AN INVESTIGATION INTO THE CAUSES AND EFFECT OF RISING PUBLIC DEBT IN SOUTH AFRICA, 2009-2019

by

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Abstract: This study delves into the intricate factors contributing to the rising public debt in South Africa between 2009 and 2019, while also scrutinising the efficacy of public debt expenditure during this period. By examining data sourced from the SA National Treasury of South Africa and the South African Reserve Bank (SARB), the research endeavours to elucidate the underlying causes behind the burgeoning public debt and assess the impact of expenditure patterns on economic outcomes.

The global financial crisis of 2008/2009 marked a pivotal juncture for South Africa's economy, precipitating a series of fiscal challenges that reverberated throughout the subsequent decade. Against this backdrop, this study embarks on a dual mission: firstly, to decipher the drivers underpinning the surge in public debt, and secondly, to gauge the efficacy of public expenditure vis-à-vis economic growth and development objectives.

From 2009 to 2019, fiscal analysis shows a clear pattern of growing budget deficits, with government spending surpassing revenue growth. South Africa's fiscal policy has heavily favoured deficit spending, relying on debt to cover revenue shortfalls and maintain expenditure growth. Most government spending goes towards current payments and social transfers, leaving little for capital formation. Despite the National Development Plan's emphasis on investing in productive assets, both public and private sector investments have consistently fallen below targets, hindering significant contributions to economic growth.

The rising public debt in South Africa stems from numerous factors, including excessive spending on unproductive areas like government compensation and social transfers, alongside high borrowing costs. This consumption-focused economic approach, coupled with insufficient investment in productive assets, has hindered South Africa's economic progress compared to global counterparts. Given these challenges, it is crucial to shift fiscal priorities towards strategies focused on investment-led growth.

Based on the preceding analysis, there is a need for policy recommendations aimed at recalibrating South Africa's fiscal trajectory. This entails devising comprehensive solutions across key areas essential for both economic growth and human development.

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List of Acronyms

FIFA - Federation Internationale de Football Association

GDP - Gross domestic product

GFS - Government finance statistics

IMF - International Monetary Fund

KZN - KwaZulu-Natal

NDP - National Development Plan

OECD - Organisation for Economic Co-operation and Development

RBT - Resource-based theory

RBV - Resource-based value

R&D - Research and development

RSA - Republic of South Africa

SARB - South African Reserve Bank

SGT - Self-governing territories

SNA - System of National Accounts

StatsSA - Statistics South Africa

TBVC - Transkei, Bophuthatswana, Venda, Ciskei

VRIO - Valuable, rare, inimitable, and organisation

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter introduces the study by providing a historical overview of public debt, its characteristics, and its implications for economic policy. It defines key concepts such as public debt, productive and unproductive expenditures, and explores their relevance to South Africa's economic context. The chapter reviews the causes of public debt, discusses the different types of government debt, and highlights the risks associated with rising debt levels. It presents data on South Africa's debt composition and compares it with global trends, emphasising the risks of increased debt servicing costs and exchange rate volatility. The chapter also outlines the research problem, objectives, and relevance, setting the stage for further analysis on how public debt has been utilised and managed in South Africa, and its impact on economic growth, fiscal stability, and development. The chapter concludes with an overview of the structure of the study, summarising the content of each subsequent chapter.

1.2 Overview of the nature of Public debt

Governments can finance their activities through three main funding sources, namely the collection of taxation, debt, or the printing of money (Ncanywa and Masoga, 2018; Piketty, 2014; Wagner, 2005, cited in Zharku, 2018). Public debt, also referred to as government debt or sovereign debt, refers to money borrowed by the government from domestic or international sources (Ncanywa and Masoga, 2018). It is the outstanding financial obligation of the government (Chouraqui, Jones and Montador, 1986). In both ancient and medieval times, public debt consisted of loans in kind instead of money, borrowed for short periods, and in times of crisis, such as war and natural disasters (Salsman, 2017). From the seventeenth century onward, the forms of public debt evolved to the issuance by the government of debt securities publicly traded in the market with visible prices and yields in public exchanges (Salsman, 2017). The South African government debt exists in the form of dated government bonds, foreign bonds, and treasury bills (SA National Treasury, 2019). Domestic debt constitutes the bulk of public debt in South Africa, with an average composition of 89.7% of total public debt for the fiscal years 2009 to 2019 (SA National Treasury, 2022). Although foreign debt constitutes a source of financing at low-interest rates, it carries the risk of exchange rate losses in the short term, should a country's currency depreciate (Chouraqui,

Jones and Montador, 1986). Volatile exchange rates threaten the government's ability to repay this debt (Chouraqui, Jones and Montador, 1986). South Africa's domestic debt consists of marketable (average 98.3%) and non-marketable (average 1.7%) securities (SA National Treasury, 2022).

1.3 Definition of Concepts

1.3.1 Public debt

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The measurement of government debt tends to differ, depending on how government and debt are defined (Irwin, 2015). While the term government can be defined narrowly, to include the central government only, or broadly to include the general government, or to include government-owned entities (entire public sector), the general government is considered a less easily manipulated definition of government, that is comparable among countries, and does not compel the government-owned entities to follow debt and deficit rules that are applied on tax-funded

government activities (Irwin, 2015). This aligns with the International Monetary Fund (IMF) Government Finance Statistics Database (GFS) that reports countries' fiscal data based on the general government level (central government, local government, state government, and social security funds (IMF, 2023). Chouraqui, Jones and Montador (1986) concur that using the general government debt provides reasonable comparability amongst different countries and is consistent with the United Nations System of National Accounts (SNA). South Africa's government accounts used in the study are presented at the general government level, including the national and provincial government and social security funds (SA National Treasury, 2022). Although some deviations from the GFS reporting guidelines exist, the accounts primarily meet the GFS requirements (SA National Treasury, 2022). SA National Treasury continuously enhances its financial systems to meet the GFS reporting requirements (SA National Treasury, 2022). Public debt is usually measured on a gross basis as the data is readily available, and gross debt is directly linked to the level of debt service costs (Chouraqui, Jones and Montador, 1986). Measuring debt on a net basis may be inappropriate, given that the government financial assets may not be related to the government financial liabilities and government financial assets, such as holdings in state-owned entities of government infrastructure or foreign assets may have deteriorated in value, as these may be difficult to sell or may have been negatively impacted by currency depreciation (Irwin, 2015; Chouraqui, Jones and Montador, 1986). For this study, public debt is measured on a gross basis as published by SA National Treasury.

Whereas there are different theories of public debt, South Africa’s strategy is to utilise public debt as a source of financing budget deficits and repayment of maturing debt (SA National Treasury, 2019). The use of public debt avoids austerity measures, such as the imposition of higher taxes, which are economically unacceptable, or strict or reduced government spending, thereby limiting the government from conducting its fiscal policy (SA National Treasury, 2023). The budget deficit financed through public debt is influenced by total government expenditure, which may be classified as either productive or unproductive.

1.3.2 Productive and unproductive government debt and expenditure

Public debt is applied for according to two primary purposes: to finance high investment; or high consumption expenditure (deficit spending) (Hassan, 2013, cited in Zharku, 2018). Public debt

may then be classified into productive and unproductive debt, based on the government expenditure it finances (Hassan, 2013, cited in Zharku, 2018; Aybarc, 2019). Productive debt refers to debt undertaken by the government to finance productivity-enhancing investments that generate economic returns and contribute to long-term economic growth, such as infrastructure development (Hassan, 2013, cited in Zharku, 2018; Aybarç, 2019). In this way, productive debts generate a steady income stream for the government (Aybarç, 2019). Typically, the government covers the interest and principal debt payments using the revenue generated by these projects (Aybarç, 2019). Unproductive debt is applied to finance current government expenditures, including warfare, famine relief, and social consumption (Hassan, 2013, cited in Zharku, 2018; Aybarç, 2019), which do not contribute to the productive capacity of the economy (Aybarç, 2019). These debts are typically repaid using tax revenues, placing a financial burden on society (Aybarç, 2019). Classical economists such as Adam Smith, David Hume, David Ricardo, John Stuart Mill, and Jean-Baptiste Say view public debt as detrimental to a nation's ability to accumulate wealth and prosperity (Salsman, 2017), and as unproductive and wasteful by nature, given the inefficiencies that tend to be found in government administration (Tsoulfidis, 2007; Bilan, 2016). According to classical economists, productive government expenditure refers to expenditure on income-generating infrastructure, and public debt should not finance ordinary government expenditure and infrastructure that will not generate income (Salsman, 2017). Classical economists support balanced budgets, fiscal prudence, and avoiding debt accumulation (Salsman, 2017).

John Maynard Keynes also believed that public debt ought to finance public capital investment instead of ordinary spending and transfers, and deficit spending is only warranted during economic depressions to boost the economy (Salsman, 2017). Generally, most government expenditures are productive, and are economic expenditures as their focus is to contribute to the long-term economic growth of a country, to the enhancement of productivity, and to generate positive externalities for the population. To mention a few, investments in infrastructure that facilitate transportation, trade, and communication boost economic activity and productivity. Spending on education and skills development enhances human capital which is crucial for sustained economic growth (Mlachila and Moeletsi, 2019; Makhoba, Kaseeran and Greyling, 2019). Expenditure on research and development drives innovation and technology that can yield long-term economic benefits and foster competitiveness (Makhoba, Kaseeran and Greyling, 2019). Expenditure on healthcare and

public health systems enhances the well-being of the citizens and leads to a productive population. Government support for entrepreneurship and small businesses encourages innovation, business, and economic diversification, as well as job creation (Antoniades and Haan, 2019). Investment in social services, including community development programmes, childcare, and elderly care, improve social well-being, reduce inequality, and enhances the overall quality of life. Investment in projects that promote environmental sustainability contribute to sustainable development and ensure that there will be a healthy environment for future generations. As much as the above activities are productive, they can also be unproductive, due to the inefficient allocation of resources, or wasted resources such as expensive and unnecessary projects that are not economically viable, but instead politically driven; inefficient social welfare programmes; misappropriation of government funds; excessive bureaucracy and administration costs that do not add value; and excessive government employees' salaries and benefits that are not commensurate with responsibility. Productive and unproductive expenditures are defined from the perspective of the method of financing government expenditure for the study (Ncanywa and Masoga, 2018; Salsman, 2017; Zharku, 2018; Aybarç, 2019). Government expenditure that is regarded as compulsory, recurring, or ordinary (public consumption) should be financed from taxation revenue (Ncanywa and Masoga, 2018; Salsman, 2017; Zharku, 2018). Expenditure in respect of infrastructure projects, investment programmes, and other government initiatives (public investment) that contributes to economic growth should be financed by borrowings when government revenue is insufficient to cover such spending.

1.4 Causes of Public debt

There are several reasons why governments borrow and find it challenging to achieve balanced budgets. Borrowing enables countries to carry-out their fiscal policies to meet the needs of the country; to stimulate and stabilise economic activity, create jobs, and support businesses during times of economic downturn, recessions, or crisis. Furthermore, it enables governments to finance budgets deficits and avoid austerity measures; to manage existing debt obligations; or to engage in long-term investments that are expected to generate benefits in the future. Debt is therefore incurred to fund budget deficits and government expenditures. In the realm of fiscal management, it is not always feasible for governments to achieve balanced budgets through either tax increments, or reductions in expenditures resulting in austerity measures (SA National Treasury,

2020). The printing of money is also an unfavourable approach, as it does not contribute real value, where, without additional production, growth consumption remains unattainable. Therefore, in pursuit of their fiscal policy objectives, or to fund essential government spending programmes, when tax revenue is not increasing rapidly (Yared, 2019), government borrowings serve as the principal means of securing the requisite funds. It is not only the amount of government expenditure that impacts public debt and economic growth, but the type of government expenditure. Nonetheless, it is imperative that borrowing occurs within sustainable thresholds.

1.5 Extent of Public Debt in South Africa and Other Countries

There is rising concern about the increasing level of public debt, and countries' capacity to sustain their debt levels, especially in low-income and emerging economies. The global financial crisis and the Covid-19 global pandemic exacerbated the high public debt levels that most countries experienced before the pandemic. According to the IMF (2021), the global debt database recorded the most significant one-year debt surge since World War II, with the pandemic causing global debt to rise to $226 trillion or 256% of GDP in 2020. Debt distress may cause countries to incur higher borrowing costs and prevent them from investing in growth and development opportunities. South Africa shows a history of slow economic growth, rising unemployment, widening inequality gap, poverty, and increasingly rapid debt. Other factors such as political instability, corruption allegations, inefficiencies in the allocation and administration of resources, shortage of skilled labour, and unfavorable credit ratings may have harmed the economy, and influenced the rising public debt in South Africa.

South Africa's national government debt increased by 212% between 31 March 2000 (R381 billion) and 31 March 2012 (R1 188 billion), due to the higher issue of government instruments, which enabled the government to fund a higher budget deficit (SARB, 2013). For the 2019 fiscal year, South Africa's gross loan debt was R2 788 billion, representing an increase of 135% since 2012 (SARB, 2023). The 2008/2009 financial crisis resulted in the growth in government expenditure exceeding the growth in government revenue (SARB, 2013). The budget balance for the 2008 fiscal year saw a surplus of R35 billion (SA National Treasury, 2022); the last positive budget balance just before the 2008/2009 financial crisis. By the 2019 fiscal year, the budget balance saw a deficit of R195 billion (SA National Treasury, 2022), a negative variance of 654%

since 2008 and the budget deficit has been increasing significantly since then. The South African Government Debt to GDP ratio as of 31 March 2021 was 79.1% (SA National Treasury, 2020/2021), an increase of +150% since 2009. The rising public debt and deficit spending in South Africa do not seem to have positively affected its economic and social life, given its socioeconomic issues and civil unrest during July 2021. According to the OECD (2020), although South Africa has a robust redistributive policy, it ranks low on many dimensions of the better life index, especially in terms of income and wealth, life satisfaction, and jobs.

South Africa is not the only country with rising public debt. Some developed countries such as the United Kingdom, the United States, and Singapore see their public borrowing above 100% of GDP (IMF, 2020). To be sure, history offers examples of even higher debt levels (Piketty, 2014). In Britain, public debt twice exceeded two years of national income, first at the end of the Napoleonic Wars, and then again after World War II (Piketty, 2014). Nevertheless, there are many good and bad reasons why governments sometimes resort to borrowing and accumulating debt if they do not inherit it from previous governments (Piketty, 2014; Majam,2017). Budget deficits and debt accumulation can serve two purposes: they provide a means of redistributing income over time and across generations, and they serve as a means of minimising the deadweight losses of taxation associated with the provision of public goods and services (Alesina and Tabellini, 1987). The debt-to-GDP ratio measures a country's stability, economic or fiscal health, and level of debt sustainability. It estimates a country's ability to repay its current debts relative to the size of its economy. When government debt accumulates over time, it can affect a country's fiscal health, as well as its long-term economic sustainability. Higher government debt levels can increase interest payments, reduce fiscal flexibility, and potentially crowd-out private investment.

1.6 Research Problem

The purpose of this section is to provide an overview of the multiple economic challenges facing South Africa, such as rising public debt, poverty, inequality, high unemployment, and stagnant economic growth. It examines how these issues are intertwined and explores the factors contributing to South Africa's economic difficulties. It highlights the role of public debt in financing government expenditures, the implications of high public debt levels and budget deficits on the economy's ability to grow and recover. By presenting data on debt, deficit spending,

government expenditure, and infrastructure investment, the section aims to review how the allocation of resources and fiscal policies contribute to the ongoing economic stagnation.

South Africa faces numerous economic problems, including rising public debt, poverty, inequality, and high unemployment. The International Monetary Fund (2023) recognises that public debt can be an essential resource for governments to finance investments in growth and development. However, the IMF (2023) also emphasises that governments must service their debts and maintain sustainable debt levels. The Heritage Foundation's 2023 Index of Economic Freedom reports that South Africa's economic freedom status is mostly unfree, with a score of 55.7% below the world average of 59.3% (The Heritage Foundation, 2023). Corruption and the weak rule of law are cited as factors that erode overall economic competitiveness (The Heritage Foundation, 2023). The Heritage Foundation (2023) noted a positive relationship between economic freedom and human development, long-term economic growth, and prosperity. Accordingly, South Africa's 2023 economic freedom score of 'mostly unfree' reflects the country's high levels of unemployment, poverty, inequality, and stagnant economic growth. Francis and Webster (2019) also noted this, indicating that there has been no improvement in poverty and inequality since the 2015 trend, as per their study findings.

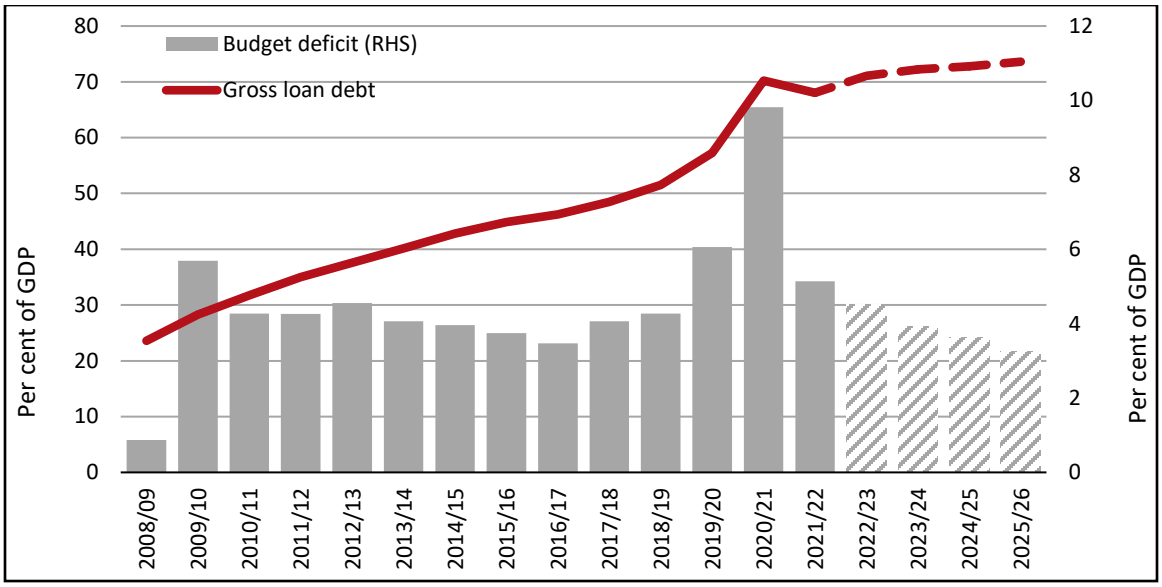
The South African economy has been fragile since the 2008/2009 global financial crisis (Burger and Calitz, 2021), where the COVID-19 pandemic had a profound impact globally, including in South Africa. Lockdown measures and restrictions implemented to curb the spread of the virus have resulted in disruptions to economic activities, reduced consumer spending, business closures, and job losses, as observed by Burger and Calitz (2021). South Africa has also struggled with high levels of unemployment for an extended period (Kingdon and Knight, 2007; Makaringe and Khobai, 2018). The pandemic has exacerbated this issue, leading to widespread job losses across various sectors. In July 2021, South Africa experienced widespread looting and unrest in some parts of the country (Vhumbunu, 2021). This social unrest, triggered by numerous factors, including socioeconomic inequalities, further strained the economy (Vhumbunu, 2021). The damage caused to businesses, infrastructure, and investor confidence harmed the economy, and hindered recovery efforts (Vhumbunu, 2021). South Africa has faced challenges in its electricity supply for several years, with increasingly frequent power outages due to an inadequate and aging

infrastructure. These electricity shortages, offset by load shedding, have adversely affected businesses, productivity, and investor confidence as observed by Ateba, Prinsloo, and Gawlik (2019) on the importance of electricity to industrialisation. The unreliable power supply continues to pose serious challenges to economic growth and stability. South Africa has experienced inflationary pressures, contributing to many households' high cost of living. Rising prices for essential goods and services and increasing interest rates place a strain on consumers' purchasing power and impact economic recovery efforts. The occurrence of severe weather events, such as floods, can have a devastating impact on infrastructure, agriculture, and communities. The damage caused by floods in some parts of the country (2023, latest in KZN and Eastern Cape) can disrupt economic activities, result in displacements, and may require significant resources for recovery and reconstruction. These challenges present significant hurdles to South Africa's economic recovery and development, which has struggled to recover since the 2008/2009 global financial crisis. Addressing these issues requires a comprehensive approach that includes targeted policies to stimulate economic growth, job creation, infrastructure investment, social welfare support, energy sector reforms, and climate resilience measures.

According to the SA National Treasury (2023) data, between 1999 and 2008, South Africa experienced an average economic growth rate of 4 percent. However, this average declined to 1.4% between 2009 and 2019 (SA National Treasury, 2023). The growth rate then decreased to 0.4% in the first quarter of 2023 (StatSA, 2023). SARB (2023) published an unemployment rate of 33% during the first quarter of 2023. This is a substantial rise compared to the average unemployment rate of 25.8% observed between 2009 and 2019 (SARB, 2023). According to the OECD (2023) latest published data, South Africa has the highest level of income inequality in the world, with a Gini coefficient of 62%, last measured in 2017. Dyvik (2024) published a Gini coefficient of 63% for South Africa in 2021, representing the highest income inequality distribution compared to other neighboring countries. With a poverty rate of 35% (OECD, 2023), more than half of the South African population lives in poverty (The World Bank, 2023; Francis and Webster, 2019), ranking below only three other countries. Government expenditure in South Africa has exceeded government revenue since the global financial crisis, starting from the 2009 fiscal year (SA National Treasury, 2023). According to the SA National Treasury (2023), the

government outlook suggests that this trend of expenditure exceeding revenue and high debt levels is expected to continue until at least 2030.

Figure 1 Budget deficit and Gross loan debt

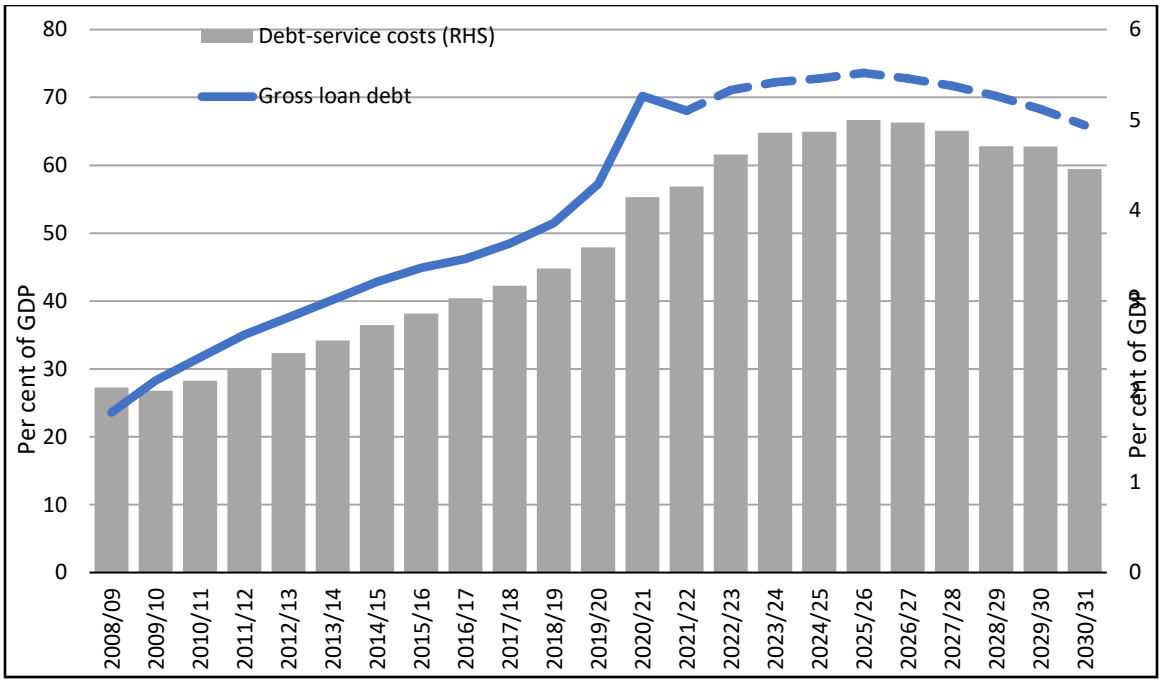


Source: SA National Treasury 2023 Budget Review Figures

Due to government expenditure growing faster than government revenue and GDP since 2009, the budget deficit and government debt are projected to continue increasing into the 2030s, as indicated in Figure 1.1. According to the SA National Treasury (2023), current costs, including compensation to employees, rising debt service costs, and transfers to households, are identified as contributors to increased government expenditure and the primary budget deficit (SA National Treasury, 2023). This is in contradiction with the Keynesian view that the increased government expenditure and deficit spending serves as a tool to stimulate the economy (Salsman, 2017). The SA National Treasury (2023) further notes that infrastructure investment spending declined as a proportion of the total government expenditure during the years mentioned, implying the share of government expenditure allocated to infrastructure investment decreased relative to other expenditure items (SA National Treasury, 2023). This is aligned to the classical economists view that deficit spending and debt should not be used to fund ordinary government expenditure as it will harm the economy through further increases in government expenditure due to increased debt service costs (Salsman, 2017). Buthelezi (2023) and Molefe and Choga (2017) found in their studies that there is a negative relationship between government expenditure and economic growth

in South Africa, with an increase in government expenditure leading to a decline in economic growth. According to Molefe and Choga (2017), most nations still depend on government expenditure as the main provider of social security and the development of physical infrastructure.

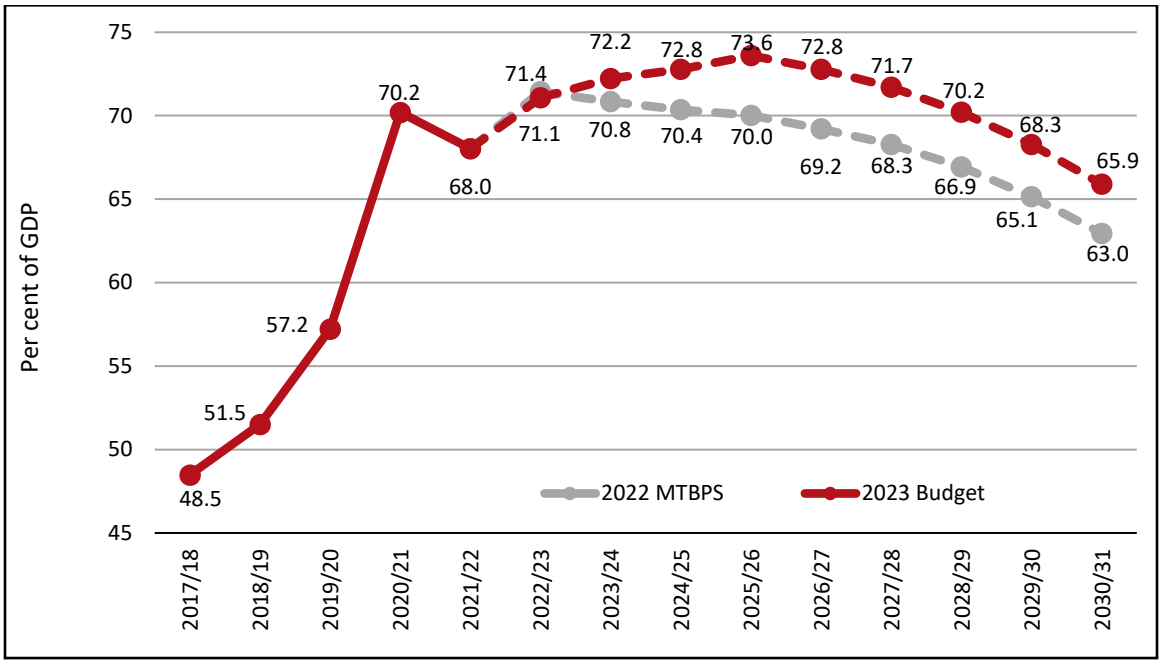
Figure 2 Debt-service costs and Gross loan debt



Source: SA National Treasury 2023 Budget Review Figures

Figure 1.2 depicts a positive relationship between increasing government debt and rising finance costs. As government debt increases, the costs associated with servicing that debt also increase. The rise in finance costs can impact the government's ability to allocate resources to infrastructure development, education, healthcare, and other productive sectors of the economy. Instead, more government funds are directed toward debt servicing, including interest payments and redemptions.

Figure 3 Gross debt and GDP Outlook



Source: SA National Treasury 2023 Budget Review Figures

Figure 1.3 illustrates the debt-GDP and projected ratios towards 2030/31. Public debt in South Africa is projected to increase to R5.84 trillion in 2026 (SA National Treasury, 2023). This represents a significant increase of 108% from the debt level observed in 2019. Furthermore, the projection suggests that public debt will stabilise at 73.6% of GDP in 2026 (SA National Treasury, 2023). The rise in public debt is due to elevated redemptions and expected Eskom debt relief at R184.4 billion annually for the next three years, until 2026 (SA National Treasury, 2023). Between 2009 and 2019, public debt rose by 349% (2009: R0.63 trillion; 2019: R2.81 trillion), and it continues to rise significantly, raising concerns about fiscal sustainability in South Africa.

This review examined the numerous economic challenges facing South Africa, including rising public debt, poverty, inequality, high unemployment, and stagnant economic growth. It highlights how these issues have been exacerbated by external shocks like the 2008/2009 global financial crisis, the COVID-19 pandemic, social unrest, and electricity supply problems, all of which have negatively impacted economic recovery and development. South Africa's increasing public debt, driven by government expenditure consistently exceeding revenue, has not translated into

economic growth. Instead, debt servicing costs have risen, constraining resources available for productive investments like infrastructure, education, and healthcare.

The analysis shows that South Africa's economic freedom score is "mostly unfree," reflecting high levels of unemployment, poverty, and inequality, further compounded by corruption and a weak rule of law. With the budget deficit and public debt projected to continue rising into the 2030s, concerns about fiscal sustainability are growing. The review emphasised the need for targeted policies to stimulate economic growth, job creation, infrastructure investment, energy sector reform, and social welfare support to overcome these economic hurdles. It underscores the importance of understanding how public debt is utilised in South Africa to address the stagnation and achieve sustainable economic recovery. It is therefore crucial to examine how public debt is utilised in South Africa to understand the reasons behind the stagnant economy.

1.7 Research Objectives and Aims

This study's objectives are:

1. To examine how public debt has been utilised in South Africa from 2009 to 2019. This involves analysing the purposes for which public debt was incurred, such as infrastructure investment, social programmes, debt servicing, or other expenditure items.
2. To understand the factors contributing to budget deficits in South Africa during the period under review. It seeks to identify the main drivers of deficits, including both revenue shortfalls and expenditure overruns. Additionally, the study will analyse the composition of these deficits, including the different components of government expenditure and its relation to public debt.
3. To examine why public debt may not have resulted in the desired economic outcomes, while assessing the factors influencing this relationship.

1.8 Relevance of the study

The study contributes to the ongoing policy debates and decision-making processes regarding fiscal policy, debt management, and economic development. It aims to provide empirical evidence and analysis that policymakers, researchers, and stakeholders can draw upon when formulating strategies and making informed decisions. Analysing the relationship between public debt and

economic growth helps assess the effectiveness of debt-financed investments in promoting economic development. Understanding why public debt has not resulted in expected economic growth and well-being provides insight into potential problems that need to be addressed. Understanding the relative importance of public investment compared to public consumption helps policymakers allocate resources effectively in order to maximise economic growth potential. The study aims to highlight that investment in infrastructure is crucial, and that public investment in education, healthcare, and social programmes contributes to human capital development and societal well-being, recommending further research on the impact of such investment in economic development in South Africa.

1.9 Structure of the study

Chapter 1 presents the introduction and background chapter providing an overview of the research topic and sets the stage for the study. It introduces the research topic, the nature of public debt, the causes of public debt, and the extent and effects of the rising public debt. The main concepts of the study, namely public debt, productive and unproductive debt/expenditure, are also introduced and defined according to existing research and in the context of this study.

The literature review in Chapter 2 analyses existing research and theories on the use of public debt. The theory of public debt as a financial instrument and a source of finance for the government is linked to the resource-based theory of applying public debt to create a competitive advantage. This is because resource-based theory is an efficiency-based theory, that addresses the way in which internal resources are used as a source of competitive advantage. The application of the VRIO framework is explored to determine if the public debt could be a source of competitive advantage. The chapter also explores the theoretical foundations of public debt, including classical theories and Keynesian perspectives. It helps readers understand the different conceptual frameworks, and their implications for economic policies.

Chapter 3 on methodology describes the research paradigm and outlines the research approach and design, the data collection methods, the data analysis procedures, the limitations and delimitations of the study, and the ethical considerations. A post-positivist paradigm is adopted for the study. Given the South African dynamics of the widening inequality gap, rising unemployment, and

poverty, and political instability, a critical realism theory is adopted that recognises that all knowledge is humanly constructed, is influenced by various social, cultural, and historical aspects; and that different people may have different understandings or views about the same situation (Chilisa and Kawulich, 2012). A quantitative method of inquiry is identified as one of the methods appropriate to investigate a phenomenon for the post-positivism paradigm (Chilisa and Kawulich, 2012). Descriptive statistics are used to analyse the correlation and cause-and-effect relationship between the dependent variable and the independent variables. The dependent variable refers to the budget deficit financed through public debt, while the independent variables refer to government revenue and the different categories of government expenditures. Following this analysis is an analysis of the correlation between public and private investment in total and economic growth, measured at real GDP growth. A t-test is performed to test the hypothesis of the strength of the relationship between the variables. Secondary data collection sources are used, and the data is statistically tested. This data collection method aligns with statistical research (Kumar, 2011). Quantitative and, in other instances, qualitative data for all the research variables are collected from the South African government's online publications. The latest publications are used for the years under review, as they incorporate updated reporting classifications and actual outcomes. The data is analysed in tables and figures and interpreted accordingly. The scope of the research is limited to a single country, South Africa, and for a specific period of 11 years, from 2009 to 2019, covering the period of the beginning of the global financial crisis and the period just before the Covid-19 pandemic. This is the case as the study seeks to investigate the causes of the rising public debt, and its effect ten years after the global financial crisis. The data as extracted from government publications is assumed to be an accurate reflection of the financial affairs of the national government of South Africa, because it is the data that is used in support of the South African annual budget reviews and presentations, and South Africa’s economic and financial data, which is publicly available.

Chapter 4 presents the results and findings chapter of the study, describes the data analysis methods employed, provides an analysis of the data collected, and presents and interprets the study outcomes. Finally, Chapter 5 is the conclusion and recommendations chapter.

1.10 Conclusion

The above review found that the rising levels of public debt in South Africa, coupled with the complexities of its composition such as the predominance of domestic debt and the risks associated with foreign debt pose significant risks to the country's economic stability. It highlighted that increased debt servicing costs and exchange rate volatility could further constrain the government's ability to allocate resources toward productive investments, thereby negatively affecting economic growth and development. The review also found that the management and utilisation of public debt, along with the balance between productive and unproductive expenditures, play a critical role in determining fiscal stability and economic outcomes in South Africa. By highlighting the risks associated with rising debt levels, these findings create a context for examining various theoretical perspectives and empirical studies on the role of public debt in economic policy.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This section reviews the background of public debt and economic growth trends in South Africa, drawing on empirical studies to highlight key developments and challenges over time. It examines how these trends have evolved in response to various economic, political, and social factors. Additionally, the section explores the theoretical foundations of public debt and the Resource-Based View (RBV) theory, which serve as the two core frameworks guiding this study. By reviewing literature on public debt theory, the section aims to understand the implications of debt accumulation on economic stability and growth. Simultaneously, the RBV theory is examined to assess how public debt, like other resources, can be strategically managed to achieve competitive advantage and sustainable development. Together, these frameworks provide a comprehensive basis for analysing the strategic use and impact of public debt in South Africa.

2.2 Background of public debt and economic growth in South Africa

The slow economic growth rate in South Africa could have resulted from the democratic government assuming excessive debt accumulated by the former national government. Much of the government debt in the early 1990s was incurred before the democratic government took power (Calitz, Du Plessis and Siebrits, 2011). By 1994/1995, the debt-GDP ratio was around 50%, a 59% increase from a 1990 ratio of 31.5% (Calitz, Du Plessis and Siebrits, 2011). This sharp rise in public debt was the result of the democratic government assuming the government pension liabilities that had been unfunded since the 1960s and consolidating the debts of the former apartheid homelands into the national debt in 1994/1995 (Calitz, Du Plessis and Siebrits, 2011). Calitz, Du Plessis and Siebrits (2011) adjusted the South African public debt to an accrual basis to take account of these two significant obligations that were assumed in the early 1990s, namely the actuarial pension fund deficits, and the debts of the former homelands (Transkei, Bophuthatswana, Venda, Ciskei (TBVC) and Self-Governing Territories (SGTs)), which, according to their calculation, adjusted the government debt upwards. The authors suggest that failing to adjust the cash public debt to consider the evolution of the two obligations, gives the impression that there was profligacy during the early 1990s, and that the periods before the 1990s were exemplary of an efficient fiscal system.

Between 1981 and 1993, South Africa's economic growth experienced in earlier years was reversed by weak trade, global oil prices, and economic sanctions, which led to rising public debt (Du Plessis and Smit, 2003 cited by Saungweme and Odhiambo, 2018). Public debt and debt service costs strain the fiscal policy, limiting its room to maneuver and invest in public development and revenue-generating projects (Saungweme and Odhiambo, 2018). Although the obligations mentioned above were significant, the debt-to-GDP ratio between 1962 and 1994 fell well below the sustainable debt level of 50% (SA National Treasury, 2022). Between 1994 and 2015, the South African government undertook numerous economic and financial reforms to improve financial stability, resulting in average economic growth rates between 2004 and 2006 as high as 5.1% (Saungweme and Odhiambo, 2018). The real growth rate between 1995 and 2004 averaged 3% and 1% GDP per capita, which was an improvement compared to the previous ten years' growth average of 0.8% GDP and -1.3% GDP per capita (1985 to 1994) (Du Plessis and Smit, 2006). However, since democracy, the growth rate was considered modest compared to international standards, which was disappointing to many who had high expectations from the democratic government (Du Plessis and Smit, 2006). According to Makhoba, Kaseeran and Greyling (2019), the South African government expenditure has increased more than government revenue from 1960 to 2017, increasing budget deficits and public debt. The intermittently large deficits since the sixties are also noted in the study of Du Plessis and Smit (2006), with average per capita economic growth rate consistently falling short of the benchmark set by a comparable group of countries. Makhoba, Kaseeran and Greyling (2019) discovered through their study, that in South Africa, government expenditures have a negative effect on economic growth and government revenue, where capital formation has a significant positive impact on economic growth in the long run. Makhoba, Kaseeran and Greyling (2019) meanwhile claim that the findings of their study were consistent with the findings of other scientific studies, which discovered that significant portions of government expenditure in developing countries are on social transfers, education, and healthcare systems, instead of income-generating investments. The composition of government expenditure is however dependent on the objective that governments want to achieve. In the democratic South Africa increased government spending in education, health, and social transfers were influenced by the policy choice of the Redistribution and Development Programme (RDP) and the Growth, Employment, and Redistribution strategies (GEAR) (Burger and Calitz, 2015). The primary aim of fiscal policy was to notably increase expenditure, particularly in crucial

areas like social services, which are essential for sustainable human development (Naidoo *et al*., 2008:32 cited in Burger and Calitz, 2015).

Even before the global financial crisis, South Africa's economy had grown more slowly than those of its peers (Eyraud, 2009; Du Plessis and Smit, 2006). Eyraud (2009) stated that despite South Africa's strong economic performance from 1996 to 2006, characterized by a stable economy, abundant natural and labour resources, and robust financial markets (Saungweme and Odhiambo, 2018), it fell behind a panel of ten comparable economies examined in the study. The panel of ten fast-growing countries averaged a robust annual real per capita GDP growth rate of 4.7%, while South Africa lagged behind that with an average growth of 1.7% per year between 1996 and 2006 (Eyraud, 2009). The study of Eyraud (2009) further found the following explanations for slow economic growth in South Africa, compared to the ten comparable countries: (1) In South Africa, growth in domestic consumption primarily emerges from domestic demand (two-thirds), which includes both household consumption, and government expenditure (Eyraud, 2009). Conversely, foreign demand accounts for a smaller portion of consumption growth (one-third) (Eyraud, 2009). In contrast, the panel of comparable countries in the study experiences the opposite pattern, with a larger share of consumption growth attributed to foreign demand (Eyraud, 2009). This difference in consumption patterns suggests that South Africa's economy is less export-driven than that of other countries, and the trade balance contributes less to growth (Eyraud, 2009). High consumption also suggests a low-saving culture that constrains the expansion in investment (Eyraud, 2009).

During the years 1996 to 2000, the GEAR strategy in South Africa aimed to create avenues for allocating more resources towards socio-economic development, therefore government expenditure on investment experienced a decline during this period (Burger and Calitz, 2015). (2) Labour productivity growth in South Africa contributes relatively little to overall economic growth (1%) compared to the panel of comparable countries (Over 4%) (Eyraud, 2009). The skills and education levels of the workforce influence labour productivity (Eyraud, 2009). If South Africa faces challenges regarding skill gaps, limited access to quality education, or inadequate training programmes, this can hinder labour productivity growth (Eyraud, 2009; Mlachila and Moeletsi, 2019). Investing in human capital development and improving workforce skills can help enhance labour productivity in the long run (Eyraud, 2009; Mlachila and Moeletsi, 2019). (3) Employment

negatively contributes to economic growth in South Africa, while labour force participation has a positive impact (Eyraud, 2009). In contrast, the panel of countries experiences the opposite pattern, where employment contributes positively to growth, while labour force participation has a negative effect (Eyraud, 2009). This could be due to the fast-growing population and labour force outpacing employment opportunities, lack of job creation, or significant gap in skills required, and labour market dynamics leading to higher unemployment rates in South Africa (Eyraud, 2009). (4) Research and Development (R&D) expenditures amounted to 0.76% of GDP, with 307 R&D researchers per million people in South Africa (Eyraud, 2009). In contrast, the panel of countries had higher R&D expenditures, at 0.92% of GDP with 1207 R&D researchers per million people (Eyraud, 2009). This suggests that South Africa has a lower innovation capacity, and potential for knowledge creation and sharing than did comparable countries (Eyraud, 2009). (5) In South Africa, the contribution of investment to GDP growth is relatively low compared to the panel (a third of the panel countries), while consumption makes a relatively higher contribution (Eyraud, 2009). This disparity suggests that South Africa's economy relies more on consumption-driven growth, with household and government spending significantly stimulating economic activity (Eyraud, 2009). Conversely, the contribution of investment, including private and public sector investments in productive assets, is relatively lower (Eyraud, 2009). All the above findings speak to a generally low investment expenditure in South Africa, which the study considers to be the main reason for the slow economic growth in the country (investment in infrastructure development, human capital, research and development, and technology). Alternatively, the slow growth could be attributable to shortcomings in proper project planning and management.

Statistics South Africa (2020) reported that economic growth was the lowest in 2019 since the 2008/9 global financial crisis. South Africa's first recession after 1994 occurred from Q4 of 2008 to Q2 of 2009, and the second in Q1 and Q2 of 2018 (Statistics South Africa, 2020). GDP decreased by 16% between Q1 and Q2 of 2020, mainly due to the impact of Covid-19 lockdowns (Statistics South Africa, 2020). A slight recovery of 0.4% increase in GDP was observed in Q1 of 2023 (SA National Treasury, 2023). Governments often engage in borrowing, and it is relatively rare for countries to maintain balanced budgets consistently (Haffert, 2019; Afanasiev and Shash, 2020). Globally only a few countries are known for maintaining balanced budgets or budgets

surpluses and the list include Australia, Switzerland, Norway, Denmark, Finland, Sweden, New Zealand, and Canada (Haffert, 2019; Afanasiev and Shash, 2020).

The theories of public debt have divergent views on the role and impact of public debt on the economy. Classical economists emphasise the importance of fiscal responsibility and caution against excessive government spending, particularly if it leads to budget deficits and the accumulation of public debt (Salsman, 2017; Bilan, 2016; Tsoulfidis, 2007). They argue that public debt can crowd-out private investment, reduce economic growth, and burden future generations with the cost of paying back the debt (Salsman, 2017; Bilan, 2016). On the other hand, Keynesian economists stress the potential benefits of public debt in stimulating economic activity during recessions or periods of slow growth (Salsman, 2017; Bilan, 2016). They argue that government spending can boost aggregate demand, create jobs, and lead to long-term economic growth (Salsman, 2017; Bilan, 2016). They believe public debt can be valuable for promoting full employment and macroeconomic stability (Salsman, 2017). While classical economists view public debt as harmful to the overall economy, advocating for fiscal discipline and balanced budgets, Keynesian economists view public debt as a potential tool for addressing economic downturns, where they advocate for the strategic use of deficit spending to support economic growth and stability. Ricardian equivalence theory challenges the Keynesian view, by suggesting that any increase in government spending financed by borrowing will be offset by future tax increases or reduced government spending, negating any positive impact on aggregate demand (Barro, 1989). The middle-ground view recognises that public debt can help promote economic growth and stability, but acknowledges the potential risks and challenges associated with excessive debt accumulation (Bilan, 2016). Proponents of this view argue for prudential debt management, including ensuring that public spending is productive and efficient, maintaining a sustainable debt-to-GDP ratio, and using public debt to finance investments that generate long-term economic benefits (Bilan, 2016). Overall, the various theories of public debt, such as the classical theory of balanced budgets and fiscal prudency, the Keynesian theory of deficit spending during economic recession, the Neoliberal economists of fiscal austerity to avoid increasing debts, future economic difficulties, and reduced welfare, and the Monetarist economists who believe in the supply of money in order to stimulate economic growth, reflect different perspectives on the role and impact of government spending and public finance on the economy (Bilan, 2016). The best approach may

depend on factors such as economic conditions, debt level, and public spending quality (Bilan, 2016).

Furthermore, the Heritage Foundation (2023) warns that countries that incur high debt levels to fund government spending crowd out private-sector investment, compromising job creation and economic growth, a sentiment supported by classical economists. South African government's ability to manage public debt is therefore of notable concern. Overall, South Africa's economic challenges, such as rising unemployment, inequality, electricity shortage, and alleged government corruption, appear complex, and the government will need to address multiple issues simultaneously to promote sustainable economic growth and development. The government and private sector are different entities, that require different management approaches. While the private sector's goal is to create value for a variety of stakeholder such as shareholders, employees, customers, suppliers, and communities they operate within, the government is responsible for providing public goods and services to its citizens per the government's policies (Rainy, 2009, cited in Rosenberg Hansen and Ferlie, 2016). Therefore, the government's management principles ought to be geared towards achieving these goals and towards ensuring efficient resource allocation to meet the needs of diverse groups of people (Rainy, 2009, cited in Rosenberg Hansen and Ferlie, 2016). The private sector also holds significant influence in the economy, particularly in advancing sustainable development through its support of the United Nations' Sustainable Development Goals for 2030 (Rashed and Shah, 2021). In practice, the private sector bears a crucial responsibility in tackling a country's social, economic, and environmental challenges (Rashed and Shah, 2021). Collaborative efforts between the public and private sectors are thus essential for achieving success. The government's operating environment is dynamic and complex, given the accountability to a large group of people and constant public scrutiny (Rosenberg Hansen and Ferlie, 2016; Boyne and Meier, 2009). Hence, effective management of government resources requires a strategic approach that focuses on control, monitoring, and fair distribution of resources (Rosenberg Hansen and Ferlie, 2016). One such approach is the resource-based view, which emphasises utilising resources to achieve competitive advantage and improve performance (Rosenberg Hansen and Ferlie, 2016). Moreover, the government ought to prioritise operational efficiency and successful performance to achieve its goals effectively, just like the private sector (Rosenberg Hansen and Ferlie, 2016). As a result, policies, programmes, and projects must be

planned, executed, and evaluated effectively to ensure that resources are utilised efficiently and effectively. The government must also adopt modern technologies and innovative practices to improve its operational efficiency, performance, and service delivery to its citizens.

2.3 Theoretical Framework

The study is guided by two key theoretical frameworks: the theory of public debt and the resource-based theory. The theory of public debt provides insights into how government borrowing can be managed to achieve economic goals, while the resource-based theory focuses on how resources, such as financial capital obtained through debt, can be leveraged to create a sustainable competitive advantage.

Within this context, the study examines the nature of government debt by differentiating between productive and unproductive debts. Productive debts are those used for investments that enhance the economy's productive capacity, such as infrastructure projects that generate a steady income stream and contribute to economic growth. In contrast, unproductive debts are incurred for purposes like social welfare programs or warfare, which do not directly enhance economic productivity and rely on tax revenues for repayment.

Furthermore, the study employs a resource-based perspective to analyse how public debt, when strategically managed and invested in productive assets, can provide a competitive advantage to the economy. It explores the optimal ways public debt should be utilised to stimulate economic growth, ensuring that the benefits of borrowing outweigh the costs. By integrating these two theoretical frameworks, the study offers a comprehensive understanding of how public debt can be a tool for economic development rather than just a financial burden.

2.4 The Theory of Public Debt

2.4.1 A Brief History of Public Debt

Notably, in both ancient and medieval times, rulers preferred to amass wealth through the ownership of land and religious institutions, which generated income, rather than relying on borrowing, as discussed by Salsman (2017) and Wagner (2005) and Aybarç (2019). This approach aligns with the principles of the mercantile economic system, which emphasised the accumulation of monetary reserves to amass wealth and trade power, often prioritising the accumulation of riches over the welfare of citizens, particularly those belonging to other nations (Salsman, 2017). In contrast, the Cameralism system, which emerged in Germany during the 18th and early 19th centuries, emphasised the efficient management of royal finances (Salsman, 2017). This system recognised the importance of prudent financial administration and aimed to enhance the handling of public funds (Salsman, 2017). These historical developments underscore the intricate relationship between public debt and economic systems, as well as the imperative for effective financial management to ensure the sustainability of public finances.

Historically, rulers' borrowing practices were not contingent on the nation's borrowing capacity but rather on their personal finances, as highlighted by Salsman (2017) and Holtfrerich, (2013). In such historical contexts, borrowing did not involve public debt mechanisms or the trading of financial instruments in markets (Salsman, 2017). Instead, funds were borrowed for specific purposes like warfare or infrastructure ventures, and typically for short durations (Stasavage, 2016; Salsman, 2017). Furthermore, debt was not regarded as a long-term source of funding, and loans were expected to be repaid using spoils of war, tax revenue, or wealth redistribution (Salsman, 2017). It is worth noting, however, that rulers often defaulted or disregarded their debts due to hostilities with creditors during those periods (Stasavage, 2016; Salsman, 2017). These practices might have been considered acceptable in specific historical circumstances (Salsman, 2017).

In contrast, in modern times, governments employ more transparent and regulated methods of borrowing and repaying debts (Salsman, 2017). Governments frequently resort to public borrowing as a fundamental strategy, which involves issuing financial instruments traded in the market, to secure funds for financing various investment projects (Stasavage, 2016; Salsman, 2017). These investment projects encompass critical sectors such as infrastructure development,

education, healthcare, and social welfare initiatives. The issuance of financial instruments, such as bonds or treasury bills, allows governments to raise capital from investors, both domestic and international, by promising future repayment with interest (Stasavage, 2016; Salsman, 2017). To ensure the responsible management of debt and maintain fiscal stability, governments establish comprehensive legal and institutional frameworks. These frameworks encompass regulations, laws, and oversight mechanisms designed to monitor borrowing activities, assess risk, and enforce compliance with debt repayment obligations. (Stasavage, 2016; Salsman, 2017).

In the pre-modern era (before the late 16th century), lending and borrowing money was met with suspicion, and often linked to the concept of usury, which was considered a sin in many religious traditions, as noted by Salsman (2017). Usury was defined as lending money at excessively high or unfair interest rates, thereby violating the belief in natural law that money should not be employed to generate more money without any productive activity (Meikle, 1994 cited in Salsman, 2017). Additionally, sovereigns frequently resorted to coinage debasement as a means to repay their debts, resulting in inflation and a loss of trust in the currency (Bullock, 1930 cited in Salsman, 2017). This was seen as fraudulent by creditors, who by such means were effectively robbed of the value of their loans.

These viewpoints began to shift during the Renaissance and Enlightenment periods, as new economic theories and practices emerged, leading to a better understanding of the role of money and credit in the economy (Salsman, 2017). The ascent of capitalism and the expansion of trade and commerce also played a role in legitimising lending and borrowing as valid economic activities (Salsman, 2017). Despite this evolution, debates about the morality and ethics of charging interest persist, and in some regions, usury remains outlawed. Nevertheless, in most modern societies, the significance of credit and lending as essential components of a functioning economy is widely accepted.

During the 18th century, the Enlightenment ushered in a new era of economic and financial thinking (Salsman, 2017). One prominent figure in this movement was Jeremy Bentham, an English philosopher and economist, who championed the concept of usury, asserting that it constituted an essential element of a functioning economy (Salsman, 2017). Bentham believed that

lending money at interest promoted economic activity and capital accumulation, ultimately benefiting society as a whole (Salsman, 2017). Bentham's ideas garnered strong support from other economists of the era, including Adam Smith, David Ricardo, Jean-Baptiste Say, and John Stuart Mill (Salsman, 2017). These economists regarded lending at interest as a means to invigorate economic growth, create investment opportunities, and enhance the availability of credit (Salsman, 2017).

The Enlightenment era shifted the nature of public finance, transitioning from focusing on individual rulers' financial capabilities, to the collective financial capacity of the entire nation (Salsman, 2017; Holtfrerich, 2013). This transformation gave rise to the establishment of principles in public finance, such as tax collection, government expenditures, and borrowing, which were now conducted on the public's behalf, rather than for a rulers' benefit (Salsman, 2017; Holtfrerich, 2013). This shift towards greater accountability and transparency allowed sovereign debtors to secure public loans more easily and at lower interest rates, thanks to their demonstrated creditworthiness and commitment to honouring their obligations (Salsman, 2017).

During periods of war, governments would often increase their public debt, as they needed substantial funding for their military endeavours (Salsman, 2017; Holtfrerich, 2013). However, public debt typically decreased in times of peace, as governments prioritised debt repayment (Salsman, 2017). This trend is exemplified by the United Kingdom, where the public debt-to-GDP ratio surged to 255% at the end of the Napoleonic wars in 1815, but then receded to more typical levels during peacetime (Salsman, 2017; Holtfrerich, 2013). In the past, the U.S. federal government employed sinking funds as a means to maintain its creditworthiness and prevent deficit spending when borrowing for wartime purposes, thereby preserving fiscal responsibility (Salsman, 2017). Nevertheless, sinking funds have largely fallen away in many economies like the United States and Great Britain, as they were often diverted toward populist political expenditures, rather than towards debt repayment (Salsman, 2017). High debt ratios have now become commonplace, even in times of peace (Salsman, 2017; Aybarç, 2019). This shift is attributed to the democratic political system, which has contributed to deficit spending and elevated debt ratios (Salsman, 2017).

The escalation of public debt in OECD economies, including prominent nations like Australia, France, Italy, Austria, Canada, Germany, the United Kingdom, and the United States, has been

chiefly propelled by a series of pivotal historical events. These events, spanning the 20th and early 21st centuries, include the devastating impacts of World War I, the profound economic downturn of the Great Depression, the monumental expenditures incurred during World War II, and the tumultuous economic climate leading up to and following the Great Recession of 2008-2009 (Salsman, 2017). These crises necessitated substantial government spending to finance wartime efforts, stimulate economic recovery, and mitigate the adverse effects of financial downturns (Salsman, 2017). However, beyond these extraordinary circumstances, during periods of peacetime, the expansion of government spending emerges as the predominant driver behind the persistent increase in public debt levels (Salsman, 2017). Governments often resort to borrowing to finance ambitious social welfare programmes, infrastructure projects, defense expenditures, and other public initiatives aimed at fostering economic growth, enhancing social welfare, and addressing societal needs (Aybarç, 2019). This sustained reliance on deficit spending, coupled with inadequate revenue generation or fiscal discipline, exacerbates the accumulation of public debt over time (Aybarç, 2019).

Bilan and Roman (2008) discovered that, in developed countries during the 1990s, the utilisation of budget deficits contributed to the growth of public indebtedness. They also observed that reduced public debt between 1996 and 2001 corresponded with decreased budget deficits (Bilan and Roman, 2008). However, Japan deviated from this pattern, with its public debt continuing to rise alongside its budget deficit (Bilan and Roman, 2008). The study identified several factors leading to budget deficits, including challenging economic conditions such as recessions, high government structural costs, substantial debt servicing expenses, and generous welfare benefits (Bilan and Roman, 2008). Persistent budget deficits were seen as a driving force behind the increasing level of public debt (Bilan and Roman, 2008). Barta (2018) also observed that advanced industrialised nations continued to borrow during times of peace and prosperity, leading to excessive debt accumulation. Barta (2018) noted that some countries, like Ireland, Spain, and the United Kingdom, experienced a sudden increase in public debt due to the global financial crisis. However, others, such as Japan, Greece, Italy, Belgium, and Canada, had already amassed high levels of debt over several decades prior to the crisis. The underlying cause of this unsustainable levels of debt is attributed to disagreements regarding how to address the debt trajectory (Barta, 2018). When policymakers struggle to gain support for tough decisions, like implementing

austerity measures to address the government's debt crisis, it becomes more difficult for the nation to resolve its debt issues and restore fiscal stability (Barta, 2018).

Classical economists opposed using public debt to finance routine government expenditures because it can potentially result in inflation and the crowding-out effect. This effect slows down economic activity and growth by competing with the private sector for funds that could have been invested productively (Tsoufildis, 2007; Bilan, 2016; Salsman, 2017; Aybarç, 2019). Furthermore, the escalation of public debt may lead to higher taxes to service the debt, thereby burdening future generations, who did not consent to incur it (Wagner, 2014).

On the other hand, Keynesian theory argues that deficit spending serves as a tool to stimulate aggregate demand during challenging economic circumstances (Nelson, 2015; Bilan, 2016; Salsman, 2017). Government expenditure injects income into the hands of those with government contracts, creates jobs, and propels economic growth by promoting increased spending, consumption, and investment (Salsman, 2017). The COVID-19 pandemic serves as an example of such challenging economic conditions, leading to increased government spending on business relief programmes and social assistance, coupled with decreased government revenue, due to business underperformance and rising unemployment. Governments worldwide responded with fiscal measures to mitigate the human and economic impact of the Covid-19 pandemic (Burger and Calitz, 2021; IMF, 2021). To bolster the healthcare system and provide relief to households and businesses affected by the crisis, the South African government introduced a comprehensive Covid-19 fiscal relief package totaling R500 billion (Burger and Calitz, 2021). This package aimed to support companies and workers through the Unemployment Insurance Fund, offer tax relief to workers earning below a certain threshold, provide temporary increases in social grants for vulnerable families, establish a new temporary Covid-19 grant for unemployed citizens, and allocate funds to assist small-to-medium enterprises (Burger and Calitz, 2021; IMF, 2021).

While an increase in government spending was initially anticipated to stimulate enough economic growth to stabilize the debt-to-GDP ratio, the trajectory shifted post-2011(Burger and Calitz, 2021). South Africa witnessed its government expenditure-to-GDP ratio surpassing the threshold where further increases positively influence growth (Burger and Calitz, 2021). Consequently,

additional increments in government expenditure are likely to exert prolonged adverse effects on economic growth (Burger and Calitz, 2021).

2.4.2 The Classical Theory of Public Debt

The classical view on public borrowing opposes government indebtedness, and regards it as harmful to the economy. According to classical economists like Smith, Ricardo, Mill, Say, and Hume, government indebtedness harms the economy, by drawing resources away from the private sector, thereby reducing capital formation and prosperity (Wagner, 2005; Bilan, 2016; Aybarç, 2019). They propose balanced budgets, where all government expenditure is funded from tax revenue (Wagner, 2005; Bilan, 2016; Salsman, 2017); the government limits spending within its means (Salsman, 2017; Wagner, 2005); and uses debt in emergencies or to finance productive infrastructure, as argued by Carl Dietzel who was one of the early critics of the classical theory that public debt in inherently a burden on future generations and harmful to economic growth (Holtfrerich, 2013). The classical theory also advocates for fair taxation and limited government spending on certain public goods and services (Salsman, 2017). Any additional spending ought to be prudent, and focus on infrastructure and public schooling (Salsman, 2017). This theory opposes the use of public debt to finance ordinary government spending, as it can lead to crowding out effects that slow economic activity and growth by competing with the private sector for funds that could have been invested productively (Tsoufildis, 2007; Bilan, 2016; Salsman, 2017; Wagner, 2005). Given the high levels of global debt at 247% of GDP or USD 235 trillion in 2021 (IMF, 2022), it is essential for governments to carefully consider their borrowing decisions and ensure that any debt incurred is used both productively, and for the benefit of the economy in the long term. While the classical theory of public debt may not be the only solution to address the current economic challenges, its principles provide valuable insight guiding policymakers in reaching informed decisions that promote economic growth and prosperity (Tsoufildis, 2007). It is important to note that economists' views on public debt can vary, and that these evolve based on new economic circumstances and experiences.

While classical economists may have been more skeptical of public debt, some realist economists such as Malthus, De Pinto, Davenant, Steuart, and Hamilton believe that public debt can have positive effect, if utilised prudently for productive purposes and kept at sustainable levels

(Salsman, 2017; Bilan, 2016). Another argument is that the providers of public debt willingly do so, with the expectation of more significant returns in the future (Wagner, 2005; Bilan, 2016). Therefore, such resources may be both available and unused (Wagner, 2005). Other classical economists like Mill suggest that borrowed resources raised from available, unproductive resources or foreign sources do not divert the economy's productive capital from its productive use and, therefore, are not harmful to economic growth and development (Bilan, 2016). A. Wagner (Bilan, 2016) also supports this view. However, Ricardian equivalence theory suggests that public debt may not prove an effective tool for stimulating economic growth, as it may lead to future taxation and may offset any increase in aggregate demand (Salsman, 2017). The Ricardian Equivalence theory suggests that individuals are forward-looking and rational in their economic decisions. When the government increases its spending and finances it through borrowing, individuals anticipate that future taxes will be raised to repay the debt. As a result, they save more in the present to prepare for those future taxes (Tsoulfidis, 2007; Barro, 1989). According to the theory, this increase in saving precisely offsets the increase in government spending, leading to no net effect on overall economic activity (Tsoulfidis, 2007; Barro, 1989). This is a view supported by James Buchanan, namely that public debt shifts cost from the current taxpayers to future taxpayers, who were not part of the decision to incur it (Wagner, 2005; 2014; Aybarç, 2019). While the Ricardian equivalence theory is influential in economic theory, it has been subject to empirical debate and criticism. Critics argue that individuals may not fully understand or anticipate future tax liabilities, and that other factors such as liquidity constraints, uncertainty, and imperfect capital markets can affect saving behaviour (Barro, 1989). As a result, the theory may not hold in real-world contexts. Ultimately, the impact of public debt on an economy depends on a variety of factors, including the level of debt relative to the size of the economy, the purpose for which it is used (productive/unproductive); the cost of servicing the debt; and the ability of the government to repay it in the future; investor confidence; the crowding out effect caused by extensive government borrowing; political stability and good governance, and global economic conditions such as global crises.

Classical economists generally oppose government borrowing, arguing that it harms economic growth by diverting resources from the private sector, thereby reducing capital formation. They advocate for balanced budgets where government expenditures are funded by taxation rather than debt. However, they acknowledge exceptions, such as borrowing for emergencies or productive

infrastructure projects. Some realist economists, like Malthus and Hamilton, argue that debt can be beneficial if used prudently for productive purposes and kept within sustainable limits. The Ricardian Equivalence theory suggests that public debt does not boost growth, as people save in anticipation of future taxes to repay the debt. While not a universal solution, the classical perspective offers valuable guidance on maintaining fiscal discipline and using debt productively to support long-term economic stability.

2.4.3 The Keynesian Theory of Public Debt

At the Paris Peace Conference following World War I, the victorious Allied nations sought to impose reparations totaling forty billion dollars on the defeated Central Powers, primarily Germany (Salsman, 2017; Nelson, 2015). While Keynes initially shared the classical economists' perspective that deficit spending during peacetime ought to be directed towards productive investments, the insistence on reparations for war debts led him to revise his stance. He pointed to the fiscal strain and economic hardship that repaying such debts would impose (Salsman, 2017).
In his book, *The Economic Consequences of the Peace* (1920), Keynes vehemently criticised the Treaty of Versailles and the demands for reparations from Germany. He argued that these demands would place an unbearable burden on the German economy and society, potentially resulting in political instability and conflict (Salsman, 2017; Nelson, 2015). Keynes arrived at his analysis of Germany's debt capacity and repayment prospects through his insights into macroeconomics and international finance. He also challenged the classical economic view that markets would automatically adjust to ensure full employment and economic growth (Salsman, 2017; Nelson, 2015). Instead, Keynes advocated for government intervention in order to boost overall demand and stabilise the economy. This intervention involved the use of fiscal and monetary policies like deficit spending, public investments, and maintaining low interest rates (Salsman, 2017). Keynes's ideas regarding deficit spending during economic downturns to stimulate the economy, and his arguments about demanding debt repayments beyond the debtor's capacity, continue to impact economic policies and theories significantly, and they remain the subject of ongoing debate and application today.

During the COVID-19 crisis, global debt increased by 29%, to reach 257% of GDP in 2020, due to the escalation in deficit spending as a temporary measure to mitigate the economic impact of

the crisis economic impact (IMF, 2022). This marked the most enormous one-year surge since World War II (IMF, 2021). In 2021, however, global debt decreased by 10% to 247% of GDP, representing the most significant one-year decline in the past 70 years. Nevertheless, the debt level remains substantially high when compared to previous years (IMF, 2022). This decline was primarily attributed to economic recovery, as countries scaled back their fiscal support measures to deal with high inflation (IMF, 2022). Salsman (2017) highlights several instances where both the debt level and debt-to-GDP ratio increased significantly during crises and recessions and decreased during peace and economic growth periods in both the United States and Britain.

Keynes expressed concerns about excessive debt levels, as well as the potential for debt to be used as a means of oppression (Salsman, 2017; Nelson, 2015). At the end of World War I, Keynes called for the cancellation of intergovernmental obligations, arguing that capital should not be scarce and that sovereign entities can create it abundantly. This viewpoint contrasted with classical economics, which advocated for capital accumulation and prosperity. Keynes believed an abundant supply of capital was necessary to stimulate the economy, as he saw excessive savings and insufficient investment as leading to stagnation (Salsman, 2017).

In summary, Keynesian economics advocates for government intervention during times of economic distress, including deficit spending and public debt, to stimulate demand, reduce unemployment, and foster economic growth (Salsman, 2017; Bilan, 2016; Wagner, 2014). However, criticisms have arisen that this approach has resulted in excessive debt and deficits, undermining classical principles of prudence, and balanced budgets (Buchanan and Wagner, 1977, as cited in Salsman, 2017). According to Buchanan (1987, as cited in Salsman, 2017), Keynes's theory of deficit spending has led both the government and the private sector to become profligate, causing governments to incur persistent, chronic budget deficits from which they still struggle to recover. Despite these criticisms, Keynesian theory maintains its influence in contemporary economic policy debates. Advocates assert that government intervention is essential to addressing market failures, and promoting long-term economic stability (Salsman, 2017; Bilan, 2016).

2.4.4 Other Views of Public Debt

A.C. Pigou's views on public debt, which came before the Keynesian views on public debt, changed over time. In his earlier work, he advocated for tax-financed ordinary expenditures and partial debt-financed extraordinary expenditures like those created by wars (Pigou, 1928 cited in Salsman, 2017; Musgrave, 1969). He believed that debt accumulation ought to be reduced during peacetime, which aligns with the principles of classical economics that public finance ought to foster long-term national wealth creation (Pigou, 1928, cited in Salsman, 2017; Musgrave, 1969). However, in his later work, Pigou endorsed the Keynesian justification for deficit spending to curb unemployment (Pigou, 1956 cited in Salsman, 2017). He believed that deficit spending could be justifiable in certain circumstances, and even defended perpetual deficit spending to redistribute income and wealth from the rich to the poor (Pigou, 1956 cited in Salsman, 2017).

Pigou held a different perspective from the prevailing notion that when an organisation is funded through debt, the present generation does not bear any costs, and all the costs fall upon future generations (Pigou, 1956, as cited in Salsman, 2017; Wagner, 2005). The classical view that future generations bear all the costs was also opposed by the Keynesian view (Wagner, 2005). In Pigou's view, the current taxpayers are responsible for paying the taxes used to repay the bondholders and fund the sinking fund. This results in a transfer of resources from one segment of the community (investors) to another (Pigou, 1956, as cited in Salsman, 2017; Collard, 1996; Wagner, 2005). However, in cases where the debt is utilised to invest in productive projects generating income, Pigou believed that future generations would inherit both the asset and the liability, without imposing a burden on the entire nation (Pigou, 1956, as cited in Salsman, 2017; Wagner, 2005). When debt is used to finance ordinary government expenditure, the burden of the current generation enjoyment is unfairly shifted to future generations, without any benefits to them (Wagner, 2005). When debt is employed to finance wars, Pigou asserted that it serves to protect future generations from subjugation, and thus, there is no injustice done to them (Pigou, 1956, as cited in Salsman, 2017; Wagner, 2005). The real burden of public debt is when it reduces investment from what it would have been due to increase in interest rates caused by government borrowing (Wagner, 2005; Salsman, 2017).

While Lerner and Keynes shared some similarities in their views on economic policy, there were also notable differences between their perspectives on public debt. Lerner's functional finance theory emphasised that the government ought to use fiscal policy, including public debt, to achieve specific macroeconomic goals, such as full employment, and price stability (Aspromourgos, 2014). He argued that public debt ought not to be a primary concern, as long as it serves these functional finance goals (Aspromourgos, 2014). Lerner emphasised that the government ought to focus on managing interest rates and inflation, rather than obsessing over the absolute level of public debt. If interest rates are low, and the government can borrow at favorable terms, it becomes more affordable to carry public debt, even if the debt level is relatively high (Aspromourgos, 2014). Keynesian economics (counter-cyclical spending) also stresses the importance of government intervention in the economy during economic downturns (Aspromourgos, 2014; Salsman, 2017). Although Keynes advocated for deficit spending during recessions to stimulate demand, and reduce unemployment, he also focused on the management of deficits and government debt in the 1920s and 1930s, during times of economic expansion, and expressed his concerns about the potential inflationary consequences of excessive government debt (Aspromourgos, 2014; Nelson, 2015; Salsman, 2017). However, Keynes has also been considered not debt conservative (Aspromourgos, 2014). Keynesian economics advocated for effective aggregate demand in the economy, and the multiplier effect, namely that an increase in government spending leads to an increase in income of those who get government contracts, where, from increased employment the economy is further stimulated through spending, consumption, and investment (Salsman, 2017). In contrast, classical and neoclassical economists emphasise the supply side to stimulate the economy. They focus on factors such as the labour market, production technology, and resource allocation as the primary drivers of economic activity. They argue that the supply and demand for labour, influenced by factors such as population growth, technological progress, and wages, determine employment levels, wages, and overall economic output, emphasising the importance of free markets and minimal government intervention in labour markets (Tsoulfidis, 2007; Bilan, 2016) believing that competition will lead to efficient outcomes. They argue that policies aimed at improving labour market flexibility, such as reducing regulations on hiring and firing, promoting workforce training and education, and enhancing labour mobility, can increase productivity and overall economic output. They argue that investments in research and development (R&D), innovation, and technological advancements are essential for driving long-term economic growth.

By improving production techniques, introducing modern technologies, and enhancing efficiency, economies can increase their productivity and competitiveness in the global market. They argue that policies that promote free markets, competition, and minimal government intervention in resource allocation led to optimal outcomes. By allowing market forces to determine prices, wages, and resource allocation decisions, economies can allocate resources more efficiently, leading to higher productivity and economic growth.

The rising public debt and persistent budget deficits had far-reaching economic and political consequences for Greece (Nelson, 2015), as did the global financial crisis of 2007-2008. In 2009, Greece revealed that it had been misreporting its budget deficit figures for several years (Nelson, 2015). The actual deficit was much higher than previously reported, further eroding investor confidence in Greek government bonds (Nelson, 2015). Investors required excessive interest in order to continue lending to the government, so Greece had to borrow more to finance debt (Nelson, 2015). They ended up defaulting due to the fact that by that time, the country had amassed an array of creditors (Nelson, 2015). The story of Greece shows that persistent budget deficits and high debt levels can harm an economy. The bailout loans received required Greece and the Eurozone to transfer significant portions of their national income to creditors, which they may not have had the capacity to handle (Nelson, 2015); an argument that Keynes made that the expectation to repay the war debts would cause fiscal distress to Germany (Nelson, 2015; Salsman, 2017).

Governments can be financed through various means, including taxation, borrowings, money creation, and revenue from government enterprises (Wagner, 2005). However, the optimal mix of financing methods depends on several factors, including the economic situation, political considerations, and institutional capacity. Wagner (2005) refers to the Cameralism doctrine that emerged in 18th-century Germany, where its proponents advocated for strengthening the state through rational economic policies, and administrative reform (Salsman, 2017). At the time, taxation was often seen as a burden on the population, and a potential source of social unrest (Salsman, 2017). Therefore, the Cameralists proposed alternative sources of revenue, such as government enterprises and land rents (Wagner, 2005). This view may not be applicable in modern times (Wagner, 2005), especially in a country like South Africa, where many state-owned enterprises fail to see a profitable return. Moreover, it is challenging to operate government enterprises efficiently and sustainably, given the complex political and bureaucratic dynamics. In

terms of borrowing and money creation, these methods can provide the government with additional resources in times of crisis, or when other sources of revenue prove insufficient (Wagner, 2005). However, they should be used judiciously to avoid excessive debt and inflation, which can adversely affect both the economy and society. While taxation may not be the preferred option for some, it remains an essential tool for funding public goods and services and ensuring a fair distribution of the tax burden among citizens.

The above discussion extends to the differences between Keynesian economics and classical or neoclassical approaches, particularly regarding public debt management. A.C. Pigou's views on public debt evolved from supporting tax-funded ordinary expenditures and debt-financed extraordinary ones, consistent with classical economics, to later endorsing Keynesian deficit spending to reduce unemployment and redistribute wealth. This shift reflects the adaptability of economic thought. Pigou argued that current taxpayers bear the cost of debt, and when used for productive projects, future generations inherit both assets and liabilities, mitigating the burden. The review contrasts Lerner's functional finance, which advocates using debt for macroeconomic goals like full employment, with Keynesian economics, which supports deficit spending during downturns but warns against excessive debt during growth periods. It also contrasts Keynesian demand-side strategies with classical/neoclassical supply-side approaches that focus on labor markets and innovation. Greece's experience illustrates the severe consequences of mismanaging debt, highlighting the need for careful debt management. The review concludes that the impact of public debt depends on its management, purpose, and the economic context.

2.5 Resource-Based Theory

2.5.1 Resource-Based Theory Introduction

The resource-based perspective has been extensively used in many domains, including welfare economics (Peteraf and Barney, 2003). While the resource-based view is primarily a microeconomic theory focused on firm-level analysis (Peteraf and Barney, 2003), its principles can be adapted and applied to macroeconomic contexts to understand the role of resources in shaping national economic outcomes, competitiveness, and development strategies. One distinguishing feature of the resource-based view is its emphasis on efficiency as a determinant of

performance (Peteraf and Barney, 2003). In the realm of macroeconomics, the RBV offers valuable insights into how the distribution, utilisation, and dynamics of resources at the aggregate level influence the economic performance, growth, and competitiveness of nations. Borrowings can serve as a valuable, rare, intangible, and inimitable resource for governments if they can secure debt at a sustainable debt-to-GDP ratio and affordable borrowing costs and allocate it efficiently for productive purposes in conjunction with other government resources. The purpose of this section is to review the resource-based theory and its private and public sector relevance.

According to Barney (1995), while external environmental factors undoubtedly influence a firm's competitive advantage, they may not provide a comprehensive explanation on their own. Historically, there has been a tendency to overlook the connection between strategy and the internal resources and capabilities of an organisation (Grant, 1991). It is crucial to recognise and examine the internal attributes of a firm, including its resources and capabilities, in addition to external factors (Barney, 1995; Grant, 1991). These internal factors play a vital role in shaping a firm's ability to achieve and sustain competitive advantage over time (Barney, 1995; Grant, 1991). By understanding and leveraging its internal strengths, a company can better position itself to adapt to changing market conditions, innovate, and outperform competitors (Barney, 1995; Grant, 1991). Therefore, a comprehensive analysis of both external and internal factors is essential for developing effective strategic management practices and enhancing long-term success in the competitive landscape.

2.5.2 Resource-Based Theory Background

Grant (1991) proposed a framework for a resource-based approach to strategy formulation that begins with identifying an organisation's resources and capabilities, and ends with the investment in upgrading and augmenting, such resources, and capabilities to ensure that the organisation achieves sustainable competitive advantage. This principle is also emphasised in *Good to Great* by Jim Collins, which states that the first step towards moving an organisation from good to great is to get the right people on board before formulating the strategy (Collins, 2001). Resources and capabilities are the foundation for strategy (Grant, 1991). Barney (1991, 1995) developed the VRIO model, sometimes called the VRIN framework (Talaja, 2012), to assess the sustainability of a firm's competitive advantage. As per the VRIN framework, a company can attain a sustainable

competitive advantage when it possesses and effectively leverages resources and capabilities that are valuable, rare, challenging to imitate, and without readily available substitutes (non-substitutable) (Talaja, 2012; Enz, 2008; Peteraf, 1993). The VRIO model consists of four attributes that resources must possess to provide a sustainable competitive advantage (Barney,1991, 1995):

Table 1 VRIO model attributes and descriptions

Attribute	Description
Value	The resource must add value to the firm by enabling it to exploit opportunities or defend against threats.
Rarity	The resource must be rare or unique, which is not widely available to competitors.
Inimitability	The resource must be difficult to imitate or replicate by competitors.
Organisation	The firm must have the organisational structure and processes to leverage the resource effectively.

Source: Barney (1991;1995)

A firm's resources can provide a sustained competitive advantage if they possess these four attributes. Otherwise, the competitive advantage may either be temporary, or non-existent. Barney (1991) and Grant (1991) argued that most research on strategic management has focused on analysing a firm's external environment to identify opportunities and threats and less on how a firm can leverage its internal resources to respond to challenges posed by the external environment. The organisation's performance is not only a function of its industry effects, but also depends on its specific resources and capabilities (Teece, Pisano and Shuen, 1997). For great organisations, success is not a one-time miracle moment (Ma, 1999; Collins, 2001). It is a continuous effort and habit (Ma, 1999; Collins, 2001). To achieve sustainable success, an organisation must consistently create, capitalise on, and maintain its competitive advantage compared to its competitors (Ma, 1999; Collins, 2001). The buildup process must be executed consistently to establish enduring success (Ma, 1999; Collins, 2001). Apple Inc. ability to innovate, to create compelling products with unique design, and provide unique and engaging customer experience has cultivated its brand loyalty and maintained its operational excellence throughout its ecosystem (Lazonick, Mazzucato, and Tulum, 2013). This was made possible by Apple's strategic control, organisational integration, and the financial commitment to innovation (Lazonick, Mazzucato, and Tulum, 2013). Coca-

Cola's competitive advantage lies in its strong brand equity, global distribution network, diversified product portfolio, effective marketing strategies, innovation capabilities, and efficient bottling system (Vrontis and Sharp, 2003). Although global organisations within the apparel, footwear, and sports equipment sectors employ similar growth strategies such as innovation, technology, sustainability, and partnerships with athletes, Nike distinguishes itself through its superior quality and competitive pricing (Ma, 1999; Robinson, 2021).

Barney's resource-based view (RBV) of the firm emphasises the importance of a firm's internal resources and capabilities in achieving sustained competitive advantage (Barney,1991, 1995; Grant, 1991). The RBV argues that firms can gain a competitive advantage by developing and deploying resources that are valuable, rare, difficult to imitate, and cannot be substituted (Barney,1991, 1995). A company's strategy and profitability ultimately depend on its internal resources and capabilities (Grant, 1991; Andrews, 1971 cited in Peteraf, 1993). Barney's findings indicated that companies that have and utilise distinctive and valuable resources, such as brand reputation, intellectual property, skilled personnel, and specialised equipment, are more effectively positioned to address environmental opportunities and threats compared to those lacking such resources (Barney, 1991, 1995). By effectively focusing on developing and deploying their internal resources, firms can create a sustainable competitive advantage, allowing them to outperform rivals in the long run (Barney, 1991, 1995).

The resource-based view provides a valuable framework for understanding how a firm's internal resources and capabilities can be leveraged to achieve and sustain competitive advantage, even in complex external environments (Grant, 1991). Embracing a dynamic capabilities approach may provide management with a competitive advantage in environments that are becoming increasingly demanding (Teece, Pisano and Shuen, 1997). A firm's internal resources and capabilities form the foundation for achieving sustainable competitive advantage according to the resource-based view (Peteraf and Barney, 2003). Good to great organisations are known to have focused on the right resources and capabilities at the outset, followed by their strategy (Collins, 2001). In their study, Collins (2001) had expected to discover that taking an organisation from good to great starts with setting a new direction and strategy, followed by getting the right executives. On the contrary, the findings were that leaders who moved organisations from good to great first secured the right resources (human capital) (Collins, 2001).

The theory suggests that government intervention can improve social welfare by providing valuable, rare, inimitable, and non-substitutable resources and capabilities (Barney, 1991).
The success of these interventions relies on the efficiency and effectiveness with which resources and capabilities are deployed (Barney, 1991). In Cyprus, for example, Antoniades and Haan (2019) found that dynamic capabilities such as entrepreneurship, motivation, investment, and adaptation, are positively linked to government performance which contributes to the prosperity of the citizens. Improved government performance can lead to more efficient use of resources, better fiscal management, and enhanced economic growth, which in turn may help reduce public debt by increasing government revenues and reducing the need for borrowing.

Barney (1991,1995), Wernerfelt (1984) and Harrison *et al*. (1991) cited in Enz (2008) outline four types of resources that constitute the key dimensions of a firm's resources and capabilities, namely financial, physical, human, and organisational.

Table 2 Competitive advantage and descriptions

Resources	Description
Financial resources	Refers to the firm's capacity to raise and invest in capital or possess all monetary resources, including debt, equity, retained earnings, and other financial assets.
Physical resources	Refers to the tangible assets that a firm possesses, such as machinery, facilities, and buildings.
Human resources	Encompasses the knowledge, skills, experience, judgment, risk-taking propensity, and wisdom of the people associated with the firm, including its employees, managers, and leaders.
Organisational resources	The firm's history, culture, relationships, operating model, policies, and procedures shape its identity, behaviour, and decision-making.

Together, these resources and capabilities form the basis for a firm's competitive advantage, allowing it to deliver superior value to customers, outperform rivals, and achieve sustainable growth and profitability over time (Enz, 2008; Teece, Pisano and Shuen, 1997; Peteraf, 1993). An

organisation can develop a long-lasting competitive edge by using its resource pool effectively and efficiently (Barney, 1991; Peteraf, 1993; Teece, Pisano and Shuen, 1997). These resources can include financial, physical, human, and organisational resources, and are the key to creating a competitive advantage in managing and blending them (Barney, 1991). Organisations continuously developing and leveraging these resources can gain a strategic edge over their competitors (Enz, 2008). For instance, a company may access substantial financial resources, while other resources must be coordinated with financial capital in order to guarantee success (Enz, 2008). It also requires a team of skilled and motivated employees, physical assets such as technology and machinery, and a well-organised management structure, that can effectively coordinate and utilise these resources to achieve a company's goals (Enz, 2008). Therefore, it is not just about having access to resources, but how effectively and efficiently they are utilised, coordinated, and managed to create a competitive advantage (Barney, 1991). Peteraf (1993) and Teece, Pisano, and Shuen (1997), as well as Peteraf and Barney (2003) argue that organisations that possess superior resources and capabilities can produce in more economical ways, or offer higher quality products.

Resources have different levels of efficiency, with those that are distinctive and superior being able to produce more economically than others (Peteraf, 1993; Teece, Pisano and Shuen, 1997). Organisations are intrinsically different in their productive abilities, resulting in some organisations having superior resources that enable them to produce at a lower cost, or produce products of a higher quality than others (Peteraf, 1993; Teece, Pisano and Shuen, 1997; Peteraf and Barney, 2003). Nike's massive scale of operations allows it to benefit from economies of scale in manufacturing, marketing, and distribution. By producing goods in large quantities through outsourced manufacturing and focusing only on the design and marketing, Nike is able to lower its average production costs per unit, thereby achieving cost advantages over its competitors (Ma, 1999).

Peteraf (1993) states that, what is essential is that superior resources remain limited in supply or cannot be expanded freely. In this way they should be exploited efficiently and effectively for maximum performance (Peteraf, 1993). Through its Toyota Production System, which emphasises lean manufacturing principles and just-in-time inventory management, Toyota minimises waste,

reduces production costs, and achieves high levels of efficiency in its manufacturing operations (Black, 2007). This enables Toyota to produce vehicles at competitive prices while maintaining quality standards (Black, 2007). For the sake of providing clarity on the domain of resource-based theory, Peteraf and Barney (2003) explain that resource-based theory is an efficiency-based theory of performance, and not a theory based on the external environment of market power, collusion, competition, and strategic behaviour. The theory also emphasises creating value and satisfying customers' needs and demands. Firms must focus on reducing costs and using their resources to create greater customer value. Understanding the needs of customers and preferences and the ability to tailor products and services to meet those needs effectively is a necessity (Peteraf and Barney, 2003).

The resource-based view emphasises the importance of strategising based on the organisation's unique resources and capabilities to create a competitive advantage (Grant, 1991). In other words, organisations must focus on strategically utilising their resources to optimise their performance rather than on the external environment, that is constantly evolving, and can prove volatile (Grant, 1991; Rosenberg Hansen and Ferlie, 2016). One of the features of resource-based theory is that it explains performance differences between organisations based on inherently different levels of efficiency, because superior resources are efficient (Teece, Pisano and Shuen, 1997; Peteraf and Barney, 2003). Efficiency involves not only cutting expenses, but also increasing value and earning economic rents (Peteraf and Barney, 2003). The resource-based view emphasises that, in order to make the most use of their valuable resources, organisations must optimise their resource allocation and utilisation. This entails identifying and eliminating waste, reducing redundancies, and ensuring that the resources align with the organisation's strategic goals. Additionally, the resource-based view recognises the importance of adapting to changes in the business environment in order to maintain competitiveness, which can involve efficiently reallocating resources when necessary (Peteraf and Barney, 2003). The resource-based view is a value-creation approach that focuses on using and developing resources to create sustainable value (Rosenberg Hansen and Ferlie, 2016).

The objective of the above review was to establish a thorough understanding of the theory, allowing for the exploration of its potential macroeconomic applications and providing insights

into public debt. The next section will delve into the resource-based theory, examining how public debt can be utilised as a resource for achieving competitive advantage.

2.5.3 Resource-based Theory and Macro-Economics

The resource-based view (RBV) approach emphasises that an organisation's internal resources and capabilities constitute the primary sources of its competitive advantage (Rosenberg Hansen and Ferlie, 2016). The resource-based view is predominantly employed within organisational structures resembling businesses, commonly found in the private sector, rather than being extensively utilised within the public sector. (Rosenberg Hansen and Ferlie, 2016; Bryson, Ackermann, and Eden, 2007; Klein *et al*., 2010). While there is limited research on applying RBV in public enterprises, researchers have identified governments needing to develop competencies and capabilities to better address emerging challenges and environmental turbulences (Szymaniec-Mlicka, 2014; Andrews *et al*., 2012 cited in Rosenberg Hansen and Ferlie, 2016; Bryson, Ackermann, and Eden, 2007). In their study, Bryson, Ackermann, and Eden (2007) show that the resource-based approach to strategy can be valuable and relevant to public organisations. A crucial factor contributing to the success of public organisations involves recognising and developing strategic capabilities to maximise public value for key stakeholders while maintaining cost-effectiveness (Bryson, Ackermann, and Eden, 2007).

According to Rosenberg Hansen and Ferlie (2016), strategic management approaches can be implemented effectively in public organisations provided they possess administrative autonomy, employ performance-based budgeting, and operate within a framework of market-like competition. Traditional public organisations may, however, be restricted in their mandate to act with autonomy (Bryson, 2004 cited in Rosenberg Hansen and Ferlie, 2016). In terms of performance-based budgeting, the observation is as to whether the performance of the public organisation can be measured and observed (Wilson, 1989 cited in Rosenberg Hansen and Ferlie, 2016), and what the public organisation can achieve with the allocated budget (Dunleavy, 1991, cited in Rosenberg Hansen and Ferlie, 2016). The ownership, funding, and social control of a public organisation, private or public, political control or control exercised through the markets, will determine whether a public organisation can operate in more like market conditions (Rosenberg Hansen and Ferlie, 2016).

Barney (1991), (1995); Peteraf and Barney (2003); Szymaniec-Mlicka (2014); and Rosenberg Hansen and Ferlie (2016) propose a different approach to strategy development. They argue that organisations should prioritise the development of strategies based on their stable resources and competencies, rather than viewing environmental diagnosis as a prerequisite. This approach can help organisations become more agile and flexible in response to an increasingly dynamic and unpredictable environment (Szymaniec-Mlicka, 2014; Rosenberg Hansen and Ferlie, 2016; Bryson, Ackermann, and Eden, 2007). Furthermore, Szymaniec-Mlicka (2014) argue that the flexibility and adaptability of an organisation can be considered a strategic resource based on the implemented resource-based approach. By building and developing their competencies and capabilities, governments can become more agile and better equipped to respond to the challenges of a dynamic and uncertain environment (Szymaniec-Mlicka, 2014; Bryson, Ackermann, and Eden, 2007). While more research is needed on applying RBV in the public sector, the approach can help governments build and develop the competencies and capabilities to meet emerging challenges and environmental turbulences.

The South African government is dealing with a turbulent environment, characterised by political, economic, and social issues such as corruption allegations, inequality, poverty, rising public debt, the long-term effects of the recent COVID-19 pandemic, and a constant threat of civil unrest. To effectively manage such complex and dynamic environments, the resource-based view (RBV) is presented as a strategic management approach, emphasising the importance of critical organisational resources, including culture, skills, knowledge, and learning and development (Szymaniec-Mlicka, 2014). Public organisations such as South African Broadcasting Corporation (SABC), South African Reserve Bank (SARB), Eskom, Department of Health, and Department of Basic Education to mention a few, must identify and develop strategic capabilities to create the most significant public value for stakeholders, namely, the South African public and corporates (Bryson, Ackermann, and Eden, 2007). Identifying, investing, and protecting such resources should be a continuous process to ensure the sustainable success of organisations (Bryson, Ackermann, and Eden, 2007).

The resource-based value approach argues that firms can achieve a sustainable competitive advantage by leveraging their unique resources and capabilities, which are difficult to imitate or

substitute by competitors (Barney, 1995). In the case of public organisations, the RBV can be used to develop flexible strategies that enable quick adaptation to change and insecurities (Szymaniec-Mlicka, 2014). The study suggests that knowledge and the ability to combine traditional resources are crucial in achieving higher efficiency and sustainable competitive advantage (Szymaniec-Mlicka, 2014). Intangible resources, such as knowledge, significantly impact a public organisations' performance (Szymaniec-Mlicka, 2014). The knowledge of stakeholders' needs becomes crucial in meeting their expectations effectively. Therefore, public organisations need to develop a culture of learning and development, and need to enhance their skills in communication, leadership, planning, creativity, analytical, and technical skills, as well as improve knowledge sharing to achieve their objectives (Szymaniec-Mlicka, 2014). Public organisations control not only land, buildings, and budgets, but also various resources, including infrastructure, sensitive information, knowledge systems, and organisational assets, such as cultures and routines (Klein *et al*., 2010).

The RBV approach can be an appropriate strategy for public organisations to manage turbulent environments effectively. By leveraging their essential organisational resources, including culture, skills, knowledge, and learning and development, public organisations can achieve higher efficiency, sustainable competitive advantage, and meet stakeholders' expectations and needs. In addition to knowledge, Szymaniec-Mlicka (2014) also highlights the significance of various other resources in establishing a sustainable competitive edge within public organisations. Human capital development is essential to public organisations' success, and skills development and training are crucial components of both economic growth and employment. However, despite the policies and legislative framework aimed at addressing the low skill base of South Africans, there seems to be a skills shortage in the South African public service, as noted by (Chelechele, 2009; Moganedi and Sithole, 2020). The Skills Development Act 97 of 1998, as amended in 2008 in South Africa, aims to expand the labour force's knowledge and competencies, and to improve employment and productivity. It was implemented to bolster economic growth and stability by encouraging skills development through education and training, while addressing the skills gap to, in particular, rescue the poor and unemployed (Chelechele, 2009; Moganedi and Sithole, 2020).

Mlachila and Moeletsi (2019) discovered that while access to education has notably increased since the advent of democracy, educational achievements remain notably subpar, largely

attributable to the inadequate quality of education. They argue in their research that the root of this issue stems from deficiencies in learning during primary education. Their study suggests that, at the macroeconomic level, the standard of education influences long-term economic growth. Despite efforts to enhance the education and training system, South Africa continues to grapple with significant issues concerning the quality of education (Mlachila and Moeletsi, 2019). According to Mlachila and Moeletsi (2019), these challenges persist, even though South Africa's budget allocation for education and training, when measured as a percentage of GDP, matches that of OECD countries, and exceeds that of many similar sub-Saharan African nations on a per-capita basis. The root causes of these challenges encompass several complex factors, including inadequate subject knowledge among certain educators, historical legacies, racial disparities, language barriers, geographical disparities, and variations in socio-economic status. This suboptimal level of educational achievement directly hinders productivity growth, and contributes to elevated levels of poverty, unemployment, and inequality within the nation (Mlachila and Moeletsi, 2019).

It may be necessary to re-evaluate the implementation of the Skills Development Act and other policies to address the skills shortage effectively and improve public service delivery. Establishing robust connections and fostering open dialogue with the business community is essential (Moganedi and Sithole, 2020). Implementing curriculum reforms that emphasise critical thinking, problem-solving, creativity, and digital literacy. Promoting STEM (Science, Technology, Engineering, and Mathematics) education from an early age to prepare students for high-demand fields. Fostering collaboration between government agencies, educational institutions, and private sector employers to identify skill gaps and design targeted training programmes. Additionally, involving businesses in decision-making processes fosters a sense of ownership and accountability, leading to more effective implementation of policies and programmes.

Intellectual capital is also essential for all organisations, including public service organisations. Intellectual capital refers to an organisation's intangible assets contributing to its overall value and competitive advantage (Radjenović and Krstić, 2017). It encompasses non-physical assets that are often knowledge-based, and difficult to quantify (Radjenović and Krstić, 2017). It helps organisations build unique capabilities, develop connections or relations, and create processes to

contribute to their success (Szymaniec-Mlicka, 2014). While public service organisations may not operate in a competitive environment that requires them to develop strategic resources, they must still be responsive to public policy and the government's priorities (Spicker, 2009). As Spicker (2009) points out, public services are distinct from for-profit services, because they exist for policy reasons, are redistributive, and act as a trust. Public organisations providing public services aim to create stability and trust in the country as a whole (Spicker, 2009). Therefore, developing strategic resources and competencies becomes crucial to the success of democratic governments (Spicker, 2009). Those who invest in developing and leveraging intellectual resources can enhance their ability to address societal issues, make informed decisions, and adapt to the evolving needs of their communities (Spicker, 2009). Policy development and decision-making in public service organisations are often based on negotiated compromises and legitimate processes and procedures rather than on general preferences or competitive market forces (Spicker, 2009). Public service organisations which include government agencies such as South African Revenue Services, South African Social Security Agency, South African National Parks; and other entities that provide public goods and services such as the Department of Home Affairs, South African Police Services, the Department of Basic Education, often operate within a unique context that differs from the private sector (Spicker, 2009). Public service organisations prioritise inclusivity, transparency, and the public good so as to ensure that decisions are well-informed, fair, and aimed at achieving societal goals, rather than just maximising profits or catering to individual preferences (Spicker, 2009). Nonetheless, public service organisations must still strive for economic viability and consider cost, efficiency, and choice in their operations and decision-making processes (Spicker, 2009) so as to ensure that decisions are in most stakeholders' best interests.

Investing in the continued development of intellectual resources, such as a skilled and motivated workforce, effective management, data analysis and utilisation, robust technology infrastructure, innovation and research capabilities, stakeholder relationships, and policy development and analysis, enhances the overall performance and impact of public organisations. This efficiency in service delivery and adaptability to evolving challenges can result in more effective fiscal management and resource allocation. By optimising public sector performance, such investments can help reduce waste, increase government revenues, and minimise reliance on borrowing, thereby contributing to better public debt management and sustainability. Apple is known for its

robust intellectual property portfolio, including patents related to hardware, software, and design (Lazonick, Mazzucato, and Tulum, 2013). This intellectual property helps Apple differentiate its products in the highly competitive technology market and maintain a premium brand image (Lazonick, Mazzucato, and Tulum, 2013). Nike's image, brand and product designs are protected by trademarks and patents, giving the company a competitive edge in the sports apparel and footwear industry (Robinson, 2021; Ma, 1999). Nike invests heavily in innovation and design to maintain its leadership position and appeal to consumers (Robinson, 2021; Ma, 1999). Every day, customers, citizens, and businesses encounter innovative e-business and e-commerce models introduced by the private sector, enabled by Information and Communication Technology (ICT) tools and applications (Ndou, 2004). As a result, they expect government organisations to keep pace and offer similar innovations (Ndou, 2004). Information and communication technologies and tools may result in intellectual resources through innovations, creations, and other intangible assets. Ndou (2004) suggests that Information and Communication Technologies (ICT) and their accompanying tools present government organisations with opportunities to ensure their long-term viability and gain strategic competitive edges. These tools streamline operational processes, increase citizen access to services, reduce costs, enhance the quality and responsiveness of services provided, offer convenience, drive innovation, and bolster existing partnerships while fostering new collaborations with civil society. Ndou (2004) research also highlights that investments in ICT tools have been associated with annual GDP growth per capita ranging from 0.5% to 1.3% across numerous developed economies, including the USA, UK, Canada, Germany, France, and Australia, from 1995 to 2002.

In some cases, public service organisations may need to adopt private sector strategies to bridge the funding gap, particularly in the face of constraints in government funding. This may involve creativity and innovation in creating additional revenue streams, while upholding their public service mandate. For example, some voluntary public services, such as telecommunications, may need to compete with for-profit market competitors (Spicker, 2009). Telkom SA Ltd, a semi-privatised and state-owned entity, engages in competition with private telecommunications firms like Vodacom, MTN, and Cell C. By embracing strategic management principles like the resource-based strategy, Telkom can enhance its competitiveness within the industry and secure supplementary revenue streams.

Organisational reputation is essential and serves as a vital organisational resource, particularly within public institutions (Szymaniec-Mlicka, 2014). An organisation with a strong image and reputation is usually associated with better quality goods and services, better delivery, and improved management of funds (Kong and Farrell, 2010). The image and reputation of public organisations are the foundations of their differentiation strategy, and a well-managed image and reputation can provide a more sustainable source of competitive advantage by being difficult to imitate (Boyd *et al*., 2010 cited in Kong and Farrell, 2010). A positive reputation can attract stakeholder support, including funding and the best talent, and enhance market and consumer confidence (Kong and Farrell, 2010). On the other hand, a negative reputation, particularly one associated with corruption and maladministration, can significantly harm an organisation's ability to attract resources, and to compete effectively. Given the importance of reputation, it is crucial for public organisations to proactively manage and protect their image (Szymaniec-Mlicka, 2014). This requires a comprehensive and ongoing approach to reputation management that incorporates strategic planning, stakeholder engagement, risk assessment, and crisis management (Szymaniec-Mlicka, 2014). Public organisations can enhance their competitiveness and contribute to broader economic growth and development by building and maintaining a positive reputation. Therefore, public organisations must prioritise the management of their reputation as part of their strategic planning and execution (Szymaniec-Mlicka, 2014).

Antoniades and Haan's (2019) study highlight the importance of organisational capabilities, such as entrepreneurship, motivation, investment, and adaptation for government political marketing and performance. Motivation capability refers to an organisation's ability to inspire and mobilise its employees to achieve desired goals and to maintain high levels of performance and commitment over time (Antoniades and Haan, 2019). Investment capability relates to an organisation's ability to allocate resources efficiently and effectively, including financial, human, and technological resources, to support strategic objectives (Antoniades and Haan, 2019). Entrepreneurship capability refers to the ability of an individual or organisation to identify and pursue new opportunities and transform these into viable business ventures (Antoniades and Haan, 2019). It involves various skills and attributes, such as creativity, risk-taking, innovation, resourcefulness, and resilience. Finally, adaptation capability refers to an organisation's ability to respond and adapt

to changes in the external environment, such as changes in customer preference, technology, or competition (Antoniades and Haan, 2019).

The study of Antoniades and Haan (2019) suggests that democratic governments can use these dynamic capabilities to achieve maximum political performance and lead the country to prosperity. The findings suggest that government leadership and management, coupled with the ability to motivate employees, proves crucial to enhancing the quality of organisational resources, and achieving superior performance (Antoniades and Haan, 2019). Additionally, the study of Antoniades and Haan (2019) highlights the importance of adaptive capability, which is positively related to political and government performance, and the ability to invest and respond effectively to economic development. Overall, the study by Antoniades and Haan (2019) suggests that leveraging these organisational capabilities can help democratic governments achieve sustainable competitive advantage and improve the prosperity of citizens and the country alike. Some companies consistently outperform others in terms of capabilities such as innovation, entrepreneurship, adaptability, and profitability (Teece, 2019). Despite this apparent reality, traditional economic theory does not offer a comprehensive explanation for why certain organisations excel in these areas while others struggle (Teece, 2019). While economic models are convenient in analysing economic phenomena through theories of monopoly and imperfect competition, they have limitations in analysing the important dynamics, internal mechanisms and complexities within organisations, households, and government entities, which significantly affect outcomes and performance (Teece, 2019). Teece (2019) asserts that even though the importance of capabilities for both business and overall economic performance is widely recognised, economists have only recently begun to formulate the concept, and their emphasis has been on ordinary capabilities and not dynamic considerations.

Financial capital can also be used to invest in infrastructure, education and healthcare systems, and other public goods that can have positive spillover effects on the economy and society. These investments can enhance a country's human and intellectual resources, improve its reputation, and increase its strategic capabilities. However, it is crucial for governments to carefully manage their borrowing so as to ensure that it is used for productive purposes. Excessive borrowing can lead to high levels of debt, which can constrain the government's ability to invest in the future and may

potentially lead to financial instability. Therefore, governments must balance their borrowing with other sources of revenue and ensure that debt is sustainable in the long term. Based on the concept of economies of scale, Walmart provided its products at lower prices compared to its rivals, thereby enhancing its competitive edge (Hunt, Watts, and Bryant, 2018). This advantage facilitated Walmart's swift expansion of revenue, profitability, market presence, and accumulation of financial capital (Hunt, Watts, and Bryant, 2018). Governments can similarly leverage economies of scale in public procurement and service delivery. By consolidating purchasing power and standardising services, governments can reduce costs, increase efficiency, and deliver better value to citizens, ultimately reducing the need for excessive borrowing and managing public debt more effectively. Walmart strategically managed its financial resources, allowing it to invest in technology, supply chain optimization, acquisitions, and global expansions. Just as Walmart strategically managed its financial resources to invest in technology, supply chain optimisation, and global expansions, governments should focus on strategically allocating resources to areas that can enhance economic growth and efficiency by investing in infrastructure, technology, human capital, and innovation, to boost overall productivity, leading to sustainable economic development and a stronger fiscal position, ultimately, reducing the dependency on public debt. Hunt, Watts, and Bryant (2018) note that within its initial three decades of establishment, Walmart expanded to encompass 1,928 stores across the United States. Its international expansion commenced in 1992, and presently, Walmart has a presence in twenty-eight nations with a total of 11,035 stores worldwide (Hunt, Watts, and Bryant, 2018). Walmart's financial strength enabled it to establish one-stop-shop for customers at lower prices, thus attracting a large customer base and creating a competitive edge (Hunt, Watts, and Bryant, 2018). Despite benefiting from economies of scale, low-cost leadership and low selling prices, and advantageous supplier negotiations due to its financial strength, Walmart must consistently control costs, adapt to evolving consumer preferences, contend with intense competition from online retailers, and navigate the complexities of operating across diverse international regulatory and legal frameworks to sustain its competitive pricing strategy. Governments should prioritise cost control in public spending, focusing on eliminating waste, reducing inefficiencies, and implementing performance-based budgeting. This approach can help contain public debt by ensuring that resources are used effectively and only where they provide maximum public benefit. Government should also be agile and responsive by adapting fiscal policies to changing economic conditions, such as responding quickly to economic

downturns with appropriate stimulus measures or adjusting spending in response to demographic changes. Governments should be cautious when implementing policies or reforms and ensure they are well-suited to the local economic, social, and cultural context. Misalignment can lead to policy failure and unintended economic consequences that may affect public debt levels. Expanding into numerous countries also led to Walmart failures because of insufficient comprehension of local shopping customs and biased and narrow views regarding the cultures, values, and societies of other nations (Hunt, Watts, and Bryant, 2018). Furthermore, should other countries in which Walmart has significant footprint decide to impose higher taxes on goods imported from other countries or changes the agreements it has with its trading partners, it could have an adverse effect on Walmart's business, especially in the United States (Hunt, Watts, and Bryant, 2018). This could happen because Walmart sells a lot of products that are imported from other countries, and if tariffs make these products more expensive, Walmart might have to raise its prices, or its profits could go down (Hunt, Watts, and Bryant, 2018). Governments should diversify their economic base and revenue sources to mitigate risks associated with over-reliance on specific industries, commodities, or trading partners. This diversification can help stabilise government revenues and better manage public debt. Ministers of finance should recognise the impact of global economic policies and agreements on national economies. Developing robust trade policies, negotiating favorable trade terms, and preparing contingency plans for economic shocks are crucial to managing public debt and sustaining economic stability.

Overall, financial capital is one of many resources necessary for sustainable economic growth. A resource bundle that is effectively and efficiently integrated and utilised (Barney, 1991; Peteraf, 1993; Teece, Pisano and Shuen, 1997), such as natural resources, human capital, financial capital, and social capital, are crucial factors contributing to a country’s economic development. It is, therefore, important for governments to develop a comprehensive strategy that considers all these resources and ensures that they are being used effectively and efficiently. The resource-based view of competitive advantage suggests that sustainable competitive advantage arises from an organisation's valuable, rare, intangible, and not perfectly imitable resources (VRIO) (Barney, 1991; Peteraf, 1993; Teece, Pisano, and Shuen,1997). Borrowings can be a valuable, rare, intangible, and not perfectly imitable resource for governments if they can acquire debt at an acceptable debt-to-GDP ratio and affordable borrowing costs, and allocate it efficiently for

productive uses combined with other government resources. The Debt-To-GDP ratio serves as a fundamental tool for policymakers, economists, and investors in assessing the fiscal health and sustainability of a country's economy. A high Debt-To-GDP ratio typically indicates that a country has accumulated a large amount of debt relative to its economic output. This can signal fiscal stress and may imply difficulties in servicing the debt in the long term.

2.5.4 Applying Financial Capital to the VRIO Framework

Introduction

This review will explore various aspects of financial capital from a private sector perspective to highlight its significance and management within businesses. Financial capital is widely acknowledged as a crucial resource that enables organisations to operate, grow, and create value (Barney, 1991; Talaja, 2012). By examining its value, rarity, imitability, and the organisational requirements for managing financial capital effectively, this review aims to provide insights into how these principles can be applied to the public sector. Understanding the dynamics of financial capital in private enterprises can offer valuable lessons for public organisations, particularly in managing public debt as a source of financial capital. Public debt, similar to financial capital in the private sector, is essential for funding infrastructure projects, stimulating economic growth, and addressing budget deficits.

Is Financial Capital Valuable?

Financial capital is valuable for organisations as it provides them with the resources necessary to operate, grow, and create value (Barney, 1991; Talaja, 2012). Financial capital is essential for businesses to acquire, allocate, and develop resources such as raw materials, equipment, personnel, and technology necessary for their operations' success. It also allows companies to invest in research and development, marketing, and other areas, to help them improve their products or services, and stay ahead of their competition. Furthermore, financial capital can finance expansion and investment in strategic initiatives, such as mergers and acquisitions, joint ventures, and other partnerships that can enhance an organisation's capabilities and market position, thereby enabling it to exploit opportunities (Barney, 1991; Talaja, 2012). By having access to financial capital, companies can seize opportunities to grow and create economic value for their shareholders, customers, and other stakeholders (Talaja, 2012). Public debt is a financial resource that allows

governments to fund essential services, support economic activities, and invest in infrastructure, education, healthcare, and other public goods that are crucial for national growth and development. Public debt enables governments to invest in large-scale developmental projects that can have long-term economic benefits, such as building roads, schools, hospitals, and public transport systems. It allows governments to engage in strategic initiatives such as economic stimulus packages, bailouts during financial crises, or partnerships in public-private infrastructure projects. When managed effectively, public debt can create significant economic value for a country's citizens. Governments may use public debt to invest in sectors that improve their global competitiveness, such as technology, renewable energy, and human capital development. Both financial capital in businesses and public debt come with risks and costs. Companies must manage the cost of capital and ensure that investments yield returns higher than the cost of funds. Likewise, governments must manage the cost of public debt (such as interest payments) and ensure that the benefits of borrowing outweigh the costs. Poor management of debt can lead to economic instability, much like mismanaged financial capital can lead to business failure.

Is Financial Capital Rare?

Financial capital is a resource that can be either scarce or abundant, depending on various factors, such as the economic environment, industry competition, regulatory requirements, and the organisation's financial performance. While financial capital is not necessarily rare in the general sense, it can be difficult for some organisations to obtain, particularly those with poor performance, reputation, or image (Talaja, 2012). Investors and lenders are often reluctant to provide financial capital to organisations with poor financial performance, or a negative reputation. These factors increase the risk of investment and decrease the likelihood of a return on investment. In such cases, the demand for financial capital may exceed the supply, leading to a scarcity of available funds (Barney, 1991; Talaja, 2012). However, organisations performing well, that retain a positive reputation, and can demonstrate a track record of delivering returns on investment are more likely to attract financial capital. These organisations may find it easier to source financial capital and may even have excess capital available for investment or expansion. Overall, the availability of financial capital can vary, depending on a range of factors, such as performance, reputation, regulatory barriers, or image. While this is common, it can be challenging for some organisations to obtain.

In China, the regulatory regime imposes restrictions on Chinese organisations regarding their access to funds through financial markets (Fonseka, Yang, and Tuan, 2013). These regulations define which firms are eligible to access various sources of financial capital, such as loans from banks, issuance of bonds, or public offerings of stocks (Fonseka, Yang, and Tuan, 2013). Moreover, these regulations may also influence the ability of firms to achieve competitive advantages, both in the short term and in a sustained manner (Fonseka, Yang, and Tuan, 2013). Developing nations lack the financial resources to embark on large-scale investment projects due to their early economic development and limited savings (Hussain, Haque, and Igwike, 2015). One explanation for why many countries in sub-Saharan Africa opted to spend and borrow rather than save some of the profits from the commodity price surge is their significant infrastructure shortfall (Devarajan, Gill, and Karakülah, 2021). Africa possesses the most inadequate energy and transportation infrastructure globally, contributing to its lack of competitiveness (Devarajan, Gill, and Karakülah, 2021). Debt as a financial resource can be employed to finance infrastructure investments, thereby creating opportunities for additional investment and growth (Hussain, Haque, and Igwike, 2015). Consequently, borrowing can help ease the investment constraints in these nations (Hussain, Haque, and Igwike, 2015). Inadequate infrastructure quality in Sub-Saharan Africa, stemming from inefficient resource allocation and project management (Devarajan, Gill, and Karakülah, 2021), further exacerbates the limited access to borrowing resources. In many least developed countries (LDCs) and some countries in Sub-Saharan Africa, there is a noticeable absence of robust financial institutions, investment firms, and capital markets, which poses challenges in accessing finance (Hussain, Haque, and Igwike, 2015). While South Africa boasts a relatively more developed financial sector compared to its regional counterparts, it still grapples with finance accessibility issues, particularly for small and medium-sized enterprises (SMEs) and marginalised individuals. Moreover, factors like inequality, unemployment, and structural limitations can further impede the availability and accessibility of investable funds within the country.

Is Financial Capital Hard to Imitate?

Financial capital may be relatively easy to imitate, as many organisations can acquire it through various means, such as loans, issuing stocks or bonds, or attracting investors, however the application of financial capital efficiently and in combination with other competencies and capabilities is what sets an organisation apart (Rugman and Verbeke, 2002). Competently and

efficiently leveraging financial capital can lead to the creation of new resources (Rugman and Verbeke, 2002). Furthermore, the cost of servicing financial capital can be expensive, especially for organisations with poor performance, or a bad reputation, and lenders may be unwilling to invest in such organisations, limiting their ability to access financial capital. Financial capital cannot be replaced (Barney, 1991; Talaja, 2012) or substituted with another resource that can serve the kind of purpose that it fulfills. Additionally, while many organisations can acquire financial capital, effectively utilising it (Talaja, 2012) and generating a return on investment can take time to imitate. This requires a combination of factors, such as skilled management, market knowledge, and the ability to execute business strategies effectively. Therefore, while financial capital may be easy to imitate regarding the acquisition, the ability to use it effectively and generate returns can be a significant challenge for many organisations. For instance, merely allocating large sums of money to infrastructure projects does not guarantee their quality improvement, as noted by Devarajan, Gill, and Karakülah (2021). Factors like project management, implementation, and the efficiency of resource utilisation are equally crucial in determining the outcome of infrastructure enhancements (Devarajan, Gill, and Karakülah, 2021). The inefficient allocation of public resources to investment projects is the cause of the lack of good value for money spent in the public sector of Sub-Saharan African countries (Devarajan, Gill, and Karakülah, 2021).

How should the Organisation be Organised to manage Financial Capital?

Organisations must be well-organised and equipped with the knowledge and expertise to manage financial capital, and allocate it effectively. This includes having a clear understanding of the financial needs and objectives of the organisation, prioritisation, and proper allocation of it, as well as the ability to access and analyse financial data to make the right decisions. In addition, having strong financial controls and risk management processes in place is critical to ensuring that financial capital is used wisely, and complies with regulatory requirements. Therefore, organisations must have a dedicated finance team or work with financial advisors to manage financial capital efficiently. Most importantly, organisations must be organised to have excellent performance evaluation processes (Rosenberg Hansen and Ferlie, 2016) in order to maximise the use of financial capital to create sustainable value.

Hussain, Haque, and Igwike (2015), in the literature review of their study concerning the correlation between national debt and economic growth, cite various empirical studies exploring this relationship. Some of the studies referenced in Hussain, Haque, and Igwike (2015) indicate that once the debt-to-GDP ratio surpasses certain thresholds (ranging from 50% to 95%), there is a negative impact of debt on economic growth. These studies, including those by Reinhart and Rogoff (2010), Baum, Westphal, and Rother (2013), Fincke and Greiner (2013), Reinhart et al. (2012), Cecchetti, Mohanty, and Zampolli (2011), Abbas, Belhocine, and ElGanainy (2010), Imbs and Ranciere (2005), Pattillo, Poirson, and Ricci (2002), and Wamboye and Tochkov (2014) cited in Hussain, Haque, and Igwike, (2015), provide strong evidence supporting the existence of a significantly negative relationship between debt levels and economic growth. Additional research has indicated the importance of considering the unique attributes of individual countries, the timeframe of analysis, and governmental policies when examining the connection between debt and economic growth. These studies emphasise that the relationship between debt and economic growth varies across different countries and time periods. This perspective is highlighted by Egert (2013), Ferreira & Candida (2009), and Manasse and Roubini (2009), as cited in Hussain, Haque, and Igwike (2015). The threshold at which adverse effects on the economy due to debt may arise varies among countries (Bilan, 2014). Some authors suggest that developed countries can sustain public debt to GDP ratios nearing 100% without encountering significant issues (Checherita and Rother, 2010; Baum et al., 2012 cited in Aybarç, 2019). Conversely, for developing countries, the maximum debt threshold is often much lower, potentially even falling below 50% of GDP (Patillo et al., 2004 cited in Aybarç, 2019).

Among the 43 Sub-Saharan Africa countries for which data was available in the IMF's 2023 Sub-Saharan Africa Regional Economic Outlook, thirty-one countries had a government debt-to-GDP ratio ranging from 50% to over 100% in 2023 (IMF, 2023). Notable examples include Angola (84.5%), Cabo Verde (113.1%), Republic of Congo (97.8%), Ghana (84.9%), Mozambique (89.7%), Senegal (81%), Sierra Leone (88.9%), and Zimbabwe (95.4%) (IMF, 2023). Additionally, fifteen Sub-Saharan countries had a debt-to-GDP ratio between 11% and 40% in 2023, with the lowest ratios observed in the Democratic Republic of the Congo (13.3%), Botswana (18.7%), Guinea (31.6%), and Comoros (33.3%) (IMF, 2023). South Africa’s recorded debt-to-GDP ratio was 73.7% in 2023 increasing to 75.8% in 2024 (IMF, 2023). Although there were slight declines in the debt-to-GDP ratios across the Sub-Saharan Africa countries by 2024, they

remained within the same ranges (IMF, 2023). The IMF's 2023 Sub-Saharan Africa Regional Economic Outlook report highlighted that, factors such as inflationary shocks, persistent exchange rate pressures, increased vulnerabilities in debt, and widening economic disparities in the Sub-Saharan Africa region have hindered growth. These challenges have been exacerbated by global conflicts/wars, decreased international demand for commodities such as oil, declining government revenue and political instability in the region (IMF, 2023).

Using public debt strategically, governments can leverage their resources to gain a competitive advantage in infrastructure development, education, healthcare, and innovation. This can be achieved by financing large-scale infrastructure that creates jobs and attract private investment, by investing in quality and more accessible education that leads to a more skilled and competitive workforce, by investing in adequate healthcare facilities and services that result in a healthy and productive population, and by investing in research and development and innovation to drive economic growth.

The review emphasised the importance of financial capital as a valuable and strategic resource for both private enterprises and public institutions. For governments, public debt serves as financial capital to fund essential services, infrastructure, and development projects. The Resource-Based View (RBV) theory, commonly used in the private sector, can also apply to public debt management, provided an acceptable debt-to-GDP ratio is maintained and borrowed funds are directed toward productive investments like infrastructure, education, healthcare, and innovation.

Empirical studies show that accessing financial capital can be challenging for developing countries and poorly performing firms, limiting their growth potential. In the context of public debt, poor management and inefficient allocation of resources, particularly in Sub-Saharan Africa, lead to low returns on investment. Studies consistently indicate a negative relationship between high debt levels and economic growth, especially when debt exceeds certain GDP thresholds. This impact is more severe in developing countries due to structural weaknesses and lower debt tolerance. However, when managed strategically with good governance and efficient resource allocation, public debt can support long-term competitive advantages.

2.6 Conceptual Framework

This study relies on two conceptual frameworks, namely: the resource-based theory on the use of borrowed resources or financial capital, and the conventional theory on the effects of public borrowing. The study will examine whether South Africa has used public debt efficiently, by spending on value-adding activities. Furthermore, it will examine whether the use of borrowed resources has created value for the South African economy and its citizens. Bilan (2016) describes the conventional view as one that combines the classical and the Keynesian view on the economic effects of public indebtedness, distinguishing between such effects in the short-term (Keynesian theory) and long-term (classical theory). Keynesian theory holds that public debt is beneficial in the short term when the economy is in a recession, crisis, or sees weak economic growth rates (Bilan, 2016). It states that public debt is essential, and can be used as a tool for economic growth by applying it to fund infrastructure projects, and to create employment or assist businesses and individuals financially. Over the long run, public debt is expected to increase interest rates, reduce investment and capital accumulation, and affect economic growth negatively. Public debt is viewed as harmful to the economy, and it is only justifiable for productivity-enhancing infrastructure (Aybarç, 2019), where the government is expected to reduce it during times when the economy is stable and growing.

2.7 Conclusion

The chapter examined resource-based theory and how it can be applied to government organisations. It also looked at public debt theories, particularly public borrowing applications. This study aims to investigate rise in public debt in South Africa, and its economic impact. Consequently, the application of public debt is critical for the study. Application links to the resource-based theory, as it is an efficiency-based theory that speaks to how organisations use their internal resource as a source of competitive advantage. Financial capital regarding borrowings was then applied to the VRIO framework so as to determine whether it could be a source of competitive advantage. It was found that, in order to be a source of competitive advantage, borrowings should be applied for investment projects that generate income, should be used to stimulate the economy during economic stagnation, and the government ought to ensure that debt is kept at sustainable levels. The theories of public debt were also reviewed. Public debt has always been a topic of

debate and discussion, and views on it have evolved based on the economic and political circumstances of the period. In general, the views on public debt can be divided into two broad categories, namely those who believe that public debt is necessary and can be used as a tool for economic growth, and those who believe that public debt is harmful to the economy, and should be avoided as much as possible, unless it is used in income-generating projects. During economic crises or recessions, the prevailing view is that public debt is necessary to stimulate the economy and create jobs. In such situations, governments may borrow money to finance infrastructure projects and create jobs, or financially assist struggling businesses and individuals. This is often referred to as deficit spending. Those who support deficit spending argue that it can help boost economic growth in the short term and create a more prosperous future in the long term.

However, during times of economic stability and growth, the prevailing view tends to shift towards reducing public debt. Those opposed to public debt argue that it burdens future generations by saddling them with the cost of repaying it (Wagner, 2005). It can also lead to inflation and higher interest rates, impeding capital accumulation and slowing economic growth. Government expenditures also tend to increase during voting years, financed by debt, thereby transferring the burden onto incoming government administration (Aybarç, 2019). Overall, views on public debt will continue to evolve as the economic and political circumstances of the world change. It remains, therefore, crucial to weigh the positives and negatives of borrowing and to find a balance between the short-term benefits and the long-term costs of public debt.

The appropriate paradigm for this study is one that should encourage a flexible approach to understanding economic policies, remaining open to new evidence and changing perspectives. It should foster continuous inquiry and adaptation, recognising that as new data and contexts emerge, our understanding of public debt must also evolve allowing for views that adapt to different circumstances.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This research aims to contribute to a general inquiry on debt sustainability by providing evidence-based quantitative findings on the rising public debt and its effect. The focus of the study is to investigate the causes of the rising public debt in South Africa and its effects between the period 2009 to 2019. This is done by examining and analysing the use of public debt in South Africa, so as to determine whether the public debt was applied for productive or unproductive purposes, and to assess the effect of these expenditures on the economy. The results will provide insight into the slow economic growth, as well as the well-being of public citizens. This study is relevant as it will explore why the South African economy remains stagnant despite the government's deficit spending and the resulting accumulation of public debt.

3.2 Research Question, Objectives, and Goal

3.2.1 Research Questions

i. What has caused the rising public debt in South Africa for the 2009 to 2019 fiscal years?

ii. How has the rising public debt affected the economy during the period under review?

3.2.2 Research Objectives

The key objective of this study is to examine whether South Africa has applied public debt resourcefully in value-adding activities and to investigate the causes of the rising public debt in South Africa between the fiscal years 2009 to 2019 and its effects on the economy. Where public debt is applied for productive spending, it is expected to result in economic growth and stability. Where public debt is applied to unproductive spending, it will explain a stagnancy in the economy.

In so doing, the study will seek to achieve the following objectives:

i. examine the use of public debt in South Africa: productive and non-productive use;
ii. analyse the cause of deficit spending, its composition, and its relation to public debt; and

iii. examine what may explain the reasons for the productive use of public debt not having resulted in expected economic growth and well-being to date.

3.2.3 Research Goal

This study aims to examine the effect of the nature and funding of government expenditure on South Africa's stagnant economy.

3.2.4 Hypotheses

H1: Increase in government expenditure without a corresponding increase in government revenue causes an increase in public debt.

H01: Increase in government expenditure without a corresponding increase in government revenue does not cause an increase in public debt.

H2: Public debt applied significantly to unproductive government expenditure negatively impacts economic growth.

H02: Public debt applied significantly to unproductive government expenditure does not impact economic growth.

3.3 Research Paradigm

Guba and Lincoln (1994) define a research paradigm as the fundamental belief system or the worldview that guides researchers in their approach to understanding and interpreting phenomena. Research paradigms provide a framework through which researchers approach their research questions and determine the most appropriate methods to conduct a study (Guba and Lincoln, 1994). Paradigms shape the researchers' understanding of what constitutes valid evidence, what types of questions to ask, and how to interpret findings (Guba and Lincoln, 1994), which is based on the philosophical assumptions of the ontology, epistemology, and methodology to understand the social world (Chilisa and Kawulich, 2012). Researchers approach and understand the social world through several paradigms in the social sciences (Chilisa and Kawulich, 2012). According to Chilisa and Kawulich (2012), most research falls into the following paradigms: positivist, post-positivist, constructivist, transformative, and postcolonial indigenous paradigms, and certain paradigms are associated with specific methodologies. However, no single paradigmatic

framework is perfect; researchers must decide what paradigmatic approach best aligns with their research question and goals (Chilisa and Kawulich, 2012).

The paradigm adopted for this research is a post-positivist paradigm. Post-positivism is a theoretical framework that evolved in response to certain positivist paradigm limitations and criticisms (Panhwar, Ansari, and Shah, 2017). Whereas the positivist paradigm is viewed as the received view (Guba and Lincoln, 1994), is objectivist, and based upon the view that the scientific method is the only approach to establish the truth and objective reality, post-positivism shifts emphasis from absolute certainty to probability (Chilisa and Kawulich, 2012). According to post-positivists, no individual, including scientists, can view the world as it really is (Trochim, 2002). This is because every individual is biased, which colours his or her observations (Trochim, 2002). This does not imply that post-positivism is not objective, but states that objectivity is inherently a social phenomenon (Trochim, 2002). Consequently, the only way to obtain objectivity is through triangulation across multiple fallible perspectives (Trochim, 2002). The post-positivist paradigm assumes that knowledge of reality is always imperfect, and that the understanding of such reality needs to be revised or refined (Guba and Lincoln, 1994). Chilisa and Kawulich (2012) claim that knowledge can be objective without it being absolutely certain. In this way, the researcher recognises the limitation of knowledge and acknowledges the need for further inquiry.

Post-positivism recognises that, because all knowledge is humanly constructed, it is influenced by various social, cultural, and historical aspects, where different people may have different understandings or views about the same situation (Chilisa and Kawulich, 2012). A post-positivist also believes that all observations are essentially theoretical and that human society – including its scientists – are unable to avoid inherent bias crafted over time by their cultural experiences and worldviews, and related heuristics (Trochim, 2002). It is possible, however, to achieve commensurability (Trochim, 2002). Post-positivism acknowledges that all knowledge is socially situated and reflects the viewpoints and values of its authors, in contrast to positivism, which holds that knowledge can be objective, and value-free (Guba and Lincoln, 1994). Furthermore, post-positivism acknowledges that no objective reality can be observed and measured directly. Instead, reality is constructed through the interactions between the observer and the observed, perceptions, and values, and because perception and observation are fallible, the constructions must also be

fallible (Trochim, 2002). This approach recognises that any individual measurement or observation may be subject to error, bias, or limitation, and that no single source of information can provide a complete and unbiased view of the world (Trochim, 2002). By using multiple data sources, comparing, and contrasting these against one another, researchers can gain a more nuanced and comprehensive understanding of the phenomena under scrutiny (Trochim, 2002).

3.3.1 Ontology and Epistemology

The ontology informs the post-positivist paradigm of the critical realism philosophy (Trochim, 2002, cited in Chilisa and Kawulich, 2012). Critical realism is an ontology that recognises the existence of an objective reality but also that, as human beings, our understanding of reality is limited to the inherent flaws of human perception and the complexity of phenomena (Guba and Lincoln, 1994). While positivists are realists (naive realism) (Chilisa and Kawulich, 2012), post-positivists recognise that all observation is fallible and has errors, where theory is subject to modification (Trochim, 2002). This of course makes sense, given how theories evolve due to critical review, from experienced reality. Scientific observation and measurement also contain error, and any interpretation of their results cannot be assumed to be the only accepted truth. The reality outside of scientific analysis should also be considered. A post-positivist ontology of critical realism assumes that reality can be socially constructed through critical examination and empirical investigation, in order to better understand the nature of reality (Chilisa and Kawulich, 2012). This research assumes multiple socially constructed realities about public debt, instead of one verifiable reality (Chilisa and Kawulich, 2012).

The post-positivist assumptions about the nature of knowledge (epistemology) are based on the proposition that knowledge is neither objective, nor perfect (Chilisa and Kawulich, 2012), but to a degree inherently subjective and constructed through observation, interpretation, and social interaction. Post-positivists maintain that perfect objectivity is not achievable, but that it is possible to approach it by researchers being aware of their bias and assumptions, or by being critical and reflexive (Chilisa and Kawulich, 2012). This is because knowledge is shaped by the researcher's personal biases and experiences, as well as by the social and historical context in which the research is conducted (Chilisa and Kawulich, 2012). The study is based on the theory that for public debt to be a source of competitive advantage, it should be applied to value-adding projects

that generate income or used to stimulate the economy during periods of stagnation. To maintain sustainability, the government should keep debt at manageable levels by reducing it during times of economic stability and growth. When debt is not managed in this way, it can become harmful to the economy. Findings through scientific observation and analysis may contradict abstract conceptualisations, but remain influenced by reality outside of scientific truths.

3.3.2 Justification for Post-Positivism Paradigm

Trochim (2002) states that our views of science have evolved since the middle of the 20th century, where this has necessitated a shift from positivism, towards a post-positivist approach. Unlike positivists, who believe that science is the only way to reach the truth, post-positivists claim that science is not distinctly different from how we think about or experience our everyday lives (Trochim, 2002). That is, scientific reasoning and common-sense reasoning are essentially the same (Trochim, 2002). While positivists believe science aims to uncover the truth, critical realists (post-positivists) firmly believe that science follows a critical imperative to establish the truth about reality, even when such may prove beyond our means to do (Trochim, 2002). Post-positivism is a philosophical position that recognises that knowledge is always tentative and fallible, and that there is no single objective truth about the world (Trochim, 2002). Post-positivists emphasise the importance of multiple measures and observations, and the need to triangulate across different data sources in order to arrive at a more complete and accurate understanding of reality (Trochim, 2002). The post-positivist prioritises quantitative data, which it emphasises tends to strengthen, confirm/disconfirm findings (Wildemuth, 1993, cited in Panhwar, Ansari, and Shah, 2017). The post-positivism paradigm is appropriate for this study, given the South African dynamics of inequality, unemployment, and poverty, to mention a few. More than scientific observations and measurements are needed in order to provide an accurate picture of reality. The research does not aspire to provide a generalised view about the causes and impact of rising public debt, but rather, to investigate the rising public debt as this applies in the South African context, during a limited timeframe (Chilisa and Kawulich, 2012). However, research findings based on South African observations and measurements may be commensurable to those of other nations (Trochim, 2002). A further reason to use the post-positivism paradigm is that the study's methodical approach is quantitative and correlational (Chilisa and Kawulich, 2012). The correlational analysis of research seeks to determine the strength of the relationship between variables (Chilisa and Kawulich, 2012).

3.4 Research Methods and Design

The study adopts a quantitative method of inquiry relevant to its aims. Post-positivism, like the positivist paradigm, uses research to predict results, test theories, and determine cause-and-effect relationships, or to determine the strength of relationships between variables (Chilisa and Kawulich, 2012). A quantitative method of inquiry is identified as one of the methods appropriate to investigate a phenomenon for the post-positivism paradigm (Chilisa and Kawulich, 2012). Apuke (2017) describes quantitative research as a method of quantifying variables by utilising and analysing numerical data using specific statistical techniques to answer the research questions. This description aligns with the descriptions found in other studies. Researchers begin with ideas, theories, or concepts that are defined that guide the identification of variables of interest (Chilisa and Kawulich, 2012). By defining and operationalising these variables, the researcher can collect data systematically and objectively, making it possible to test their hypotheses and determine whether there is a statistically significant relationship demonstrated in them (Chilisa and Kawulich, 2012). Descriptive statistics are used to analyse the correlational relationship between government expenditure and public debt.

3.5 Data Collection Methods

Kumar (2011) refers to two primary ways of collecting data, namely, primary, and secondary sources. One of the ways of explaining causal relationships between variables, as mentioned by Trochim (2002), is through statistical research. Statistical research aligns with secondary sources of gathering data, and statistically analysing it (Kumar, 2011). Secondary data refers to data that has been previously collected by others for a different purpose, and can be used by researchers (Ellram and Tate, 2016). It can be either quantitative or qualitative, and may come from various sources, such as extant literature, census data, government information, financial data, and organisational reports and records (Ellram and Tate, 2016). Access to secondary data can vary, with some sources being freely and publicly available, while others may require permission or payment of a fee (Ellram and Tate, 2016). The data collected for this study comes from the Department of National Treasury of the Republic of South Africa (SA National Treasury). On its website, the SA National Treasury states that it is its holistic responsibility to manage South Africa's national government finance (SA National Treasury, 2023). The unit of analysis for the

study is the national government. It is accepted that data from SA National Treasury proves to be the most reliable and valid source of financial data in South Africa for the study.

Furthermore, extensive research data on South African public finances and from credible organisations, namely the International Monetary Fund (IMF), can be used to corroborate or augment the data collected. Data from all sources are publicly available and may be accessed via the websites of relevant organisations. Financial data is published each fiscal year on the budget information section of the SA National Treasury website, and it is analysed annually. The measurement scale of relevant data collected from secondary sources is usually in monetary Rand values, and ratio form. However, where necessary, any data not collected in these forms will be transformed into variables using the most objective and accurate measurement scale and ratios (Kumar, 2011).

3.6 Data Analysis and Interpretation

Statistical data analysis is applied to indicate how public debt is used, whether for productive or unproductive expenditure. Regression analysis and correlation are used to determine the linear relationship between the independent and dependent variables, and to measure the strength and direction of such a linear relationship (Holmes, Illowsky, and Dean 2017). This statistical analysis provides an understanding of how changes in the independent variables affect the dependent variable (Holmes, Illowsky, and Dean 2017). Hypothesis testing determines whether there is sufficient evidence to support or reject the claim that has been made about the population (Holmes, Illowsky, and Dean 2017). The conceptual framework for this study holds that public debt constitutes a source of competitive advantage when used to fund income-generating expenditure, as well as expenditure that creates employment. This type of expenditure is referred to as public investment. Any other expenditure is considered current government expenditure for public consumption and is, therefore, unproductive.

Financial data on the study's variables of interest for the fiscal years of 2009 to 2019 is collected from SA National Treasury and organised in an Excel document for each fiscal period. Descriptive statistics present the most relevant and essential data in simple table summaries, with figures showing the relationship between variables (Trochim, 2002). The main variables of interest include total government debt, government expenditure, government revenue, budget balance, and

gross domestic product (GDP). Other variables that will be observed include debt service costs, indicators such as the ratio of debt to GDP, the ratio of expenditure to GDP, the ratio of expenditure to revenue, interest rates, and other relevant variables. The study begins by analysing public debt trends for the periods under review and public debt proportion and composition (domestic and foreign debt, marketable and non-marketable, per lenders, per specific purposes) to determine its specific use. Public debt that links to any public investment is considered to have been applied for productive use. Deficit spending is analysed to determine the use of public debt not linked to any specific purpose. Since there is no distinct use of this general portion of public debt, the analysis is done by observing the behaviour of current government expenditure. Significant growth in any expenditure category is assumed to have contributed to deficit spending and, therefore, to the increase in public debt. The extent of the annual growth in revenue and GDP is observed for each fiscal year so as to determine how they relate to the behaviour of government expenditure and have contributed towards or have been impacted by the rise in public debt. The data analysis is not extensive enough to be relegated to appendices, and is presented in the body of this research report (Trochim, 2002).

The independent variables are government revenue, and the different categories of government expenditure, because these are the variables responsible for changing the budget balance funded by public debt (Kumar, 2011). The budget balance is the dependent variable because it is the outcome variable (Kumar, 2011). Other variables may affect the magnitude or strength of the relationship between the variables of focus or control the relationship and are regarded as extraneous and intervening variables (Kumar, 2011). The analysis seeks to determine a correlational relationship, and to achieve this, the increase or decrease in government expenditure or revenue must happen before the change in the budget balance; the changes in all the variables must take place in the same fiscal year, and there must be no other factor that accounts for the change in the budget balance, except for government expenditure or revenue. Where the most sizable portion of public debt is placed on public investment (productive use), the expectation is that this will boost the economy, improve government revenue, and gross domestic product.

Furthermore, the findings may reveal a weak link between public investment and public debt or gross domestic product (GDP). In such case, public debt is assumed to have been used more for unproductive purposes. Stagnant economic conditions are evidence of this.

The Pearson correlation coefficient is widely used in statistics to assess the degree of correlation between two variables (Schober, Boer, and Schwarte, 2018; Ly, Marsman, and Wagenmakers, 2018). It is denoted by "r" and is commonly used to measure a linear relationship between two continuous variables, and to quantify the strength and direction of the linear association between variables (Schober, Boer, and Schwarte, 2018; Ly, Marsman, and Wagenmakers, 2018).

Figure 4 The Pearson correlation coefficient formula

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Where,

r = Pearson Correlation Coefficient

x_i = x variable samples

y_i = y variable sample

$\bar{x}$ = mean of values in x variable

$\bar{y}$ =mean of values in y variable

(Patil, 2023; Holmes, Illowsky, and Dean, 2017)

The Pearson correlation coefficient takes values of -1 and 1, where "1" indicates a perfect positive linear correlation, meaning that the two variables increase together. The "-1" value indicates a perfect negative linear correlation, which means that one variable increase, while the other decreases. A value of '0' indicates no linear correlation between the variables (Schober, Boer, and Schwarte, 2018; Ly, Marsman, and Wagenmakers, 2018; Patil, 2023), (Holmes, Illowsky, and Dean, 2017). A positive linear correlation is expected between the budget deficit funded by public debt and the different categories of government expenditure, without a corresponding increase in government revenue. That is, government revenue is growing slower than government expenditure.

Interpreting a correlation coefficient

While there are no strict universal thresholds that indicate the strength and significance of the relationship between two variables (Schober, Boer, and Schwarte, 2018), the following thresholds, as noted in their study, are used to interpret the correlation coefficient:

Table 3 Correlation coefficient interpretation

Correlation Coefficient	Interpretation
0.00–0.10	Negligible correlation
0.10–0.39	Weak correlation
0.40–0.69	Moderate correlation
0.70–0.89	Strong correlation
0.90–1.00	Very strong correlation

(Schober, Boer, and Schwarte, 2018)

Hypothesis testing is conducted on the correlation coefficient for each independent variable and the dependent variable to determine the significance of the correlation (Holmes, Illowsky, and Dean, 2017; Mertens, Pugliese, and Recker, 2017). The p-value is compared to the significance level to determine whether or not the correlation is significant. The predefined threshold usually used in hypothesis testing (significance level) of 0.05 (Mertens, Pugliese, and Recker, 2017) is used for this analysis, in order to test the significance of the statistical analysis by comparing it to the p-value calculated based on the test statistic. The null hypotheses (H01 and H02) are rejected where the p-value is less than the significance level, which means that there is statistically significant evidence to support the alternative hypotheses (H1 and H2) (Holmes, Illowsky, and Dean, 2017); namely, that the increase in government expenditure without a corresponding increase in government revenue causes an increase in public debt, and public debt applied significantly to unproductive government expenditure negatively impacts economic growth. Where the p-value is more than the significance level, there is statistically insufficient evidence to

reject the null hypotheses or support the alternative hypotheses, based on the data analysed (Holmes, Illowsky, and Dean, 2017).

3.7 Limitations and Delimitations of the Study

The public debt of nations is a critical and widespread phenomenon. The study only investigates the rising public debt of a single country, South Africa, for ten years (2009 to 2019). Therefore, empirical evidence is very narrow, towards one country and for a specific time series, which delimits the scope of the research. This was deliberately done to create focus and the ability to investigate the phenomenon extensively for the periods under review. The study findings are not meant to provide generalised views about public debt in South Africa, or even for a different country within the same time series.

The presentation of the data from secondary sources is inconsistent in some instances. For example, the classification or categorization of one of the variables may vary year after year (expanded or consolidated), depending on revised reporting requirements. Data availability may also be a limiting factor, due to revised reporting requirements. This limitation may prevent proper comparison, analysis, and interpretation of variables.

3.8 Ethical Concerns

Government documents constitute the primary basis of data collection and interpretation. Data from secondary sources will be cautiously approached, and not manipulated in any way. In all instances, ownership of the original data will be adequately acknowledged.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

Chapter 4 starts by analysing and interpreting the South African Government's financial data for 2009 to 2019 fiscal years as published by SA National Treasury and the South African Reserve Bank on their websites. The financial data is mainly obtained or compiled from the latest budget publications, depending on the availability of relevant data. The South African National Treasury regularly reviews the data presented in the government accounts, in order to improve its scope and classification. Therefore, historical data in the latest budget publications are updated with any necessary classification adjustments and may not be strictly comparable to previous budget publications. Furthermore, the historical data in the latest budget publications are updated with actual outcomes. Other economic indicators and statistics are extracted from the online South African Reserve Bank (SARB) statistics section. The data in these government publications are accepted at face value and are not tested for accuracy. The data analyses are in respect of the consolidated government/public accounts, as described in the South African National Treasury Structure of Government Accounts publications and are for fiscal years starting on 1 March and ending at the end of February.

The second part of this chapter is a regression analysis between the variables observed and quantifying the strength of such correlation. We already know that there is a correlation between the budget balance, government revenue, and government expenditure. The analysis seeks to quantify this relationship's strength and show cause and effect. The independent variables in the study are government revenue, and the different categories of government expenditure in the SA National Treasury budget publications, current payments, transfers and subsidies, payment for capital assets, and payment for financial assets. The dependent variable refers to the budget deficit that is financed through the issue of debt. The national government issues debt to cover the budget balance, finance debt redemptions, and assist public enterprises with investment financing. Current payments consist of compensation to government employees, borrowing costs, land rent, and expenditure on government goods and services. Transfers and subsidies contain transfers to other government institutions, businesses, and households, which include current and capital payments. Payments for capital assets consist of payments for capital formation.

Furthermore, payments for financial assets consist of lending to public institutions or equity investments in those institutions for policy purposes. Multiple regression analysis is initially performed to eliminate any insignificant variable. The individual analysis is performed for any significant variable. The second relationship that is analysed is that of public investment and GDP. Public investment consists of both public and private sector infrastructure investments. The analysis seeks to identify whether there is a linear relationship between the two and whether this constitutes a strong correlation.

4.2 Public Investment

The purpose of this review is to analyse the relationship between public debt, public investment, and economic growth in South Africa over the past two decades, particularly focusing on the period from 2009 to 2019 The review examines the evolution of South Africa's public debt and its implications for economic growth and development. It evaluates the impact of debt accumulation on public and private sector investment, particularly in infrastructure, and assesses the crowding-out effect of public borrowing on private investment. It also explores the effects of South Africa's changing credit ratings on its access to financing and overall economic stability.

Before 2009 the low levels of debt in South Africa created room for public enterprises to access funding through domestic and international markets, enabling these to finance their infrastructure development programmes, thus giving South Africa a chance at a growing economy through job creation and capacity expansion (SA National Treasury, 2008). In the national budget of 2008, South Africa had projected a reduction in debt by 2010/2011 of 15.9%, due to a negative net borrowing requirement (SA National Treasury, 2008). Due to South Africa's robust economic growth, the major credit rating agencies have revised their sovereign credit rating from stable, to positive. This status places a country in an advantageous position, allowing it to access domestic and international markets for development finance, due to increased confidence in a country’s creditworthiness. Sovereign credit ratings in South Africa are assessments provided by international credit rating agencies that evaluate the creditworthiness of the South African government. These ratings reflect the agencies' opinions on the ability of the government to meet its financial obligations, including servicing its debt. In 2015, Standard & Poor's (S&P) revised South Africa's credit rating from stable to negative (Tlharipe-Mothibi, 2020). Additionally, in

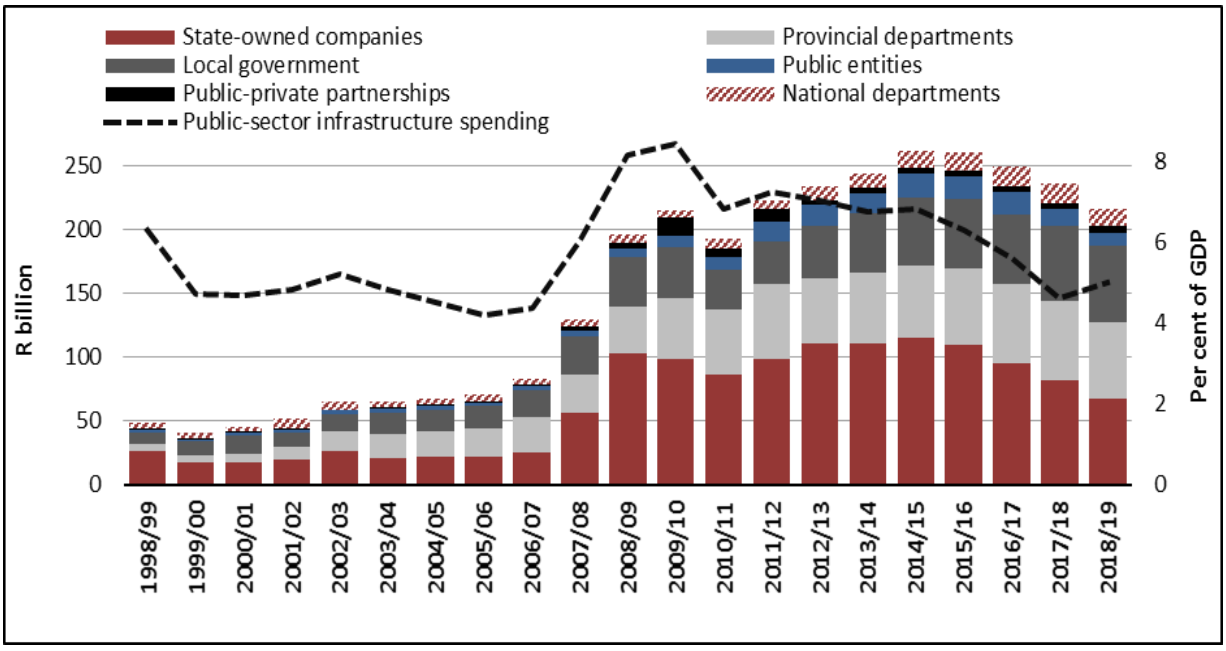
2016, Fitch Ratings lowered South Africa's credit rating to one notch above junk status, with a negative outlook (Tlharipe-Mothibi, 2020). Both rating agencies cited weak economic growth, political instability, delays in new electricity plant completion, elevated debt levels, fiscal and current account shortfalls, and currency depreciation as the primary risk factors (Tlharipe-Mothibi, 2020).

Table 4 Public sector infrastructure spending

R billion	National departments	Provincial departments	Local government	Public entities	Public-private partnerships	State-owned companies	TotalPublic-sector infrastructure spending	Public-sector infrastructure spending % of GDP
2008/09	6.3	36.1	39.6	6.2	4.9	103.3	196.4	8.16
2009/10	5.7	47.9	39.6	8.8	13.9	99.1	215.1	8.43
2010/11	7.2	52.0	30.9	9.4	7.3	86.0	192.9	6.82
2011/12	6.6	58.4	33.2	15.4	10.7	98.9	223.2	7.25
2012/13	11.4	50.3	41.7	16.1	3.8	111.3	234.5	7.01
2013/14	11.9	55.2	47.1	15.4	3.9	111.2	244.8	6.76
2014/15	13.5	56.4	53.2	19.2	4.0	115.8	262.2	6.80
2015/16	14.5	60.6	54.7	17.8	4.3	109.3	261.2	6.30
2016/17	15.8	62.6	54.4	17.1	4.8	95.2	249.9	5.60
2017/18	14.9	62.3	58.8	13.2	4.8	82.2	236.2	4.60
2018/19	13.6	59.5	61.0	9.6	4.9	67.5	216.2	5.00

Source: SA National Treasury 2020 budget publication

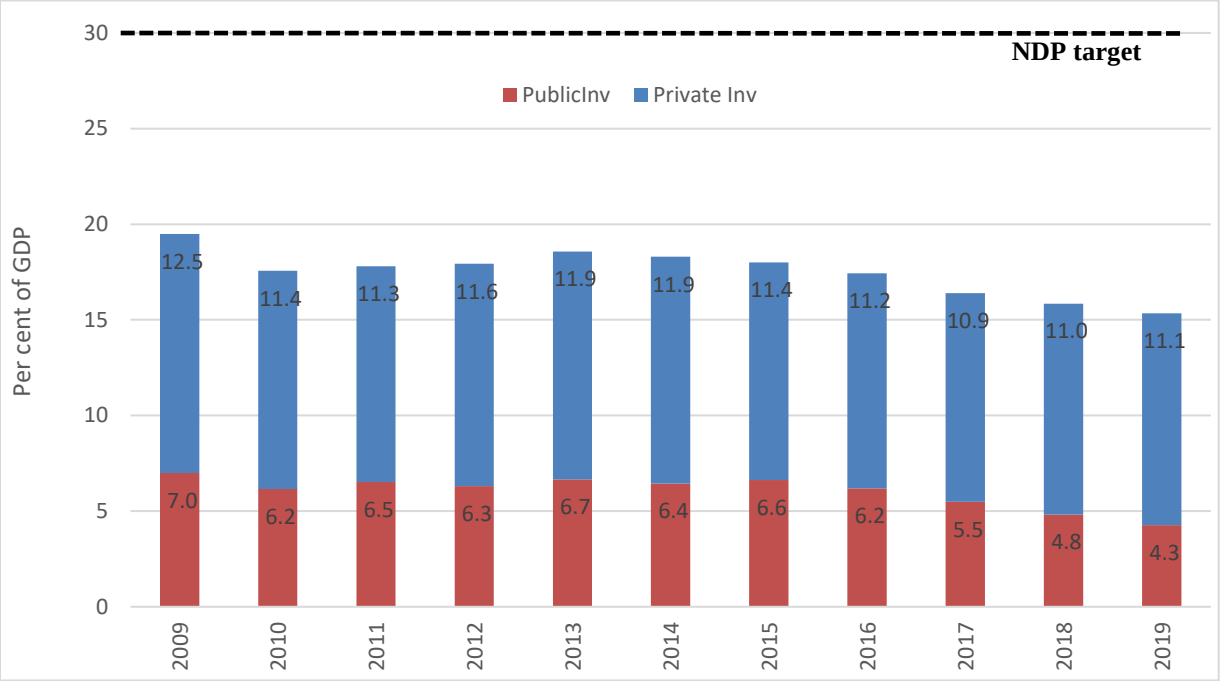
Figure 5 Public sector infrastructure spending



Source: SA National Treasury 2020 Budget Publication

Table 4 and Figure 5 show infrastructure investment by the public sector. State-owned entities are the most significant contributor at a proportion of 42% and 53% between 2009 and 2016, followed by provincial and local governments (SA National Treasury, 2008). Public investment by state-owned companies and development finance institutions is vital to increasing the productive capacity and alleviating poverty in South Africa through job creation (SA National Treasury, 2008). More than 70% of infrastructure investment is in economic services (energy, water & sanitation, transport & logistics, and others), and the remainder is for social services (education, health, housing, community facilities, and others). Public sector investment increased by 55.7% from 2008 to 2009 and 50.9% in 2010. This is in respect of the five-year planned improvement programmes on energy and transport infrastructure that included improvements for the 2010 FIFA World Cup (SA National Treasury, 2010). The increased infrastructure development arises from the democratic government's endeavor to rectify the deficiency in economic and social infrastructure by implementing the reconstruction and development plan (Makhathini, Mlambo, and Mpanza, 2020). This plan focuses on enhancing access to social and economic infrastructure, including the provision of housing, education, and healthcare, as well as facilitating connectivity to electricity grids and water networks for households (Makhathini, Mlambo, and Mpanza, 2020). Public sector investment slowed after 2011, decreasing between 2016 and 2019 by 17.2% due to the substantial reduction of capital spending by state-owned entities and municipalities. This was due to the deteriorating economic growth, rising public debt, including government-guaranteed debt, difficulty accessing funding by state-owned entities, reduced revenue collections, and underspending on conditional grants by municipalities (SA National Treasury, 2020). It reduced infrastructure spending as a ratio to GDP from an average of 7.3% to 5.4% (SA National Treasury 2020).

Figure 6 Public and Private Investment to GDP



Source: SA National Treasury 2023 Budget Publication

Between 2009 and 2019, the proportion of capital investment was an average of 66% private sector investment and 34% public sector investment, showing that private investors contributed more to economic development. This proportion has been maintained for many years, with private sector investment leading at proportions of between 64% and 74% (observed for periods 1994 to 2021). There was a reduction in private sector investment from 2008 to 2011 by 23.3 percent. The reduction in investment was anticipated, given the global financial crisis of 2008/2009, and low investor confidence. However, private sector investment has been picking up slowly since then and has remained constant at 11.5% of GDP since 2016, while public sector investment has been decreasing since 2016. The crowding-out effect of private investment seems to be non-existent, since private sector investment maintained the lead in capital investment, although public debt had been increasing sharply. Total investment averaged 17.5% of GDP (private investment at an average of 11.5%; public investment at an average of 6.0%) between 2009 and 2019, still below the National Development Plan 2030 target of 30% (SA National Treasury, 2020). South Africa planned and undertook major infrastructure programmes during the years under review, including the FIFA World Cup infrastructure development (energy and transport), the Lesotho Highlands

water project, new buses by the Passenger Rail Agency for the FIFA World Cup, Eskom power plants, Transnet pipelines, rail and ports investments, the construction and upgrade of dams, water transfer schemes, schools, hospitals, clinics, information, and communication broadband infrastructure, social housing development, informal housing upgrades, urbanising mining towns, the development of health facilities and nursing colleges, regional investment on the part of the development finance institutions, to mention a few (SA National Treasury, 2009 to 2019). The unemployment level has been constant at 25% since 2010, increasing by 9% from 2009, and started increasing by 4% annually between 2015 and 2019 (SARB, 2009 to 2019). For the periods under review, investment in the economy does not seem to have contributed significantly to employment, given the increasing levels of unemployment and poverty.

During the period 2009 to 2019, South Africa experienced significant changes in its fiscal policies, public investment strategies, and credit ratings, which impacted its economic development trajectory. Initially, low levels of public debt allowed South Africa to leverage domestic and international markets for financing infrastructure projects, contributing to job creation and economic growth. However, subsequent economic challenges, such as rising public debt, declining credit ratings, and reduced public sector investment, have raised concerns about the sustainability of these policies and their effectiveness in stimulating economic growth and reducing unemployment.

4.3 Public Debt

The purpose of this review is to examine the composition, usage, and implications of public debt in South Africa, with a particular focus on the period from 2009 to 2019. The review aims to analyse the impact of this debt composition on the country's economic stability and growth, considering the balance between domestic and foreign borrowing. It highlights the risks associated with overreliance on domestic debt, such as higher interest rates, the crowding-out effect on private investment, and increased sovereign risk, which can undermine investor confidence and elevate borrowing costs. Additionally, the review explores the categorization of public debt in South Africa into three primary uses: financing the gap between government revenue and expenditure, funding public bond redemptions, and supporting infrastructure investment through direct transfers and guaranteed debt.

Table 5 Gross domestic public debt

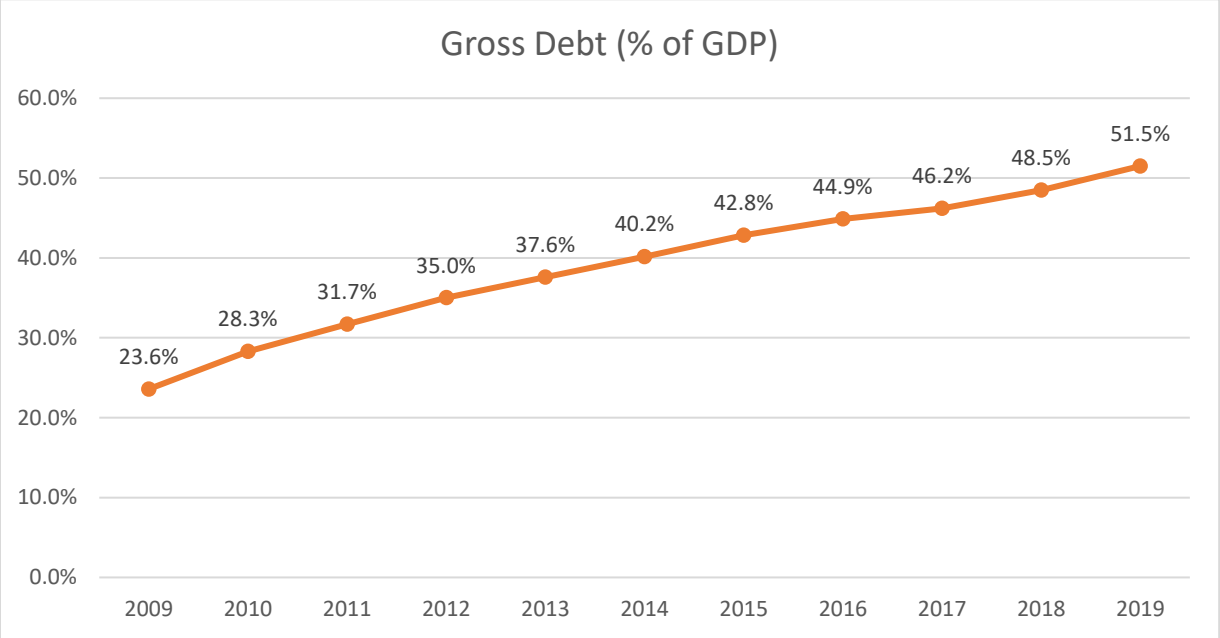
R'billion	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Domesti debt											
Marketable	527.8	700.5	869.6	1,045.4	1,210.8	1,409.7	1,601.5	1,782.0	1,981.6	2,242.9	2,467.8
Non-marketable	2.0	4.9	23.1	25.5	30.3	31.4	30.6	37.3	38.5	29.0	29.2
Total domestic debt	**529.7**	**705.5**	**892.7**	**1,070.9**	**1,241.1**	**1,441.1**	**1,632.1**	**1,819.4**	**2,020.1**	**2,271.9**	**2,497.0**
Foreign debt											
Marketable	66.7	77.1	77.8	98.2	106.6	127.0	155.1	189.3	206.8	214.2	289.3
Non-marketable	30.6	22.5	20.0	18.7	18.0	16.7	11.7	10.3	6.0	3.6	2.0
Total foreign debt	**97.3**	**99.7**	**97.9**	**116.9**	**124.6**	**143.7**	**166.8**	**199.6**	**212.8**	**217.8**	**291.3**
Total gross debt	**627.0**	**805.1**	**990.6**	**1,187.8**	**1,365.7**	**1,584.8**	**1,798.9**	**2,019.0**	**2,232.9**	**2,489.7**	**2,788.3**
As % of GDP	**23.6%**	**28.3%**	**31.7%**	**35.0%**	**37.6%**	**40.2%**	**42.8%**	**44.9%**	**46.2%**	**48.5%**	**51.5%**

Source: Data compiled from SA National Treasury budget publications

Table 5 shows the composition of South Africa's public debt. On average, from 2009 to 2019, 89.7% of South Africa's public debt consist of domestic debt, and 97.1% of marketable debt (SA National Treasury, 2022). Domestic marketable debt comprises fixed-income and inflation-linked bonds and short-term treasury bills (SA National Treasury, 2022). South Africa applies foreign debt to meet its future foreign currency commitments. Domestic debt is the primary source of finance in South Africa, limiting the country's exposure to the volatility of currency fluctuations (Hlongwane and Daw, 2023). Domestic debt is used to meet the annual borrowing requirement from the budget balance, refinance maturing public debt, and support infrastructure developments to fund the acceleration of social and economic priorities. Public finance for the years before the global financial crisis reflected prudent fiscal management, with the debt-to-GDP ratio at manageable levels (SA National Treasury, 2009). Overreliance on domestic borrowing leads to higher interest rates, potentially crowding out private investment and slowing economic growth (Tlharipe-Mothibi, 2020; Ncanywa and Masoga, 2018). Persistently high levels of domestic debt due to government expenditure growing more than government revenue, high unemployment and inequality (Hlongwane and Daw, 2023) in South Africa increases sovereign risk, raising concerns about the government's ability to repay its obligations, thereby leading to higher borrowing costs and reduced investor confidence, further exacerbating fiscal challenges (Tlharipe-Mothibi, 2020; Ncanywa and Masoga, 2018). Political pressures may influence domestic borrowing, as the government may encounter resistance to austerity measures or tax hikes necessary for servicing

debt obligations (Ncanywa and Masoga, 2018), thereby constraining fiscal flexibility and impeding the implementation of prudent fiscal policies (Maja, 2017). Conversely, external debt exposes South Africa to exchange rate risk due to its volatile currency, as repayment obligations are denominated in foreign currencies. Fluctuations in exchange rates can significantly inflate the cost of servicing external debt, particularly if the local currency depreciates relative to the currencies in which the debt is denominated.

Figure 7 Gross debt as a ratio of GDP.



Source: Data compiled from SA National Treasury budget publications

Table 6 Gross public debt and Government-guaranteed debt

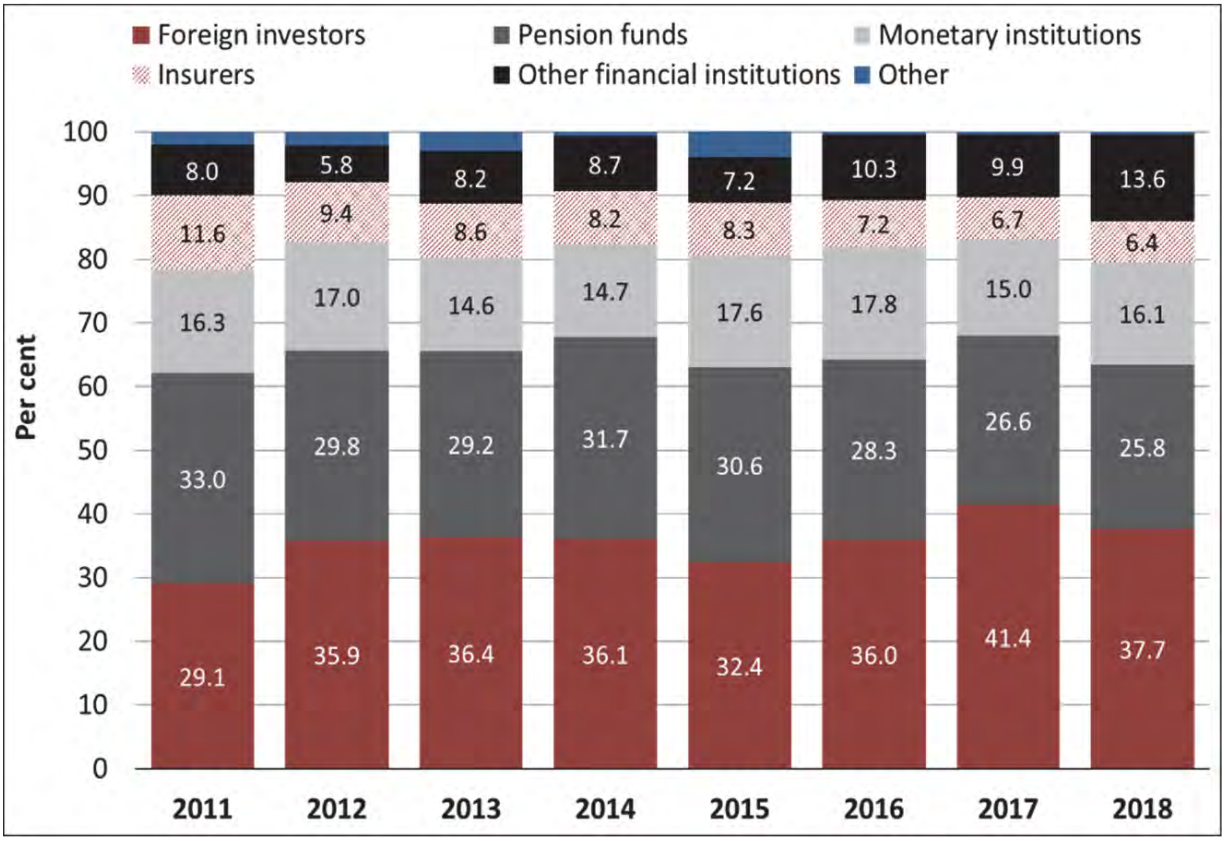
R'billion	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total gross debt	627.0	804.9	990.6	1,187.8	1,365.7	1,584.8	1,798.9	2,019.0	2,232.9	2,489.7	2,788.3
Government guarantees	63.0	139.4	160.0	164.3	224.8	288.0	327.2	380.1	426.2	453.0	525.1
Debt including guarantees	**690.0**	**944.3**	**1,150.6**	**1,352.1**	**1,590.5**	**1,872.8**	**2,126.1**	**2,399.1**	**2,659.1**	**2,942.8**	**3,313.4**

Source: Data compiled from South African Reserve Bank statistics

Figure 7 depicts the sharp rising public debt in South Africa since the global financial crisis of 2008/2009, and it has continued rising since then. Although the budget balance was in surplus in 2008, the economy has never recovered, evidenced by ever rising budget deficits. As shown in

Table 6 above, State-owned guaranteed debt also grew substantially, with Eskom being the largest stakeholder. South African economic growth, like other economies, was also impacted by the low commodity prices globally in 2016, due to ample supplies and slowing demand by emerging economies, forcing countries to make relevant economic adjustments (SA National Treasury, 2016). Rising borrowing costs, drought, electricity shortage, and declining business confidence also harmed the economy (SA National Treasury, 2016). The South African SA National Treasury also identified shortcomings in infrastructure project planning and management and the needed to address this to see the positive impact of investment in the economy (SA National Treasury, 2016).

Figure 8 Holders of Government bonds.



Source: South African SA National Treasury 2019 budget publication.

The primary source of government funding is through marketable domestic securities (average of 98.3%) and consists of fixed-income bonds, inflation-linked bonds, and treasury bills. Figure 8 shows the type of government lenders, mainly foreign investors, and local corporations. Lenders invest in government bonds because they are low-risk investments, with fixed or secured returns

backed by the government, making them attractive. Except for state-owned entity loans that are usually tied to specific infrastructure projects such as the development of roads, water, or energy and provincial and local government's social infrastructure, the national government issues bonds to finance budget deficits, finance debt redemptions and borrowing costs and to assist public organisations with investment financing. Based on the use of public debt in South Africa, public debt could be classified into three uses:

1. to finance the shortfall between government revenue and government expenditure;
2. to finance public bond redemptions; and
3. to assist with infrastructure investment (direct transfers and guaranteed debt).

The first use could be classified as both productive and unproductive, because it includes payment for capital formation. The second use is considered unproductive. The third use is classified as used for productive purposes as it is usually tied to infrastructure development, assuming proper planning and management of such projects. In addition, public enterprises use loan debt to finance infrastructure development (SA National Treasury, 2019). The national government guarantees the debt.

This review examined South Africa's public debt from 2009 to 2019, focusing on its composition, use, and impact. It finds that most public debt is domestic (89.7%) and marketable (97.1%), primarily in the form of bonds and treasury bills. While domestic debt reduces currency risk, it raises interest rates and can crowd out private investment, affecting economic growth and fiscal stability. High domestic debt levels, driven by spending exceeding revenue, along with unemployment and inequality, increase sovereign risk and borrowing costs. The review also discusses how rising debt since the 2008/2009 financial crisis has led to budget deficits, rising costs, and economic challenges. Public debt in South Africa is mainly used to cover revenue shortfalls, refinance maturing debt, and support infrastructure. The review emphasises the need for careful debt management to support sustainable growth while managing risks.

4.4 Budget Balance

The purpose of this review is to examine South Africa's budget balance from 2009 to 2019, focusing on the relationship between government revenue and expenditure. The review will assess

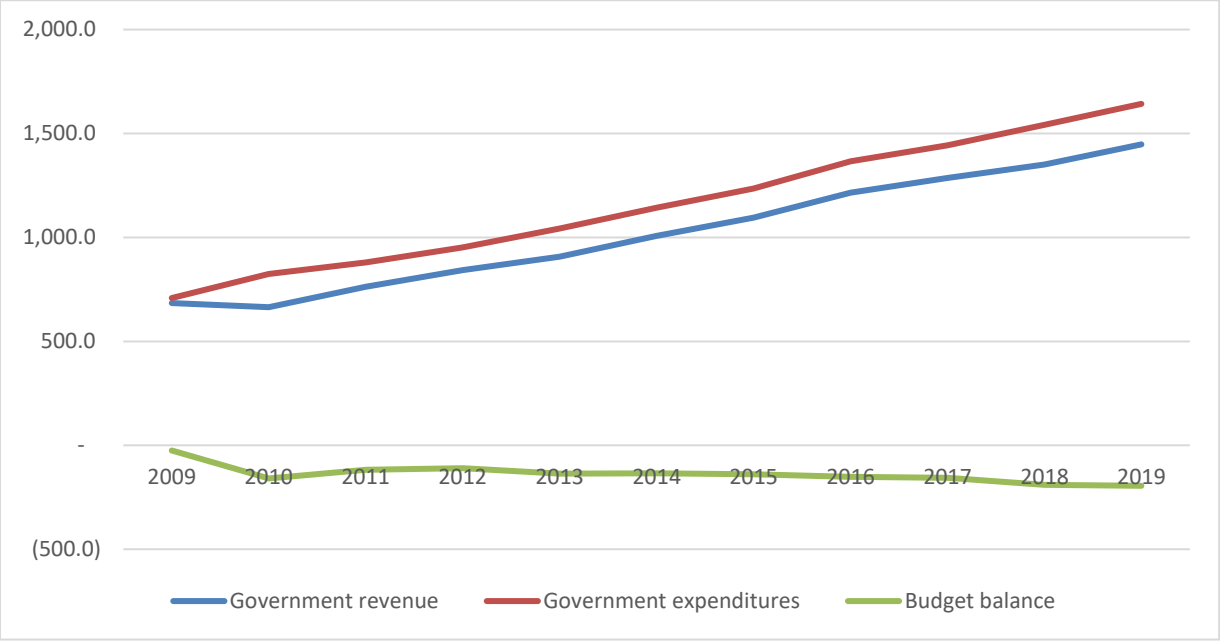
whether revenue growth was sufficient to cover expenditure or if government spending grew at a faster rate than revenue. It also analyses how the resulting budget balance was allocated, identifying key areas of expenditure and the factors driving these spending decisions. Additionally, the review explores the impact of these budgetary dynamics on government borrowing, providing insight into why borrowing increased during this period.

Table 7 Allocation of budget balance to productive and unproductive expenditures

R'billions	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total government revenue	**683.47**	**664.47**	**762.87**	**842.16**	**907.57**	**1,008.05**	**1,095.32**	**1,215.31**	**1,285.60**	**1,350.29**	**1,447.65**
Current payments	409.8	469.9	522.9	579.9	632.5	691.7	744.7	809.6	885.8	941.4	1,010.4
Transfers and subsidies	237.9	263.3	278.7	307.0	339.5	371.9	398.6	435.3	469.2	501.7	546.5
Budget balance before other payments	**35.75**	**(68.75)**	**(38.68)**	**(44.77)**	**(64.48)**	**(55.51)**	**(47.99)**	**(29.61)**	**(69.38)**	**(92.84)**	**(109.21)**
Payments for capital assets	49.68	57.53	55.96	62.33	66.30	75.66	85.51	90.30	79.06	77.48	69.93
Payments for financial assets	11.05	33.31	22.44	3.04	5.09	4.19	6.17	31.11	8.53	20.32	15.73
Budget balance finance	**(24.99)**	**(159.58)**	**(117.07)**	**(110.14)**	**(135.87)**	**(135.37)**	**(139.67)**	**(151.02)**	**(156.98)**	**(190.64)**	**(194.87)**
Proportions:											
Payment for consumption expenditure	-143.0%	43.1%	33.0%	40.6%	47.5%	41.0%	34.4%	19.6%	44.2%	48.7%	56.0%
Payments for capital assets	198.8%	36.0%	47.8%	56.6%	48.8%	55.9%	61.2%	59.8%	50.4%	40.6%	35.9%
Payments for financial assets	44.2%	20.9%	19.2%	2.8%	3.7%	3.1%	4.4%	20.6%	5.4%	10.7%	8.1%
Budget balance finance	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

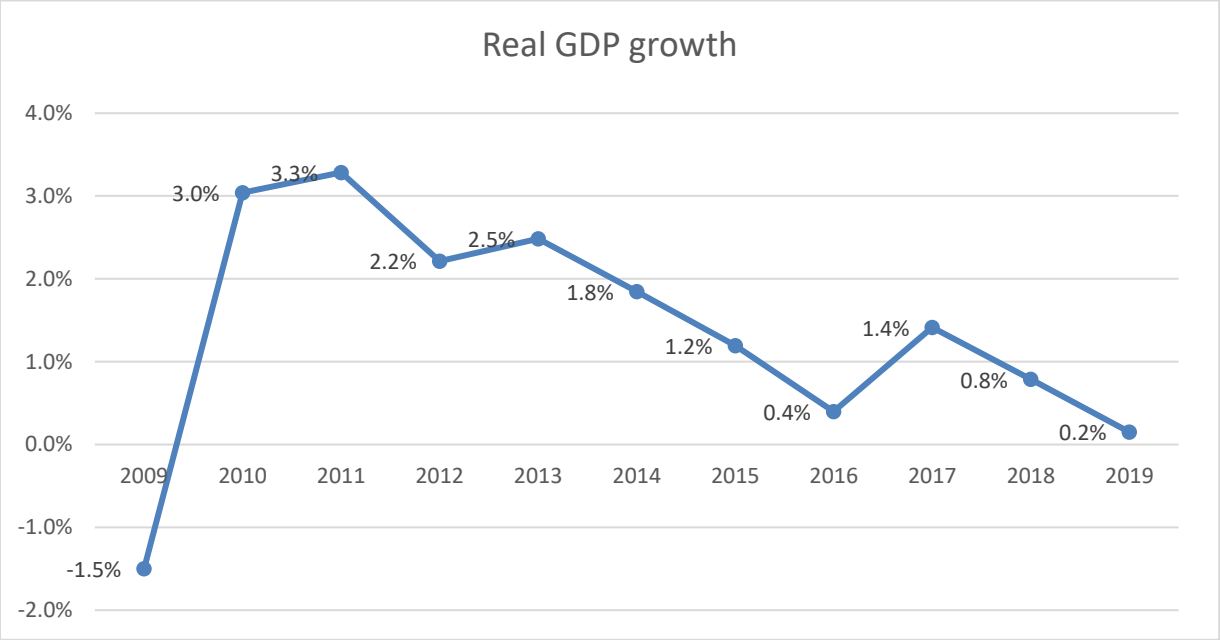
Source: Data compiled from SA National Treasury budget publications.

Figure 9 Budget balance.



Source: Data compiled from SA National Treasury budget publications.

Figure 10 Real GDP growth.



Source: SA National Treasury 2019 budget publication.

Government revenue was lower in 2009/2010 due to the impact of the 2008/2009 global financial crisis and lower commodity prices (SA National Treasury, 2009). South Africa's countercyclical fiscal policy position is to maintain sustainable growth in expenditure, and not to deviate from its social and economic delivery priorities, even during economic difficulties (SA National Treasury, 2009). South Africa's countercyclical policy aims to bolster economic growth and maintain sustainable public finances, allowing the nation to adapt swiftly to stabilise the economy during periods of both recession and expansion, as well as to navigate external shocks effectively (SA National Treasury, 2010). This strategy involves implementing stimulus measures, such as increasing spending on social programmes and economic infrastructure during downturns, while simultaneously managing government borrowing as the economy expands (SA National Treasury, 2010). Over the longer term, the goal is to decrease debt and deficit spending, thereby creating fiscal space to ensure that public finances are well-prepared to respond during economic downturns (SA National Treasury, 2010). Notably, the government augmented spending on social programmes and infrastructure in response to the economic downturn of 2008-2009 (SA National Treasury, 2010).

To support this countercyclical approach, the South African government establishes fiscal rules or targets, encompassing metrics like targeted GDP, expenditure levels, debt limits, and deficit spending thresholds, as well as goals related to low inflation, affordable cost of borrowings, low unemployment, and a competitive exchange rate (SA National Treasury, 2010). Fiscal policy is closely coordinated with monetary policy to ensure a cohesive and efficient response to economic fluctuations. Additionally, the government conducts ongoing monitoring of the national budget, including through the mid-term budget policy statement, which provides updates on budget outcomes and allows for necessary adjustments to be made as needed.

South Africa could not cut expenditure and allocation during these crisis years, and the past years of prudent fiscal management, a strong economy, and low debt-to-GDP ratios allowed for that (SA National Treasury, 2009). South Africa has emphasised capital investment since 2001, due to its importance in economic development. Since then, the government and public enterprises have engaged in significant economic and social infrastructure development and capital expenditure. As per the SA National Treasury (2020) update on public sector infrastructure, the focus on social infrastructure development comprised several initiatives. These included the establishment of a 488-bed central hospital in Polokwane, a 550-bed regional hospital in Tygerberg, and the construction of a 1238-bed Klipfontein hospital (SA National Treasury, 2020). Additionally, efforts were directed towards the Student Housing Infrastructure Programme (SHIP), as well as the expansion, renovation, and management improvement of sixty-four schools in Gauteng (SA National Treasury, 2020). Moreover, projects encompassed the construction of social housing units for low- to middle-income families and the continuation of the social housing programme in its second phase (SA National Treasury, 2020).

In terms of economic infrastructure development, activities primarily concentrated on the upkeep, refurbishment, and reinforcement of municipal electricity distribution networks (SA National Treasury, 2020). Furthermore, plans entailed a two-phase extension of the existing Gautrain rail system, including the procurement of forty-eight additional coaches for the Gautrain and the expansion of depot facilities to cater to increased demand (SA National Treasury, 2020). Substantial upgrades were also earmarked for various segments of highway infrastructure, specifically the N1, N2, and N3 roads (SA National Treasury, 2020). Other initiatives encompassed the enhancement of broadband infrastructure, construction of office facilities, solid

waste management and landfill development, as well as the augmentation of bulk water supply infrastructure (SA National Treasury, 2020).

Including state-owned entities, social and economic infrastructure investment has been growing significantly, as shown in Figure 1. Instead of adopting austerity measures, the country's position has been to finance budget deficits through debt, aiming to ensure that debt is kept at maintainable levels. The most considerable portion of government expenditure, that of compensation to government employees, has been increasing, due to the government's commitment to increase employment (SA National Treasury, 2011). However, the government recognised that in order to deliver on this commitment, lower salary increases would have to be implemented (SA National Treasury, 2011). Transfers and subsidies, which include social grants and subsidies to households and transfers to non-profit organisations, form the second largest government spending and have been increasing due to several reasons, including extending the age limit for child support grants and annual increases on transfers and subsidies (SA National Treasury, 2019). Although South Africa has maintained the growth in expenditure, from 2012, the South African economy started growing more slowly than initially projected (SA National Treasury, 2013). Recovery from the 2008/2009 financial crisis was uneven globally, with emerging markets growing more rapidly than developed countries (SA National Treasury, 2013).

Furthermore, slow growth in developed countries, which constitute South Africa's trading partners, negatively impacted the economy due to reduced demand (SA National Treasury, 2013). With the slow growth in GDP, reduced business confidence, and the electricity supply crisis, South Africa's growth continued to decrease below projection (SA National Treasury, 2013). The increase in the budget deficit, high borrowing costs, and the funding pressure from state-owned entities increased the debt-to-GDP ratio from a low of 23.6% in 2009 to 51.5% in 2019. Unemployment rose from 23% in 2009 to 28% in 2019, and real GDP growth contracted to 0.2% in 2009 from 3% in 2010.

This review examines South Africa's countercyclical fiscal policy from 2009 to 2019, focusing on its approach to maintaining economic growth and managing public finances during economic downturns and expansions. In response to the 2008/2009 global financial crisis, South Africa adopted a countercyclical strategy that prioritized sustainable growth in government expenditure, avoiding austerity measures even during economic challenges. The government implemented

stimulus measures, such as increased spending on social programs and economic infrastructure, while setting fiscal rules and coordinating closely with monetary policy to maintain stability and manage debt.

The review highlights significant investments in social and economic infrastructure, including hospital construction, school renovations, social housing, and the expansion of transport and utility networks. These efforts aimed to support economic recovery and development. Despite these initiatives, South Africa faced slower-than-expected economic growth from 2012 onwards, influenced by global economic conditions, reduced demand from key trading partners, and domestic challenges such as electricity supply issues and declining business confidence.

The analysis reveals that South Africa's strategy of financing budget deficits through debt helped avoid immediate economic contractions, but it led to a significant rise in the debt-to-GDP ratio—from 23.6% in 2009 to 51.5% in 2019. Additionally, unemployment increased from 23% to 28%, and economic growth remained below projections, reflecting ongoing fiscal pressures and structural challenges. The review underscores the importance of balancing expenditure growth with sustainable debt management to ensure long-term economic stability.

4.5 Regression Analysis

Based on the observed trends of rising government expenditure, widening budget deficits, increasing public debt, and declining GDP growth noted in the previous sections, regression analysis is conducted to rigorously and quantitatively examine the relationships between these key economic variables, including government spending, debt levels, economic growth, and unemployment. This analysis provides empirical evidence that aids in evaluating the effectiveness of South Africa's fiscal policies and understanding their broader economic impacts. By doing so, it helps policymakers develop more effective and targeted strategies for economic management, ensuring sustainable growth and fiscal stability.

Below is the multiple regression analysis of the five independent variables and the dependent variable performed on the 2009 to 2019 data, as contained in the South African National Treasury website budget reviews publications. Multiple regression equations are included. The calculation

was performed online, using the data analysis function within Excel. The results below clearly show the independent variables being tested for significance, and their calculated coefficients and p values. A significance level of 0.05 is selected for the testing the statistical significance of the regression analysis.

Table 8 Multiple regression results: Budget deficit and government expenditures per category

Regression Statistics	
Multiple R	1
R Square	1
Adjusted R Square	1
Standard Error	0.0020959
Observations	11

ANOVA

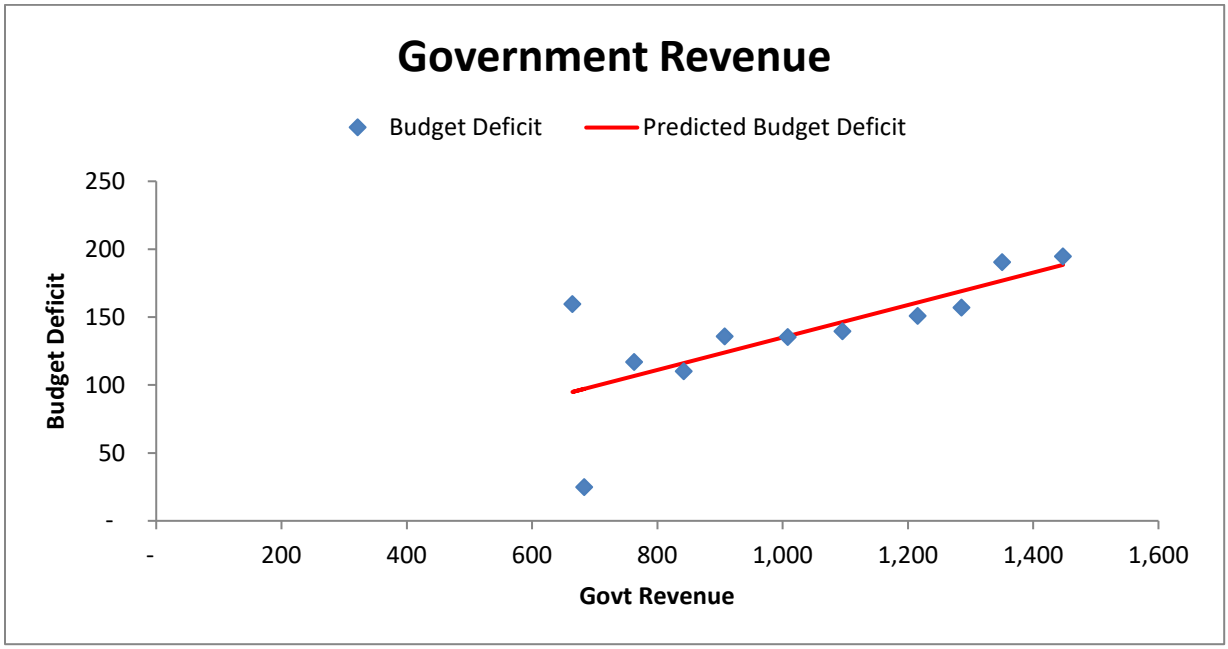
	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	20994.087	4198.817	955797762	1.92346E-22
Residual	5	2.196E-05	4.39E-06		
Total	10	20994.087			

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0119664	0.0046329	2.582941	0.0492562	5.726E-05	0.023875621	5.726E-05	0.023875621
Govt Revenue	-0.9998334	2.958E-05	-33804.2	4.2998E-22	-0.999909447	-0.999757386	-0.999909447	-0.999757386
Current payments	0.9995996	6.515E-05	15343.19	2.2322E-20	0.999432114	0.999767058	0.999432114	0.999767058
Transfers and subsidies	1.0003185	0.0001517	6595.341	1.521E-18	0.999928647	1.000708409	0.999928647	1.000708409
Payments for capital assets	0.9997336	9.121E-05	10960.38	1.2E-19	0.999499159	0.999968102	0.999499159	0.999968102
Payments for financial assets	0.9998883	6.819E-05	14663.06	2.8001E-20	0.999713057	1.000063638	0.999713057	1.000063638

Regression formula: $y = 0.0119664 + (-0.9998x) + (0.9996x) + (1.0003x) + (0.9997x) + (0.9999x)$. The multiple regression analyses correlation coefficients (multiple r) depict a perfect linear relationship between the independent variables: government revenue, current payments, transfers and subsidies, payments for capital assets, and payments for financial assets, and the dependent variable, budget deficit. The budget deficit is a function of the independent variables, and analysed collectively, where a strong correlation would be expected. As expected, the coefficient of determination (adjusted R-square) shows a 100% variation in the budget deficit, due to the change in the independent variables. Since the p-value of all the independent variables is less than the level of significance of 0.05, the regression is considered to be significant. Individual regression analysis for each variable is performed below to test the strength of each independent variable to the dependent variable.

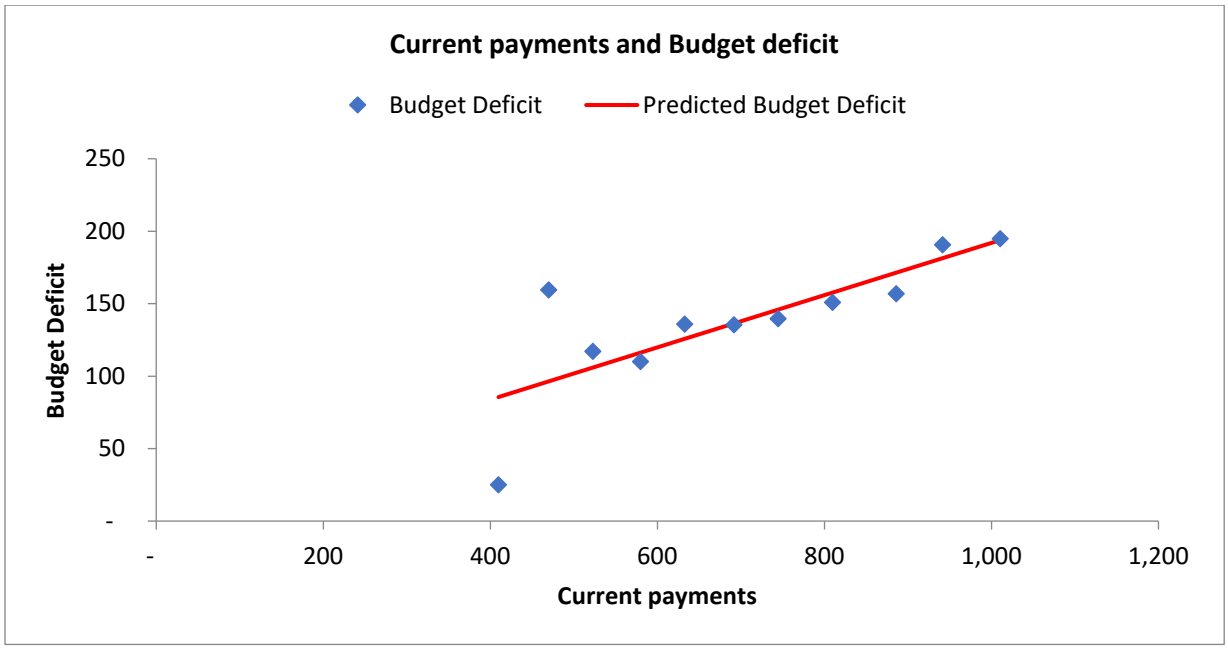
Simple regression results: Budget deficit and each government expenditure category

Figure 11 Government revenue and budget deficit.



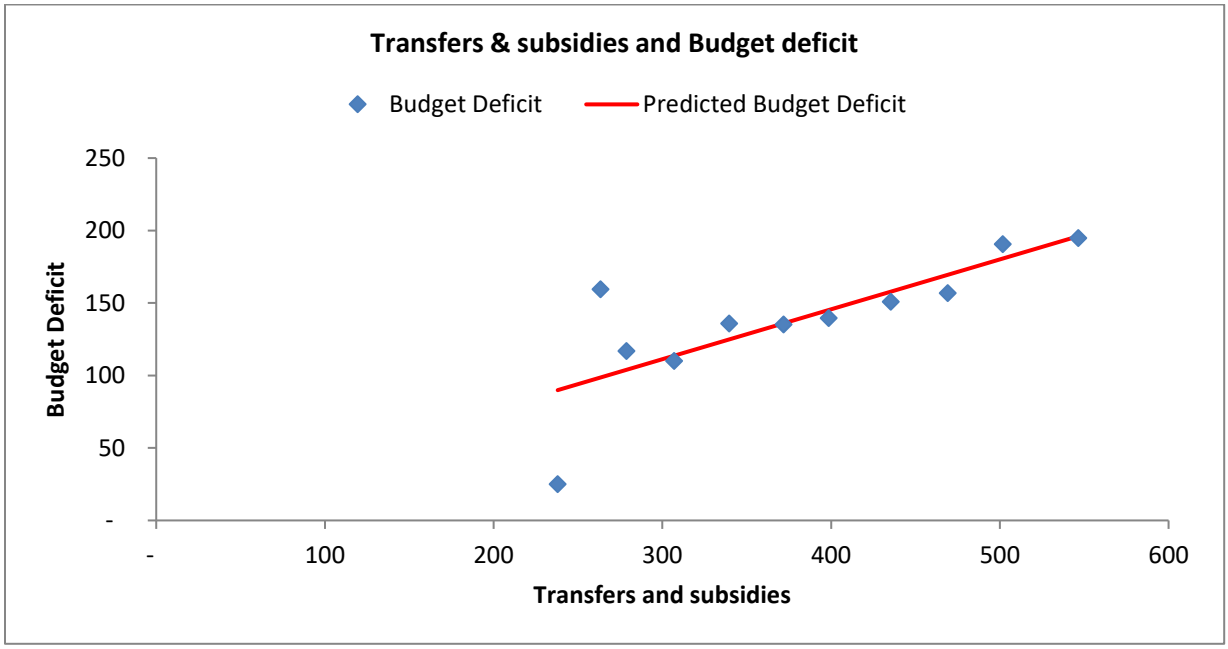
Regression equation: y = 15.4939 + 0.1195x

Figure 12 Current payments and budget deficit



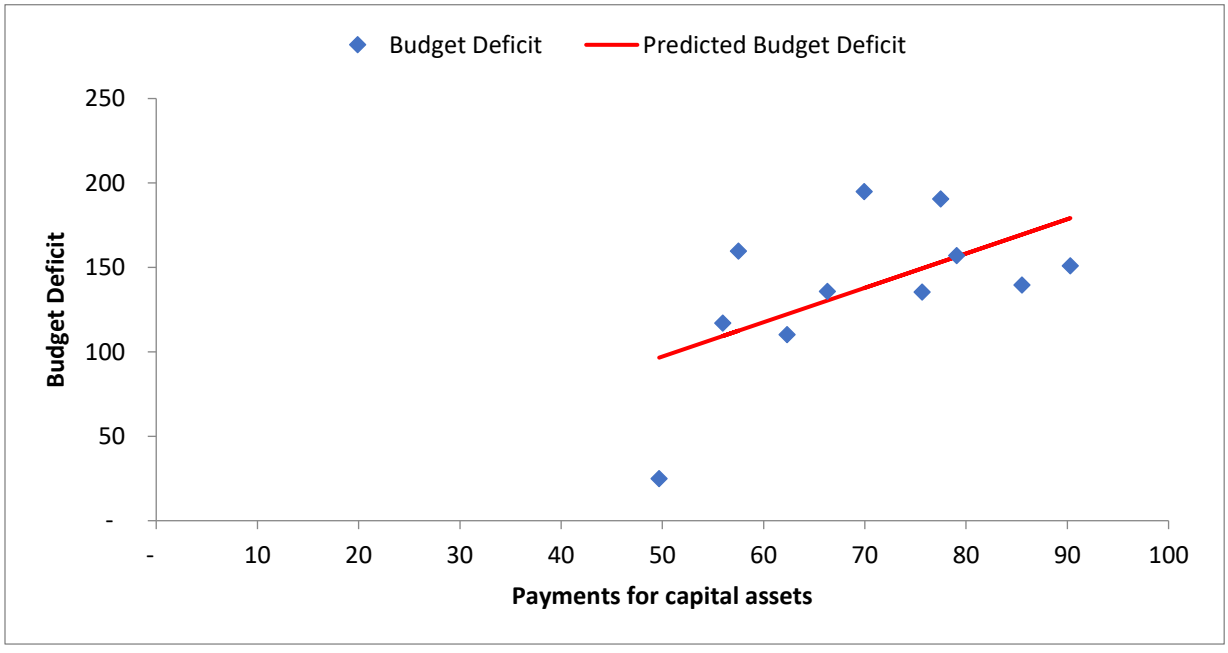
Regression equation: y = 11.6918 + 0.1802x

Figure 13 Transfers and subsidies and budget deficit



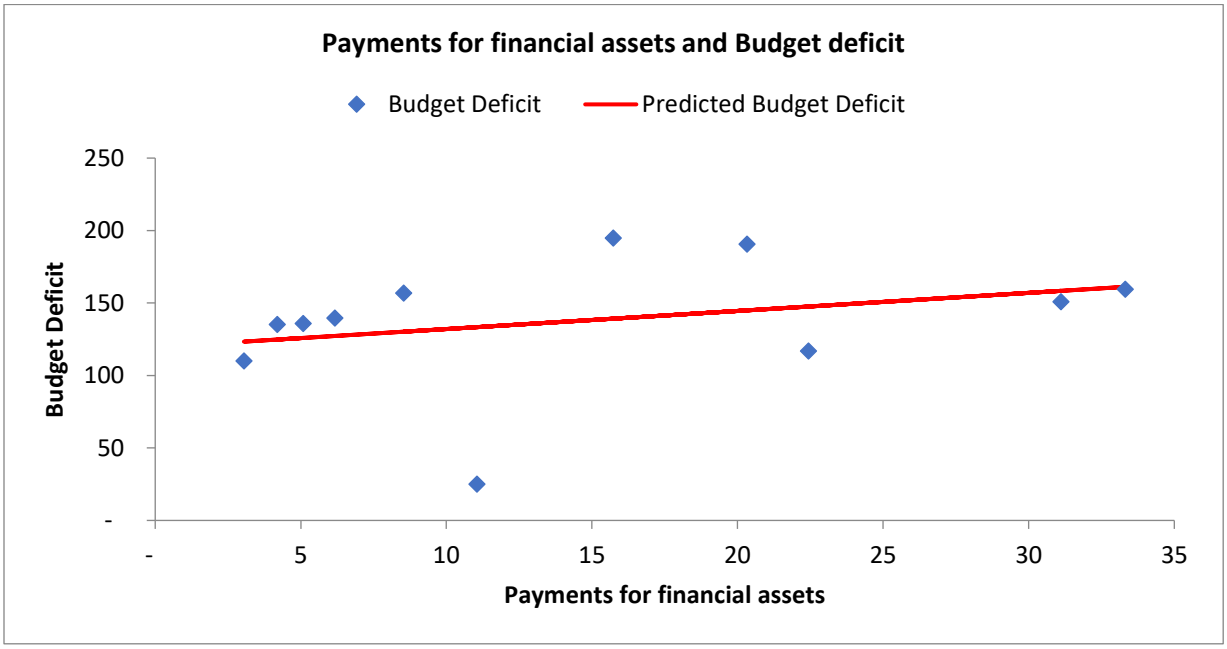
Regression equation: y = 7.9918 + 0.3442x

Figure 14 Payments for capital assets and budget deficit.



Regression equation: y = -4.4798 + 2.0338x

Figure 15 Payments for financial assets and budget deficit.



Regression equation: y = 119.5715 + 1.2482x

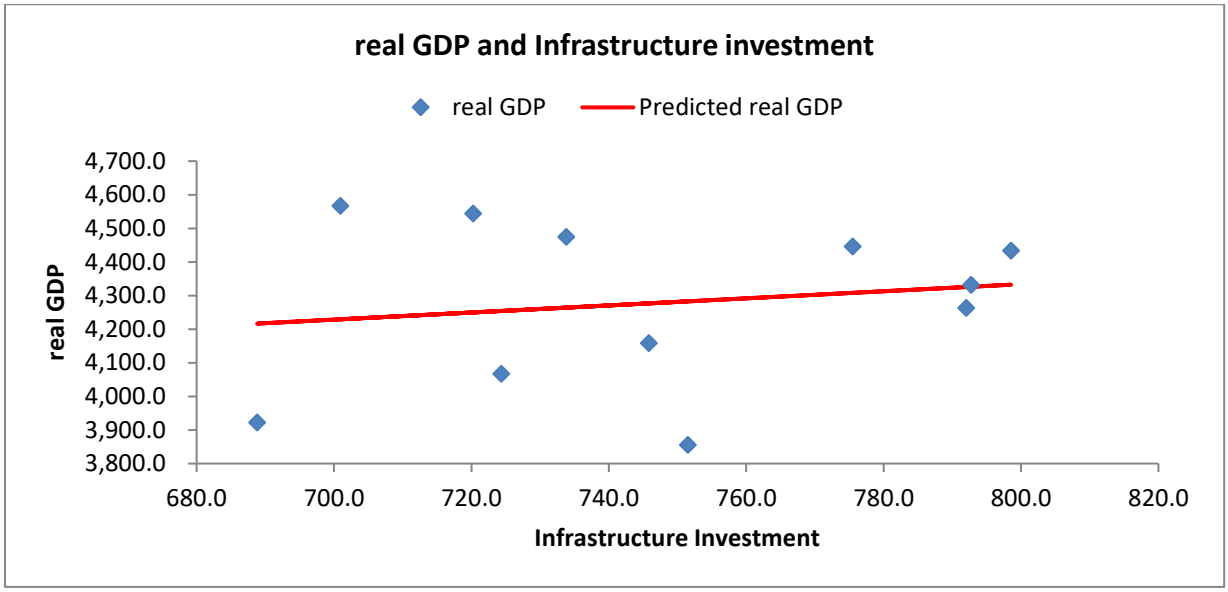
Table 9 Individual regression analysis results

Independent Variables to Budget Deficit	Number of observations	Multiple R	R Square	P-value	t Stat	Correlation strength
Government revenue	10	0.7172	0.5144	0.0130	3.0876	Strong
Current payments	10	0.7776	0.6046	0.0048	3.7099	Strong
Transfers and subsidies	10	0.7694	0.5920	0.0056	3.6137	Strong
Payments for capital assets	10	0.5721	0.3273	0.0659	2.0925	Moderate
Payments for financial assets	10	0.2948	0.0869	0.3789	0.9254	None/Very weak

Infrastructure investment and economic growth

The final test identifies and quantifies the correlation between investment in infrastructure by the public and private sectors and GDP.

Figure 16 Real GDP and Infrastructure investment.



Regression equation: y = 3489.823 + 1.055035x

Table 10 Regression analysis results between infrastructure investment and real GDP

Infrastructure Investment and GDP Growth	Number of observations	Multiple R	R Square	P-value	t Stat	Correlation strength
Infrastructure investment	9	0.162368	0.02364	0.633372	0.493656	None/Very weak

4.6 Conclusion

4.6.1 Economic data interpretation

This study aims to investigate the reasons for rising public debt in South Africa, to examine whether it has been applied efficiently to value-adding activities, and whether a value has been created for the South African economy and its citizens. This chapter started by analysing and interpreting economic and financial data extracted from the South African National Treasury budget reviews and the South African Reserve Bank statistics. The evidence collected shows that South Africa's economy began contracting due to the impact of the 2008/2009 global financial crisis (SA National Treasury, 2022). The slow recovery by the developed countries' trade partners also impacted the recovery of the country (SA National Treasury, 2022). Government revenue grew slower than government expenditure, and budget deficits increased sharply (SA National Treasury, 2022). Although the government and state-owned entities engaged in significant infrastructure projects, unemployment remained constant at 25%, and increased annually to 28% by 2009 (SA National Treasury, 2022, SARB, 2023). Private investment also decreased, and later remained constant at a ratio of 11.5% of GDP, with no significant upward movements realised by 2019 (SA National Treasury, 2022). Public sector investment also reduced due to difficulty in obtaining finance. Government expenditure continued to increase, regardless of low revenue collections (SA National Treasury, 2022). The South African government's fiscal policy aims to maintain sustainable growth in expenditure regardless of the economic conditions so as to accelerate the government delivery mandate in respect of social and economic plans (SA National Treasury, 2009). Therefore, public debt in South Africa is applied to cover the shortfall in revenue (budget deficits), finance debt redemptions, and provide investment support to government and public entities (SA National Treasury, 2009). Based on the 2009 to 2019 data in Table 6, budget deficits are realised immediately after current payments, transfers, and subsidies are made. Both these categories of expenses comprise the most sizable portion of total government expenditures in South Africa (between 90% and 95%) at an average of 92.4% between 2009 and 2019. These categories are regarded as public consumption expenditures that ought to be financed by taxation revenue. In line with South African fiscal policy, any revenue shortfall is financed through the issue of debt. On average, between 2009 to 2019, a more considerable portion of the budget deficit arose from payment for capital assets (productive expenditure) at 62.9%, followed by current

payments and transfers and subsidies at 24.1%, and payment for financial assets made at 13.0 percent. Productive expenditure is expected to improve economic activity and create jobs. However, despite the numerous infrastructure developments undertaken, South Africa has experienced a continued rise in budget deficits, public debt, unemployment, and a contracting economy. It is recommended that further research is conducted in order to assess the efficiency of development projects' planning, management, and implementation.

4.6.2 Regression analysis interpretation

The research hypotheses for this study are as follows:

H1*: Increase in government expenditure without a corresponding increase in government revenue causes an increase in public debt.*

H01*: Increase in government expenditure without a corresponding increase in government revenue does not cause an increase in public debt.*

H2: *Public debt applied to unproductive government expenditure negatively impacts economic growth.*

H02: *Public debt applied to unproductive government expenditure has no impact on economic growth.*

Multiple regression analysis determines whether any independent variables ought to be excluded from regression testing. Based on a perfectly linear correlation, a +1-correlation coefficient, and p-values of less than the 0.05 level of significance for all independent variables, individual regression analysis was performed to quantify the strength of the relationship between each independent variable and the dependent variable and to test the statistical significance of each independent variable.

Strong correlation

The findings presented in Table 6 reveal a robust linear connection between the three independent variables, and the budget deficit. Specifically, government revenue (with an R-value of -0.72), current payments (with an R-value of -0.78), and transfers and subsidies (with an R-value of -0.77) all exhibit a strong correlation with the budget deficit, with each having an R-value exceeding 0.7. It is important to note that a strong correlation does not imply causation. Nevertheless, in this instance, a causal relationship does exist between the independent variables and the dependent variable, as the budget deficit is influenced by these independent factors.

According to the results of the regression analysis, a change of 0.5144 in the budget deficit can be attributed to a change in government revenue, where a change of 0.6046 in the budget deficit can be attributed to a change in current payments, and a change of 0.5920 in the budget deficit can be explained by changes in transfers and subsidies. This shows that government expenditures are growing more than revenue. Importantly, all of these variables demonstrate statistical significance in the regression analysis, as indicated in Table 6, with p-values below the 0.05 significance threshold. This underscores their importance in the context of the regression analysis.

The null hypothesis (H01), which posited that an increase in government expenditure without a corresponding increase in government revenue does not lead to an increase in public debt, has been rejected, based on the findings.

Moderate correlation

Table 6 illustrates a moderate relationship between the budget deficit and payments for capital assets, with a correlation coefficient (r) of 0.5721 falling below the 0.7 threshold. The variability in payments for capital assets accounts for 0.3723 of the variation in the budget deficit. However, the p-value, standing at 0.0659, exceeds the 0.05 significance level, rendering payments for capital assets statistically insignificant in this regression analysis.

The first null hypothesis (H01) asserting that an increase in government expenditure without a corresponding increase in government revenue does not lead to a rise in public debt remains unchallenged. Likewise, the second null hypothesis (H02), positing that public debt stemming from unproductive government expenditure does not affect economic growth, cannot be refuted.

In essence, we cannot reject the notion that there is no significant relationship, while there is not enough evidence to support the presence of a significant relationship.

None or very weak relationship

Table 6 indicates that there is a very weak or possibly non-existent relationship between the budget deficit and payments for financial assets, with a correlation coefficient (R-value) of merely 0.2948, which falls below the 0.3 threshold. Payments for financial assets account for only 0.0869 of the variation in the budget deficit. Moreover, the p-value, standing at 0.9254, significantly exceeds the 0.05 significance level, indicating that payments for financial assets are statistically insignificant in this regression analysis.

When we examine the correlation between infrastructure investment and real GDP in Table 7, we find no correlation, as indicated by a low R-value of 0.162368. Additionally, the p-value exceeds the 0.05 significance threshold, reaching 0.633372, which further underscores that investment in infrastructure lacks significance in this regression analysis.

This lack of correlation can be understood in the context of concerns raised by the SA National Treasury, including deficiencies in infrastructure planning and management, project delays, increasing unemployment rates, mounting public debt, rising borrowing costs, and sluggish economic growth. Given these factors, it becomes clear that investments in development have not yielded the anticipated economic expansion.

The National Accounts, as presented in the SA National Treasury Budget Publications, highlight that a significant portion of total government expenditure goes towards current payments, encompassing government salaries, goods, and services, borrowing expenses, and transfers and subsidies. Moreover, current payments are prioritised over payments for capital formation and financial assets. As illustrated in Table 4, the budget deficit occurs prior to payments for capital formation, indicating that South Africa heavily relies on consumption-driven growth; while the contribution of investment, both from the private and public sectors, in productive assets is comparatively lower (Eyraud, 2009). Overall, public debt in South Africa has been found to negatively impact growth (Tlharipe-Mothibi, 2020; Ncanywa and Masoga, 2018).

The lack of correlation between investments in development and the anticipated economic growth in South Africa can be attributed to factors such as poor infrastructure planning and management, project delays, rising unemployment, increasing public debt, and high borrowing costs. These challenges highlight a deeper issue in the allocation of resources, where government spending is predominantly focused on current payments, such as salaries and subsidies, rather than on investments in capital formation or productive assets that could promote sustainable growth. This consumption-driven expenditure model restricts the country's potential for long-term economic expansion.

Given these findings, there is a clear need for strategic economic reforms. A shift in focus from consumption-driven spending to investments in productive assets, both public and private, is crucial for achieving sustainable growth. This shift would involve improving infrastructure planning, enhancing project management, and prioritising capital formation. Revising the current fiscal strategy to align better with the objectives of economic development and social equity is essential. Re-evaluating expenditure priorities and incorporating the principles of welfare economics will ensure the efficient use of resources and maximise societal well-being. These considerations pave the way for concluding that targeted policy changes are necessary for fostering a more resilient and equitable economy.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study sought to determine the causes of the rising public debt in South Africa between 2009 and 2019, and to evaluate the effectiveness of public debt expenditure. The reason for the study emanates from the continued social issues of rising levels of unemployment, poverty, inequality, rising public debt, electricity supply shortages and the slow economic growth.

The study examined government debt, distinguishing between productive and unproductive debts. It uses general government debt measured on a gross basis. The rationale for using this measure is explained in Chapter 1, in the section outlining the description of concepts. Productive debts are those invested in infrastructure projects that enhance economic capacity and generate income for the government. Unproductive debts are used for purposes like welfare programs and do not enhance economic productivity, leading to repayment through tax revenues. These concepts were explained in Chapter 1. Furthermore, the study utilises a resource-based view to explore how public debt can serve as a competitive advantage and examines optimal use for economic stimulation. The theoretical framework is discussed in Chapter 2 of this study. The research methodology for this study, as contained in Chapter 3, used a post-positivist paradigm following a quantitative method of inquiry and using descriptive statistics to analyse the variables of interest in the study. A Pearson correlation coefficient formula is used to assess the degree and strength of the relationship between public debt and government expenditures. Chapter 4 provides an analysis of financial data and supporting figures, collected mainly from the South African National Treasury and the South African Reserve Bank for the periods 2009 to 2019. A trend analysis of the data was conducted and interpreted, followed by regression and correlation analysis.

5.2 Summary of the findings

Data Analysis and Interpretation results

The data reveals that, on average, public consumption expenditure makes up 92.4% of South Africa's total government expenditure between 2009 and 2019. A substantial portion of these expenditures is absorbed by taxation revenue and the excess over revenue is financed by debt. It was also discovered that budget deficits appear immediately after public consumption expenditure.

On proportioning the budget deficit between the portion of public consumption expenditure in excess of taxation revenue, and the remaining categories of expenditures in the government budget, that is, capital expenditure and payments for financial assets, 62.9% of the deficit is in respect of capital expenditure, 24.1% is towards current payments, and 13.0% is towards social transfers and subsidies. This implies that, in South Africa, deficit spending takes place largely towards investment consumption. The results imply, firstly, that in South Africa significant portions of government expenditures are on consumption expenditure instead of income-generating investments. It may also imply that the South African economy is consumption-driven, and not export driven to improve the trade balance. It was noted by the SA National Treasury (2013) that the slow growth in developed countries due to the financial crisis, which are South Africa's trading partners, negatively impacted the economy due to reduced demand. Secondly, high consumption suggests a low-saving culture in South Africa that constrains expansion in investment. Although a sizable portion of the deficit spending goes towards funding investment projects, it does not contribute much to economic growth.

Regression and Correlation analysis results and interpretation

Strong and Moderate Correlation

The results of the regression and correlation analysis revealed a strong linear correlation between three independent variables (government revenue, current payments, and transfers and subsidies) and the budget deficit, with correlation coefficients exceeding 0.7. While correlation does not imply causation, in this case, there is a causal relationship. Regression analysis reveals that changes in these independent variables significantly impact the budget deficit, with government revenue, current payments, and transfers and subsidies explaining changes of more than 50% in the budget deficit, respectively.

A moderate correlation was revealed between the budget deficit and payments for capital assets, with a correlation coefficient of below the 0.7 threshold. Payments for capital assets account for 0.3723 of the budget deficit's variability.

A very weak or possibly non-existent relationship between the budget deficit and payments for financial assets was revealed and there was no correlation between infrastructure investment and

real GDP as shown in Tables 6 and 7. The p-values for these tests significantly exceed the 0.05 significance level.

Hypothesis testing results

The two research hypotheses as set out for this study are presented once more as follows:

H1*: Increase in government expenditure without a corresponding increase in government revenue causes an increase in public debt.*

H01*: Increase in government expenditure without a corresponding increase in government revenue does not cause an increase in public debt.*

H2: *Public debt applied to unproductive government expenditure negatively impacts economic growth.*

H02: *Public debt applied to unproductive government expenditure has no impact on economic growth.*

With the relationships that are statistically significant with p-values below 0.05 significance level, it was discovered that the main hypothesis H1 is accepted and the null hypothesis H01 is rejected. Unproductive government expenditures will continue to be financed by public debt if there is no growth in the economy. South Africa will continue to experience high debt levels, high borrowing costs, and contraction of private investment, without a correcting improvement in the economy.

Regarding relationships that have a moderate relationship (payment for capital assets and budget deficit), with a p-value above 0.05 significance level, it would not be possible to conclude that there is no significant relationship, as there is not enough evidence to support the presence of a significant relationship. Therefore, we cannot refute that increased payments for capital formation do not cause an increase in public debt. This was evidenced by the proportional use of the budget deficit, which revealed that 62.9% of the deficit is towards payments for capital formation. Furthermore, given the proportion of consumption expenditures towards total government

expenditure (average 92.4%), hypothesis H02 cannot be rejected, as it was revealed that such large spending does not contribute to economic growth in South Africa.

5.3 Success of the study

The goal of this study is twofold, namely: 1) to determine the causes of the rising public debt in South Africa between 2009 and 2019; and 2) to evaluate the effectiveness of public debt expenditure in South Africa for the periods under review.

The evidence collected from the SA National Treasury and SARB for the years under examination, in Chapter 4 of this study, revealed that South Africa's economy began to contract as a consequence of the 2008/2009 global financial crisis. Following a positive budget balance in the 2008 fiscal year, budget deficits began to emerge from the 2009 fiscal year, with government revenue growing at a slower pace than government expenditures. It is noteworthy, however, that South Africa has consistently maintained a deficit spending approach as it was noted in Chapter 1 that an increase in government expenditure outpaced government revenue from 1960 to 2017, resulting in escalating budget deficits and public debt.

Given that South Africa's government fiscal policy is geared towards sustaining expenditure growth irrespective of economic conditions that advance the government's delivery mandate for social and economic plans, public debt in South Africa serves the purpose of bridging revenue shortfalls (budget deficits), among other objectives. This assertion is corroborated by the fact that a substantial portion of South Africa's government expenditure comprises current payments and social transfers. Although these payments may not experience significant percentage growth, their absolute value remains substantial, averaging 92.4% of total expenditures from 2009 to 2019. Consequently, the remaining average portion of 7.6% encompasses payments for capital formation and payments towards financial assets held by the government.

However, it is notable that investments in capital formation, both on the part of the public and private sectors, have fallen significantly short of the National Development Plan's target of 30%, with an average of 19.5% recorded between 2009 and 2019, as depicted in Figure 2 of Chapter 4 of this study. At this level of investment, contributions to economic growth from capital formation cannot be expected to be substantial. Despite the private sector's larger role in infrastructure

investment in South Africa compared to the public sector, investment levels have declined since 2008, and have remained stagnant.

In conclusion, the mounting public debt in South Africa can be attributed to expenditures deemed unproductive, consisting of compensation to government employees, government goods and services expenditure, borrowing costs, social transfers, and subsidies growing faster than government revenue as analysed in Chapter 4. This conclusion aligns with findings of other authors as discussed in Chapter 1, which highlight that one reason for South Africa's slower economic growth compared to its peer nations since the global financial crisis is its consumption-driven economic model. Unlike an export-oriented approach, South Africa has relatively lower contributions from private and public investments in productive assets compared to other similar countries. Furthermore, as discussed in Chapter 1, a significant portion of government expenditure in developing countries like South Africa is directed toward social transfers, education, and healthcare, rather than investments that generate income. However, it is important to recognise that the South African context is complex and may require further investigation.

5.4 Recommendations

Addressing South Africa's specific economic, social, and political issues requires collaboration among government, academia, private sector entities, and civil society in order to generate actionable insight, and inform policy decisions. The following recommended actions aim to stimulate economic activity and growth, ensure the efficient use of borrowed funds, and ultimately reduce reliance on public debt. Most of these may be in place already, but may not be effective and efficient. Therefore, more research is needed on how to enhance them. Furthermore, South Africa has a debt management framework in place, and due to the deterioration of debt level sustainability, there may be a need to review the framework in order to identify any gaps in terms on effective implementation and comprehensiveness.

<u>Infrastructure development</u>

Ongoing research efforts are essential to the enhancement of the efficient planning, implementation, and management of infrastructure projects, such as the development of social infrastructure (health, education, community facilities, human settlements) and economic infrastructure (energy, water and sanitation, transport, and logistics). It is imperative to identify

bottlenecks and challenges that contribute to project delays and budgetary excesses, with a view to recommending potential solutions for streamlining the process. The growth of private investment hinges on bolstering business confidence, as this investment plays a pivotal role in job creation and economic expansion. Therefore, there is a pressing need to foster private sector participation and enhance the overall business environment. This will ensure that borrowed funds are invested in productive, growth-enhancing projects, minimizing waste and inefficiencies, and leveraging private investment to reduce the reliance on public debt.

The Fiscal policy

It is necessary to establish effective fiscal policies that simultaneously promote economic growth and uphold fiscal prudence. In the context of South Africa, there is a noticeable trend of government expenditure outpacing government revenue. The prevailing government fiscal strategy in the country prioritises sustaining social and economic expenditures, irrespective of prevailing economic circumstances. Therefore, allocation of social spending should primarily prioritise the resolution of societal challenges, the reduction of inequality, and the enhancement of the overall welfare of the populace. This approach aims to cultivate a more robust, educated, and financially empowered citizenry, ultimately culminating in increased human capital and greater economic productivity. This will help the country to achieve a more balanced budget over time.

Education and Skills development

The issue of substandard education quality and unfavourable educational outcomes in South Africa stands as one of the nation's foremost challenges. It represents a multifaceted and intricate concern, necessitating a comprehensive approach with the active involvement of various stakeholders, including government authorities, educators, parents, and the wider community. Addressing this challenge entails a series of initiatives, including enhancing the caliber of teacher training programmes and instituting continuous professional development. It also calls for addressing teacher shortages by enhancing the allure of the teaching profession and deploying qualified educators. Furthermore, it is imperative to ensure that schools, particularly those in disadvantaged areas, have adequate learning resources, such as learning materials, textbooks, and technological tools. Investment in the maintenance and construction of school infrastructure, including libraries and laboratories, is essential for establishing secure and conducive learning environments.

Moreover, the undertaking of research and data analysis is crucial to identify challenges and potential solutions effectively.

In addition to these measures, leveraging online educational platforms, digital libraries, and educational applications can play a pivotal role in bridging educational disparities and equipping South Africans with the requisite skills to partake in the contemporary economy. Collaborative ventures with the private sector, aimed at facilitating and making this new mode of learning affordable, hold the potential to augment the quality and accessibility of education. By focusing on resolving these fundamental challenges, the government can create a more skilled, healthier, and financially stable population. A well-educated and empowered citizenry leads to increased human capital, which in turn drives economic productivity and growth, ultimately reducing reliance on public debt.

Trade and Investment

It is essential to scrutinise trade policies and both bilateral and multilateral trade agreements to identify opportunities for expanding exports and attracting foreign investments. Given South Africa's wealth in natural resources, there is an imperative to accelerate the expansion of exports as a means to stimulate employment and alleviate poverty. Research efforts can additionally be directed toward diversifying South Africa's export base. By creating a more dynamic and diverse economic landscape through trade and investment policies, South Africa can reduce its reliance on public debt, maintain fiscal stability, and support sustainable economic development.

Small and Medium-sized Enterprises (SMEs)

Small and Medium-sized Enterprises (SMEs) serve as a conduit for employment generation, consequently contributing to overall economic expansion. It is imperative for the government to persist in exploring avenues for bolstering the advancement of SMEs. This includes endeavours such as facilitating access to financial resources, streamlining, and simplifying regulatory processes, and facilitating entry into broader markets.

Energy and Resource Management

Small and Medium-sized Enterprises (SMEs) in South Africa experience significant adverse impacts as a result of power outages, leading to operational cutbacks and workforce reductions.

To effectively address the issues associated with energy security and environmental sustainability, it is imperative to promote the development of sustainable energy solutions and implement resource management strategies that foster growth within the country.

Innovation and Technology

In South Africa, the utilisation of innovation and technology holds significant potential in facilitating economic growth and advancement. The adoption of digital government services represents an effective means of enhancing operational efficiency, mitigating corruption, and elevating the quality of public service delivery. This initiative can facilitate greater ease of access to government services for citizens, thereby fostering trust, elevating both consumer and business confidence, and enhancing government revenue generation. Furthermore, the critical importance of investing in digital infrastructure, including robust high-speed internet connectivity, and dependable electricity supply, cannot be overstated. This infrastructure is essential for businesses to operate efficiently and for individuals to access online services and information.

5.5 Limitations of the study

This research exclusively investigated the factors contributing to the increase in public debt in South Africa within the timeframe of 2009 to 2019. Consequently, the applicability of the findings to periods beyond this specified duration is limited. The scope excluded comparative analysis with other countries of similar characteristics to evaluate South Africa's performance in relation to its escalating public debt. Rather, the research centered its attention on South Africa's unique economic dynamics. It is worth noting that the primary source of secondary data for this study was the SA National Treasury of South Africa.

5.6 Future research areas

This study has identified that the primary driver behind the increasing public debt in South Africa (RSA) is the growth in government expenditure surpassing the growth in government revenue. Furthermore, it is noteworthy that a near-total proportion of government expenditure – approximately 95% – is allocated to current payments and social transfers, which are often considered unproductive.

Future research endeavours could encompass several areas of investigation. Firstly, there is a need to assess the societal and economic impacts of social spending in South Africa. An understanding of the effectiveness of these expenditures, particularly concerning poverty reduction, inequality mitigation, and human capital development, would provide valuable insight.

Additionally, forthcoming studies could delve into a comprehensive analysis of investments in productive assets. This may entail an examination of the factors that influence investment decisions, the barriers to investment, and an exploration of the potential for increasing investments to stimulate economic growth.

To gain deeper insight into the decision-making processes informing fiscal policies, government expenditure priorities, and the ramifications of public debt across various sectors of society, qualitative research methods such as interviews and case studies may prove efficacious.

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