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The Effect of Fiscal Policy on Economic Growth in Zambia (1990 to 2020)

by

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DECLARATION

I Mary Thilasony Zulu, declare that this research titled “The Effect of Fiscal Policy on Economic Growth in Zambia (1990 to 2020)” is my original work and has not been submitted, wholly or in part, for the award of any degree or diploma in any other institution of higher learning.

I affirm that all sources of information used in this study have been duly acknowledged, and I have adhered to ethical standards throughout the research process.

This work is submitted to the University of Lusaka in partial fulfillment of the requirements for the award of the Master of Science in Economics and Finance.

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Date: 20th January 2025

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Signature of Supervisor: 

Date: 20th January 2025

DEDICATION

This work is dedicated to my dear husband, whose unwavering understanding and willingness to take up family responsibilities during my long absences made this journey possible. Your support has been my anchor, and your belief in my goals has been my strength.

To my beloved family, thank you for your moral and spiritual support throughout this process. Your encouragement provided me with the resolve to persevere and achieve this milestone.

To my son, Christian, who went days on end without spending time with his mother. Your patience and love gave me the motivation to keep pushing forward.

To my daughter, Nthanda, may this serve as a reminder that you can accomplish anything you set out to do with determination and perseverance.

Finally, to the cherished memory of my late daughter, Yara. May this work serve as a living tribute to her. Though she is no longer with us, her memory continues to inspire me every day.

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Table of Contents

LIST OF FIGURES

LIST OF ACRONYMS

ABBREVATION	DEFINITION
ARDL	Autoregressive Distributed Lag
ECM	Error Correction Model
GDP	Gross Domestic Product
COVID	Corona Virus Disease
IMF	International Monetary Fund
MMD	Movement for Multiparty Democracy
HIPC	Highly Indebted Poor Countries
OECD	Organisation for Economic Cooperation and Development
VAT	Value Added Tax
GNI	Gross National Income
NGO	Non-Governmental Organisation
ADF	Augmented Dickey Fuller
PPP	Purchasing Power Parity
US	United States
UK	United Kingdom
MDG	Millennium Development Goal

ABSTRACT

This research investigates the impact of fiscal policy on Zambia's economic growth from 1990 to 2020. Employing time series data and econometric analyses, the study examines the roles of government expenditure, taxation, and public debt in shaping economic performance. Key methodologies include the Autoregressive Distributed Lag (ARDL) model, Error Correction Model (ECM), and Granger causality tests to establish short- and long-term relationships. Results reveal that public expenditure significantly influences economic growth, with causality running from expenditure to growth, supporting Keynesian economic theory. However, challenges such as high public debt, weak tax systems, and inefficient spending limit fiscal policy's effectiveness. The findings underscore the need for targeted public expenditure and improved fiscal discipline to enhance economic stability and growth. Recommendations emphasize public-private partnerships and sector-specific evaluations to optimize fiscal policy impacts

CHAPTER ONE

BACKGROUND

When it comes to managing the economy, fiscal policy is an important tool because it directly affects the total output i.e. Gross Domestic product (GDP). According to (Mankiw, 2008) fiscal policy refers to government's decision to use taxation, government spending and/or borrowing to influence economic activity which in return influences the level of output and employment in the economy. The government will determine whether to use expansionary fiscal policy or contractionary fiscal policy, depending on the situation. In order to bring the economy out of recession, the government uses expansionary fiscal policy which involves decreasing taxation, raising government spending or both. This leads to an increase in demand for goods and services, and thus the increase in demand of goods and services leads to an increase in output and prices as well. Contractionary fiscal policy, on the other hand, entails increasing taxation, decreasing government expenditures, or both, in order to tackle inflation. This chapter serves as the foundation for the entire research study, providing essential background information and outlining the key components of the research framework, laying the foundation for an in-depth investigation of the effects of fiscal policy on economic growth in Zambia. The sections in this chapter provide a clear understanding of the context, significance, and scope of the research.

1.1. OVERVIEW OF MACROECONOMIC PERFORMANCE

After gaining independence in 1964, Zambia implemented an expansionary fiscal policy designed to stimulate the economy and support development. This policy specifically emphasized infrastructure development and the creation of strategies to promote domestic production of goods that had previously been imported. The goal was to enhance industrialization within the country and reduce dependency on foreign goods.

To lay the groundwork for economic growth, Zambia enacted a Transitional National Development Plan between 1964 and 1966, followed by the First National Development Plan, which spanned from 1966 to 1971. These plans aimed to address the various economic challenges faced by the newly independent nation. However, due to ineffective

revenue collection and poor economic returns, the government ultimately decided to abandon the Third National Development Plan.

By the mid-1980s, Zambia found itself burdened with significant debt, making it one of the most indebted countries in the world relative to its GDP. As a result of this financial strain, the International Monetary Fund (IMF) urged the Zambian government to implement comprehensive economic reforms aimed at stabilizing and restructuring the economy. A critical aspect of these reforms was reducing the nation's dependency on copper, which had been the cornerstone of its export earnings. One of the significant changes during this period was the elimination of food subsidies, which led to substantial increases in the prices of basic commodities. This drastic measure provoked widespread discontent among the urban population, ultimately resulting in protests and riots. In response to the escalating unrest, the Zambian government abandoned the Structural Adjustment Program (SAP) in May 1987 and replaced it with the New Economic Recovery Program. Unfortunately, this new initiative failed to deliver the expected results, and by 1989, the government had to negotiate a new agreement with the IMF.

In the years following 1991, the Zambian government shifted its focus to developing Poverty Reduction Strategy Papers (PRSPs), which were designed to address the pressing issues of poverty and economic instability with the assistance of various collaborating partners. By 2003, the PRSPs were replaced with a medium-term expenditure framework (MTEF), which provided a structured macroeconomic and fiscal policy framework to guide the government's budgeting and spending over the subsequent three years. After the general elections in 2001, Zambia once again emphasized national planning by reintroducing five national development plans that would underpin the government's fiscal policy objectives. These plans aimed to ensure sustainable economic growth and development through strategic investments in key sectors. Moving forward from 2005, Zambia's long-term fiscal policy objectives were articulated in a comprehensive document known as "Vision 2030." This vision outlined the country's aspirations for economic and social development and was implemented through a series

of detailed five-year national development plans designed to achieve the identified goals and improve the overall quality of life for Zambian citizens.

Zambia's macroeconomic performance over the years has been influenced by a combination of fiscal policy decisions, commodity price fluctuations (particularly copper), structural challenges, and external factors like the global economic environment and the COVID-19 pandemic. The country's fiscal policy, in particular, has played a key role in shaping the economy's growth trajectory, especially in terms of government spending, taxation, public debt, and borrowing strategies. According to (Whitworth, 2014), the late 1960's saw the nationalization (Zambianization) of foreign owned firms. Consequently, this led to the creation of parastatals. However, this growth did not last and resulted in budget deficits due to failing export earnings. As a result, there was a reduction in productivity. In the 1980's rather than reducing on expenditure, the focus was on borrowing. Due to the indebtedness resulting from borrowing, fiscal deficits and debt became unsustainable and thus, the IMF proposed measures to the government of which one of the measures was to reduce on government expenditure. (Whitworth, 2014) further states that the exercise of privatizing the mines in the 1990's ushered in a period of continuous rapid expansion, aided by a resurgence in copper prices. This provided minimized vulnerability to external shocks and significant fiscal space in addition to debt relief.

During the tenure of the Movement for Multiparty Democracy (MMD) beginning in 1991, economic growth was minimal. Efforts to acquire donor funding were impeded by government's failure to deal with corruption, coupled with the lengthy process of privatization of the mines. According to (Thurlow, 2004) "The modest foreign investment which began with Chiluba's economic reforms declined in the wake of the 1996 elections and only accelerated again after 1998". Zambia had a high debt burden at the end of the decade, despite getting debt relief, fiscal strictness, and substantial privatization, the proportion of GDP spent on repayment of debt doubled between 1990 and 1999. As a result, In 2000 Zambia was classified as a Highly Indebted Poor Country (HIPC) and

became eligible for a two-thirds reduction in debt if it implemented a poverty reduction strategy (Thurlow, 2004).

Failure to achieve poverty reduction targets in 2002 and 2003, due in part to lack of capacity to utilize allocated resources and implement programmes and in part to poor fiscal discipline, meant that Zambia was not able to reach the completion point for the Heavily Indebted Poor Countries (HIPC) Debt Initiative at the end of 2003 as anticipated. The government was forced to embark on a painful and unpopular fiscal reform programme in 2004 which involved rationalizing staff, reducing employment benefits for public servants and implementing new controls on state spending (OECD, 2005). Consequently, In April 2005 Zambia reached the HIPC completion point and according to the (WorldBank, 2005) became eligible for debt relief valued at $3.9 billion.

During this period, Zambia recorded a positive growth rate, however, this was not sustainable overtime because the expenditure was way above the revenue. Since the year 2005, Zambia's fiscal policy objectives are guided by a document called "Vision 2030" which is implemented through numerous five year national development plans. Zambia's Vision 2030 (2006-2030) aims to transform Zambia into a prosperous middle income nation by 2030 and to create a new Zambia which is a "strong and dynamic middle-income industrial nation that provides opportunities for improving the well-being of all, embodying values of socio economic justice (GRZ, 2006). Vision 2030 comprises three priority sectors:

1. Economic growth and wealth creation
2. Social investment and human development
3. Creating an enabling environment for sustainable social economic development.

Similarly, the economic growth rate has been fluctuating. According to (WorldBank, 2021) "GDP Annual Growth Rate in Zambia has been fluctuating and has averaged 3.2 percent between 1961 and 2020, reaching the highest of all time at 16.60 percent in 1965 and the lowest figure of -8.60 percent in 1994.

Zambia experienced a period of robust economic growth in the early 2000s, with average annual GDP growth of around 6-7% between 2000 and 2015, driven largely by rising copper prices, infrastructure development, and macroeconomic stability (WorldBank, 2020). However, Zambia's growth rate has been more volatile in recent years due to external shocks and domestic issues.

- GDP Growth: In 2014, Zambia's GDP growth peaked at 6.3%, but by 2015, growth slowed to 3.4%, reflecting the global decline in copper prices and domestic electricity shortages. By 2020, the economy contracted by 3.0% due to the impact of the COVID-19 pandemic (WorldBank, 2021).

- Economic Recovery Post-COVID: In 2021, Zambia's economy rebounded with a 4.3% growth in real GDP as copper prices recovered and the global economy began to recover from the pandemic (IMF, 2022).

Zambia's fiscal policy has been centered on balancing government spending and revenue collection while managing public debt. This has been challenging due to structural inefficiencies, weak tax collection, and the heavy reliance on copper exports for revenue.

- Tax Revenue and Government Spending: In 2019, Zambia's tax-to-GDP ratio stood at just 15.6%, which is relatively low compared to the regional average in sub-Saharan Africa (WorldBank, 2020). Efforts have been made to improve tax compliance and increase revenue from non-mining sectors, but challenges remain.

- Public Debt: Zambia's public debt has grown significantly, especially in the 2010s, as the government borrowed heavily to finance infrastructure projects. By 2020, Zambia's total public debt reached $17.2 billion, approximately 120% of GDP (WorldBank, 2021). This level of debt became unsustainable, and Zambia defaulted on its external debt in November 2020, making it the first African nation to do so during the pandemic.

- Deficits and Borrowing: Fiscal deficits have been a persistent feature of Zambia's economy. In 2020, the government recorded a deficit of 9.1% of GDP, up from 7.7% in 2019, exacerbated by reduced revenue from copper exports and increased expenditure on health and social protection during the pandemic (IMF, 2021).

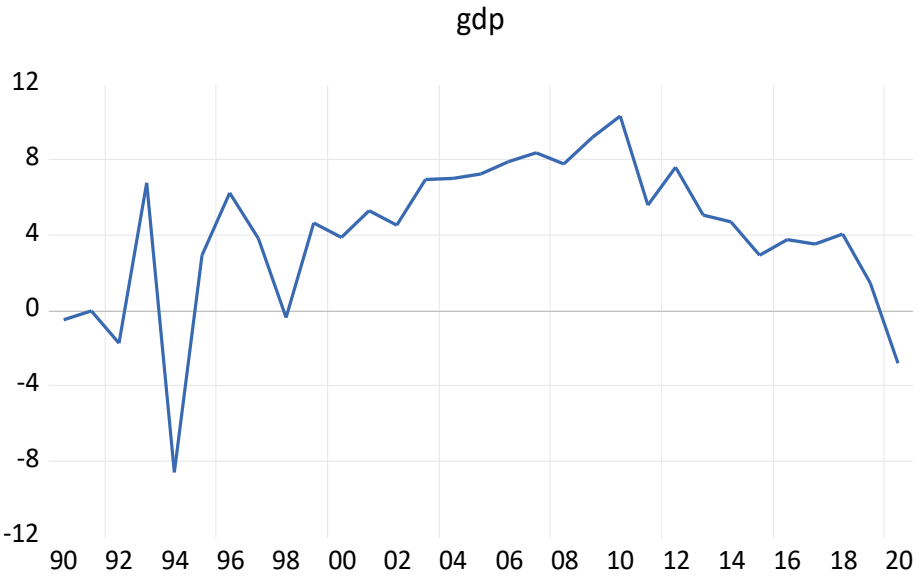
Several factors have constrained Zambia's ability to achieve sustainable growth through fiscal policy:

- Commodity Reliance: Zambia's significant dependence on copper exports renders its economy particularly susceptible to changes in global copper prices. A decline in copper prices often leads to diminished export revenues, reduced foreign exchange reserves, and budget deficits. For example, the steep fall in copper prices in 2015 resulted in a drop in Zambia's foreign exchange earnings, which intensified the fiscal difficulties.

- Inflation and Currency Devaluation: Inflation in Zambia has frequently been unstable. In 2020, the average inflation rate was approximately 15.7%, worsened by the devaluation of the Zambian kwacha against major currencies (IMF, 2021).The kwacha has experienced considerable downward pressure in recent years, leading to increased inflation and higher import costs, negatively impacting household purchasing power.

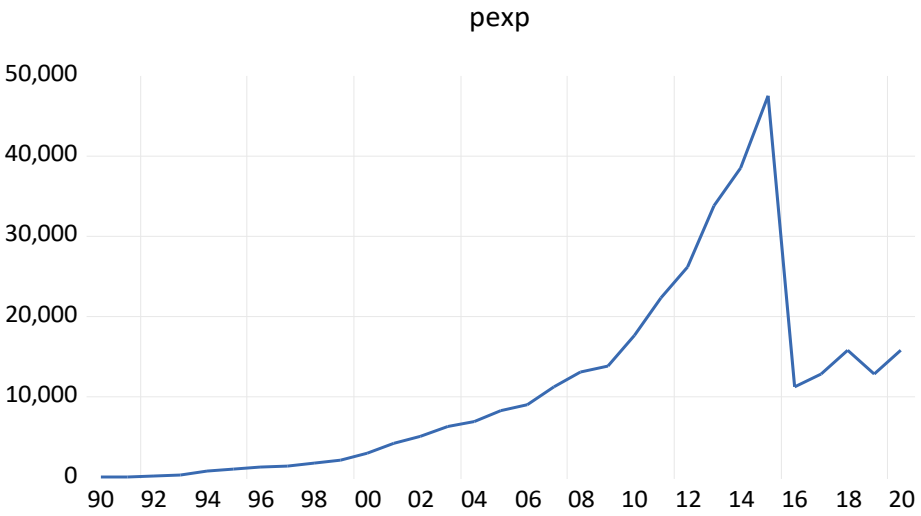
- Sustainability of Public Debt: Elevated public debt levels have restricted fiscal policy by hindering the government's capacity to invest in growth-enhancing initiatives without worsening the debt burden. In 2020, the government allocated about 13% of GDP to servicing external debt (WorldBank, 2021).

Figure 3. 1 trend analysis of GDP for the period 1990 to 2020



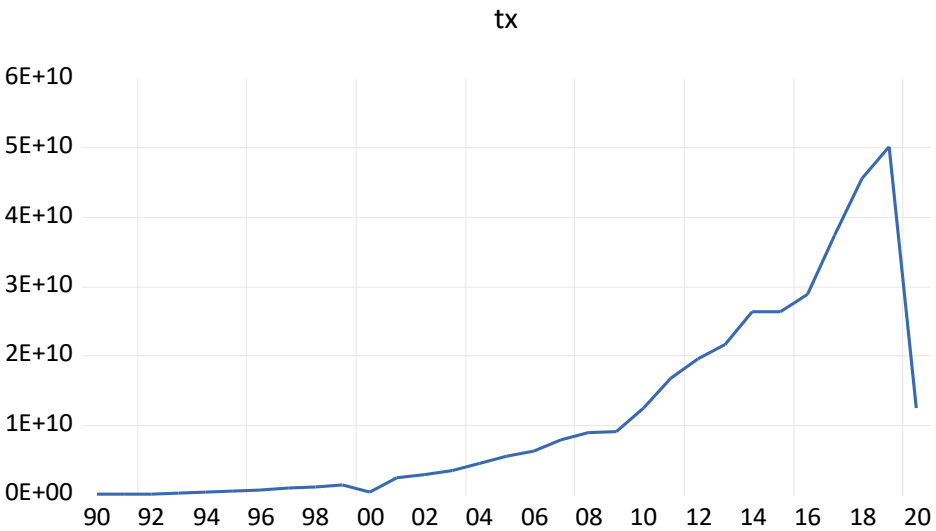
From the above results, it can be seen that the lowest point for the nation's economic growth is 1994 and the highest was 2010.

Figure 3. 2 trend analysis of PEXP for the period 1990 to 2020.



From the above results, it can be seen that the lowest point for the nation's public expenditure is 1990 and the highest was 2014.

Figure 3. 3 trend analysis of Tax for the period 1990 to 2020



The tax revenue resembles the trend for the public expenditure. However the highest for tax revenue was seen in 2018 for the period under review.

1.2. STATEMENT OF THE PROBLEM

Fiscal policy, which includes government spending and taxation, plays a vital role in influencing the economic growth of nations, especially in developing countries like Zambia. It is implemented to affect the levels of output in an economy. However, the effectiveness of fiscal policy remains uncertain, as it has led to economic growth in some developing nations while resulting in little to no improvement in others.

In recent years, Zambia has encountered persistent economic challenges, including high public debt, inflation, and sluggish GDP growth. These issues raise questions about the effectiveness of its fiscal policies in promoting sustainable development. Although fiscal policy is theoretically expected to stimulate economic growth through increased government expenditure and tax incentives, the actual impact in Zambia has been a topic of debate among policymakers, economists, and scholars.

Over time Zambian fiscal policy has relied heavily on copper extraction and high public borrowing, making the economy vulnerable to external shocks. Examples of these include issues such as the government's high budget deficits and increasing debt levels that have raised concerns about the sustainability of the fiscal situation and the crowding-out effect on private sector investment. Furthermore, Zambia's fiscal policy has frequently struggled to convert spending into productive investments particularly in critical sectors such as infrastructure, education, and healthcare, all of which are crucial for long-term economic growth.

Proponents of fiscal expansion in Zambia claim that it could stimulate short-run growth while the critics claim that, due to high debt levels and inefficient spending, some of this deficit-financed fiscal expansion would have little impact in the long-run (Mweemba, 2018). Also, the effect of fiscal policy on economic growth will depend on the composition of the economy, the level of institutional development and whether private sector investment responds to government policies.

For this reason, this paper aims to assess the extent to which Zambia's fiscal policy has contributed to or hindered economic growth, with a particular focus on government spending, taxation, and the management of public debt. Given the current economic challenges, it is critical to understand the specific fiscal policy instruments that have the most significant impact on Zambia's growth trajectory and to explore alternative policy measures that could enhance economic stability and development in the future.

1.3. RESEARCH OBJECTIVES

1.3.1. General Objective

To investigate the effect of fiscal policy on economic growth.

1.3.2. Specific Objectives

1. To investigate the effect of taxes on economic growth.
2. To investigate the effect of government borrowing on economic growth.
3. To investigate the effect of government expenditure on economic growth.

1.4. RESEARCH HYPOTHESES

H01: There is no significant relationship between taxes and economic growth.

H02: There is no significant relationship between government borrowing and economic growth.

H03: There is no significant relationship between government expenditure and economic growth.

1.5. SIGNIFCANCE OF STUDY

This study is intended to add to the knowledge base of economics in the field of economic policy. It is important in the sense that the study would help to provide a greater understanding of the relationship between fiscal policy components and economic growth. The findings of the study may also help to fill information gaps that previous studies may not have addressed.

1.6. SCOPE OF STUDY

The study was carried out in Zambia. The aim of the study was to investigate the effects of taxes, government borrowing and government expenditure on economic development

in Zambia. For the purpose of this study, secondary data was collected from the World Bank, Zambia Statistics Agency, Zambia Institute for Policy Analysis and Research and the Ministry of Finance for the periods between 1990 and 2020.

1.7. DEFINITION OF KEY TERMS

VARIABLE	CONCEPTUAL DEFINITION	OPERATIONAL DEFINITION
FISCAL POLICY	Government actions aimed at influencing the economy through changes in the level and structure of public spending and funding	Government actions to mobilize revenue through taxes, borrowing and the nature of government spending
TAX	Imposition of compulsory levies on individuals or entities by the government	Levies on trade, personal income, corporate and consumption as a way for the government to mobilize resources and contribute to GDP
GOVERNMENT BORROWING	Money the government borrows to fund its spending	The money borrowed internally and externally in order to fund its spending and how it contributes to GDP
GOVERNMENT EXPENDITURE	Money spent by the public sector on the acquisition of goods and services such as education, health, defence, etc	Money spent by the government to foster economic growth

This chapter has provided a comprehensive background on the role of fiscal policy in influencing economic growth, with a specific focus on Zambia's economic trajectory from independence. It has established the fundamental importance of fiscal policy as a tool utilized by governments to manage economic activities through taxation, government spending, and borrowing. The background has illustrated how different fiscal policy measures have been employed over time to stimulate growth, address economic downturns, and maintain macroeconomic stability.

Zambia's macroeconomic performance has undergone significant shifts over the decades, influenced by various internal and external factors, including global commodity price fluctuations, structural economic reforms, and the impact of external debt. The nation's economic history demonstrates a pattern of reliance on expansionary fiscal policy to promote industrialization and infrastructure development, especially in the early years post-independence. However, challenges such as high public debt, fiscal deficits, and economic vulnerabilities due to over-reliance on copper exports have constrained sustainable economic growth.

A key observation from the chapter is that Zambia's fiscal policy has evolved through various economic reform programs, including the Structural Adjustment Programs (SAPs), the Heavily Indebted Poor Countries (HIPC) initiative, and the Vision 2030 framework. Despite these efforts, the country has faced persistent fiscal challenges, such as inefficiencies in tax collection, high borrowing levels, and a growing budget deficit. The effectiveness of Zambia's fiscal policy has been debated, with concerns over whether government expenditures have translated into productive investments capable of driving long-term economic growth.

The statement of the problem highlights the ongoing fiscal challenges that Zambia faces, particularly regarding the sustainability of its fiscal policies and their effectiveness in fostering economic stability. The research objectives and hypotheses outlined in this chapter serve as a foundation for the study by identifying key areas of interest, including the impact of taxation, government borrowing, and public expenditure on economic growth. The study aims to provide empirical insights into how these fiscal components interact with economic performance.

Furthermore, the significance of this research has been emphasized, noting its contribution to the field of economic policy. Understanding the intricate relationship between fiscal policy and economic growth is crucial for policymakers, economists, and stakeholders seeking to implement more effective fiscal strategies. The study's scope has been defined, focusing on Zambia between 1990 and 2020, utilizing secondary data from reputable sources such as the World Bank and Zambia Statistics Agency.

In conclusion, the chapter has laid a strong foundation for the research by contextualizing Zambia's fiscal policy within its broader economic history. It has highlighted the key challenges and opportunities within the country's fiscal landscape, paving the way for an in-depth analysis of the relationship between fiscal policy and economic growth in subsequent chapters. By investigating taxation, government borrowing, and expenditure, the study seeks to offer insights that can guide more sustainable fiscal policymaking in Zambia.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Fiscal policy plays a fundamental role in shaping the economic trajectory of a nation, particularly in developing economies such as Zambia. As a primary tool for macroeconomic management, fiscal policy involves government actions related to taxation, public spending, and borrowing, all of which influence economic growth, inflation, employment, and overall economic stability. Over the years, economic scholars have debated the effectiveness of fiscal policy in driving growth, leading to the development of various theoretical perspectives. The relationship between fiscal policy and economic growth is complex and varies depending on the specific economic conditions, institutional frameworks, and policy implementations of each country.

This chapter provides a comprehensive literature review on the theoretical and empirical perspectives regarding the impact of fiscal policy on economic growth. The first section delves into the theoretical frameworks that have shaped fiscal policy discourse, including Keynesian Theory, Ricardian Equivalence, the Solow-Swan Model, and Endogenous Growth Theory. These theories offer different perspectives on the effectiveness of government intervention in economic growth, highlighting the potential benefits and limitations of fiscal measures.

The second section examines empirical evidence from global, African, and Zambian contexts. It explores studies on the impact of government spending, taxation, fiscal deficits, and public debt on economic performance. While global studies provide a broad understanding of fiscal policy's role in economic development, research from African and Zambian perspectives sheds light on region-specific challenges, such as weak tax administration, inefficient public spending, and rising public debt. The discussion highlights key debates and findings from various studies to provide a nuanced

understanding of how fiscal policies have shaped Zambia's economic performance over the years.

By synthesizing existing literature, this chapter aims to establish a foundation for understanding the intricate relationship between fiscal policy and economic growth in Zambia. The insights drawn from this review will inform the subsequent analysis of fiscal policy trends and their implications for economic growth in the Zambian context.

2.1. THEORETICAL LITERATURE REVIEW

2.1.1. Theories of Fiscal Policy

a) Keynesian Theory of Fiscal Policy

The Keynesian model, developed by John Maynard Keynes during the Great Depression, posits that government intervention is essential in managing economic activity, especially in times of recession. According to (Keynes, 1936), when private sector demand falls, the government can step in to stimulate demand through increased public spending and lower taxes. This spending multiplier effect stimulates aggregate demand, which in turn drives higher output and employment.

According to the Keynesian theory, fiscal policy affects economic growth via the multiplier effect. Increased government spending raises aggregate demand, which increases national income and encourages investment. The multiplier effect depends on the marginal propensity to consume and the marginal tax rate. Keynesian theory asserts that in periods of economic slack, government fiscal policy can directly affect the output gap, reduce unemployment, and stimulate economic growth.

b) Ricardian Equivalence Theory

The Ricardian Equivalence Hypothesis (REH), formulated by economist David Ricardo and later extended by Robert Barro in the 1970s, challenges the effectiveness of fiscal policy. According to this theory, individuals foresee that increased government spending today will eventually require higher taxes in the future. Therefore, when the government increases its budget deficit (for instance, through tax cuts or increased spending),

individuals will increase their savings in anticipation of future tax burdens. As a result, the effect of government spending on aggregate demand is neutralized because private sector savings increase to offset the government's fiscal policy actions.

(Ricardo, 1817) suggests that fiscal policy has no effect on aggregate demand, and therefore, does not stimulate economic growth. In this model, the government's budget deficit leads to an increase in household savings, as individuals anticipate future tax increases to cover the deficit. As such, the stimulus effect of government spending is offset by reduced private consumption, leaving economic growth unchanged.

2.1.2. Theories of Economic Growth

a) Solow-Swan Model (Neoclassical Growth Theory)

The Solow-Swan model, developed by Robert Solow and Trevor Swan in the 1950s, is one of the most widely cited theories of economic growth. It posits that economic growth results from the accumulation of capital (both physical and human), technological progress, and labor force growth (Solow, 1956). Fiscal policy plays an indirect role in influencing economic growth through its effect on investment and savings rates, which affect the accumulation of capital.

In the Solow-Swan model, fiscal policy plays an important role in shaping long-term economic growth, largely by affecting how much people save. For example, if taxes are lowered, individuals have more disposable income, which can encourage them to save more. Those extra savings can then be invested in things like machinery and infrastructure, boosting overall productivity.

However, it's important to note that the model highlights diminishing returns to capital; this means that while fiscal policy can have a big impact in the short to medium term, its effects taper off over time. Ultimately, the model suggests that long-term growth relies more on advances in technology than on fiscal measures.

b) Endogenous Growth Theory (Romer, Lucas)

Endogenous growth theory, developed by Paul Romer and Robert Lucas in the 1980s, challenges the assumption of diminishing returns to capital. Unlike the Solow-Swan model, endogenous growth theory suggests that technological progress, human capital development, and innovation are crucial drivers of economic growth (Romer, 1986). In this framework, fiscal policy can influence long-term growth by fostering investment in education, research and development (R&D), and infrastructure.

Endogenous growth theory highlights how strategic government spending can really make a difference in the economy. When the government invests in education, research, and technology, it not only improves individual skills but also creates a ripple effect that boosts overall productivity. By providing tax breaks for research and development or directly funding educational initiatives and innovation, this can in return nurture an environment where creativity and progress thrive. This kind of support leads to greater innovation, which plays a crucial role in driving long-term economic growth and improving the quality of life.

2.2. EMPIRICAL LITERATURE REVIEW

2.2.1. Global Evidence on Fiscal Policy and Economic Growth

Fiscal policy, which involves how governments spend money and collect taxes, is a key factor in shaping economic growth. There's an ongoing conversation among economists about how exactly fiscal policy affects growth—some argue it can boost the economy, while others believe it can hold it back. The effects often vary based on specific economic circumstances.

Around the world, many see fiscal policy as a vital tool for maintaining overall economic stability, smoothing out the ups and downs of the business cycle, and fostering growth that can be sustained over the long term. This section will look into various studies that provide real-world evidence on how fiscal policy influences economic growth, paying particular attention to the ways in which spending and tax policies impact long-term growth in both developed and developing countries.

2.2.1.1. Fiscal Spending and Economic Growth

One of the most well-known discussions on fiscal policy and growth is framed through the lens of Keynesian economics, which asserts that government expenditure can stimulate demand and economic activity, particularly during economic downturns. (Keynes, 1936) initially proposed that fiscal expansion through public spending could mitigate economic recessions by boosting aggregate demand. (Barro, 1990) developed a model that explored the trade-off between government spending and private sector investment, concluding that while short-term spending could boost economic activity, long-term growth depends heavily on the quality and productivity of such spending.

A significant body of empirical research supports the Keynesian view that fiscal spending can stimulate economic growth, especially in developing and emerging market economies. For instance, (Alesina, 2002) conducted a cross-country analysis and found that government spending on infrastructure, education, and healthcare can have a significant positive impact on long-term economic growth, provided it is managed efficiently and complemented by sound economic policies. Similarly, (Tazi, 2000) emphasized that public investment in infrastructure and human capital can enhance productivity, reduce transaction costs, and foster private sector development, thereby contributing to growth.

However, the effectiveness of fiscal spending in promoting growth is not universal. (Fischer, 1993) argued that fiscal expansion in the form of excessive government spending, especially in the presence of high fiscal deficits and inefficient allocation of resources, can lead to inflationary pressures and crowding out of private investment. This conclusion is echoed in (Tirole, 1992), who found that fiscal spending financed by debt, without corresponding increases in tax revenues, could lead to higher debt servicing costs and reduce the government's fiscal space, ultimately hurting growth.

2.2.1.2. Taxation and Economic Growth

Taxation is another crucial component of fiscal policy with significant implications for economic growth. Broadly, the literature highlights the dual effect of taxation: while higher

taxes can reduce disposable income and private sector spending, they are also essential for financing public goods and services. (Levine, 1992) argued that a balanced and efficient tax system is crucial for sustainable growth, as it can ensure adequate revenue for public investment while not stifling private enterprise.

One key study by (Ram, 1986) reviewed the link between tax policy and economic growth across developing countries and found that high tax rates on businesses, especially in developing economies, can discourage investment and reduce economic efficiency. He suggested that a progressive tax system that balances equity with efficiency is crucial for fostering both economic growth and social stability. Similarly, (Friedman, 2003) argued that excessive taxation on labor and capital could hinder economic dynamism by reducing incentives for entrepreneurship, innovation, and savings.

However, the relationship between taxation and growth is also subject to the quality of tax administration. In many developing economies, tax evasion and informal economic activity limit the effectiveness of tax policies. (Hodgson, 2004) reviewed the impact of tax policy on economic performance in developing countries and noted that countries with weak tax administration systems often experience poor revenue collection, which restricts fiscal space and increases reliance on external borrowing. Furthermore, (Slemrod, 2008) noted that tax reforms aimed at broadening the tax base and improving compliance are necessary for sustaining fiscal health and fostering growth.

2.2.1.3. Fiscal Deficits, Debt, and Growth

The relationship between fiscal deficits, public debt, and economic growth has been widely debated in the literature, particularly in the context of developing countries where fiscal space is limited and debt levels can quickly become unsustainable. (Agenor, 2004) explored how fiscal deficits, when combined with high levels of public debt, can negatively affect economic growth by leading to higher inflation, higher interest rates, and reduced investment in productive sectors. (Blanchard, 2002) further examined how fiscal policy, particularly government spending, can affect output in both short- and long-term scenarios. They found that the fiscal multiplier, the effect of fiscal spending on GDP varies

significantly depending on the type of government spending, the state of the economy, and the country's fiscal health.

In contrast, (Reinhart, 2010) conducted an analysis of debt and growth in advanced economies and found that countries with public debt-to-GDP ratios exceeding 90% tend to experience lower growth rates. They suggested that high levels of debt could raise borrowing costs and reduce investor confidence, ultimately leading to slower economic growth. These findings are particularly relevant for developing countries, where fiscal space is often constrained, and rising debt levels can exacerbate fiscal vulnerabilities.

Globally, fiscal policy plays a critical role in economic growth, but its effectiveness depends on the quality of public spending, the structure of the tax system, and the management of fiscal deficits and public debt. While fiscal spending can boost growth in the short term, its long-term impact is contingent on efficient allocation, proper debt management, and the country's institutional capacity to implement reforms. Policymakers in both developed and developing economies need to strike a balance between fiscal stimulus and fiscal sustainability to foster sustained economic growth.

2.2.2. African Context: Fiscal Policy and Economic Growth

Sub-Saharan Africa (SSA) is a region filled with both immense economic potential and serious challenges. The impact of fiscal policy on promoting growth here has become an important topic of discussion among researchers and policymakers. Many African countries, often categorized as developing or low-income, struggle with ongoing budget deficits, ineffective tax collection, and a heavy dependence on borrowing from other nations. Despite these hurdles, fiscal policy serves as a vital tool in driving economic growth and tackling pressing issues such as poverty, inequality, and infrastructure needs. Addressing these challenges is not just about numbers; it's about improving the lives of millions and creating a brighter future for the region.

2.2.2.1. Government Spending and Economic Growth in Africa

A growing body of literature has highlighted the crucial role of government spending in driving economic growth in Africa. Public expenditure on infrastructure, education, healthcare, and social welfare is seen as essential for long-term development. (Celasun,

2006) emphasized that government spending on infrastructure, particularly roads, energy, and transportation, boosts productivity by reducing costs for businesses and facilitating trade. Similarly, (Harris, 2018) found that infrastructure development in countries like Ethiopia and Kenya has been instrumental in stimulating private sector investment and enhancing economic growth.

Government spending in Africa plays a crucial role in shaping the future, but often its impact is diminished by issues like resource misallocation, corruption, and governance problems. In his research on West Africa, (Fosu, 2017) highlighted that while investing in education and healthcare can significantly boost long-term growth, poor governance and a lack of strong institutions can hold back these efforts. He emphasized the importance of governments focusing on sectors that promise the greatest returns, such as education and infrastructure, all while striving to improve the efficiency of public services. In essence, for government spending to truly benefit society, a more strategic and accountable approach is essential.

In addition to infrastructure, (Colier, 2007) argued that fiscal spending on human capital, particularly education and healthcare, is essential for promoting growth in Africa. A well-educated and healthy workforce can significantly increase labour productivity, attract foreign investment, and drive innovation. However, they noted that many African countries still struggle with inadequate funding for social sectors, leading to poor health outcomes and low levels of educational attainment.

2.2.2.2. Fiscal Deficits, Debt, and Growth in Africa

Fiscal deficits and rising public debt have been recurring problems in many African countries. (Kraay, 2000) explored how fiscal deficits, if not properly managed, can crowd out private investment and create macroeconomic instability. High fiscal deficits often lead to inflationary pressures and higher interest rates, which can undermine economic growth. (Brixiovia, 2013) examined the relationship between fiscal deficits and economic growth in SSA and found that countries with large and persistent deficits often face slower growth due to debt servicing obligations and reduced fiscal space.

Public debt has become a pressing issue for many African countries, especially since the turn of the century. In his analysis, (Colier, 2007) highlighted the dangers of rising public debt, particularly external debt, warning that it threatens long-term economic growth. He pointed out that high costs associated with servicing this debt can restrict governments from investing in essential areas like education and infrastructure, which are crucial for fostering development.

A more recent study by (Kose, 2019) emphasized that excessive borrowing, particularly from international markets, can lead to dire financial distress and weaken investor confidence. This situation makes it increasingly challenging for countries to secure affordable financing in the future. Since the early 2000s, the growing burden of debt has posed significant challenges for many African nations, with countries such as Ghana, Zambia, and Mozambique facing serious debt crises. The research of (Reinhart, 2010) established a clear link between high public debt and slower economic growth. They found that countries with debt-to-GDP ratios above 60% often struggle with reduced growth prospects, primarily due to the rising costs associated with managing their debt. In essence, the weight of public debt is not just a statistic; it affects the lives of millions by limiting the resources available for vital services and development initiatives.

2.2.2.3. Taxation and Revenue Mobilization in Africa

Taxation plays a vital role in shaping fiscal policy across Africa. Many Sub-Saharan African countries face significant obstacles due to low tax revenues, which limit their ability to effectively manage public spending. This reality often forces them to turn to external borrowing for financial support. According to (Togo, 2017), one major reason for these low tax collection rates is the presence of large informal economies, alongside challenges like poor tax compliance and inefficient tax systems.

(Ogbonnaya, 2016) highlights the importance of improving tax administration and expanding the tax base as essential steps toward enhancing fiscal capacity and reducing reliance on foreign debt. On a more positive note, some countries, like Uganda and Tanzania, have seen success in their tax reform efforts. (Siqueira, 2019) studied these initiatives and found that better compliance, broader tax bases, and stricter enforcement

of tax laws have all contributed to increased revenue collection. Despite these successes, the informal sector remains a persistent challenge, with many parts of the economy still escaping the tax system. Addressing this issue is crucial for ensuring a stable and sustainable financial future for these nations.

Fiscal policy is a vital tool that can drive economic growth in Africa, but it faces several hurdles. Issues like inefficient public spending, rising public debt, and weak tax systems often hinder its effectiveness. To make meaningful progress, governments need to focus on improving governance and strengthening institutions. This will help ensure that fiscal policies are not just efficient but sustainable over the long run. Additionally, boosting tax collection and decreasing reliance on external debt will be crucial steps toward achieving lasting economic stability in the region. By addressing these challenges, Africa can unlock its potential for growth and prosperity.

2.2.3. Zambian Context: Fiscal Policy and Economic Growth

Zambia, much like several other African nations, has been grappling with significant challenges in its fiscal policy. These struggles primarily revolve around managing public debt, dealing with fiscal deficits, and addressing inefficient government spending. The country's heavy reliance on copper exports makes its economy particularly sensitive to fluctuations in global prices, which can create instability. The journey of Zambia's fiscal policy has been shaped by a mix of internal factors, such as political instability and issues with governance, as well as external pressures, like the unpredictable nature of commodity prices and the terms of international loans. These challenges paint a picture of an economy striving for resilience in the face of various hurdles.

2.2.3.1. Government Spending and Economic Growth in Zambia

Zambia has turned to government spending as a key strategy for boosting economic growth, especially through infrastructure development. The government has made significant investments in large projects in crucial areas like energy, transportation, and housing. These initiatives are designed to enhance productivity and encourage private investors to come on board. (Sichinga, 2015) pointed out that improvements in roads and electricity have played a role in driving short-term economic growth. However, the long-

term benefits are often hindered by inefficiencies in how projects are managed and the challenges posed by corruption.

On the social front, Zambia has also launched programs aimed at fostering inclusive growth. (Muleya, 2018) observed that increased government spending on education and healthcare has helped raise literacy rates and improve life expectancy, both vital for sustainable economic development. Nevertheless, (Chileshe, 2017) raised concerns that the positive impacts of these social programs are often compromised by poor governance and the misallocation of resources.

2.2.3.2. Fiscal Deficits and Public Debt in Zambia

Public debt has been a significant concern for Zambia, especially since the early 2000s. In his analysis, (Chanda, 2016) pointed out how the country's growing reliance on external borrowing, particularly through Eurobonds, has greatly increased its debt servicing costs. The situation took a serious turn in 2020 when the IMF reported that Zambia defaulted on its debt obligations, which highlighted the struggles the nation faced in managing its finances. This escalating debt has really limited Zambia's ability to invest in development projects or improve social welfare, forcing the government to consider borrowing even more.

(Kabwe, 2017) looked into Zambia's fiscal deficits and found that they were mainly driven by government spending that outstripped available revenue. Unfortunately, much of this spending hasn't resulted in productive investments, raising valid concerns about whether Zambia's fiscal policies are sustainable in the long run. It's clear that the challenges ahead will require careful management to ensure a stable economic future for the country.

2.2.3.3. Taxation and Revenue Mobilization in Zambia

Zambia has been grappling with a deeply inefficient tax system for many years, and this challenge is largely attributed to the substantial informal sector, which often remains untaxed. As highlighted by (Chirwa, 2019), the country has consistently recorded low tax revenue as a proportion of its Gross Domestic Product (GDP). This persistent issue has created significant difficulties for the government, making it challenging to finance essential development projects without relying on external borrowing. (Munyemana,

2019) underscores the importance of addressing this situation by improving tax compliance, expanding the tax base, and integrating a larger portion of the informal sector into the formal economy. By doing so, Zambia can bolster its fiscal sustainability and reduce its dependence on external financing.

In recent years, the Zambian government has initiated various reforms aimed at overhauling its tax system. Key measures include the introduction of value added tax (VAT) and modifications to income tax rates to enhance revenue collection. Despite these efforts, as noted by (Sichinga, 2020), the implementation of reforms has been undermined by multiple challenges. These include weak tax enforcement mechanisms, widespread tax evasion practices, and the overall complexity of the tax code, which can deter compliance among taxpayers.

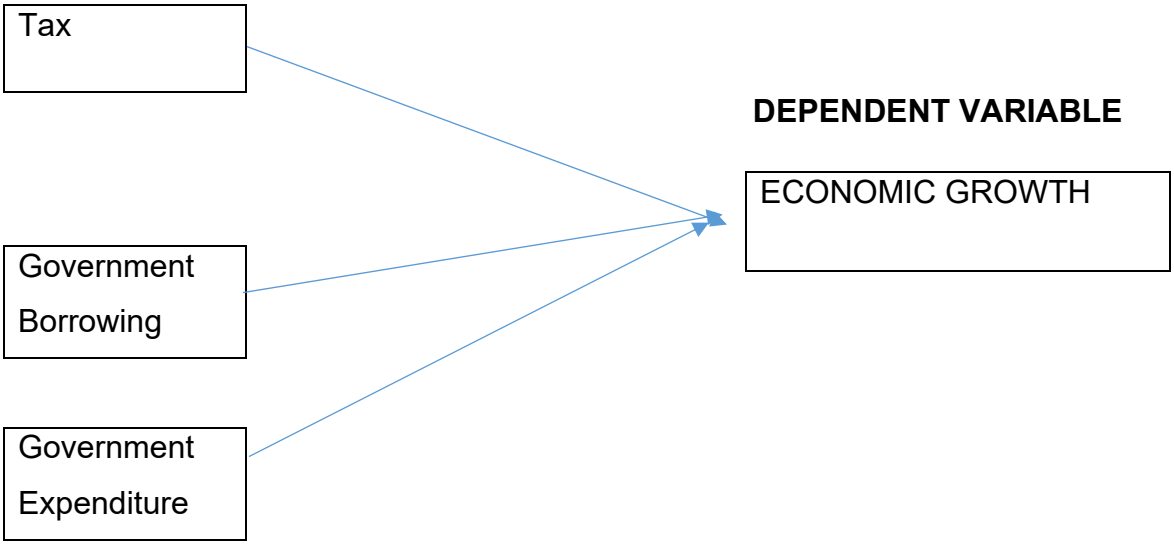
Fiscal policy in Zambia has played an essential role in stimulating short-term growth, particularly through targeted investments in infrastructure. These projects have the potential to create jobs, enhance productivity, and improve the quality of life for citizens. However, the country faces significant hurdles that hinder the long-term sustainability of such growth. Rising public debt levels, inefficient government spending, and a fragile tax framework are key issues that need to be addressed to maximize the positive impacts of fiscal policy.

To foster more sustainable economic growth, it is vital for Zambia to commit to principles of fiscal responsibility. This entails not only improving the efficiency of public sector operations but also implementing strategies to boost domestic revenue collection. Establishing a more effective tax system will be necessary for funding crucial development initiatives and ensuring that Zambia can meet the needs of its population without increasingly relying on external debt. The integration of the informal sector into the formal economy will be a critical step in this process, as it has the potential to significantly enhance tax revenue and support broader economic development.

2.4. CONCEPTUAL FRAMEWORK

INDEPENDENT VARIABLES

Fiscal Policy



The literature reviewed in this chapter underscores the critical role of fiscal policy in influencing economic growth, both globally and within the Zambian context. Theoretical perspectives present contrasting views on the effectiveness of fiscal policy, ranging from Keynesian support for government intervention to Ricardian skepticism about the impact of fiscal deficits. Similarly, economic growth models, such as the Solow-Swan and Endogenous Growth theories, highlight different mechanisms through which fiscal policy can affect long-term economic performance.

Empirical evidence suggests that fiscal policy outcomes are highly contingent on the quality of government spending, the efficiency of taxation systems, and the sustainability of public debt levels. Globally, studies indicate that well-managed fiscal spending on

infrastructure, education, and healthcare can boost economic growth, while excessive deficits and inefficient tax structures can undermine fiscal sustainability. Within Africa, the effectiveness of fiscal policy is often constrained by weak institutions, governance issues, and external debt burdens, factors that are particularly relevant in Zambia.

In the Zambian context, the literature highlights significant challenges, including persistent fiscal deficits, rising public debt, and inefficient tax collection mechanisms. While government spending on infrastructure and social services has contributed to short-term growth, inefficiencies in resource allocation and governance have limited its long-term benefits. Additionally, Zambia's heavy reliance on external borrowing has created vulnerabilities that threaten fiscal sustainability and economic stability.

Overall, the literature indicates that for fiscal policy to effectively drive economic growth in Zambia, it must be accompanied by prudent fiscal management, improved tax administration, and strategic public investment. Addressing governance challenges and enhancing institutional capacity will be essential in ensuring that fiscal measures translate into sustained and inclusive economic growth. This review sets the stage for a deeper examination of Zambia’s fiscal policy trends and their broader implications for the country’s economic development in the following chapters.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter outlines the research methodology employed to investigate the effect of fiscal policy on economic growth in Zambia from 1990 to 2020. The study adopts a quantitative research design, utilizing time-series econometric techniques to empirically analyze the relationship between fiscal policy variables and economic growth. Given the nature of the research, secondary data from reputable sources such as the World Bank, International Monetary Fund (IMF), the Ministry of Finance, and the Zambia Institute for Policy Analysis and Research (ZIPAR) are utilized. The chapter also details the model specification, estimation procedures, and diagnostic tests to ensure the validity and robustness of the findings. The Autoregressive Distributed Lag (ARDL) bounds testing approach is chosen due to its suitability for handling variables of different integration orders, facilitating the estimation of both short-run and long-run relationships. Additionally, the chapter discusses ethical considerations in data handling and acknowledges potential limitations associated with the methodology.

3.1 RESEARCH DESIGN

This study employs a quantitative research design, utilizing time-series econometric techniques to investigate the effect of fiscal policy on economic growth in Zambia. The research adopts an empirical approach by analyzing secondary data spanning from 1990 to 2020. The study relies on macroeconomic indicators to establish the relationships between key fiscal policy components and economic growth.

3.2 DATA SOURCES AND COLLECTION

The study uses secondary data obtained from reputable sources such as the World Bank, International Monetary Fund (IMF), the Ministry of Finance, and the Zambia Institute for Policy Analysis and Research (ZIPAR). The dataset includes annual observations on Gross Domestic Product (GDP), Public Expenditure (PEXP), Tax Revenue (TAX), and Debt Service as a percentage of Gross National Income (GNI).

3.3 MODEL SPECIFICATION

Given that some of the variables in this study are integrated of order I(1) while others are I(0), the Autoregressive Distributed Lag (ARDL) bounds testing approach is employed to analyze both the short-run and long-run relationships between fiscal policy variables and economic growth. The general form of the ARDL model is specified as follows:

where: $Y_t = \alpha + \sum_{i=1}^{p} \beta_i Y_{t-i} + \sum_{j=0}^{q} \gamma_j X_{t-j} + \epsilon_t$

- Y_t represents the dependent variable at time *t*.
- X_t represents the independent variable at time *t*.
- α represents the intercept term.
- β_i represents the coefficients of the lagged dependent variable.
- γ_j represents the coefficients of the lagged independent variable.
- *p* and *q* represent the lag orders for the dependent and independent variables respectively.
- ϵ_t is the error term.

3.4 JUSTIFICATION FOR THE ARDL MODEL

The ARDL model is preferred due to its flexibility in handling variables of different integration orders (I(0) and I(1)) without the need for pre-testing all variables for stationarity at the same level. Moreover, it allows for estimating both short-run and long-run relationships simultaneously.

3.5 ESTIMATION PROCEDURES

3.5.1 Unit Root Tests

To ensure the stationarity of the time series variables, the Augmented Dickey-Fuller (ADF) test is employed. The test follows the null hypothesis that a variable has a unit root (non-stationary), against the alternative hypothesis of stationarity.

3.5.2 Optimal Lag Selection

The optimal lag length is determined using the Akaike Information Criterion (AIC) within the ARDL framework. This ensures that the selected model effectively captures the dynamic relationships among the variables while avoiding overfitting.

3.5.3 Cointegration Analysis

The Pesaran, Shin, and Smith (2001) bounds testing approach is used to assess the presence of a long-run relationship among the variables. If the computed F-statistic exceeds the critical value bounds, the null hypothesis of no cointegration is rejected, indicating the existence of a long-run relationship.

3.5.4 Error Correction Model (ECM)

Once cointegration is established, the ARDL model is reparameterized into an ECM to estimate the short-run dynamics and the speed of adjustment toward long-run equilibrium. The ECM equation is specified as follows:

where is the error correction term capturing deviations from long-run equilibrium, and represents the speed of adjustment.

3.6 DIAGNOSTIC TESTS

To ensure the reliability and robustness of the model, several diagnostic tests are performed:

- **Serial Correlation Test:** The Breusch-Godfrey test is conducted to detect autocorrelation in the residuals.

- **Heteroskedasticity Test:** The Breusch-Pagan/Cook-Weisberg test is used to check for heteroskedasticity.
- **Normality Test:** The Jarque-Bera test is applied to determine if residuals follow a normal distribution.
- **Model Stability Test:** The cumulative sum of recursive residuals (CUSUM) and CUSUM squared tests assess model stability over time.

3.7 ADDRESSING MODEL SPECIFICATION CONCERNS

The empirical model is specified to control for key growth determinants, such as capital and labor, to avoid misspecification. This ensures that fiscal policy's effects are not overstated by omitting fundamental drivers of economic growth.

3.8 ETHICAL CONSIDERATION

All data used in this study were obtained from publicly available sources, ensuring compliance with research ethics. Proper citations and references are made to acknowledge data sources and prior research contributions.

In summary, this chapter has provided a comprehensive overview of the research methodology employed in analyzing the impact of fiscal policy on Zambia's economic growth from 1990 to 2020. The study employs a quantitative research design and relies on secondary data sources, ensuring empirical rigor. The ARDL model is selected as the primary econometric technique due to its flexibility in accommodating different levels of integration and its ability to estimate both short-run and long-run relationships. Various estimation procedures, including unit root tests, optimal lag selection, cointegration analysis, and the error correction model, are incorporated to enhance the robustness of the results. Furthermore, diagnostic tests ensure the model's reliability, while ethical considerations are observed to maintain research integrity. The methodology outlined in this chapter lays the foundation for the subsequent analysis and discussion of findings, providing a systematic approach to understanding the effects of fiscal policy on economic growth in Zambia.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULTS

Introduction

This chapter presents the empirical results derived from the analysis of the relationship between Gross Domestic Product (GDP) and key fiscal policy variables, namely Public Expenditure (PEXP), Tax Revenue (TAX), and Debt Servicing (DS % of GNI). The analysis employs the Autoregressive Distributed Lag (ARDL) model, chosen for its ability to handle variables with different levels of integration. The study utilizes secondary data from credible sources such as the World Bank, Zambia Statistics Agency, and the Ministry of Finance, covering the period from 1990 to 2020. The results obtained through Stata/MP 17.0 for Windows undergo rigorous statistical testing, including unit root tests, optimal lag selection, model estimation, and post-estimation diagnostics. These tests ensure the reliability of findings and provide insights into both the short-run and long-run effects of fiscal policy on economic growth in Zambia. The chapter follows a systematic approach, beginning with pre-estimation tests, proceeding with model estimation, and concluding with post-estimation validation.

4.1. DATA COLLECTION

The research questions were addressed using quantitative experimental methods suitable for time series data. Following the chosen methodology, this study adopted a longitudinal case study approach and utilized secondary data. Secondary data enabled the analysis to cover an extended period while minimizing the time and cost associated with collecting primary data. For this study, data on public spending and GDP in Zambia was readily available and compiled at regular intervals by the Zambian Government, the Ministry of Finance, the International Monetary Fund (IMF), and the World Bank.

The secondary data was obtained from reliable sources, including the World Bank Development Indicators database, the Zambia Statistics Agency, the Zambia Institute for Policy Analysis and Research, and the Ministry of Finance, covering the period from 1990 to 2020. This data was particularly suitable for this study, as it allowed for a comprehensive examination of the causal relationship between fiscal policy and

economic growth. The key variables analyzed included real gross domestic product (GDP), government expenditure, government revenue, and total government debt.

4.2. PRE ESTIMATION TESTS

4.2.1. Unit Root Tests

The ADF test was performed on all variables to determine whether they contain a unit root, which suggests non-stationarity. The hypothesis for the test is;

• H_0: δ = 0 (the time series is non-stationary)

• H_1: δ ≠ 0 (the time series is stationary)

If the p-value is less than 0.05, the null hypothesis is rejected, indicating stationarity (Dickey &

Fuller, 1979).

Variable	Obs	Lags	Test Statistic	Critical Value (1%)	Critical Value (5%)	Critical Value (10%)	p-value
GDP	29	1	-1.955	-3.723	-2.989	-2.625	0.3068
PEXP	29	1	-1.613	-3.723	-2.989	-2.625	0.4766
TAX	29	1	-2.723	-3.723	-2.989	-2.625	0.0702
Debt Service of GNI	29	1	-2.947	-3.723	-2.989	-2.625	0.0401

According to the table above, three variables are non-stationary at the 5% significance level (except Debt Service of GNI). Therefore, the variables needed further differencing to ensure the validity of econometric models.

Variable	Obs	Lags	Test Statistic	Critical Value (1%)	Critical Value (5%)	Critical Value (10%)	p-value
D_GDP	28	1	-6.373	-3.73	-2.992	-2.626	0
D_PEXP	28	1	-4.187	-3.73	-2.992	-2.626	0.0007
D_TAX	28	1	-3.206	-3.73	-2.992	-2.626	0.0196

From the above test, the variable Debt Service of GNI is I (0) and the variables, GDP, PEXP and TAX are I (1). This allows us to use the ARDL model.

4.2.2. Optimal Number of Lags

The optimal number of lags was determined using Stata/MP 17.0. The selection of optimal lag lengths was conducted using the Akaike Information Criterion (AIC) within the ARDL framework. A maximum lag length of 3 was initially specified for all variables, allowing the model to assess various lag structures. The results indicated that the optimal model follows an ARDL (3,0,1,3) specification, meaning that the GDP is explained by its own three lags, public expenditure (PEXP) has no lags suggesting that it affects GDP immediately, one lag for tax revenue (TAX), and Three lags for Debt Service of GNI. The selection of this lag structure ensures that the model effectively captures the dynamic relationship between the dependent and independent variables while minimizing information loss and avoiding overfitting. Additionally, the automatic lag selection process evaluated 192 possible lag combinations, reinforcing the robustness of the chosen specification.

4.3. ESTIMATION

The estimation of the Autoregressive Distributed Lag (ARDL) model was conducted to examine the short-run and long-run relationships between Gross Domestic Product (GDP) and key fiscal policy variables, namely Public Expenditure (PEXP), Tax Revenue (TAX), and Debt Service of GNI. Following the estimation, the model was reparameterised into an Error Correction Model (ECM) to assess both the short-run dynamic adjustments and the speed of return to equilibrium in response to economic

shocks. This table presents the coefficients, standard errors, t-statistics, p-values, and 95% confidence intervals.

Variable	Coefficient	Std. Error	t-Statistic	P-Value	95% Confidence Interval
Adjustment Term (ADJ)					
GDP (L1)	-0.08372	0.306587	-0.27	0.788	-0.7305632 to 0.5631227
Long-Run Relationship (LR)					
PEXP	-0.00114	0.004543	-0.25	0.805	-0.0107223 to 0.0084466
TAX	-7.50E-10	2.60E-09	-0.29	0.776	-6.24e-09 to 4.74e-09
DebtServiceofGNI	-0.38475	1.013423	-0.38	0.709	-2.52289 to 1.753383
Short-Run Relationship (SR)					
GDP (LD)	-1.33874	0.297119	-4.51	0	-1.965601 to -0.7118702

GDP (L2D)	-0.4184	0.306174	-1.37	0.19	-1.064376 to 0.2275668
TAX (D1)	1.68E-10	6.23E-11	2.69	0.015	3.64e-11 to 2.99e-10
DebtServiceofGNI (D1)	-0.10279	0.084157	-1.22	0.239	-0.2803492 to 0.0747641
DebtServiceofGNI (LD)	0.05291	0.083777	0.63	0.536	-0.1238434 to 0.2296642
DebtServiceofGNI (L2D)	0.135252	0.037276	3.63	0.002	0.0566059 to 0.2138972
Constant (_cons)	2.700573	2.178452	1.24	0.232	-1.895559 to 7.296705

4.4. POST-ESTIMATION TESTS

4.4.1. Co-Integration

The Pesaran, Shin, and Smith (2001) bounds test examines whether a long-run relationship exists between the variables being studied. The output provides an F-statistic and a t-statistic, alongside critical values and p-values for different significance levels (10%, 5%, and 1%).

Null Hypothesis (H0): No level relationship exists (i.e., no cointegration).

Alternate Hypothesis (H1): There exist Co-Integration

Test Results:

- F-statistic: 1.485
- t-statistic: -0.273

Test Decision at Different Significance Levels:

Significance Level	Decision	Reasoning
10%	No rejection	The F-statistic (1.485) is smaller than the critical value for I(0) (3.009), and the p-value (0.415) is greater than 0.10. Similarly, the t-statistic (-0.273) is not extreme enough compared to the critical value.
5%	No rejection	The F-statistic (1.485) is smaller than the critical value for I(0) (3.781), and the p-value (0.692) is greater than 0.05. The t-statistic (-0.273) does not exceed the critical value for I(0).
1%	No rejection	The F-statistic (1.485) is smaller than the critical value for I(0) (5.769), and the p-value (0.692) is greater than 0.01. The t-statistic (-0.273) does not exceed the critical value for I(0).

From the above Stata/MP 17.0 output, based on the Pesaran, Shin, and Smith (2001) bounds test, we do not reject the null hypothesis (H0) at all significance levels (10%, 5%, and 1%). This suggests that there is no level of relationship (cointegration) between the variables.

4.4.2. Autocorrection Test

The Durbin-Watson test was used to test for serial correlation. The Durbin-Watson statistic ranges from 0 to 4 (University of Notre Dame, n.d.)

. The interpretation of the results is based on the following;

- A value close to 2 suggests no first-order autocorrelation.
- A value closer to 0 indicates positive autocorrelation.
- A value closer to 4 indicates negative autocorrelation.

Given the value of 2.513635 from the Durbin-Watson test, it is in the range that suggests no significant autocorrelation in the residuals

4.4.3. Normality Test

To test for normality, The Jarque-Bera test was used as follows;

- **H_0 (Null Hypothesis):** The residuals follow a normal distribution.
- **H_1 (Alternative Hypothesis):** The residuals do not follow a normal distribution.

The Jarque-Bera test output:

- Test Statistic: 8.76
- Chi-Square Degrees of Freedom: 2
- p-value: 0.0125

From the test results, we have sufficient evidence to reject the null hypothesis and conclude that the residuals are not normally distributed.

4.4.4. Heteroskedasticity Test

To test for heteroskedasticity, the Breusch-Pagan/Cook-Weisberg test was used.

- **Null Hypothesis (H_0):** The residuals have constant variance (no heteroskedasticity).
- **Alternative Hypothesis (H_1):** The residuals have non-constant variance (heteroskedasticity).

The output from the Breusch-Pagan/Cook-Weisberg test;

Chi-Square Degrees of Freedom = 9.95

P-Value = 0.0016

Since 0.0016 is less than 0.05, we reject the null hypothesis and conclude that there is heteroskedasticity.

Given this result, we can adjust for heteroskedasticity using the Newey-West standard errors. It uses a kernel function (e.g., Bartlett kernel) to downweigh the influence of higher-order lags, ensuring the covariance matrix remains positive semi-definite. The formula for the adjusted covariance matrix includes terms like:

$$\hat{S} = \hat{\Gamma}_0 + \sum_{v=1}^{q} \left(1 - \frac{v}{q+1}\right) (\hat{\Gamma}_v + \hat{\Gamma}_v')$$

where $\hat{\Gamma}v$ represents autocovariance at lag v. Lag Selection requires specifying a maximum lag (q), often chosen using rules like $4\left(\frac{T}{100}\right)^{2/9}$ for annual data (Newey and West, 1986).

Below is the output from Stata/MP 17.0 software;

Variable	Coefficient	Std. Error	t-Statistic	P-Value	95% Confidence Interval
PEXP (Public Expenditure)	0.0000783	7.19E-05	1.09	0.286	-0.0000693 to 0.0002258
TAX (Tax Revenue)	-4.10E-11	3.03E-11	-1.36	0.186	-1.03e-10 to 2.11e-11
DebtServiceofGNI	-0.0787599	0.069891	-1.13	0.27	-0.2221644 to 0.0646446

Constant (_cons)	4.361254	1.706365	2.56	0.017	0.8600815 to 7.862426

The above normality and heteroskedasticity test results indicate that there is a need to adjust the data. One method that can help with this is the Newey-West standard error. Newey-West standard errors are a statistical method used to adjust standard errors in regression analysis when the assumptions of homoscedasticity (constant variance) and no autocorrelation are violated (Ao, 2009). Below is the output for the model;

Statistic	**Value**
Number of Observations (n)	31
F-statistic	1.29
p-value for F-test	0.2979
R-squared	0.1254
Adjusted R-squared	0.0282
Root MSE	3.9375

Below is the output for the individual coefficients of the model;

Variable	Coefficient	Std. Error	t-Statistic	p-value	95% Confidence Interval
PEXP	7.83E-05	7.76E-05	1.01	0.322	-0.000081 to 0.0002375
TAX	-4.10E-11	6.41E-11	-0.64	0.528	-1.72e-10 to 9.04e-11
DebtServiceofGNI	-0.07876	0.057229	-1.38	0.18	-0.1961831 to 0.0386634
Constant	4.361254	1.222851	3.57	0.001	1.85217 to 6.870337

The results from the ARDL model indicate that while certain fiscal policy variables exhibit short-run effects on GDP, the bounds test for cointegration suggests no long-run relationship between GDP and Public Expenditure, Tax Revenue, and Debt Service. The unit root tests confirmed that the majority of variables required differencing to achieve stationarity, justifying the use of the ARDL model. The estimation results highlighted the dynamic nature of fiscal policy impacts, with varying effects on GDP depending on lag structures and statistical significance levels. Post-estimation diagnostics, including tests for autocorrelation, normality, and heteroskedasticity, were conducted to validate the robustness of the model. While some diagnostic tests indicated potential issues, adjustments such as Newey-West standard errors were applied to improve the reliability of the estimates. Overall, these findings contribute to the broader understanding of fiscal policy's role in Zambia's economic growth, laying the groundwork for further policy-oriented research and recommendations.

CHAPTER FIVE

DISCUSSION OF FINDINGS

Introduction

This chapter presents a comprehensive discussion of the key findings from the study on the effects of fiscal policy on economic growth in Zambia between 1990 and 2020. The study employed an Auto Regressive Distributed Lag (ARDL) model to assess the short- and long-run relationships between GDP and fiscal policy variables such as Debt Service (% of GNI), Public Expenditure, and Tax Revenue. The findings provide insights into the implications of fiscal policy interventions on Zambia's economic trajectory, offering valuable perspectives for policymakers, researchers, and other stakeholders.

The discussion is structured to interpret the empirical results in light of theoretical frameworks and previous studies. It evaluates the stationarity of the data, the presence of a long-run equilibrium relationship, and the impact of fiscal variables on GDP in the short run. Additionally, this chapter explores the implications of heteroscedasticity in the model and how the use of Newey-West standard errors affects the robustness of the results. The findings contribute to the ongoing discourse on optimal fiscal policy design in developing economies, particularly in the context of Zambia's economic structure and growth challenges.

5.1. RESEARCH CONCLUSIONS

The main objective of this research was to discuss how fiscal policy affects economic growth in Zambia, focusing on the individual relationships between public expenditure, debt servicing and taxation and how they interact with GDP. The study set out to understand not just whether there is a link between these factors, but also the direction of that connection. Does fiscal policy lead to economic growth, or does economic growth influence fiscal policy? Additionally, it sought to examine how these relationships play out over time, both in the short run and the long run.

To carry out this research, a variety of statistical tests were employed using Stata/MP 17.0 for Windows software. This study analysed the effect of fiscal policy on economic

growth in Zambia using data spanning from the year 1990 to the year 2020. Put more precisely, it analysed the relationship between Gross Domestic Product (GDP) and crucial variables at the disposal of the fiscus – Debt service (% of GNI), Public Expenditure (PEXP), and Tax Revenue – using an Auto Regressive Distributed lag model as the foundation of our analysis.

In this section, we determine the significance of the relationship between variables based on the p value threshold of 0.05 (5%), with any p-value below this threshold indicating a statistically significant effect. This chapter delves deeper into these findings, providing a comprehensive discussion that integrates theoretical and empirical insights to enhance understanding of the results.

The results yielded by this paper's analysis provide valuable insight into the long and short-run dynamics of equilibrium income given fiscal intervention in the economy, as well as the speed of adjustment (equilibrium reversion) given changes in fiscal policy. Overall, this study sought to provide valuable insights into Zambia's economic landscape, aiming to help guide decisions that could foster sustainable growth and improve the overall well-being of its citizens. By exploring these important relationships, we hope to contribute to a better understanding of how fiscal policy can effectively contribute to economic growth in the country. The detailed analysis of the data reveals an important aspect about the individual relationships between public expenditure, taxation and public debt with economic growth in Zambia.

5.1. Stationarity Analysis

The use of the Augmented Dickey Fuller test was employed to determine whether the variables being studied contained a unit-root, the presence of which would reveal that the variables in question are non-stationary. The results of ADF are as follows:

- Debt Service (% of GNI) was found not to contain a unit-root and was thus found to be integrated of order 0 i.e. I(0) revealing that the variable needed no further differencing to make it stationary.

- Tax Revenue, Public Expenditure and GDP were all found to contain a unit root and were thus found to be integrated of order 1 i.e. I(1) revealing that the variables needed to be differenced once to make them stationary.

Due to the mix of I(0) and I(1) variables, the ARDL model was used as it was best suited. These results are sufficient for the use of co-integration analysis.

5.2. Co-integration and Long-Run Relationship Analysis

Co-integration was used in the analysis of our variables to determine whether the variables in question move in tandem in the long-run, telling or informing of a relatively stable long-run relationship among them.

In a bid to ascertain whether there exists a long-run relationship between GDP and our fiscal policy variables, the Pesaran, Shin, and Smith (2001) Bounds Test was applied. Both the F-statistic (F=1.485) and the student t statistic (t=-0.273) were not significant at any of the statistical standard level of significance, leading us to conclude that no stable long-run relationship exists among variables.

All estimated long-run coefficients of the ARDL model i.e. coefficients of the variables Tax Revenue, Public Expenditure, and Debt Service of GNI were all statistically insignificant at a 5% level of significance - the p-values of all variables were greater than 0.05 – leading the researcher to conclude that changes in the aforementioned fiscal variables do not translate into economic growth (measured by changes in GDP) in the long-run. Leading the researcher to conclude that, there exists no stable long-run relationship among variables.

5.3. Short-run analysis and the Error Correction Model

According to the results yielded by the ARDL model, GDP (LD) lagged one period was found to be statistically significant at a 1% level of significance with a p-value of 0. Suggesting that a high GDP in the previous period would be followed by a decline equivalent to the product of the coefficient and the change in the previous period's GDP

- i.e. $-1.33874 \times \Delta GDP_{t-1}$ in the short-run. GDP (L2D) lagged two periods was found to not significantly affect present GDP.

Tax Revenue (D1) according to the ARDL model was found to be statistically significant at 5% with a p-value of 0.015 with a coefficient of 1.68E-10, suggesting that a unit increase in Tax Revenue will lead to a 1.68E-10 increase in GDP in the short run.

Debt Service of GNI (D1) was found to be statistically insignificant at 1%, 5% and 10% levels of significance as its p-value was 0.239, leading us to conclude that changes in debt servicing by the fiscus does not significantly impact GDP. However, Debt Service of GNI (L2D) was found to be significant at all levels of significance with a p-value of 0.002. Thus a two period lagged decrease in debt servicing would lead to a $0.135252 \times \Delta DebtService$ decrease in GDP in the short run. This leads us to conclude that an increase in debt servicing by fiscal authorities would materialize into economic growth after a period of two years.

The Error Correction Model helps in our assessment of the speed with which GDP reverts to its equilibrium level given exogenous and/or endogenous shocks to the system. Although the error correction term coefficient was negative which is theoretically correct- implying reversion towards equilibrium after a shock to the system- it was however found to be statistically insignificant at 1%, 5%, and 10% levels of significance with a p-value of 0.788, leading us to conclude that there is not strong enough evidence to support the notion that GDP reverts to its equilibrium level following a shock to the system in the short run.

5.4. Heteroscedasticity and Standard Error Robustness

In our quest to determining the presence/absence of Heteroscedasticity, this paper utilized the Breusch-Pagan/ Cook-Wiesberg test. With a resultant p-value of 0.0016, we rejected the null hypothesis of homoscedasticity of the error term, thus resulting in our model suffering from heteroscedasticity.

The Newey-West standard errors were used to account for heteroscedasticity in our model and generate more robust estimates of our coefficients. The Newey-West

heteroscedastic adjusted estimates show that no fiscal policy variables were statistically significant and therefore have no significant influence on GDP growth (GDP in the long run).

This study sought to explore the relationship between fiscal policy and economic growth in Zambia by analyzing the impact of government spending, taxation, and public debt on GDP. The results indicate that while fiscal policy plays a crucial role in economic management, its effectiveness in stimulating long-term economic growth remains uncertain based on the empirical evidence from this study. The findings suggest that there is no stable long-run relationship between GDP and fiscal policy variables, implying that changes in public expenditure, taxation, and debt servicing do not significantly influence economic growth over extended periods.

In the short run, the study found that tax revenue had a statistically significant positive impact on GDP, while the effects of debt servicing and public expenditure were mixed. Notably, an increase in debt servicing was found to contribute to economic growth after a lag of two years, highlighting the delayed effects of fiscal adjustments. However, the error correction term was statistically insignificant, suggesting weak evidence of GDP reverting to equilibrium following fiscal policy shocks. Moreover, the presence of heteroscedasticity in the model indicates potential variability in fiscal policy effects, reinforcing the need for more robust policy designs.

These findings underscore the complexity of fiscal policy formulation in Zambia and highlight the necessity for further research into alternative growth-enhancing strategies. Future studies could explore additional macroeconomic variables, sector-specific fiscal interventions, and external economic conditions that may influence Zambia’s economic growth trajectory. Policymakers should consider adopting a more refined approach to fiscal policy, ensuring that spending, taxation, and debt management strategies align with long-term sustainable development objectives.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the conclusions drawn from the study on the effect of fiscal policy on economic growth in Zambia over the period from 1990 to 2020. The primary aim of the research was to investigate how fiscal policy variables, specifically public expenditure, tax revenue, and debt servicing affect the country's Gross Domestic Product (GDP). By employing advanced econometric techniques such as the Auto Regressive Distributed Lag (ARDL) model, Error Correction Model (ECM), and stationarity tests, the study explored both the short-run and long-run dynamics of fiscal policy in Zambia.

In the preceding chapters, the analysis of fiscal policy was conducted through a thorough examination of each of these key fiscal variables. The results revealed interesting insights into the immediate effects of government spending, taxation, and debt servicing on GDP, as well as the long-term implications of these fiscal measures. The findings challenge certain assumptions, particularly those associated with Keynesian economic theory, which posits that government intervention through fiscal measures can generate sustained growth over the long term. Instead, this study emphasizes that the success of fiscal policy in promoting growth is far more refined and contingent upon several other factors, such as institutional capacity, governance, and fiscal discipline.

The analysis of public expenditure, tax revenue, and debt servicing highlights the importance of not just the volume of fiscal interventions but also how efficiently and effectively they are implemented. The study finds that while these fiscal policy instruments may have a significant impact on economic performance in the short run, their effectiveness tends to diminish over time unless accompanied by institutional reforms that foster better governance and enhanced fiscal management. Furthermore, the findings underline the need for a comprehensive approach to fiscal policy. One that incorporates sound fiscal discipline, strategic debt management, and a broader effort to improve the overall business and economic environment.

This chapter summarizes the key findings of the study, discusses their implications, and provides policy recommendations that aim to improve Zambia's fiscal management in order to foster sustainable economic growth. The chapter also outlines areas for future research, with the goal of further enhancing the understanding of how fiscal policy can best contribute to long-term economic development in Zambia and similar developing countries.

Public Expenditure and GDP

The findings indicate that public expenditure does not have a statistically significant impact on GDP in the long run. However, short-run analysis reveals that public expenditure can influence GDP, aligning with Keynesian economic theory, which suggests that government spending can boost economic activity.

This conclusion is consistent with the studies of Gangal & Gupta (2013), Garba & Abdullahi (2013), and Gisore et al. (2014), which found that government expenditure positively impacts economic growth, particularly in developing countries. However, Fischer (1993) and Tirole (1992) argue that excessive government spending, especially when inefficiently allocated, may lead to inflationary pressures and crowding out of private investment.

Tax and GDP

In the short run, tax revenue has a statistically significant positive impact on GDP, but the effect is minimal. The coefficient suggests that a unit increase in tax revenue results in only a marginal increase in GDP.

This aligns with Ram (1986), who found that high tax rates can discourage investment, while Levine & Renelt (1992) emphasized the importance of a balanced tax system for sustainable growth. On the contrary, Slemrod & Bakija (2008) highlight that tax reforms improving compliance and broadening the tax base can positively impact economic performance.

Debt Servicing and GDP

The study finds that debt servicing does not significantly impact GDP in the short run, except when lagged by two periods. This suggests that increased debt servicing leads to economic growth only after a two-year lag.

This partially supports the findings of Reinhart & Rogoff (2010), who showed that high public debt negatively affects growth once it exceeds 90% of GDP. However, Blanchard & Perotti (2002) argue that fiscal multipliers depend on the type of government spending, meaning debt-financed investment can still have positive effects if efficiently utilized.

The study confirms that while fiscal policy variables can impact GDP in the short run, their long-run effects are not statistically significant. This finding contradicts certain Keynesian perspectives, which argue that fiscal spending, particularly government expenditure, has a lasting positive effect on economic growth over extended periods. Keynesian economics traditionally asserts that government intervention through fiscal measures can stimulate demand and create a multiplier effect that sustains growth in the long run. However, the results of this study suggest that the effectiveness of fiscal policy, especially in the long term, is more complex.

Instead of the expected prolonged growth driven by fiscal spending, the findings indicate that the actual impact on GDP diminishes or becomes insignificant over time. This outcome supports the view that the effectiveness of fiscal policy is not solely determined by the magnitude of spending or taxation but is highly influenced by factors such as governance, institutional capacity, fiscal discipline, and the efficiency with which fiscal resources are allocated and utilized. Poor governance, corruption, or inefficiency in the implementation of fiscal policy can reduce its potential to foster sustained growth, highlighting the importance of strong institutional frameworks.

Furthermore, this study suggests that fiscal policy's success in stimulating economic growth depends significantly on the broader economic environment, including external factors such as global commodity prices and financial flows, and domestic factors like the structural composition of the economy. Therefore, fiscal measures may not automatically translate into long-term economic development unless accompanied by improvements in governance and fiscal management.

In conclusion, the findings point towards focusing not only on fiscal interventions but also on strengthening the institutional framework, enhancing governance, and promoting fiscal discipline to ensure that fiscal policy achieves its intended objectives. This comprehensive approach is crucial for sustaining economic growth in the long run, rather than relying solely on increased government spending.

Policy Recommendations

1. Enhancing Efficiency in Public Expenditure: This can be done by redirecting public spending toward productive sectors such as infrastructure, healthcare, and education to maximize economic growth. Additionally, policymakers can enhance efficiency in public expenditure by implementing performance-based budgeting to ensure accountability and efficient use of resources.

2. Broaden the Tax Base and Improve Compliance: Formalizing the informal sector through incentives such as tax amnesties, simplified tax systems, and digital financial services. Furthermore, strengthening tax administration to minimize evasion and improve compliance through digitization.

3. Debt Management and Sustainability: Adopting prudent borrowing policies to prevent excessive public debt accumulation and also prioritizing concessional loans and ensuring borrowed funds are directed toward productive investments that yield long-term economic benefits.

4. Strengthen Fiscal Policy Coordination: This entails improving coordination between monetary and fiscal policies to stabilize the economy and ensuring sustainable growth. In addition to that, enhancing transparency in fiscal policy decision-making to boost investor confidence.

5. Encourage Private Sector Participation: The government can create a conducive business environment through policy reforms that attract private investment. Furthermore, government can also develop public-private partnerships (PPPs) to leverage private sector efficiency in public service delivery.

Recommendations for Future Research

Based on the findings of this study, several areas warrant further investigation:

1. Sector-Specific Fiscal Policy Analysis: Future research should analyze the impact of fiscal policy on specific economic sectors, such as agriculture, manufacturing, and services. This would provide more granular insights into how government spending and taxation policies influence different areas of the economy.

2. Efficiency of Public Expenditure: Given that public expenditure does not significantly impact GDP in the long run, further research should explore the efficiency of government spending. Investigating the allocation of funds to infrastructure, health, and education could reveal whether targeted investments yield higher economic returns.

3. Debt Sustainability and Economic Growth: The delayed impact of debt servicing on GDP suggests the need for research into Zambia's debt sustainability. Examining the long-term effects of rising debt levels and assessing optimal borrowing strategies could inform more prudent fiscal policies.

4. The Role of Governance in Fiscal Policy Effectiveness: Research should explore the role of governance, corruption, and institutional quality in shaping fiscal policy outcomes. A comparison of Zambia with other developing nations could provide insights into best practices for enhancing fiscal policy effectiveness.

5. Alternative Revenue Mobilization Strategies: With taxation having only a marginal impact on GDP, future studies should investigate alternative revenue generation methods, such as public-private partnerships, natural resource taxation, and financial sector reforms, to reduce dependence on traditional tax revenues.

6. Impact of Global Economic Shocks: Considering Zambia's reliance on commodity exports, research should examine how global economic fluctuations affect the country's fiscal policy outcomes. Understanding these external influences could help design more resilient fiscal policies.

7. Comparative Analysis with Other Sub-Saharan African Countries: A comparative study between Zambia and other sub-Saharan African countries could help determine whether Zambia's fiscal policy challenges are unique or part of broader regional trends. Identifying

best practices from similar economies could provide valuable lessons for policymakers. By addressing these gaps, future research can contribute to a more comprehensive understanding of how fiscal policy influences economic growth in Zambia, ultimately guiding the development of more effective economic strategies.

This section provided insightful conclusions that challenge conventional economic theories while emphasizing the critical role of governance, institutional capacity, and fiscal discipline in determining the effectiveness of fiscal policy. One of the key findings of this study is that while fiscal policy measures, particularly public expenditure and tax revenue, have a significant impact on GDP in the short run, their long-term effects are statistically insignificant. This contradicts the traditional Keynesian perspective, which suggests that government spending fosters sustained economic growth over time. Instead, the study found that the effectiveness of fiscal policy is contingent upon several factors, including the efficiency of public expenditure, debt sustainability, and broader macroeconomic conditions.

Public expenditure, though influential in the short run, does not contribute significantly to GDP growth in the long run. This suggests that the effectiveness of government spending is limited unless it is well-targeted, efficiently utilized, and complemented by strong institutional mechanisms. Similarly, while tax revenue shows a positive impact on GDP in the short term, the effect is minimal, reinforcing the need for broadening the tax base and improving compliance rather than relying on high tax rates. Debt servicing was found to have a delayed effect on economic growth, with the impact materializing only after two years. This underscores the importance of sustainable debt management practices that prioritize productive investment rather than excessive borrowing for recurrent expenditures.

The study's findings highlight that fiscal policy alone is not a sufficient driver of long-term economic growth. Instead, a comprehensive approach that integrates sound fiscal discipline, improved governance, and institutional reforms is necessary for achieving sustained economic development. Enhancing transparency, promoting accountability in fiscal management, and fostering a conducive business environment are crucial in ensuring that fiscal interventions yield the desired economic outcomes.

Furthermore, the research emphasizes the need for a holistic fiscal policy framework that aligns short-term economic stimulus measures with long-term structural reforms. Strengthening coordination between fiscal and monetary policies, optimizing public expenditure allocation, and implementing strategic tax policies are essential steps towards improving Zambia's economic resilience. Additionally, fostering private sector participation through policy reforms and public-private partnerships (PPPs) can further enhance economic growth and reduce dependency on government interventions.

In conclusion, while fiscal policy remains a vital tool for economic management, its success in fostering sustainable growth depends on how well it is designed and implemented. Policymakers must focus not only on increasing public spending and revenue collection but also on improving the efficiency of fiscal resources, ensuring sustainable debt management, and fostering an enabling environment for private sector growth. By adopting a comprehensive and disciplined approach to fiscal management, Zambia can harness its fiscal policy to drive long-term economic prosperity and improve the well-being of its citizens.

References

Adamu, J. &. H. B., 2015. *Government expenditure and economic growth nexus,* s.l.: Africa Development Bank.

Agenor, P. R., 2004. The economics of fiscal deficits and government debt. *Journal of Economic Literature,* 4(42), pp. 986-1032.

Ahmad, M., 2014. Government expenditure and economic growth: An econometric test. *International Journal for Social Science and Humanities Research,* Volume 2.

Alesina, A. e. a., 2002. *Fiscal policy, output, and debt: A review of theory and evidence,* s.l.: MIT Press.

Barro, R., 1990. Government spending in a simple model of endogenous growth. *Journal oof the Political Econoy,* 5(98), pp. S103-S125.

Blanchard, O. &. P. R., 2002. An empirical analysis of fiscal policy in the United States. *Quarterly Journal of Economics,* 4(117), pp. 1329-1368.

Brixiovia, Z. &. N. M., 2013. Fiscal deficits and public debt: A comparative analysis of African economies. *African Development Review,* 2(25), pp. 232-245.

Celasun, O. e. a., 2006. Public sector governance and fiscal policy. *International Monetart Fund working paper,* p. WP/06/145.

Chanda, R., 2016. Zambia's debt sustainability: A case study. *Journal of African Economies,* 25(3), pp. 393-420.

Chileshe, P., 2017. Fiscal policy and economic growth in Zambia: Challenges and opportunities. *Zambia Economic Review,* 28(1), pp. 37-49.

Colier, P., 2007. *The bottom billion: Why the poorest countries are failing and what can be done about it,* s.l.: Oxford University Press.

Fischer, S., 1993. *Fiscal Policy and Economic Stabilization,* Cambridge: MIT Press.

Fosu, A. K., 2017. Government spending and economic growth in Africa: The role of governance. *African Development Review,* 4(29), pp. 579-593.

Friedman, M., 2003. *Capitalism and Freedom,* Chicago: University of Chicago Press.

Gangal, V. L. N. &. & Gupta, H., 2013. Public expenditure and economic growth: A case study of India. *Global Journal of Management and Business Studies,* 3(2), pp. 191-196.

GRZ, 2006. *Zambia Vision 2030: A prosperous middle-income nation by 2030,* Lusaka: GRZ.

Harris, A. e. a., 2018. Infrastructure investment and economic growth in East Africa. *Development Policy Review,* 5(36), pp. 633-651.

Hodgson, G., 2004. Tax systems and tax reforms in developing countries. *Journal of Development Economics,* 1(73), pp. 1-40.

IMF, 2021. *Zambia: Fiscal Deficits and Debt Sustainability,* Washngton DC: International Monetary Fund.

IMF, 2022. *Zambia: Economic Recovery and Prospects Post-COVID-19,* Washington DC: Internetional Monetary Fund.

Keynes, J. M., 1936. *The General Theory of Employment, Interest, and Money.* 1st ed. London: Macmillan.

Kose, M. A. e. a., 2019. Global debt and growth: A cross-country analysis. *World Bank Working Paper No. 8744.*

Kraay, A., 2000. Fiscal deficits and their impact on growth in Africa. *World Bank Economic Review,* 2(14), pp. 349-374.

Levine, R. a. R. D., 1992. 'A sensitivity analysis of cross-country growth regressions'. *The American Economic Review,* 4(82), pp. 942-963.

Mankiw, 2008. s.l.:s.n.

Mankiw, N. G., 2008. *Principles of Economics.* 5th ed. s.l.:South-Western Cengage Learning.

Muleya, M., 2018. Fiscal policy, government spending, and economic growth in Zambia: An empirical analysis. *Zambia Journal of Economics,* 34(1), pp. 21-36.

Mweemba, J., 2018. *Fiscal Deficits and Economic Sustainability in Zambia: A Critical Analysis,* Lusaka: ambia Institute of Economic Studies.

OECD, 2005. *Economic Survey of Zambia,* Paris: Organsation for Economic Cooperation and Development.

Ram, R., 1986. 'Government size and economic growth: A new framework and some evidence from cross-country regressions'. *Amercan Economic Review,* 1(76), pp. 191-203.

Reinhart, C. M. &. R. K. S., 2010. *This time is different: Eight centuries of financial folly,* s.l.: Princeton University Press.

Ricardo, D., 1817. *On the Principles of Political Economy and Taxation.* 1st ed. London: John Murray.

Romer, P., 1986. Increasing Returns and Long-Run Growth. *Journal of Poitical Economy,* 5(94), pp. 1002-1037.

Slemrod, J. &. B. J., 2008. *Taxing Ourselves: A Citizen's Guide to the Debate Over Taxes,* s.l.: MIT.

Solow, R. M., 1956. A Contribution to the Theory of Economic Growth. *Quaterly Journal of Economics,* 1(70), pp. 65-94.

Tazi, F., 2000. *Public Investment and Economic Growth: The Role of Infrastructure and Human Capital,* Lusaka: Zambia Economic olicy Institute.

Thurlow, J. &. W. P., 2004. The Road to pro-poor growth in Zambia: Past lessons and future challenges.. *Development Policy Review,* 22(6), pp. 677-700.

Tirole, J., 1992. *inancial Crisis, Fiscal Policy, and Economic Growth,* Cambridge: MIT Press.

Wagner, . E. &. E., 1977. Wagner's law, fiscal institutions, and the growth of government. *National Tax Journal,* Volume 30, pp. 59-68.

Whitworth, A., 2014. Explaining Zambian Poverty: A h/istory of (Nonagriculture) Economic Policy Since Independence. *Journal of International Development,* 27(7), pp. 953-986.

WorldBank, 2005. *Zambia Reaches HIPC Completion Point and Becomes Eligible for Debt Relief,* Washington DC: World Bank.

WorldBank, 2020. *Zambia Public Finance Review: Enhancing Domestic Revenue Mobilization,* Washington DC: WorldBank.

WorldBank, 2021. *Zambia Economic Update: The Impact of COVID-19 on Zambia's Economy,* Washington DC: WorldBank.

APPENDIX

Figure A. 1 Data set for 1990 to 2020

YEAR	GDP %	PEXP	TAX	% Debt Service of(GNI)
1990	-0.48107	35.84	22081900	6.676750213
1991	-0.03613	84.72	38184800	19.80816724
1992	-1.73092	156.4	106570700	12.19213993
1993	6.797274	314.26	222913700	11.98160134
1994	-8.62544	827	421908600	10.95032162
1995	2.897669	998.35	516135400	73.28264384
1996	6.218546	1264.78	699802500	7.392885011
1997	3.814007	1475.75	907900000	6.066100694
1998	-0.38575	1841	1066400000	6.095994664
1999	4.65019	2195	1378300000	4.693024693
2000	3.897323	3040	302633333.3	5.497190052
2001	5.316868	4212	2445503688	4.757238576
2002	4.506014	5172	2848226832	5.607222605
2003	6.944974	6336	3447687674	11.74370813
2004	7.032395	6919	4553747455	8.050111609
2005	7.235599	8348	5502071248	3.687391424
2006	7.903694	9051	6302400000	1.249712163
2007	8.352436	11207	7923241560	0.997002671
2008	7.773896	13060	8895494961	1.012452803
2009	9.220348	13847.5	9040100425	1.142934006
2010	10.29822	17634.4	12477509534	0.792571202
2011	5.564602	22385.9	16780541000	0.987045998
2012	7.597593	26152.22	19549490000	0.918342604
2013	5.057232	33790.13	21711624000	1.187279431
2014	4.697992	38541.64	26329274000	1.49867392
2015	2.920375	47509.7	26395795000	2.617486556

2016	3.776679	11263.38	28855958000	3.65186742
2017	3.504336	12847.21	37393013963	3.39387668
2018	4.034494	15836.57	45643375276	4.95230521
2019	1.441306	12847.21	50107705101	11.37208169
2020	-2.78506	15836.57	12464337988	23.06472963

DATA OUTPUT

```
// We set it to time series.
tsset YEAR

// Test for stationarity
dfuller GDP , lags(1)
dfuller PEXP , lags(1)
dfuller TAX , lags(1)
dfuller DebtServiceofGNI , lags(1)

// Results are non-stationary need to be differenced
gen D_GDP = D.GDP
gen D_PEXP = D.PEXP
gen D_TAX = D.TAX

//Test for Stationarity of differenced values
dfuller D_GDP , lags(1)
dfuller D_PEXP , lags(1)
dfuller D_TAX, lags(1)

// Testing for optimal number of lags for ardl
ardl GDP PEXP TAX DebtServiceofGNI, aic maxlags(3) dots
generate residuals

// Estimation of model
 ardl GDP PEXP TAX DebtServiceofGNI , aic maxlags(3) ec

 // Co-Intergration
 estat ectest

 // Autocorrelation Test using Durbin-Wattson
estat dwatson

// Normality test
ssc install jb
jb residuals

// Heteroskedasticity Test
generate residuals__squr = residuals^2
reg residuals__squr PEXP TAX DebtServiceofGNI
estat hettest
```

```
// Newey-West standard errors
newey GDP PEXP TAX DebtServiceofGNI, lag(3)
```

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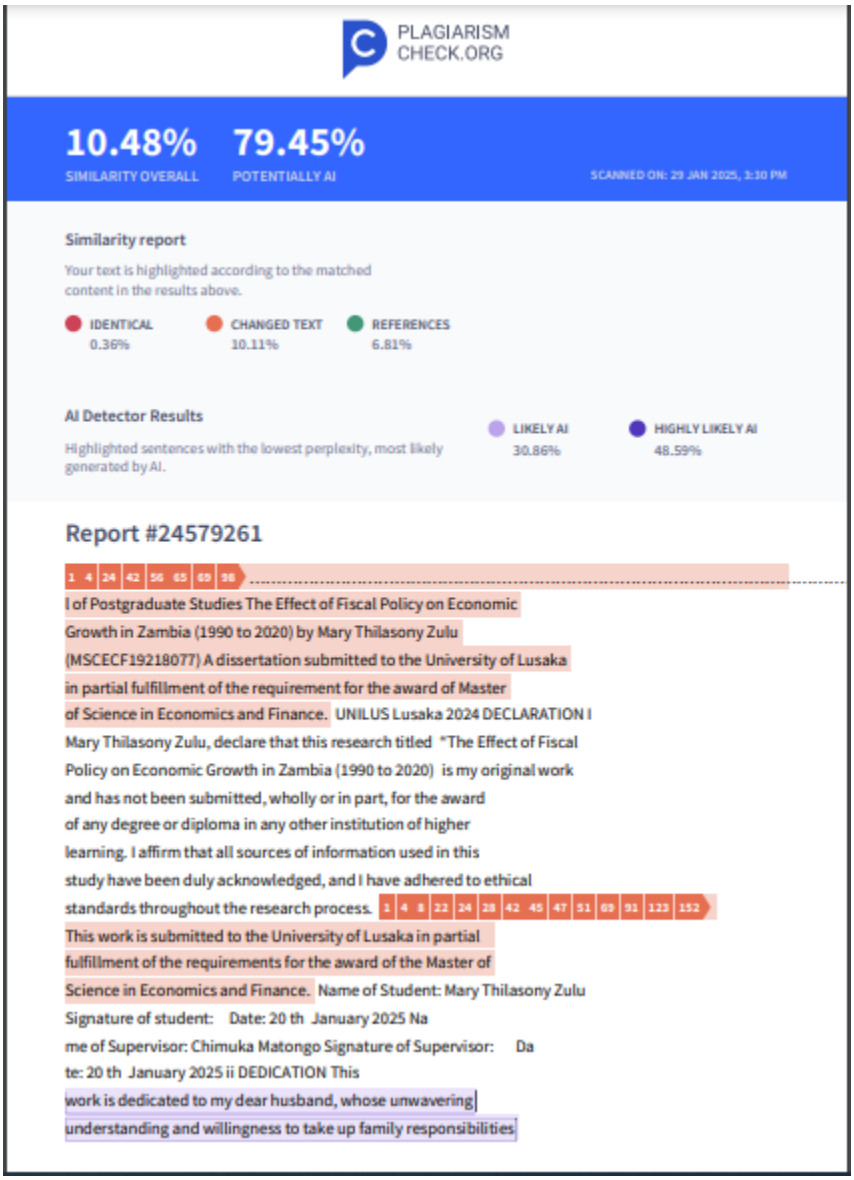

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l of Postgraduate Studies The Effect of Fiscal Policy on Economic Growth in Zambia (1990 to 2020) by Mary Thilasony Zulu (MSCECF19218077) A dissertation submitted to the University of Lusaka in partial fulfillment of the requirement for the award of Master of Science in Economics and Finance. UNILUS Lusaka 2024 DECLARATION I Mary Thilasony Zulu, declare that this research titled "The Effect of Fiscal Policy on Economic Growth in Zambia (1990 to 2020) is my original work and has not been submitted, wholly or in part, for the award of any degree or diploma in any other institution of higher learning. I affirm that all sources of information used in this study have been duly acknowledged, and I have adhered to ethical standards throughout the research process. 1 4 8 22 24 28 42 45 47 51 69 91 123 152 This work is submitted to the University of Lusaka in partial fulfillment of the requirements for the award of the Master of Science in Economics and Finance. Name of Student: Mary Thilasony Zulu Signature of student: Date: 20 th January 2025 Na me of Supervisor: Chimuka Matongo Signature of Supervisor: Da te: 20 th January 2025 ii DEDICATION This work is dedicated to my dear husband, whose unwavering understanding and willingness to take up family responsibilities