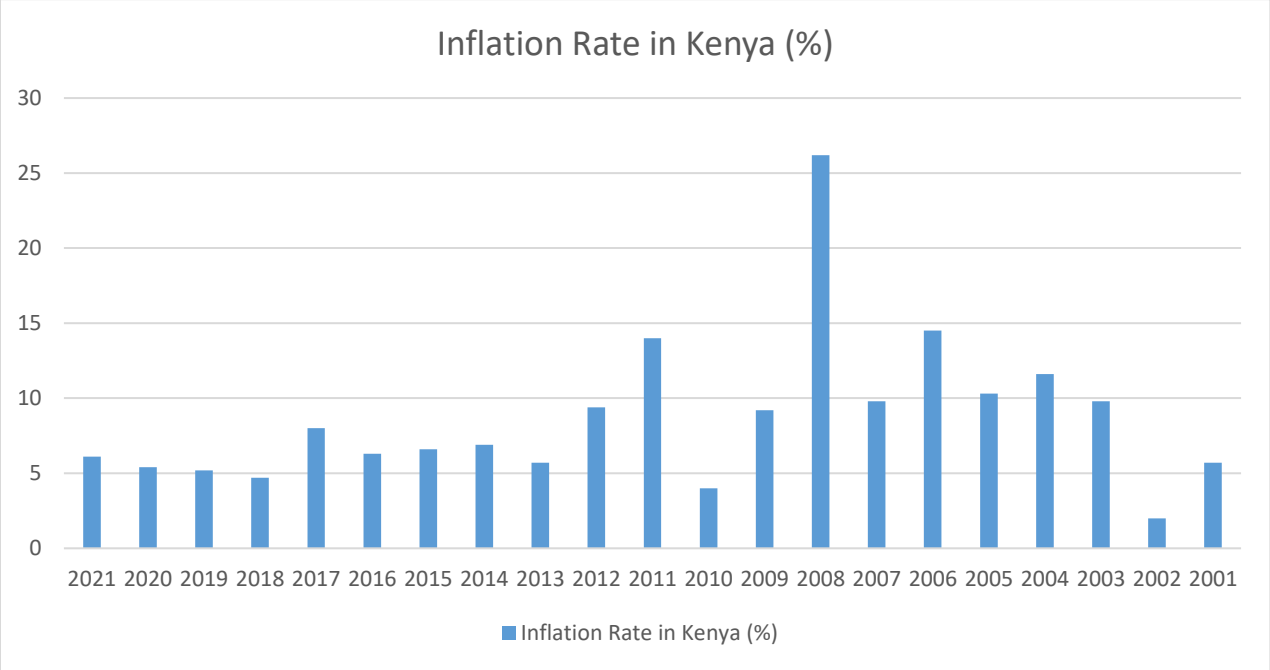

Figure 4.5: Inflation Rate (Central Bank of Kenya, 2022; World Bank, 2022; Kenya National Bureau of Statistics, 2022)

As illustrated above, inflation rate was very high in 2008 in Kenya and it stood at 26.2%. In 2002, inflation rate was very low at 2%. Based on the results, it is clear that as the government increases its borrowing, inflation rate has been increasing.

4.2.5 Foreign Domestic Investments

Foreign direct investments in Kenya in terms of net inflows has been changing over the years and the findings are presented in table 4.6 and figure 4.6 below:

Table 4.6: Foreign Domestic Investments from 2001 to 2021

Year	**Foreign Domestic Investments (net inflows $)**
2021	269,000,000

2020	716,756,224
2019	1.33 billion
2018	1.63 billion
2017	1.27 billion
2016	678,803,417
2015	619,719,962
2014	820,934,459
2013	1.12 billion
2012	1.38 billion
2011	1.45 billion
2010	178,064,199
2009	116,259,381
2008	95,584,971
2007	729,054,667
2006	50,674,725
2005	21,211,685
2004	46,063,931
2003	81,738,243
2002	27,618,447
2001	5,302,623

Table 4.6: Foreign Domestic Investments (Macrotrends, 2022)

The findings were presented graphically below:

Figure 4.6: Foreign Domestic Investments from 2001 to 2021

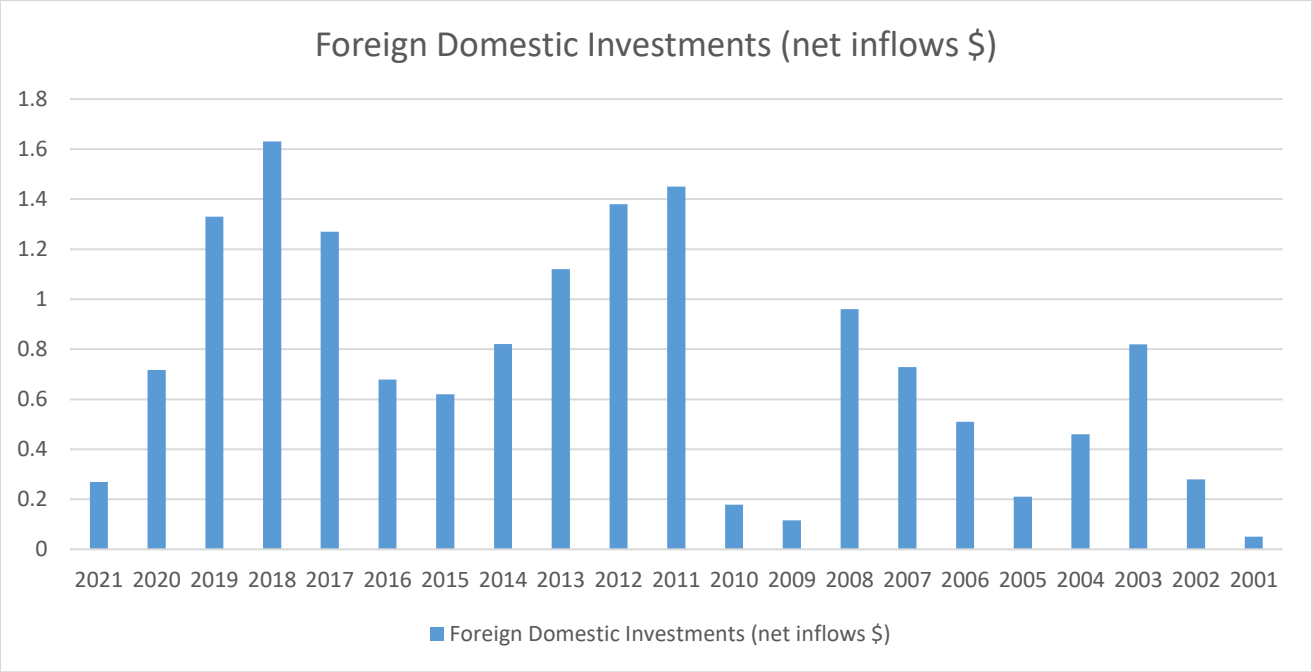

Figure 4.6: Foreign Domestic Investments (Macrotrends, 2022)

An analysis of foreign domestic investments in Kenya were very high in 2018 and stood at $1.63 billion but it was low in 2001 at $5,302,623 in 2001.

4.3 Inferential Statistics

The inferential statistics is important for describing how statistics were derived from the observation of the data collected within the study period, which is important in showing the relationship that exist between government borrowing and economic growth. The model summary is presented in table 7 below:

Regression Statistics	***Multiple R***	***R Square***	***Adjusted R Square***	***Standard Error***	***Observations***
	0.5690**	0.3238**	0.21108**	1.8319**	20

Table 7: Summary of Model (Research Findings, 2022)

Based on the model above, it is important to differentiate between the predictors or constant variables (government borrowing, unemployment rate, inflation rate, foreign direct investments)

and dependent variables (gross domestic product). The regression model shows that the R square stands at 0.324, whereas the adjusted square stands at 0.211. Based on the analysis, it is clear that for the 20 observations, around 30% variations in terms of GDP growth rate/GDP per capita income was explained by the predictors/constant variables. The findings are further explained using the Analysis of Variance (ANOVA) as presented below:

ANOVA

	Df	**SS**	**MS**	**F**	**Significance F**
REGRESSION	3	28.9242**	9.6414**	2.8728**	0.0649**
RESIDUAL	18	60.4079**	3.3560**		
TOTAL	21	89.3321**			

Table 8: ANOVA Analysis (Research Findings, 2022)

As observed in the regression statistics, it is clear that the predictors are government borrowing, unemployment rate, inflation rate, foreign direct investments, whereas the dependent variable is gross domestic product. The ANOVA results from the table above show that the F value stands at 2.87 at a statistical significance of around 0.065 as per the model. This is based on the relationship that exist between government borrowing and economic growth. An analysis of coefficients is presented in table 9 below as part of the t-tests that were carried out in the study:

Predictors/Constant Variables	**Coefficients**	**Standard Error**	**t-Stat**	**P-value**
Intercept	79.348**	72.468**	1.095**	0.288**
Government borrowing	-1.28**	2.23**	-0.56**	0.58**
Unemployment rate	-6.07**	4.44**	-1.37**	0.19**
Inflation rate	-0.007**	0.05**	-0.17**	0.86**
Foreign direct investments	-1.25**	2.12**	-0.51**	0.54**

Table 9: Coefficients (Research Findings, 2022)

The coefficients have considered predictors or constant variables (government borrowing, unemployment rate, inflation rate, foreign direct investments) and dependent variables (gross domestic product), which has helped in showing that the actual p-values are higher as compared to the maximum allowed figure of 0.065 as per the statistical significance in the model and the t-tests failed in reaching the desired statistical significance value of 0.05. It is therefore clear that the predictor variables of the multiple linear regression ($Y = \alpha + \beta1X1 + \beta2X2 + \beta3X3 + \varepsilon$) do not effectively explain the variation that exist in economic growth in the case of Kenya because the desired statistical significance level of 0.05 was not attained.

4.4 Interpretation of Findings

The data analyzed and presented in table 7 clearly helps in the interpretation of measure of goodness of fit and it is clear that the regression model shows that the R square stands at 0.324, whereas the adjusted square stands at 0.211. Based on the analysis, it is clear that for the 20 observations around 30% variations in terms of GDP growth rate/ GDP per capita income has been explained by the predictors/constant variables. This shows that all variables used in the regression are statistically insignificant in the determination of economic growth or GDP growth rate, which is supported by empirical literature, such as Nyakoe (2020) and Hilton (2021), where the researchers found that government borrowing does not lead to positive economic growth.

On the other hand, the ANOVA results that were presented in table 8 shows that the regression coefficients can be considered to vary significantly as compared to the significance F, which stands at 0.065. The model shows that the significance level needs to be less as compared to statistical significance. In the current context, F value stands at 2.8728 which can be considered to be statistically insignificant compare to the value of 0.065 as per the model. The results show that the variables (government borrowing, unemployment rate, inflation rate, foreign direct investments) are insignificantly related to the GDP growth value, which is supported by empirical studies findings presented by Mbalu and Matanda (2021) and Mwangi (2017), which found out that government borrowing does not contribute towards economic growth. In this case, it is clear that independent variables cannot be considered when making predictions on the future economic growth of Kenya based on GDP rate or GDP per capita income, which is against the findings of

studies, such as Ndoricimpa (2020), Njoroge (2020), and Kithinji (2021), which established there is a positive relationship between government borrowing and economic growth.

Moreover, an analysis of the collected data and information was done using the model as per the coefficients table 9. The model clearly shows that government borrowing has a negative relationship with economic growth due to the fact that negative values were established as per the coefficients value of each of the predictors or constant variables, which is a confirmation of the results generated by studies by Nyakoe (2020) and Hilton (2021), where a negative relationship was confirmed between government borrowing and economic growth. In this case, an increase in government borrowing can actually lead to a decline in economic growth. In addition, it is clear that unemployment rate, inflation rate, and foreign direct investments are negatively linked with economic growth.

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The study has focused on the assessment of the effects of government borrowing on economic growth in Kenya. The current chapter presents a summary, conclusion, and recommendations that the researcher has made based on the collected data and interpreted findings. The chapter is divided into different sections, including summary of findings, conclusions, recommendations, limitations of study, and areas of future research.

5.2 Summary of Findings

The current research study utilized a conceptual framework, a multiple linear regression ($Y = \alpha + \beta1X1 + \beta2X2 + \beta3X3 + \varepsilon$) in the assessment of the effects of government borrowing on economic growth. The collected data and information that was used in addressing the research problem and objective was between 2001 and 2021 and it considered a wide range of variables, including GDP growth rate, GDP per capita, government borrowing, unemployment rate, inflation rate, and foreign direct investments. Inferential statistics were conducted on the variables of the study to establish whether there is a positive relationship between government borrowing and economic growth. The results have clearly shown that as the government has been increasing its borrowing from internal and external sources, unemployment rate has been increasing, as well as inflation rate, and foreign direct investments but these have been affecting economic growth. This confirms the findings of Nyakoe (2020), Mwangi (2017), and Hilton (2021), which established that there is a negative relationship between government borrowing and economic growth. Table 4.1 and 4.2 clearly shows that GDP and nominal GDP per capita have been growing in line with the government borrowing as per table 4.3. However, this growth has been characterized by uncertainties in foreign domestic investments (table 4.6), increasing inflation rate (table 4.5) and unemployment rate (table 4.4). Using a multiple linear regression analysis, the results have clearly shown that the variables do not have a significant relationship with economic growth. The p-values that were generated using the model have shown that they are higher as compared to the 0.065 value for the significance F. In this case, the variables have been found to be statistically

insignificant in the prediction of variations of economic growth. This is supported by studies, such as Hilton (2021) and Ndoricimpa (2020) which established that there is a negative relationship between government borrowing and economic growth.

Moreover, interpretations of the study findings using the multiple regression model, with the specific focus being on coefficients showed that there is a negative correlation between the dependent and independent variables. This primarily means that government borrowing has a negative effect on economic growth. In this case, increasing public debt can affect GDP growth rate and GDP per capita income in a given nation. The finding is supported by existing studies, such as Hilton, 2021; Heimberger, 2021; Saungweme and Odhiambo (2018), which have established that government borrowing does not increase economic growth in a given nation but leads to repayment/debt burdens. This is also supported by the Debt Overhang Theory, which according to Albuquerque and Krustev (2018) shows that there is an increase in fiscal crises today and this has been causing public debt overhang and the balance that exist across public debt has been affecting economic growth. Therefore, the findings confirm the theoretical assertion that shows that governments are faced with heavy debt burdens due to borrowing with limited or no economic growth. However, the results conflict with the findings of studies, such as Mbalu and Matanda (2021) and Saungweme and Odhiambo (2018), which established that government borrowing result in positive economic growth.

5.3 Conclusions

In summary, the key objective of the study was to assess the effect of government borrowing on economic growth in the Kenyan economy. The research focused on addressing the conflicting evidence presented in this area of study, as well as existing research and knowledge gaps. Data from existing literature shows that there are conflicting findings on the effects of government borrowing on economic growth. There are studies that show a positive, and others negative impacts of public debt on economic growth. However, the current study has shown that government borrowing has a negative impact on economic growth using the case of Kenya. The regression model clearly shows that government borrowing is insignificantly associated with the variations that have been occurring in economic growth in Kenya. The finding was reflected across the other variables, such as unemployment rate, inflation rate, and foreign direct investments. The results

can be useful to the Kenyan government and policymakers, as well as in other nations because it can show how the government can monitor public debt and take all the necessary measures and policies for using it towards economic growth. It can therefore be concluded that there is a negative impact between government borrowing and economic growth based on the relationship that exists between the research variables.

5.4 Recommendations

The model that was used showed that the regression results have indicated that the variables analyzed had no significant effect or positive relationship with economic growth in the context of Kenya. It is recommended that there is a need for using different predictors or independent variables in the determination of the effects of government borrowing on economic growth. For instance, researchers and policymakers can use government expenditure, instabilities, and corruption, among other factors in determining how government borrowing affects economic growth in a nation. It is recommended that policymakers need to examine how governments can increase taxes or focus on other sources of money for preventing over-borrowing, which has been established that it may fail to contribute towards economic growth. Moreover, it is recommended that researchers and policymakers need to examine how government borrowing affects economic growth in every year. For instance, the current study has examined the relationship between these variables over a period of 20 years. This will show how public debt is utilized each year and whether it contributes towards economic growth. Besides, it is recommended that policymakers in different nations, including Kenya need to fully understand macroeconomic trends and factors and how this influence economic growth in the context of government borrowing. Moreover, it is important to develop effective monitoring and controlling systems for the fully assessment of how public debt can be utilized for enhancing economic growth.

5.5 Limitations of Study

There are different limitations that can affect research studies. In the current context, the researcher was focused on collecting and analyzing data from different sources. However, it was challenging to retrieve data and information from different sources, including World Bank, Trading Economics, Kenya National Bureau of Statistics, the National Treasury, and government budgets.

For example, initially, the researcher was focused on collecting 30 data points on the study variables but this was quite challenging and the findings were later limited to 20 data points within a period of 20 years from 2001 to 2021. In addition, it was difficult to find data on some variables, such as nominal GDP per capita and foreign direct investments in the Kenyan currency, thus making it challenging for the study. It was also difficult to access data that was presented as confidential and sensitive during the research and this was a key limitation. This can affect the accuracy and reliability of the research findings and conclusions. The research was also limited in a given period of study and depended only on secondary data sources.

5.6 Areas of Future Research

Based on the analysis of the relationship that exist between government borrowing and economic growth, it is clear that there is a need for undertaking further research on the research problem and objective. Further research needs to be undertaken on each variable (government borrowing, unemployment rate, inflation rate, and foreign direct investments) separately for understanding their correlation with economic growth. Moreover, future research needs to differentiate between external and internal debt and how each affects economic growth in a nation. Further research can also be focused on how corruption or misuse of borrowed resources can affect economic growth. Besides, government expenditure can be assessed alongside economic growth in a nation, which can help in showing why there is a negative relationship between public debt and economic growth. In the future, a primary data-based study can also be conducted on the effects of government borrowing on economic growth.

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