

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

SCHOOL OF BUSINESS

THE EFFECT OF TAXATION ON ECONOMIC GROWTH IN GHANA

BY

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DECLARATION

I hereby declare that this submission is my work and that, to the best of my knowledge, it contains no material previously published by another person for the award of any other degree or diploma at Kwame Nkrumah University of Science and Technology, Kumasi, or any other educational institution, except where due acknowledgment is made.

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Signature

Date

DEDICATION

I dedicate this project to my parents, for their constant love and support.

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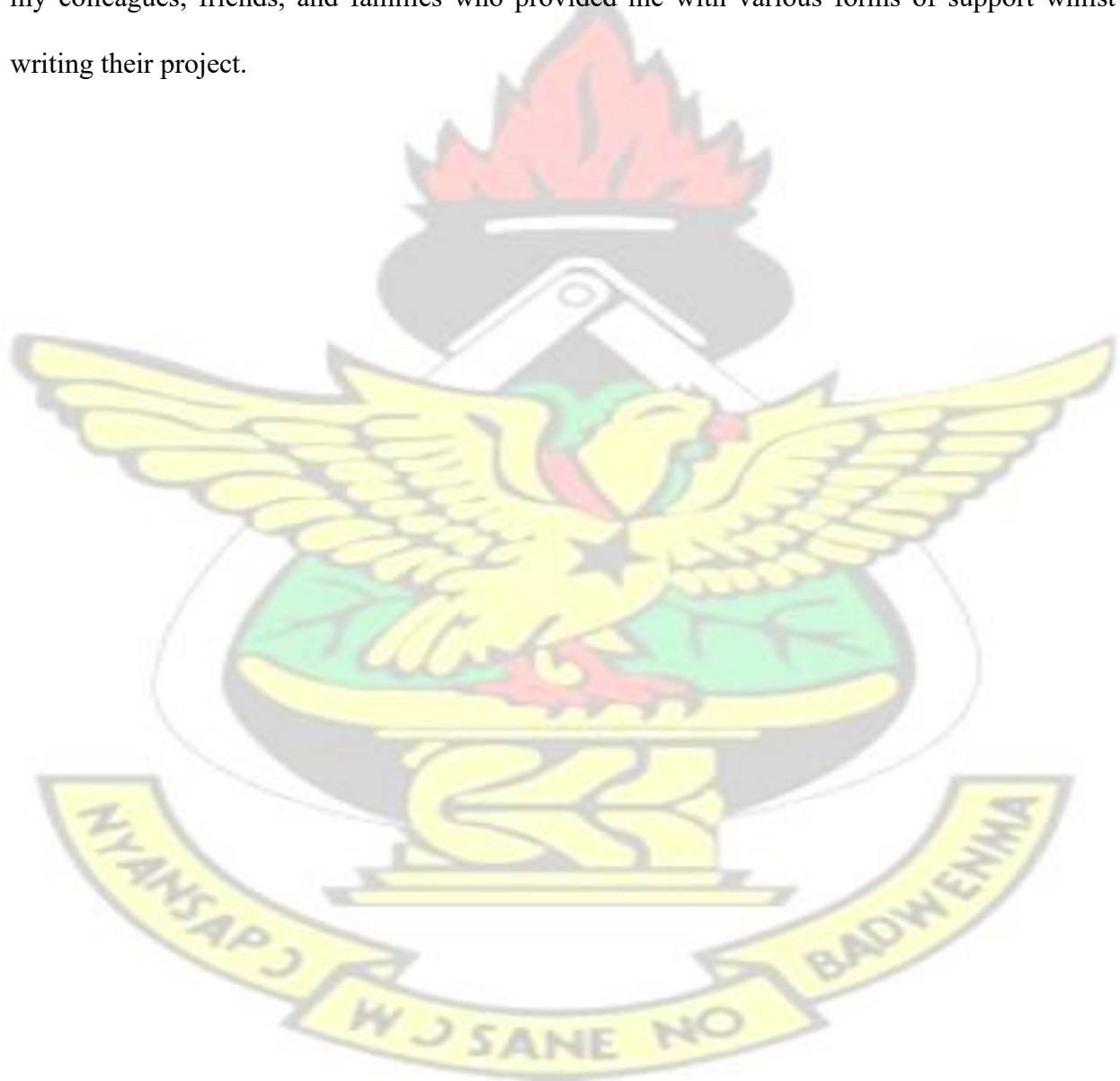


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ABSTRACTS

The study aims to examine the impact of taxation on economic growth in Ghana. Three main tax components; value-added tax, corporate income tax, and custom and excise duty were used to determine the tax variables whereas real gross domestic product was used to proxy the economic growth. Foreign direct investment and inflation were controlled. Literature was reviewed on the study variables with emphasis laid on Laffer Curve Theory and Endogenous Growth Theory as the theoretical base. Time series data was collected on the variables from the year 1990 to 2020 through secondary data sources. The stationarity of the data set was tested using a unit root test, and the relationship amid the dependent and independent variable quantity was calculated with the ordinary least square regression. Analysing the data collected, the model had high explanatory power ($R\text{-squared} = 0.983$). Among taxation variables, custom and excise duty had a significant positive effect on GDP, as did FDI, while corporate income tax and value-added tax did not show significant impacts. Inflation on the other hand had a negative coefficient which was not statistically significant, suggesting a potential negative relationship between inflation and economic growth.

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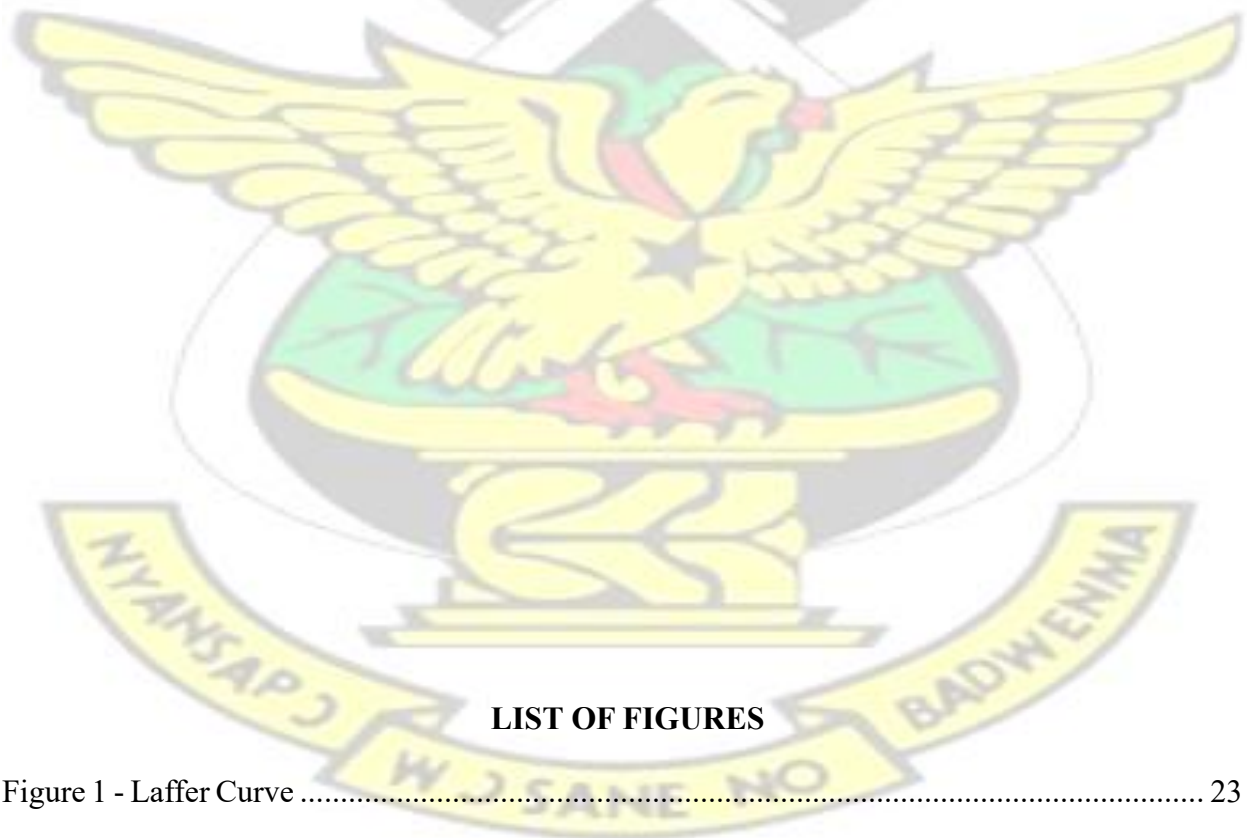


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LIST OF ABBREVIATIONS/ACRONYMS

GDP	:	Gross Domestic Product
VAT	:	Value Added Tax
GST	:	Goods and Services Tax
CIT	:	Corporate Income Tax
GRA	:	Ghana Revenue Authority
OECD	:	Organisation for Economic Co-operation and Development
EU	:	European Union
PITR	:	Personal income tax revenue
OLS	:	Ordinary Least Square
ARDL	:	Auto-Regressive Distribution Lag
CBN	:	Central Bank of Nigeria
SPSS	:	Statistical Package for Social Sciences
HDI	:	Human Development Index
UNDP	:	United Nations Development Programme
NBS	:	National Bureau of Statistics
RGDP	:	Real Gross Domestic Product
CED	:	Customs and Excise Duties
FDI	:	Foreign Direct Investment
ADF	:	Augmented Dickey-Fuller
PP	:	Phillips-Perron

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Africa has a wealth of natural resources that support economic growth. Some of these items are found in gold, iron, cobalt, uranium, and copper. Diamonds and cocoa beans are also obtained from cocoa pods. One or more of these crucial resources are present in most African nations. Resources that may generate income are crucial for the nations' economies to thrive. Despite abundant natural resources, most African economies are still in very poor shape. States and governments must thus ensure they have adequate revenue coming in from their sources to aid in the growth of the nation (Macek, 2014).

Taxation has taken a top spot in the state government's priorities because it is needed to collect money rapidly. It is impossible to exaggerate the importance of taxes as a source of revenue for any government. Any country needs to have a government that can provide basic infrastructure and amenities. This means that the growth and development of any country is linked to this. This may be why the government is so concerned about a way to get money to help them achieve their goals for society (Yahaya & Bakare, 2018). The government requires money to fulfill its mandate to support the nation's economic development through infrastructure and other services. According to Güzel (2021), a sizable sum of money is required that the people cannot provide on their own for the government to address the requirements of the populace.

So, one of the primary ways to get the funds required to construct these types of things is through taxation. Undoubtedly, one of the most effective financial weapons is taxation. They reduce private consumption, boost investment, and widen the gap between the rich and the poor. It makes it easier for the government to get the money it needs to grow the economy. Taxes play a big part

in building a country and growing the economy (Monkam & Moore, 2015). Because citizens and the government trade tax for development, it helps to build a social contract between the two groups. People all over the world are taxed in different ways depending on where they live and which tax law they want to follow. Different types of taxes include progressive tax, proportional tax, VAT, property tax, capital gains tax, income tax, and many more.

The process or apparatus by which communities or groups of individuals are forced to pay a set amount to assist manage and develop the society, according to Castagna (2021), is known as taxation. According to Appah and Wosowei (2016), taxes are a type of coerced payment that the government makes to cover the cost of maintaining the government. Through tax agents, citizens contribute to the expense of maintaining the government. Taxes are legitimate because they are supported by laws that the government has created. Worldwide, tax money is crucial to a nation's development since it supports government spending. According to Isaac (2015), tax is a mandatory levy that the government imposes on its citizens or their property to accomplish certain aims. To accomplish their objectives, numerous state governments have embraced this concept. These objectives are typically based on development and economic growth. The tax system is viewed as a source of contention and dispute in the majority of nations, regardless of how it is created, expressed, or operated (Baiardi *et al.*, 2019).

A study by Lederman (2018) found that even though taxes are put in place to help people grow and make money, the system is harmed because of things like tax evasion, tax avoidance, and falsified records that cause low tax yields. Ghana has a lot of problems when it comes to investigating its tax administration system. There haven't been enough studies done to thoroughly look at the system in a way that looks at how the tax administration works with tax laws and

policies in Ghana. Lederman (2018) found that tax monitoring led to more revenue and that information communication led to more revenue as in a study he did in Ghana. Ohemeng and Owusu (2015), on the other hand, say that developing a Revenue Authority model in Ghana has made a big difference in how much money Ghana makes.

As explained by Amoh (2019) lack of economic literature on the complete analysis of taxation, policies, and law in the economy has made it seem like there is a big difference between what people think is reliable tax revenue administration and what it is. Therefore, the goal of this project is to evaluate how taxes affect Ghana's economic growth. This was accomplished by concentrating the investigation on the impact of taxation on Ghana's GDP. Here, value-added tax, corporate income tax, customs, and excise duty are all carefully examined to determine and analyze their effects on Ghana's economic development.

1.2 Problem Statement

Numerous countries predominantly depend on taxation as their primary source of income to finance their expenditure requirements. When these nations' ability to generate revenue lags behind their spending, it is probable that their fiscal deficit will deteriorate. In 2007, Ghana's tax revenue, expressed as a proportion of its Gross Domestic Product, was 14.31%, which notably fell below the Sub-Saharan African regional average of 18%, as reported by data from the World Bank's World Development Indicators. Additionally, in 2012, Ghana's tax revenue was 17.31%, contrasting with the 26.9% average for the sub-Saharan Africa region. Beyond Africa, taxes serve as the primary means of generating revenue in nearly every country worldwide, while also fulfilling other crucial roles. In modern economies, taxes stand as the most vital source of government funding. They are also a general obligation for the people who pay them, even if they do not get anything in return (Enahoro & Olabisi, 2012).

The Ghanaian tax system on businesses and individuals has recently piqued increased interest and concern due to its impact. Due to the numerous taxes imposed on individuals and businesses in Ghana because of tax laws and taxation systems, the majority of them are forced to suffer losses or cease operations (Dabuo, 2017). Numerous business decisions are made every day, and many of them may fail because of poor decision-making. Because paying taxes is a responsibility that businesses must undertake, they can reduce their tax obligations to minimize their tax burden. The inability of businesses to efficiently handle taxes has a detrimental impact on the business's decisions on financing, investments, and dividends. According to Okpeyo *et al.* (2019), there are currently obstacles for businesses in Ghana due to a number of taxes and high tax rates. There are two issues that arise from tax obligations. To begin with, every single tax that a business is required to pay is just another expense. Increases in taxes have the same effect as increases in the price of goods.

To fulfill the ever-increasing demands of individual taxpayers, Ministries, Departments, and Agencies face resource constraints. It has been highlighted that staff members don't receive frequent training to keep them up to date within tax-related concerns. For tax administration to be fair and efficient, with little or no costs for taxpayers, enough structure and equipment, and skilled workers, the government needs to put in place mechanisms and structures that will make the process easier (Peprah *et al.*, 2020).

In general, governments worldwide encounter difficulties in revenue collection and effective financial management (Maimako & Kwatmen, 2019). Economists have long been interested in the variables influencing the pace and prosperity of a nation's development. Many argue that tax revenue is one of the most crucial factors contributing to a nation's progress (Stoilova, 2017).

The relationship between taxes and economic growth can vary – either positively, negatively, or neutrally – depending on the significance of tax revenue in the economy. Much of the empirical research on tax collection and economic growth, exemplified by studies conducted by Macek (2014), Stoilova and Patonov (2013), and Al-tarawih *et al.* (2020), focuses on cross-national comparisons. It is important to note that the findings from these studies may not be directly applicable to Ghana, as they may not accurately capture the unique experiences and circumstances of Ghana's tax system and economy.

This research investigation centers on the interrelation between tax revenue and economic growth, the direction of this relationship, if discernible, and the specific tax categories that have a noteworthy impact on economic growth. Understanding the underlying connections between these two overarching economic factors holds considerable importance for policymaking, even as the precise influence of taxes on economic advancement remains a pivotal concern. Should taxation and economic growth indeed exhibit a causal relationship, policymakers may harness taxes as a tool for shaping economic activity through fiscal policy. However, employing taxation as a fiscal policy tool would prove ineffective in the absence of any correlation between taxation and economic growth. Consequently, this study primarily concentrates on assessing how taxes function as a driver of economic growth in Ghana, with particular attention to the value-added tax, corporate income tax, and excise and customs duties. This endeavor aims to furnish empirical evidence pertaining to Ghana's tax policies and their impact on economic development.

1.3 Objectives of the Study

The overall objective of the study is to examine how taxation affects the economic growth of Ghana with an emphasis on value-added tax, corporate income tax, customs, and excise duty.

Specifically, the study aims at achieving the following objectives:

1. To assess the effect of Value Added Tax (VAT) on the Real Gross Domestic product of Ghana.
2. To assess the impact of corporate income tax on the Real Gross Domestic product of Ghana.
3. To determine the impact of customs and excise duty on the Real Gross Domestic product of Ghana.

1.4 Research Questions

To achieve the above objectives, the following research questions were asked:

1. How does Value Added Tax (VAT) affect the Real Gross Domestic product of Ghana?
2. Does corporate income tax impact Real Gross Domestic Product?
3. Does customs and excise duty impact Real Gross Domestic Product?

1.5 Significance of the Study

This study will be useful to researchers, academics and scholars, policymakers, and other people who want to make decisions based on this study when it is done. This study aimed to add to the wealth of knowledge about how taxation can help in the economic growth of Ghana. The study will inform local officials, policymakers, and the government that they need to pay attention to the way taxes are collected in the country so that money can be used to grow the economy and

make the country better for everyone else. Those who oversee getting these funds will also be able to learn from this study and understand the role taxation plays in economic development and ensure that there is high tax compliance to aid the process.

The study will contribute to the existing literature on taxation and economic growth in Ghana. The empirical evidence gathered from the outcomes of this study will enable researchers and academics to be able to use this study to help them build other studies that are based on the same facts.

1.6 Scope of the Study

The aim of this research is to analyze how taxation influences Ghana's economic development. To achieve this goal, the study examines three different types of taxes and their effects on Ghana's economic growth. In this context, the research focuses on utilizing Ghana's Gross Domestic Product (GDP) as the indicator for measuring economic growth. Specifically, the study will consider value-added tax, corporate income tax, customs duties, and excise duties as the primary tax categories of interest. Therefore, any other forms of taxation or economic variables will not be considered within the scope of this investigation. This is to ensure that this scope is thoroughly investigated to attain the solutions to the research questions of this study.

1.7 Organization of the Study

The research project is structured into five distinct chapters, each dedicated to examining the role of taxation in generating revenue for economic growth. Chapter one provides an overall introduction to the study, outlining its objectives and research inquiries. It elucidates the problem at hand, defines the study's scope and significance, offers an overview of the research methodology, and assesses the organization of the study.

The second chapter, the Literature Review, encompasses the examination of relevant concepts, theoretical foundations, empirical research findings, and the establishment of a conceptual framework.

Chapter three delves into the methodology employed in the study, detailing the study variables and the procedures for data collection and analysis.

Chapter four is dedicated to presenting the study's results and initiating discussions based on these findings.

The final chapter serves as a conclusion, summarizing the research outcomes and presenting recommendations for the remainder of the study.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the conceptual review, theoretical framework, empirical literature, and conceptual framework. The conceptual review discusses the idea and significance of taxation and economic growth, and the empirical literature compares the work of past researchers on the subject to evaluate the relationship amid the two variable quantities. The theoretical literature explains how the Laffer curve theory and endogenous theory explain the relationship between the studied variables, while the conceptual framework demonstrates how the study variables are measured.

2.1 Conceptual Review

The conceptual review explains the meaning and concept of taxation and economic growth and how they are measured.

2.1.1 Taxation

The financial charges imposed by the government on individuals, corporate entities, businesses, and possessions that generate revenue is termed taxation (Ojong *et al.*, 2016). It is a mandatory contribution from individuals and property owners, enforced by the government, to fund public administration and meet general public needs (Svara, 2021). Taxation has been practiced since ancient times and serves as a means of generating revenue for communities or societies forming a state, to support public expenditures and improve the economic, social, and living standards of taxpayers. Taxes can be directly or indirectly imposed on individuals and corporate income. Direct taxes are levied on personal or corporate income, whereas indirect taxes are imposed on the sales of goods and services or trade involving profit or loss (Akhor & Ekundayo, 2016). Taxes

are therefore monetary obligations placed on individuals or properties to support the government, and they are not voluntary payments but rather enforced contributions authorized by legislation (Babatunde *et al.*, 2017).

In accordance with Khobai *et al.* (2016), taxation signifies the government's compulsory imposition of levies on various sources of revenue, commodities, services, and assets owned by individuals, partnerships, trustees, executors, and organizations. They perceive taxation as a fee that the government enforces on the earnings, assets, or income of private individuals, business partnerships, or corporate entities. Ojong *et al.* (2016) offer a more elaborate definition, describing taxation as a vital revenue stream for the government, enabling the financing of public services and the fulfillment of other societal obligations. As per Afubero and Okoye (2014), taxation contributes to over 90% of the government's revenue.

Taxation can be categorized primarily into two groups: direct and indirect taxes. Direct taxes are levied on the earnings of individuals, groups, and businesses, and they are paid directly by the individuals or entities to whom they are legally assigned by the tax authorities. Examples of direct taxes include personal income tax, corporate income tax, capital gains tax, petroleum profit tax, and capital transfer tax. In contrast, indirect taxes are imposed on spending, particularly on goods and services. These taxes are typically shouldered by third parties and are integrated into the prices of goods and services that consumers pay. Examples of indirect taxes include import duties, export duties, and the Value Added Tax (VAT) (Okwara & Amori, 2017).

Governments engage in a variety of activities and initiatives, and it is essential for citizens to shoulder the responsibility of taxation to support their government. As articulated by Afubero and Okoye (2014), taxation stands as one of the primary streams of income for the government,

utilized to finance public amenities and fulfill other societal obligations. Samuel and Tyokoso (2014) provide a definition of tax as a mandatory charge imposed by the government on the earnings, profits, or assets of both individuals and corporate entities. According to Samuel and Tyokoso (2014), taxation ranks as the paramount source of revenue for modern governments, typically constituting more than ninety percent of their total income. Afubero and Okoye (2014) underscore that taxation represents a concept and a discipline concerning the imposition of levies on citizens. It is a civic duty, and the revenue generated through taxation is expected to be utilized in providing social amenities, ensuring security, and creating conditions for the society's economic well-being. Taxation is considered a crucial instrument for national growth. The degree of wealth generated through economic activities in society serves as a significant indicator of development and growth. Furthermore, significant employment opportunities contribute to the creation of wealth for individuals, enabling them to sustainable livelihood and pay taxes to the government. (Hepburn *et al.*, 2021).

2.1.2 Value Added Tax

A consumption tax on goods and services is imposed at different stages of the production and distribution process, capturing value addition from the initial production phase to the final point of sale (Timmermans & Achten, 2018). This tax is due when goods and services are bought, regardless of whether the buyer is an individual, a business entity, or any other person (ClementOzele *et al.*, 2019). Value-added tax is simply called the Goods and Services Tax (GST).
$$\text{VAT to be paid} = \text{Cost of Product} - \text{Components that have previously been taxed at an initial step.}$$
 French tax official Maurice Lauré introduced the idea of VAT in 1954. This was not novel since the idea of taxing each phase of the production process had been considered a century earlier in Germany

(Mehrotra, 2022).

In 1995, under the direction of the late President Jerry John Rawlings, VAT was first implemented in Ghana. Both the sales and the services taxes. Policy analysts believe this introduction pushed prices upwards, but the 1995 attempt was a failure. The failure was attributed to the absence of public education and the act's brief implementation period, which lasted only around two months after it was passed (Imurana *et al.*, 2014). After various public education programs to inform individuals of the significance and advantages of the tax, it was restored in 1998.

Legislators gave inclusivity and public education top priority after the initial effort to enact the tax. The law's commencement section included specific instructions requiring the minister in charge of finances to inform the media and the public when the tax is due and to publish those instructions in the official gazette.

A turnover registration threshold was outlined in the original Value Added Tax Act, 1998 (Act 546) for retailers exclusively. Regardless of their turnover, other taxpayers had to register. In 2001, the requirement was lowered, to encourage more vendors to sign up. A flat-rate program of 3% for merchants was launched in 2007. Retailers could not claim their VAT inputs under the plan, which reinstated a sales tax feature. Legal changes made in 2011 attempted to clarify the ambiguity brought about by the fact that retailers were categorized into two groups. The registration limits were also increased and extended to cover all taxpayers, as opposed to just shops previously. Additionally, the 3% flat-rate program was broadened to include every taxpayer with a lesser turnover, so it was open to all not only retailers.

The duration of the 1998 Act came to an end in July 2013. During this time, Ghana had established a well-defined VAT administration system, which employed an input-output calculation method for standard-rated suppliers with a turnover exceeding GHC90, 000.00.

Additionally, there was a VAT flat-rate system in place that did not permit deductions for inputs, similar to the sales tax, for individuals or businesses with turnovers ranging from GHS10, 000.00 to GHS90, 000.00. In 2013, a new VAT Act was enacted and put into effect in 2014. Although the intention was for this new VAT framework to seamlessly replace the old one, it led to disruptions in several established procedures. Since the flat-rate program was virtually abolished by the new law, certain taxpayers had to be recategorized from the flat-rate program to the VAT program. In 2014, Ghana had a full VAT system once more. The thresholds were once more revised upward. A unique flat-rate program with a 5 percent cap was created for real estate developers in April 2015. Real estate was starting to receive some attention at this point. When the 2007 amendment's 3-percent retailer flat-rate system was reinstated in April 2017, this was, however, revoked. Once more, shops in Ghana paid a flat rate of 3 percent, and taxpayers who paid the required amount were subject to a clear VAT. The definition of "retailer" was expanded to include wholesalers while keeping its basic connotation.

By the end of 2017, a change was approved to introduce a VAT withholding component for a specific group of taxpayers known as agents, with implementation set for 2018. Under this VAT withholding obligation, agents were required to hold back a portion of the VAT they owed to their suppliers and promptly remit it to the revenue authority. To make the unpaid VAT eligible as input credit for the respective supplier, the agent had to provide an acknowledgment certificate.

To ensure accurate VAT administration, whether it was the standard VAT or flat rate, agents were assigned three additional responsibilities: first, to ensure VAT withholding; second, to confirm VAT withholding; and third, to provide a credit certificate accessible to the supplier. It's worth noting that these changes did not apply to the flat-rate scheme introduced in April 2017. Just as

VAT taxpayers were adapting to these modifications, additional amendments were introduced in August 2018. One of these amendments separated two levies that were previously part of the total effective standard VAT rate of 17.5% and converted them into direct levies. Consequently, the associated input taxes were no longer claimable, akin to the flat-rate scheme. The reporting credentials were improved after a new sales tax was introduced. These alterations made the VAT more complicated. Currently, the VAT rate in Ghana for retailers of taxable goods with an annual turnover of more than GHC200,000.00 but not exceeding GHC500,000.00 is 3% and the standard VAT rate is 15%.

2.1.3 Corporate Income Tax

Companies pay taxes known as corporate income tax; this is imposed on the profits these companies earn. (Yahaya & Bakare, 2018). The Ghana Revenue Authority is responsible for CIT collection in Ghana. CIT applies to all registered companies in Ghana, whether they are domestic or foreign entities with a permanent establishment in the country. The taxable income for CIT purposes is calculated based on the net profit of the company. This is determined by deducting allowable expenses and deductions from the gross income. Allowable expenses may include costs directly related to generating income, such as salaries, rent, utilities, and depreciation of assets, according to Sommer *et al.* (2013). Allowable expenses may include costs directly related to generating income, such as salaries, rent, utilities, and depreciation of assets, according to Sommer *et al.* (2013). The tax rate applies to the net profit.

Companies pay standard CIT rate of 25% in Ghana. However, specific sectors and industries may have different tax rates or incentives provided by the government to promote investment and economic growth. For example, certain industries like mining and petroleum may have specific tax regimes (35%) or additional taxes applicable to them. At the end of the financial year,

companies are required to file annual tax return with the Ghana Revenue Authority within four months. This includes financial statements, supporting documentation, and particulars of the computation of the taxable income. It is also imperative that companies make provisional tax payments throughout the year based on estimated profits. To companies, the Ghanaian government provides several tax breaks, exemptions, allowances, and deductions for particular businesses, areas, or activities in order to promote investment and economic growth (Ghana Revenue Authority). However, companies must meet specific criteria and obtain approval from relevant authorities to benefit from these incentives.

To ensure compliance with CIT regulations, the GRA conducts audits and compliance checks on companies. This is because, companies need to maintain accurate and complete records, comply with tax laws, and seek professional advice when needed. Non-compliance or underpayment of taxes may result in penalties, fines, or legal consequences. Moreover, Ghana has transfer pricing regulations in place to prevent the manipulation of prices and profit shifting between related entities. Companies engaging in transactions with related parties, whether local or international, are required to adhere to arm's length principles and provide documentation to support the pricing of these transactions (Barker *et al.*, 2017). To ensure fairness and transparency in ascertaining taxable profits, the arm's length principle is employed i.e., Pricing of transactions between related parties should be conducted as if the parties were unrelated (Sari & Hunar, 2015). The principle is intended to prevent the shifting of profits between related entities to minimize tax liabilities. The corporate income tax in Ghana plays an imperative role in generating revenue for the government and supporting public services and infrastructure development. As a result, companies need to understand their obligations, comply with tax laws, and seek professional guidance to ensure proper tax planning and compliance with CIT regulations.

2.1.4 Customs and Excise Duty

Customs and excise duties play essential roles in the economic and fiscal policies of countries worldwide. These taxes, imposed on goods during importation and production, respectively, serve multiple purposes. The nature, impact, and significance of customs and excise duties are explored in this thesis. It expands on their economic, regulatory, and revenue-generating functions. Customs duty is often referred to as an import duty tariff or tax levied on goods when they cross international borders (Pauwelyn, 2013). Its primary objective is to regulate trade, protect domestic industries, generate revenue, and control the inflow of goods from foreign countries. Governments set customs duty rates as a percentage of the imported goods' value or as specific rates for certain product categories.

Custom duties serve as a revenue source for governments, contributing to public funds and supporting essential services and infrastructure. It also acts as a trade barrier, influencing the competitiveness and pricing of imported goods (Huang *et al.*, 2017). By raising the cost of imported products, customs duties protect domestic industries from unfair competition and encourage domestic production and employment. Moreover, customs duties can be employed strategically to correct trade imbalances, promote national security, or discourage the importation of certain goods. However, excessive or indiscriminate customs duties may hinder international trade, limit consumer choices, and result in retaliatory measures by trading partners.

Excise duty on the other hand is imposed on specific goods produced within a country. It is an indirect tax assessed during the phases of production, sale, or consumption. The purpose of excise duty is to help generate revenue, regulate and control, and also market protection (De Stefano (2019). Revenue generation is a key aspect of excise duty, providing governments with a significant source of income (Afuberoh & Okoye, 2014). The funds collected contribute to public

expenditures, infrastructure development, and welfare programs. By adjusting the rates of excise duty, governments can respond to changing economic conditions and revenue requirements.

Excise duty also enables governments to regulate and control the consumption of certain goods. Higher taxes on products such as tobacco, alcohol, and petroleum aim to discourage excessive consumption, promote public health, and mitigate negative societal effects (Pacula *et al.*, 2014). It can also be used to incentivize the use of environmentally friendly or sustainable products, aligning with broader environmental policies.

Excise duty, as a tool for market protection, operates by increasing the cost of imported goods in comparison to domestically produced goods. This deliberate price disparity aims to provide support to local industries, foster domestic production, and safeguard employment opportunities within the country. By making imported goods more expensive through excise duty, governments create an environment that encourages consumers to choose locally produced alternatives. This preference for domestic goods stimulates the growth of local industries and fosters their competitiveness in the market. The increased demand for domestically produced goods can lead to expanded production capacities, innovation, and technological advancements within the country. Taxes are imposed on importation of goods at the port of entry, these taxes are customs and excise duties. Custom and excise duties are also levied on certain manufactured goods produced (Omale *et al.*, 2023).

2.1.5 Economic Growth

A prolonged upsurge in the generation and utilization of commodities and amenities within an economy spanning a specific timeframe (Murray *et al.*, 2017). The augmentation in the monetary worth of commodities and amenities generated by an economy during a fiscal year is termed as economic expansion. These commodity and amenity valuations are adjusted to account for

inflation. It stands as a pivotal gauge of a nation's overall well-being. The vitality and progress of a nation's economic system are gauged through transformations in the gross domestic product (GDP). GDP signifies the aggregate worth of all ultimate goods and services crafted within the confines of a nation's borders over a designated duration. The "pace of economic expansion" alludes to the geometric annual rate of growth in gross domestic product from the initial year to the concluding year over a period. This growth tempo mirrors the long-term trajectory of the average GDP level during the period while discounting any GDP fluctuations surrounding this trajectory. The notion of economic expansion mirrors the extension of an economy's capability to fabricate commodities and services, ultimately culminating in an elevated quality of life and enhanced material prosperity for individuals within the community (Diener *et al.*, 2013). When an economy experiences growth, it signifies that it is generating more output and income, leading to higher employment rates, increased incomes, and reduced poverty levels.

Several key factors contribute to economic growth. Investment plays a critical role, as increased spending on physical capital, such as buildings, machinery, and infrastructure, enhances productivity and efficiency in the production process (Srinivasu & Rao, 2013). This leads to the creation of new businesses, the expansion of existing ones, and the adoption of new technologies, all of which stimulate economic growth. Technological progress is another crucial driver of economic growth in that advances in technology and innovation enables the development of new products, improved production processes, and the creation of entirely new industries. Technological advancements often result in increased productivity, which leads to higher economic output and growth.

The significance of human capital in the context of economic development cannot be underestimated. Having a well-trained and educated workforce is crucial for maintaining

consistent economic growth. Allocating resources to education, training, and healthcare enhances the caliber of the workforce, boosts productivity, and fosters innovation, all of which are integral to economic advancement. Furthermore, the presence and effective management of natural resources play a significant role in influencing economic growth (Ahmed, *et al.*, 2020). Access to energy, minerals, and agricultural land can contribute to economic development. However, it is crucial to ensure that natural resources are managed sustainably to prevent their depletion and mitigate negative environmental impacts.

Economic growth has numerous positive effects on society. It leads to higher incomes and improved living standards, allowing individuals to afford better housing, healthcare, education, and other necessities (Weil, 2014). It also generates employment opportunities, reducing unemployment rates and improving overall economic stability. It also increases tax revenues for governments, providing resources for investment in public goods and services like infrastructure, education, and healthcare, further benefiting society. However, economic growth is not without its challenges. It can lead to increased inequality if the benefits are not distributed equitably among different segments of society (Oishi & Kesebir, 2015). Another issue is environmental sustainability since unrestrained growth can strain natural resources and worsen pollution and climate change. For long-term sustainable development, it is essential to strike a balance between economic expansion and social and environmental concerns (Kopnina, 2014).

2.1.6 Economic Growth Measure

The most commonly employed gauge of economic growth is real Gross Domestic Product, which represents the combined worth of all finished goods and services generated within a nation's boundaries during a designated timeframe, usually a year (Easterlin, 2015). Real GDP is computed by modifying nominal GDP to account for inflation, which permits a more precise

assessment of economic output across different periods. It is imperative to factor in inflation since it considers the impact of increasing prices on the value of goods and services produced. Real GDP gives a clearer view of the actual growth in production and economic activity, divorced from price fluctuations, by utilizing constant prices. Because it covers the whole expansion or contraction of an economy, real GDP is regarded as a trustworthy gauge of economic growth (Easterlin, 2015). Real GDP growth over time indicates economic expansion since it reflects higher output levels, higher earnings, and expanded consumption. On the other hand, a decrease in real GDP denotes a contraction or recession in the economy (Adedoyin & Zakari, 2020).

Just as observed in numerous other research endeavors (for instance, Macek 2014; Ogbonna & Appah, 2016; Ngwoke, 2019), this study adopted real Gross Domestic Product (GDP) as a surrogate for economic expansion. This choice was made because it offers a comprehensive gauge of the overall economic vigor within an economy. It encompasses the total worth of all ultimate commodities and services generated, enabling a measurable evaluation of the magnitude and progression of the economy. Through the utilization of real GDP, the investigator can assess the influence of taxation on the broader economic panorama. GDP is determined by summing up all the monetary outlays made by consumers, enterprises, and the government during a specified timeframe. The GDP equation can be expressed as follows: $GDP = \text{consumer expenditure} + \text{business investments} + \text{government spending} + \text{net exports}$.

2.2 Theoretical Framework

It is not immediately clear how taxes might theoretically affect economic performance. A heavier tax load might be considered as a significant barrier to the nation's economy's long-term improvement. According to Gemmell *et al.* (2013), taxes imposed by the government may have both favorable and unfavorable effects on economic growth.

2.2.1 Laffer Curve Theory

In 1979, economist Arthur Laffer introduced the Laffer curve theory, which depicts the connection between tax rates and government income. According to this theory, there exists an ideal tax rate that optimizes revenue, and any additional tax rate hikes beyond this point would result in a decrease in revenue (Miravete *et al.*, 2018). The underlying principle of the Laffer curve is that tax revenue is increased as the government increases tax rates. However, at very high rates of taxation, practices of tax evasion start, and there is low motivation to work, hence if the tax rates are lowered it can boost the revenue. The idea of the Laffer curve assumes that taxpayers will adjust their behavior in response to changes in tax rates (Sanz-Sanz, 2016). As tax rates rise, taxpayers may reduce their work effort, investment, and entrepreneurship, or engage in tax planning strategies to minimize their tax liabilities. Conversely, lower tax rates may incentivize economic activity, leading to increased tax revenue.

The Laffer curve theory does not imply that lower taxes always lead to higher revenue or that higher taxes always lead to lower revenue. Instead, it suggests that there is an optimal tax rate that strikes a balance between incentivizing economic activity and generating revenue for the government (Hüseyin & Bulut-Cevik, 2021). This implies that lower tax rates can potentially stimulate economic growth. Lower taxes can increase the rewards for productive activities, leading to increased economic output, job creation, and overall economic growth. It can also encourage savings and capital accumulation. Higher levels of savings can provide the necessary resources for investment, which can boost productivity and contribute to long-term economic growth. However, the impact of tax rates on economic growth is not solely determined by the

Laffer curve. Other factors, such as the quality of public institutions, infrastructure, human capital, and regulatory environment, also play significant roles in fostering economic growth (Shao & Yang, 2014).

The correlation between tax rates and economic growth is not straightforward. When tax rates rise from lower levels, their initial effect on economic growth might be relatively modest. However, as tax rates reach higher levels, the negative effects on incentives and economic behavior may start to outweigh the positive effects, potentially leading to a slowdown in economic growth. While lower tax rates can potentially spur economic growth, tax revenue may initially decrease in the short term. This is because the positive effects on economic growth take time to materialize and generate additional taxable income. Nevertheless, over the long term, the theory suggests that higher economic growth can contribute to increased tax revenue, even at lower tax rates (Gemmell *et al.*, 2013). The theory is therefore seen as a simplification of the complex relationship between tax rates and economic growth. The actual shape and location of the curve can vary depending on various factors, such as the elasticity of taxable activities, the efficiency of tax systems, and the specific economic context of a country. The nature of the Laffer curve is shown in Figure 1.

too low. The government collects the maximum revenue while fostering a favorable climate for economic growth.

Beyond the apex of the curve, as tax rates continue to escalate, the curve descends, signifying a decline in government revenue. This decline arises from the adverse effects of high tax rates on economic behavior and incentives. As tax rates become burdensome, individuals and businesses may curtail their productive activities and explore ways to evade or minimize taxes, leading to a reduction in overall economic output and taxable income. Consequently, government revenue shrinks despite elevated tax rates. Critics of the Laffer curve argue that it oversimplifies the link between tax rates and government revenue, failing to fully consider other factors influencing tax revenue, such as government expenditures, the broader economic landscape, and the distributional consequences of taxation. Furthermore, the curve does not offer precise guidance on determining the tax rate that maximizes revenue or predicting the revenue implications of tax policy changes in real-world scenarios (Holter *et al.*, 2019).

This theory holds relevance in this study as it assists in identifying the threshold at which tax rates cease to spur greater economic growth. According to this theory, taxes exert an influence on economic growth, especially in the short term, primarily through their effects on demand.

2.2.2 Endogenous Growth Theory

In accordance with the endogenous growth theory, economic expansion stems from internal economic dynamics, or inherent forces, rather than external ones (Sredojević *et al.*, 2016). This theory is founded on the concept that advancements in innovation, knowledge, and human resources result in heightened productivity, thereby positively impacting the economic outlook.

The idea that external influences played a substantial role in long-term economic growth was initially flawed and unsatisfactory, prompting the emergence of the endogenous growth hypothesis (Shapiro, 2015). Elements such as innovation, knowledge, and human capital can lead to a notable upsurge in productivity, which in turn propels economic development. This theory is called the neoclassical growth model.

The endogenous growth theory's core conclusion is that understanding and technological advancements are not subject to diminishing returns. Unlike physical capital, which can experience diminishing returns as it accumulates, knowledge and ideas can be shared and used by multiple individuals simultaneously without getting depleted. This means that investing in knowledge and innovation can lead to increasing returns, as the benefits of new ideas can be spread across the economy, creating a positive feedback loop for growth. In endogenous growth theory, innovation plays a central role. It is viewed as the engine of long-term economic growth, driving productivity improvements and technological advancements (Chou *et al.*, 2014). Innovations can arise from various sources, including research and development activities, entrepreneurial activities, learning by doing, and spillover effects from other industries or countries. The theory suggests that policies and institutions that promote innovation, such as intellectual property rights protection and supportive education systems, can stimulate economic growth.

Human capital is another crucial factor in endogenous growth theory. It speaks about the knowledge, skills, and abilities of individuals in an economy. Investments in education and training are seen as vital for the accumulation of human capital, which in turn enhances labor productivity and contributes to economic growth (Arabi *et al.*, 2013). A skilled workforce is more

likely to engage in innovative activities, adopt new technologies, and contribute to productivity improvements.

While taxation is not typically emphasized as a central factor in the original endogenous growth theory, it is important to recognize that economic theories are not static and can evolve to incorporate new insights and perspectives. The original endogenous growth theory may not have explicitly focused on taxation but there is scope to incorporate tax policies and their effects into the framework because taxation is another internal factor that influences economic growth. Many contemporary studies and models in the field of endogenous growth theory have explored the relationship between taxation and economic growth, recognizing the potential significance of tax factors in shaping long-term growth trajectories (Balcilar *et al.*, 2023).

2.3 Empirical Literature

Macek (2014) employed regression analysis to assess the effects of various types of taxes on economic growth in OECD nations from 2000 to 2011. This investigation examined how taxes influenced factors like capital accumulation, investment, human capital, and technology in growth models. The study utilized panel regression and extended neoclassical growth models by Mankiw *et al.* (1992). It found that social security contributions, personal income taxes, and corporate income taxes had negative impacts on economic growth. Surprisingly, value-added tax (tax quota) did not harm growth. Property taxes showed no statistically significant effects.

Consumption taxes positively affected GDP growth, while labor taxes had a negative impact. Short-term changes in consumption tax rates correlated with GDP growth, and the relationship between GDP growth and changes in capital and labor tax rates exhibited two-way causality. Pairwise Granger Causality Tests and Panel Regression (Szarowska, 2013) were used to

investigate these connections. The study was motivated by the impact of financial crises on EU tax systems, gathering data from 24 EU member states from 1995 to 2010.

Canavire-Bacarreza *et al.* (2013) explored the economic consequences of various taxes in Latin America, including value-added taxes, sales taxes, personal and corporate income taxes, and natural resource royalties. They used vector autoregressive methods to analyze tax effects on growth in Argentina, Brazil, Mexico, Chile, and Latin America as a whole. The study found that low tax collections in Latin America led to unexpected findings, such as personal income taxes not negatively affecting growth. It suggested that improving tax collection mechanisms could stimulate growth, especially for resource-dependent countries, though corporate income taxes had a negative effect on specific nations.

Al-tarawih *et al.* (2020) studied taxation's short and long-term impacts on Jordan's economic growth from 1980 to 2018. They used Auto-Regressive Distribution Lag techniques and found cointegration among economic growth, taxation, capital, and trade variables. The results indicated that taxes had adverse associations with both short-term and long-term growth. Ogbonna and Appah (2016) investigated tax management and revenue's influence on Nigeria's economic expansion. Their research found significant correlations between per capita income and various tax revenues and Nigeria's GDP. They emphasized the importance of tax administration and revenue in shaping the Nigerian economy.

Otu and Theophilus (2013) examined the relationship between taxes and Nigeria's growth, emphasizing the contributions of domestic investment, labor force, and foreign direct investment. They used ordinary least squares regression analysis. Ngwoke (2019) assessed tax impacts on Nigeria's growth from 2007 to 2017, using ex-post facto analysis and secondary data. The study

highlighted the influence of taxation on GDP, particularly petroleum profits, corporate income taxes, and customs and excise levies. Adegbe and Fakile (2011) investigated corporate income tax's impact on Nigeria's progress from 1981 to 2007. They found a significant correlation between corporate income tax revenue and GDP, highlighting tax fraud and avoidance as challenges to revenue generation.

Festu and Samuel (2007) observed tax revenue's role in Nigeria's economic activities and growth, noting that poor administration and negative public perception hindered its impact. Owolabi and Okwu (2011) evaluated Value Added Tax's contribution to Lagos State's growth in various sectors. They found VAT revenue played a pivotal role but emphasized the need for comprehensive research on tax revenue's overall impact on Nigeria's economy. Okafor (2012) explored income tax's influence on Nigeria's GDP, establishing a favorable outcome using ordinary least squares regression analysis.

Ebiringa and Yadirichukwu (2012) examined the impact of taxes on Nigeria's economic growth from 1985 to 2011, finding correlations between Company Income Tax, Value Added Tax, and GDP. Awa and Ibeanu (2020) analyzed the influence of tax income on Nigeria's growth from 1997 to 2018. They found that petroleum profit tax and corporate income tax had substantial effects, emphasizing the need for better tax administration. Ezekwesili and Ezejiofor (2022) explored taxes' impact on Nigeria's economic expansion from 2008 to 2017, revealing a positive correlation between real GDP and corporate income tax, petroleum profit tax, and value-added tax.

Dladla and Khobai (2018) studied taxes' impact on South Africa's economic growth from 1981 to 2016, finding adverse effects and highlighting the role of fiscal policy. Okwara and Amori

(2017) examined tax income's effect on Nigeria's growth from 1994 to 2015. They found that non-oil income significantly impacted GDP, while value-added tax had a negative relationship. Takumah (2014) investigated tax income's impact on economic growth in Ghana from 1986 to 2010, finding positive correlations in both short and long-term relationships. MacCarthy *et al.* (2022) explored the link between taxes and economic growth in Ghana from 1972 to 2019, highlighting the importance of direct taxes in driving economic development. Takumah and Iyke (2017) investigated the causal relationship between tax revenue and economic growth in Ghana, finding evidence of a unidirectional flow from tax revenue to economic growth.

2.3.1 VAT and Economic Growth

Bilal (2015) extensively explored the relationship between Value Added Tax (VAT) revenue and economic growth, reviewing both theoretical frameworks and empirical research. The study focused on VAT revenue performance in Pakistan from 1991–1992 to 2011–2012. Using Ordinary Least Square Regression, the analysis showed a clear and positive impact of VAT revenue on Pakistan's economic growth. Specifically, a one percent increase in net VAT revenue corresponded to a 0.24% increase in nominal GDP. Granger Causality findings supported a shortterm connection between VAT revenue growth and Pakistan's economic expansion.

Hassan (2015) conducted a similar examination of VAT revenue and economic growth in Pakistan, aligning with Bilal's timeframe. The study also utilized Ordinary Least Square Regression and confirmed the positive impact of VAT revenue on Pakistan's economic growth. Granger Causality results further emphasized a short-term relationship between VAT income growth and economic expansion.

Jewel (2022) took a longer view, analyzing the impact of Bangladesh's value-added tax on GDP from 1991-1992 to 2020-2021. Using a constrained Vector Autoregressive (V.A.R.) model and Johansen's co-integration technique, the study consistently showed that the value-added tax contributed positively to Bangladesh's sustained economic growth. Rahman and Sarkar (2021) explored the impact of value-added tax on Bangladesh's economic expansion using annual time series data and various statistical analyses. Their research found a significant positive influence of VAT on Bangladesh's GDP-linked growth, as well as a strong positive association between VAT and total tax revenue and total revenue.

Gatawa *et al.* (2016) evaluated the effect of value-added tax on Nigeria's economic growth from its inception to 2014. Their study employed Johansen's co-integration test on quarterly data from 1994 Q4 through 2014. The findings confirmed the substantial positive impact of VAT on economic growth, along with the positive association between additional government revenues (excluding VAT) and economic growth during the study period. Onwuchekwa and Aruwa (2014) investigated VAT's impact on Nigeria's economic development, using the Least Square method. Their results highlighted VAT's significant contribution to government tax revenue and, consequently, Nigeria's economic growth. Adegbe *et al.* (2016) also examined VAT's impact on the Nigerian economy from 1994 to 2015, revealing a positive correlation between VAT and GDP. Shala (2021) assessed Kosovo's Value Added Tax collection and its implications for economic development. The study analyzed VAT collection trends from 2005 to 2015, utilizing various analytical tools and econometric methods, including Ordinary Least Squares. The study found that VAT collection in Kosovo was reliant on border trade but emphasized that revenue collection alone did not ensure fiscal stability. Additionally, Kosovo's relatively low VAT share of GDP

indicated lower economic development. The econometric analysis supported a significant and positive relationship between VAT and Kosovo's GDP.

2.3.2 Corporate Income Tax and Economic Growth

"Adegbeie and Fakile (2011) conducted a study to examine the connection between corporate income tax and the economic progress of Nigeria between 1981 and 2007. They compared annual corporate income tax revenue with Gross Domestic Product (GDP) during this period and employed analytical methods such as Chi-square and multiple linear regression. Their results demonstrated a substantial impact of corporate income taxes on GDP, with an impressive Rsquared value of 98.6% and an adjusted R-squared value of 98.4%. This highlighted a strong association between corporate income tax and Nigeria's economic growth and emphasized that tax fraud and avoidance were significant challenges to revenue generation. However, it's essential to note that this study exclusively focused on corporate income tax, and the broader impact of total tax revenues on the Nigerian economy should be considered.

Festu and Samuel (2007) emphasized that tax revenue's contribution to economic activity and growth in Nigeria remains limited due to poor management, negative public perception, and the perception of taxation as an unwelcome burden unrelated to citizens' duties or government services. Ogwuche *et al.* (2019) conducted a study exploring the impact of corporate income tax on Nigeria's economic growth. Their research also highlighted that efficient tax administration leads to increased revenue generation but is hindered by tax evasion and avoidance resulting from gaps in tax legislation. Data were collected from various sources, including the CBN bulletin, NSE factbook, and FIRS annual report, spanning the period from 2007 to 2017. To analyze the data, Gross Domestic Product (GDP) was regressed against Corporate Income Tax, serving as the dependent variable and a proxy for economic growth, employing multiple

regression analysis techniques. According to the data, corporate income tax significantly affects Nigeria's economic expansion. Etim *et al.* (2020) investigated the long-term relationship between petroleum earnings, corporate income taxes, and economic growth in Nigeria from 1980 to 2018. They operated on the premise that taxes play a crucial role in an economy's fiscal policy framework. The study applied various statistical tests, including the Augmented Dickey-Fuller unit root test, Engle-Granger Procedure Co-integration test, Parsimonious Error Correction Mechanism, Durbin-Watson statistic, and parameterized model to examine secondary data over the 39-year period. The findings indicated that taxes on petroleum profits and corporate income had a favorable and substantial impact on economic growth.

Ogwuru and Agbaraevah (2017) assessed the influence of selected components of tax revenue in Nigeria on the country's growth and development from 2000-2015. Two models were employed, with one measuring economic growth using Gross Domestic Product (GDP) as the dependent variable and the second measuring economic development through the Human Development Index (HDI). Both models included Value Added Tax (VAT), Corporate Income Tax, and Customs and Excise Duties as independent variables. Data were sourced from the CBN statistical bulletins, annual reports, the World Bank, and the United Nations Development Programme (UNDP) Human Development Index Report. Ordinary least square regression technique was used for data analysis. The results showed positive and significant relationships between GDP and VAT as well as customs and excise duty. The model for HDI indicated that VAT had a negative impact, while Corporate Income Tax had a positive and significant relationship with HDI.

Adejare (2015) studied the impact of corporate income tax on economic growth in Nigeria and its influence on the country's revenue profile. Using secondary data from the Central Bank of Nigeria Statistical Bulletin spanning from 1993 to 2013, the study examined the relationship

between the dependent variable (Gross Domestic Product) and independent variables (Corporate Income Tax, Value-Added Tax, Petroleum Profit Tax, and Inflation) through multi-regression analysis. The findings revealed that corporate income tax positively impacted Nigeria's revenue profile, thereby directly enhancing the country's growth. Corporate income tax revenue is essential for funding public services like healthcare, education, and infrastructure, which contribute to Nigeria's economic prosperity.

Aliyu and Mustapha (2020) experimentally evaluated the effect of tax revenue on economic growth in Nigeria for the period from 1981 to 2017. They utilized time series data from the National Bureau of Statistics (NBS), FIRS yearly publications, and CBN statistics bulletins. The study employed the Ordinary Least Squares (OLS) and Autoregressive Distributed Lag (ARDL) approaches to estimate the relationships, dynamics, and long-term impacts of independent factors on dependent variables. The analysis revealed that the variables were co-integrated, according to the ARDL bound test, and government domestic debt and petroleum value-added tax had a significant and positive correlation with GDP, according to the ARDL long-run estimation. Additionally, corporate income tax and customs and excise levies emerged as variables that had a detrimental effect on economic growth.

2.3.3 Custom and Excise Duty and Economic Growth

Canavire-Bacarreza *et al.* (2013) conducted a study spanning from 1990 to 2009 to investigate the impact of tax policies on the economic growth of 19 Latin American countries. They utilized two empirical approaches: panel data analysis encompassing all Latin America and VAR analysis focusing on Argentina, Brazil, Chile, and Mexico. The overall sample regression analysis suggested that personal income taxes could have substantial adverse effects on economic growth,

particularly when tax rates are higher. Conversely, a greater reliance on excise and customs duties appeared to have notably positive consequences for economic growth across Latin America.

Okafor (2012) delved into the influence of tax revenue on Nigeria's economic growth from 1981 to 2007. The study examined the relationship between Nigeria's economic growth and its primary sources of tax revenue, including petroleum tax, corporate tax, value-added tax, and customs and excise duty revenue, using OLS multiple regression analysis. The findings indicated a strong and significant correlation between customs and excise taxes and GDP.

Ibadin and Oladipupo (2015) scrutinized the impacts of indirect taxes on Nigeria's economic growth over 34 years, spanning from 1981 to 2014. They utilized the Error Correction Model to evaluate the influence of VAT, PPT, and CED on real gross domestic product (RGDP). Their research unveiled that VAT and PPT had favorable and substantial effects on RGDP. Furthermore, they identified a positive association between RGDP and CED over two different time periods.

Chibu and Njoku (2015) investigated the effects of taxes on the Nigerian economy from 1994 to 2012. Their statistical analysis revealed a positive relationship between the dependent variables (Gross Domestic Product and Unemployment) and the explanatory variables (Custom and Excise Duties, Corporate Income Tax, and Petroleum Profit Tax). Ebiringa and Yadirichukwu (2012) explored the consequences of various taxes on Nigeria's economic growth from 1985 to 2011, using a straightforward linear regression technique. Their findings indicated an inverse correlation between customs and excise duties and gross domestic product, implying a negative relationship between these taxes and Nigeria's economic growth. Conversely, GDP and corporate income tax exhibited a direct and significant connection.

Owino (2019) assessed the impact of excise and customs taxes on Kenya's economic growth from 1973 to 2010. The study aimed to address a significant knowledge gap and inconsistencies in existing empirical research about Kenya. Grounded in an endogenous growth model, the study employed correlation analysis to assess the direction and strength of relationships between variables. Empirical findings suggested a favorable link between Kenya's economic growth and customs and excise duties.

Ogwuru and Agbaraevah (2017) investigated the influence of specific tax revenue sources on Nigeria's growth and development between 2000 and 2015. They developed two models, one measuring economic growth using Gross Domestic Product (GDP) and the other measuring economic development using the Human Development Index (HDI). Value Added Tax (VAT), Corporate Income Tax, and Customs and Excise Duties (CED) served as independent variables in both equations. Data were drawn from sources such as the World Bank, the UNDP Human Development Index Report, CBN statistics bulletins, annual reports, and statements of accounts. Ordinary least squares regression was used for data analysis. Results indicated positive and substantial associations between GDP, VAT, and CED. In the HDI model, while CIT had a positive relationship, VAT had a negative one, but both variables were highly correlated with HDI.

2.4 Conceptual Framework

The conceptual framework exhibits how the taxation and economic growth relationship is measured. Details on the measures of the study variables are shown in Figure 2.1.



Figure 1.1 – Conceptual Framework

Source; Author's construct

Figure 2 illustrates a conceptual link between taxation and economic growth. Taxation is depicted as the independent variable and is measured through three primary tax types: value-added tax, corporate income tax, and customs and excise duty. While value-added tax and customs and excise duty are categorized as indirect taxes in Ghana, corporate income tax is considered a direct tax. Consequently, the assessment of taxation takes into account both direct and indirect tax perspectives. Economic growth is gauged using real gross domestic product (GDP). The arrow connecting taxation to economic growth signifies the presence of a relationship between these two variables. More precisely, it implies that modifications in the taxation system, such as alterations in tax rates or policies, can impact the level of economic growth. The underlying concept conveyed by this figure is that taxation can exert influence on economic growth by affecting various factors within an economy.

2.5 Conclusion

This chapter extensively reviewed the existing literature concerning the relationship between taxation and economic growth, with a specific focus on three distinct tax categories: value-added tax, corporate income tax, and customs and excise duty. The measure used to assess economic growth was real gross domestic product (GDP). The study established its theoretical framework by drawing upon two prominent theories: the Laffer curve theory and the endogenous growth

theory. In accordance with the Laffer curve theory, the initial imposition of taxes leads to a rise in revenue or economic growth as tax rates increase. However, there comes a point where taxpayers perceive the taxes as excessive, prompting them to seek ways to evade payment. At this stage, economic growth and revenue reach their peak, and any further increases in tax rates result in a decline in revenue.

Conversely, the Endogenous growth theory posits that a nation's economic growth stems from internal factors such as innovation, technology, and human capital. Taxation represents an internally generated source of funds, aligning with the principles of the endogenous growth theory. When examining the impact of taxation on economic growth, it was evident that various studies yielded diverse results. Some studies suggested a negative correlation, while others identified a positive influence of taxes on economic growth. However, none of these studies conducted a comprehensive assessment of the combined effect of value-added tax, corporate income tax, and customs and excise duty on economic growth. Instead, some studies focused on one or two of these tax types in isolation. Thus, no study comprehensively evaluated the collective impact of all three tax forms on economic growth. The ultimate goal of this research is to not only provide deeper insights into the intricate relationship between taxation and economic growth but also to contribute to our understanding of how direct and indirect taxes, when considered together, influence the economic growth of Ghana.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents details on how the data was collected, analyzed, and interpreted. It provides a thorough explanation of the research design and methodology, model specification, definition and measurement of model variables, estimating technique, data sources, and data analysis methods.

3.1 Research Design

Research design is the plan that gives a general description of the strategy used in a research study as identified by Creswell & Creswell (2017). The goal of the research study determines which research design is suitable for the study. Research design serves as a bridge between the research questions, objectives and processes for empirical data collection and analysis for data-driven conclusions. There are three main forms of research design as identified by Saunders et al (2014). These are Exploratory, Explanatory and Descriptive. Every research attempt to satisfy at least one of the three research purposes.

Exploratory research applies when there is limited literature on a particular topic. It brings in-depth understanding and produces research questions (Zikmund, Babin, Carr & Griffin, 2013). It is a unique approach to asking open questions on an occurrence and gaining an understanding of a subject of interest. The use of a Case study is mostly appropriate for exploratory research (Levy and Powel, 2005). Exploratory research can be conducted by searching the literature, interviewing experts and conducting focus group interviews (Saunders et al, 2014). Ponelis, 2011, conducted an exploratory study of business intelligence in knowledge-based growth small, medium and microenterprises in South Africa. This research method was adopted because, there was not

sufficient understanding and knowledge about business intelligence in small, medium and microenterprises.

Descriptive Research explains the features or attributes of an occurrence without affirming any relationship (Neuman, 2014). Descriptive research is about giving a description of reality hence it is very objective and neutral. It does not seek to form hypotheses or develop a theory. Explanation and evaluation are left to the reader to deduce for descriptive research in its purest form. Descriptive research is mostly applied in Architectural work and outside, where it mostly concerns studies linked with individual projects and direct application to solving a design task (Lans & van der Voordt, 2002).

Just like how Irena Szarowská, (2013) conducted research on the effects of taxation by economic functions on economic growth in the European Union using explanatory research, this research seeks to establish a relationship between the variables of interest. Explanatory research seeks to establish a causal relationship between variables of interest (Saunders et al, 2014). This study aims to explain how taxation impacts economic growth, by discussing the relationship between these variables:

1. Value Added Tax (VAT) and the Real Gross Domestic Product.
2. Corporate Income Tax and Real Gross Domestic Product.
3. Customs and Excise Duty and Real Gross Domestic Product.

Desk study research relies on existing data from various sources such as articles, reports, and documents to address research objectives and questions (Bryman and Bell, 2015). This research uses the desk study approach. This is because the period and the variables under discussion had data from diverse sources that needed to be compiled and utilized for the purposes of this research.

Macek, (2015) conducted research on The Impact of Taxation on Economic Growth: Case Study of OECD Countries using the desk study research method. Rudolf's research used data from sources such as the OECD database National Accounts Statistics, database Penn World Table (Penn World Table – database 1950 – 2011), OECD Education at Glance, OECD Tax Statistics and World Tax Index database.

Qualitative research is often referring to a term that uses data collection techniques or a way to analyse data that is not numerical, with open-ended questions. It is popularly known as realistic research since it needs to be conducted in a natural setting (Saunders et al, 2014). Researchers investigate issues in their own context and the meaning people bring to them. The goal is to reproduce meaning from participants' opinions and it is mostly inductive in nature and has numerous primary statements. (Asenahabi, 2019).

Quantitative research uses an analytical approach to answer questions and achieve the objectives of a research work. The data gathered results from empirical observations and measures. It is a technique that produces discrete values for data analysis (Asenahabi, 2019). It often uses the deductive approach since it uses data to test certain theories. It explores various relationships between variables being measured numerically and analysed with statistical tools (Saunders et al, 2014). This research work uses the quantitative research method. This is because the data needed to answer the questions to achieve at the various objectives are discrete values. An example is the research conducted by Racek in 2015 on the Impact of Taxation on Economic Growth: Case Study of OECD Countries.

The mixed research method explains both qualitative and quantitative methods of research.

Qualitative data brings in open-ended data where responses are not predetermined while quantitative research brings closed-ended data (Asenahabi, 2019). It may use both inductive and deductive approaches since it is a mix of both qualitative and quantitative (Saunders et al, 2014).

The various research design methods used in this study are:

1. Explanatory
2. Desk study
3. Quantitative

This format of a research template was used due to the nature of the research. Irena Szarowská, (2013) conducted research on the effects of taxation by economic functions on economic growth in the European Union the research design adopted. Rudolf Macek, (2015) also conducted research on the Impact of Taxation on Economic Growth: Case Study of OECD Countries. These articles were considered because it served as templates for answering the research questions and achieving the research objectives using the research design adopted by these studies.

3.2 Data Type and Source

The primary data source utilized in this study is derived from secondary data. The study relied on quarterly data spanning from 1990 to 2020 to evaluate the potential impact of changes in Ghana's taxation system on the country's economic growth. The dataset encompasses information related to three key tax indicators: customs and excise tax, corporate income tax, and value-added tax. Additionally, it includes data on real GDP per capita, the accumulation of physical and human capital, the growth rate of the labor force, as well as the stock of physical and human capital. The methodology used for measuring each variable is elaborated upon in the subsequent sections. These datasets were compiled using information sourced from various institutions, including the

World Development Indicators, the Ghana Statistical Service, the Ghana Revenue Authority, the Bank of Ghana, the Institute of Statistical, Social, and Economic Research (ISSER), and the Government of Ghana's Budget Statement.

3.3 Model Specification

Most of the research on economic growth suggests that a wide range of factors can influence economic growth. Using the generalized regression model as a guide, the model for the study is in three stages. The first stage employed the basic regression model, and the equation is written as

$$CapY = \alpha + bX + \varepsilon \dots \dots \dots (1)$$

Where the left-hand variable Y stands for the dependent variable in the model, which is Economic Growth tested by real GDP (RGDP). X contains a set of independent variables (taxation) in the estimation model; value-added-tax, corporate income tax, and custom and excise duty. α is taken as the constant of the regression equation whereas the gradient of the equation is noted as b and the error margin is also represented with ε . Deducing from the generalized regression equation, the altered regression model used by Ngwoke (2019) is adopted for this thesis. Therefore, the model is rewritten as

$$\ln(RGDP) = \alpha + \beta_1 \ln(VAT_{it}) + \beta_2 (CIT_{it}) + \beta_3 (CED_{it}) + \varepsilon \dots \dots \dots (2)$$

Where: GDP = Real GDP

VAT = Value-Added-Tax

CIT = Corporate Income Tax

CED = Custom and Excise Duty

ε = error term \ln

= natural log

Coupled with the basic regression model, some external growth determinants in the form of controlled variables (rate of inflation and foreign direct investment) are also introduced to the model. Therefore, the final model for this study is rewritten as

$$\ln(\text{RGDP}) = \alpha + \beta_1 \ln(\text{VAT}_{it}) + \beta_2 (\text{CIT}_{it}) + \beta_3 (\text{CED}_{it}) + \beta_4 (\text{INF}_{it}) + \beta_5 (\text{FDI}_{it}) + \varepsilon \dots\dots\dots (3) \text{ Where:}$$

INF = Inflation

FDI = Foreign Direct Investment

3.4 Variable Description and Justification

There are two variables (taxation and economic growth) in this study, and they are measured using diverse determinants. The dependent variable, economic growth is measured with the Real GDP of the country while the independent variable is measured with the three selected tax forms: valueadded-tax, corporate income tax as well as custom and excise duty.

3.4.1 Dependent Variable

Economic growth

Economic growth in a country refers to the sustained increase in the country's gross domestic product (GDP) over time. It represents the total monetary value of all the final products and services produced within a country's borders during a specific period. Real Gross Domestic Product serves as a reliable indicator of economic expansion. Real GDP measures the total value of all goods and services produced annually at prices from a chosen base year, taking into account

the effects of inflation. In studies such as Ngwoke (2019) and Gashi *et al.* (2018), Real GDP was used as a key statistic to empirically analyze economic growth. Typically, Real GDP is calculated by subtracting the GDP deflator (R) from the nominal GDP.

3.4.2 Independent Variable

Corporate income tax

A government assessment levied on the profits made by a firm or corporation is known as income tax. This tax is imposed on a corporate entity's net income or profits made over a certain time frame, often a fiscal year. The government normally decides the corporate income tax rate, which might vary between nations. Corporate bodies are classified as people for tax reasons since they are deemed independent legal entities from their owners and operators. This arrangement enables governments to tax businesses according to their earnings in the same way that people are taxed according to their income (Sunarsih & Oktaviani, 2016).

The revenue produced less the permitted deductions and costs equals the corporate net profit, which is the basis on which the corporate income tax is often computed. The amount of tax due by the corporation is then calculated by multiplying this net profit by the appropriate tax rate. For corporate income tax, several nations have varying tax rates and administration structures. These rates can change depending on things like the nation's tax laws, the state of the economy, and the requirement for revenue production (Jiang *et al.*, 2021). Governments have the option of using corporate income tax to pay for infrastructure improvements, public services, and other expenses.

Customs and Excise duty

This is a levy levied by the government on imported or exported products. When products cross international borders, it is a type of indirect tax that is imposed at the border. Customs and excise taxes are used to restrict commerce, safeguard domestic industries, create income, and manage the flow of commodities (Elamonovich, 2022). Specifically, products that are imported into a country are subject to customs duty. When products enter a nation, customs officials value them and then calculate the duty payment by applying a tax rate or tariff. The kind of products, their number or weight, their claimed value, and any applicable trade agreements or exclusions can all affect customs duty.

Contrarily, excise tax is placed on a select number of locally manufactured or imported commodities, usually those that are regarded as luxury items or dangerous, such as alcohol, cigarettes, fuel, or specific kinds of cars. Excise taxes are often imposed to deter the use or consumption of certain products and to bring in money for the government. The expense of the duty is frequently passed on to the customer by the producer, importer, or seller, who also pays it. Both customs and excise duties are administered by customs authorities or agencies within a country. These agencies enforce customs laws, collect duties, and ensure compliance with import and export regulations.

Value Added Tax

Value Added Tax, commonly known as VAT, is a type of consumption tax levied on the purchase of goods and services. It applies to every phase of the supply chain, starting from the creation or importation of products all the way to their final sale to consumers. VAT is designed as a tax on consumption, and the ultimate responsibility for paying it falls on the final consumer. The amount

of VAT to be paid is determined by the value added at each stage of manufacturing or distribution (Harkushenko, 2022). Businesses often collect this tax on behalf of the government and then remit it to the appropriate tax authorities. VAT represents a significant source of revenue for governments, which is crucial for funding public services and infrastructure. One of its key advantages is its effectiveness in curbing tax evasion because it captures the value added at every step of production or distribution. This feature makes VAT widely regarded as an efficient tax

3.4.3 Controlled Variables (Growth Determinants)

Foreign Direct Investment (FDI)

There is a widespread acceptance of FDI as a driver of progress in underdeveloped nations (Ramzan *et al.*, 2019). Therefore, it is anticipated that a rise in FDI would increase total investment, which will then enhance total production and its rate of growth. Consistent findings in the empirical literature examining the impact of FDI on growth (Sakyi & Egyir, 2017; Hayat, 2017; Yimer, 2023) show a significant positive link between the two variables.

Inflation

Inflation is a measure of the rate at which the average prices of goods and services in an economy increase over some period. It is the rise in the general level of prices in an economy. It influences the behavior of investors in the bank. This happens because their investment behavior fluctuates because of inflation. For example, a predictable reduction in inflation would inform investors to prepare to invest because the prices of shares, bonds, and other stock activities would reduce. Higher inflation on the other hand would reduce real income, which would bring about a reduction in investments hence reduced economic growth (Muritala, 2011).

Table 3.1: Variable Measurement and Data Source

Variable	Measurement	Data Sources
Dependent: Economic Growth	Real GDP	World Development Indicator (WDI)
Independent: Taxation	Value-Added-Tax	GRA & Bank of Ghana (BOG)
	Corporate Income Tax	GRA
	Custom And Excise Duty	Bank of Ghana (BOG)
Controlled: Growth Determinants	Foreign Direct Investment Inflation	World Development Indicator (WDI) World Development Indicator (WDI)

3.5 Estimation Strategies

3.5.1 Unit Root Test

A time series of data will be used in this investigation. However, there is a significant issue with time series data that is frequently related to its non-stationary quality. Non-stationary variables may produce false findings, particularly in conventional linear regression. Applying the standard Ordinary Least Square (OLS) method to non-stationary time series data would quickly lead to incorrect conclusions. As a result, the t-statistic and R^2 would rise, making the estimations significant but producing false findings. When using time series data, the observations must be made independent and stationary. The majority of macroeconomic variables are non-stationary; nevertheless, by differencing the variable, these series become stationary. The number of times the variable is changed to produce a stationary series is the order of integration.

The study begins by estimating the different tax categories and using a unit root test to see if the variables are stationary. The unit root test compares the alternative hypothesis ($H_1: p \neq 1$) to the

null hypothesis ($H_0: p = 0$). The alternative hypothesis proposes a stationary series, whereas the null hypothesis suggests a non-stationary series. The crucial values produced are compared to the t- t-statistics obtained from the estimate (Mackinnon, 1996). The conclusion that the series is either stationary at level or integrated of order zero is reached when the t-statistics is more negative than the crucial value. If the t-statistics is less negative than the crucial value and the conclusion is nonstationary at the level, we still fail to reject the null hypothesis. A series may not always be stationary at level; however, level differencing at the d^{th} level can make it stationary, which means an integrated series.

3.5.2 Ordinary Least Square (OLS) Regression

The ordinary least square regression technique was used to analyse the study objectives. OLS is a fitting choice for this analysis due to its assumptions and characteristics that align with the nature of the research. OLS is a valuable technique for examining relationships between variables due to its simplicity, interpretability, and ability to quantify the linear association between independent and dependent variables. By estimating coefficients that indicate the change in the dependent variable for a unit change in the independent variable while controlling for other factors, OLS allows for hypothesis testing, causal exploration, and policy analysis. It provides a structured approach to understanding relationships in data, making it a versatile tool for both researchers and policymakers seeking to gain insights into complex phenomena. It is therefore a suitable technique to adopt in testing for the taxation and economic growth relationship.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSIONS

4.0 Introduction

The chapter presents results on the findings after examining the impact of taxation on economic growth. The study results are presented in Tables. Further discussions were made to compare the study findings with what has been established in the literature.

4.1 Descriptive Statistics

To give a preliminary overview of the information, a descriptive statistic was produced before estimating the effect of taxation on economic development. The descriptive statistics were determined using the mean values. Each mean value provides a glimpse into the average characteristics of the respective variables within the context of the study. These insights set the foundation for further analysis to understand the relationships, impacts, and dynamics among these variables and their influence on economic growth in Ghana.

Table 4.1: Descriptive statistics

Summarise GDP CIT CED VAT FDI INFL, separator (7)

Variable	Obs	Mean	Std. Dev.	Min	Max
GDP	31	3.250	.925	1.606	4.249
CIT	31	3.289	.277	2.930	3.762
VAT	31	20.711	1.604	16.401	22.532
CED	31	.002	.000	.001	.002
FDI	31	20.778	1.498	17.892	22.079
INFL	31	2.664	.486	1.966	3.726

Corr GDP CIT CED VAT FDI INFL, Obs=31 Source;
Author's computation (2023)

The data encompassed observations from 31 different instances or years. The mean GDP value of 3.250 signifies the average economic output of Ghana over the observed instances. This

suggests that, on average, the country's economic activity produced goods and services with a value equivalent to 3.250 units. The standard deviation of 0.925 indicates the degree of variation around this average. The range from 1.606 to 4.249 represents the span of GDP values, highlighting the variability in economic performance, where some instances witnessed relatively lower economic output (1.606), while others recorded higher levels (4.249).

With a mean CIT value of 3.289, the study reveals the average tax rate imposed on corporate income within Ghana. This suggests that, on average, companies in the country were subject to an income tax rate of approximately 3.289. The relatively low standard deviation of 0.277 implies that the variations in corporate income tax rates were relatively minor. The range from 2.930 to 3.762 underscores the extent of variation in tax rates applied to corporate incomes. The mean VAT value of 20.711 signifies the average value-added tax rate applied to consumption and trade in Ghana. This indicates that, on average, goods and services were subject to a value-added tax rate of 20.711%. The standard deviation of 1.604 reflects the extent of deviation from this average rate. The range from 16.401 to 22.532 highlights the diversity in VAT rates, suggesting that different goods and services faced varying levels of taxation. The extremely low mean CED value of 0.002 signifies the average custom and excise duty applied to goods and products. This indicates that, on average, a minimal duty was imposed on imported and domestically produced items. The almost negligible standard deviation of 0.000 implies a lack of variation, suggesting that custom and excise duties remained consistently low across the observed instances. With a mean FDI value of 20.778, the study reveals the average amount of foreign direct investment received by Ghana. This suggests that, on average, the country attracted FDI amounting to 20.778 units. The standard deviation of 1.498 points to the variability in the levels of foreign investment. The range from 17.892 to 22.079 highlights the diverse nature of foreign direct investment flows

into the country. The mean INFL value of 2.664 signifies the average rate of inflation in Ghana. This suggests that, on average, the general price level increased by approximately 2.664% over the observed instances. The standard deviation of 0.486 indicates the degree of variation in inflation rates. The range from 1.966 to 3.726 underscores the fluctuations in inflation, implying that there were periods of relatively low and high inflation rates.

4.2 Multiple correlation

Multiple was conducted to determine the relationship between taxation and economic growth. The pairwise correlation coefficients between the various variables provide insights into the strength and direction of their associations.

Table 4.2: Correlation

	GDP	CIT	CED	VAT	FDI	INFL
GDP	1.000					
CIT	0.727	1.000				
CED	0.955	0.713	1.000			
VAT	0.724	0.824	0.734	1.000		
FDI	0.945	0.560	0.862	0.549	1.000	
INFL	-0.655	-0.532	-0.674	-0.490	-0.531	1.000

Source; Author's computation (2023)

Results from the correlation analysis indicate that the correlation between GDP (Real GDP) and CIT (Corporate Income Tax) reveals a positive coefficient of 0.727. This suggests a moderate positive relationship between Corporate Income Tax revenues and economic growth. In other words, as revenues generated from Corporate Income Tax increase, the economy tends to experience growth. A positive correlation of 0.713 also emerges between GDP and CED. This finding highlights a similar pattern to that of CIT, where higher Customs and Excise Duty revenues are associated with increased economic growth. This connection emphasizes the

significance of import duties and excise taxes as potential sources of revenue that align with economic expansion. Considering the correlation between GDP and VAT (Value Added Tax), a coefficient of 0.724 is revealed. This once again underscores a positive relationship, indicating that as Value Added Tax revenues increase, economic growth is likely to follow suit. Value Added Tax, being a consumption-based tax, can play a role in shaping consumer behavior and thus impacting economic activity positively.

Now, delving into the relationships among taxation variables themselves, a network of correlations that provides insights into how different forms of taxation might interplay within the economy was found. The correlation between CIT and VAT is 0.824, suggesting a relatively strong positive association between these two forms of taxation. Similarly, the correlation between CIT and CED is 0.713, and between VAT and CED, it's 0.734. These positive correlations imply that there could be synergy between these tax types, possibly reflecting a cohesive approach in the implementation of various taxation policies.

In the realm of control variables, FDI (Foreign Direct Investment) presents a substantial correlation with GDP, showing a coefficient of 0.945. This robust positive correlation indicates that increased Foreign Direct Investment is aligned with higher economic growth. It signifies the role of foreign investment in contributing to the expansion of the economy. On the other hand, the correlation between INFL (Inflation) and GDP is -0.655, revealing a negative relationship. This finding suggests that higher inflation rates might be associated with lower economic growth. Moreover, the negative correlations between INFL and FDI (-0.531) and between INFL and CIT (-0.532) imply that elevated inflation levels might deter foreign investment and negatively impact Corporate Income Tax revenues. In all, the positive correlations between taxation variables (CIT, CED, VAT) and economic growth underscore the potential contributions of these taxes to the

expansion of the economy. The correlations involving control variables provide insights into the roles of foreign investment (FDI) and inflation (INFL) in shaping economic growth and tax revenues.

4.3 Unit root test

The stationarity of the variables, a crucial presumption in time series analysis, was to be confirmed by the unit root tests. Knowing whether the variables are stationary or not is crucial since non-stationary variables can produce erroneous regression findings. In order to do this, the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests were used. The findings offer vital information about how these variables behave and whether they are suitable for further research.

Table 4.3: Unit root test

Variable	Levels		First Difference	
	ADF	PP	ADF	PP
GDP	-2.12	-2.25	-3.95**	-0.39**
CIT	-2.38	-3.99	-4.66*	-4.59*
VAT	-3.50	-3.56	-5.00*	-5.34*
CED	-3.24	-2.60	-5.29*	-9.98*
INFL	-2.37	-2.11	-3.87*	-6.53*
FDI	-2.44	-3.19	-5.43**	-7.26**

* Represent stationary variables at a 1% significance level,

** Represent stationary at 5% and *** represent stationary variables at 10%.

Source; Author's computation (2023)

In terms of the levels of the variables, the findings indicate that GDP, CIT, VAT, CED, INFL, and FDI exhibited ADF and PP test statistics that were below the critical values at the 5% significance level. This means that these variables were non-stationary in their original form, suggesting that they might possess a unit root and be integrated into order one (1). However, after taking the first

difference of these variables, the ADF and PP test statistics became notably more negative, surpassing the critical values even at the 1% significance level for most variables. This implies that the first differences of GDP, CIT, VAT, CED, INFL, and FDI were stationary, indicating that these variables were integrated of order zero (I (0)) and did not possess a unit root. In addition, the control variables of FDI and INFL followed similar patterns. Both variables were non-stationary in levels but became stationary after differencing, providing a clearer foundation for their incorporation as control variables in the subsequent analysis.

The unit root test results suggest that the first differences in GDP, CIT, VAT, CED, INFL, and FDI can be used in subsequent analyses. The stationary nature of these variables after differencing enhances the reliability of any regression or modeling that will be conducted in the study.

4.4 Multiple Regression

The study aimed to investigate the impact of taxation on economic growth in Ghana, with a specific focus on the effects of Value Added Tax, Corporate Income Tax, and Custom and Excise Duty. In addition to this, the study also considered the role of two control variables: Foreign Direct Investment and Inflation. The primary measure of economic growth utilized was real Gross Domestic Product.

Table 4.4: Regression

Variable	Coefficient	Standard error	t	p> t	[95% conf. interval]
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CIT	.324	.207	1.57	0.138	-.117	.765
CED	.188	.055	3.44	0.004	.072	.305
VAT	317.483	263.82	1.20	0.247	-244.836	879.802
FDI	.329	.043	7.70	0.000	.238	.420
INFL	-.117	.088	-1.33	0.204	-.305	.071
Constant	-8.699	.820	-10.61	0.000	-10.448	-6.952
<hr/>						
Number of observations	=31					
F (5, 25)	=175.76					
Prob>F	=0.000					
R-squared	=0.983					
Adjusted Rsquared	=0.978					

Source; Author's computation (2023).

The statistical analysis employed a multiple regression model to assess the relationships between the variables. The model exhibited a high degree of explanatory power, as evidenced by the significant values for both the F-statistic (175.76) and the associated p-value (Prob>F = 0.000), indicating that the overall model is statistically significant and can explain a substantial portion of the variation in the dependent variable. The R-squared value, a measure of the proportion of the variation in the dependent variable (GDP) that can be explained by the independent variables in the model, was calculated to be 0.983. This high R-squared value suggests that approximately

98.3% of the variability in economic growth can be attributed to the independent variables included in the model, namely CIT, CED, VAT, FDI, and INFL.

Among the independent variables, CED exhibited a particularly strong positive relationship with GDP (coef. = 0.188, $p < 0.01$). This implies that an increase in Customs and Excise Duty is associated with a significant positive effect on economic growth in Ghana. Similarly, Foreign Direct Investment demonstrated a substantial positive impact on GDP (coef. = 0.329, $p < 0.001$), highlighting the role of foreign investment in stimulating economic growth. On the other hand, CIT and VAT did not demonstrate statistically significant effects on economic growth, as indicated by their respective coefficients (CIT: coef. = 0.324, $p = 0.138$; VAT: coef. = 317.483, $p = 0.247$). This suggests that changes in these tax components might not have a direct and immediate impact on economic growth in the Ghanaian context. Interestingly, INFL was found to have a negative coefficient (coef. = -0.117), albeit not statistically significant ($p = 0.204$). This implies that higher inflation may be associated with lower economic growth, although the relationship is not conclusive based on the current data.

4.5 Discussion of Findings

The study aims to examine the impact of taxation on economic growth in Ghana. In achieving this broad aim, the study aimed at assessing.

1. The effect of Value Added Tax on the real gross domestic product of Ghana,
 2. The impact of corporate income tax on the real gross domestic product of Ghana
 3. The impact of customs and excise duty on the real gross domestic product of Ghana.
- Secondary data was collected on the respective variables covering the period of 1990 to 2020. The study results are discussed hereafter.

4.5.1 Effect of Value Added Tax on Economic Growth

The assessment of Ghana's economic development took gross domestic product (GDP) into account as a proxy for gauging growth while examining the influence of value-added tax (VAT). The study's outcomes hinted at a somewhat favorable impact of VAT on economic expansion. VAT, being a consumption tax, gets levied on the acquisition of goods and services. In principle, a consumption tax should have a detrimental effect on economic growth by reducing disposable income and potentially curbing consumption. However, the research uncovered a positive, albeit modest, influence of VAT on economic growth. It's both intriguing and slightly unexpected to observe that VAT wields a slight yet beneficial influence on economic development. This positive effect of VAT might stem from its relatively efficient nature. VAT is a wide-ranging tax that's challenging to evade, allowing it to generate substantial revenue without causing significant distortions in the economy. Moreover, it can be employed to fund public expenditures, potentially stimulating economic growth. Another factor contributing to VAT's positive impact on economic growth could be its progressive nature, with higher rates applied to higher-value goods and services, disproportionately affecting wealthier households. This may contribute to reducing income inequality, which could further propel economic expansion.

Numerous studies have investigated the connection between value-added tax and economic growth. While most of these studies have established a positive link between these variables, the majority have identified a substantial relationship. For example, Asogwa and Nkolika (2013) found that VAT had a significant impact on investment growth in Nigeria. In a similar vein, Adegbe *et al.* (2016) demonstrated that VAT had a substantial influence on economic growth as measured by GDP. These findings contrast with those of Anojan (2015) in Sri Lanka, Emmanuel

(2013) in Nigeria, Rahman and Sarkar (2021) in Bangladesh, Gatawa *et al.* (2016) in Nigeria, and Onwuchekwa and Aruwa (2014) in Nigeria, among others, who identified a noteworthy relationship between VAT and economic growth. Nevertheless, Izedonmi and Okunbor (2014) supported the current findings by discovering a positive yet statistically insignificant correlation between VAT and GDP in developing nations. Egbunike *et al.* (2018) similarly found an insignificant correlation between corporate income tax and economic growth.

4.5.2 Effect of Corporate Income Tax on Economic Growth

The connection between corporate income tax and economic growth is subject to variation, influenced by a range of factors such as the tax rate level, the tax system's design, the broader economic conditions, and the unique attributes of the country under examination. While it is conceivable that, in specific scenarios, an uptick in corporate income tax rates could result in heightened economic growth, this is not a universally applicable principle. The relationship is nuanced, and conversely, there are circumstances where the opposite holds true.

Having assessed the effect of Corporate income tax on economic growth, it was discovered that a positive but insignificant relationship exists between the two variables. This implies that when Corporate income tax increased, there was a tendency for economic growth, as measured by GDP, to increase as well. Similarly, when corporate income tax decreased, economic growth also tended to decrease. However, this correlation is not strong enough to be deemed reliable or meaningful in a substantive way due to its insignificant nature. That is to say, a positive but insignificant relationship between corporate income tax and economic growth indicates that there seems to be a tendency for these two variables to move in the same direction—when corporate income tax rates rise, economic growth also tends to increase. This implies that the connection between changes in corporate income tax rates in Ghana and economic growth is not strong

enough to confidently assert a cause-and-effect relationship. Instead, the correlation might be a result of random chance rather than a meaningful and consistent pattern.

Unlike the present study that discovered an insignificant relationship between corporate income tax and economic growth, the positive relationship between corporate income tax and economic growth is largely established in the literature. For instance, Ogwuche *et al.* (2019) who assessed the relationship between the two variables discovered a positive but significant relationship. Similar findings were discovered in the study of Etim *et al.* (2020), Adejare (2015), and Aliyu and Mustapha (2020) all in Nigeria.

A positive but insignificant relationship between corporate income tax and economic growth as discovered in this study could be accredited to a multitude of reasons that weaken the potential impact of tax rates on growth. While lower corporate taxes can theoretically incentivize investment, innovation, and business expansion, this effect might be mitigated by other concurrent economic policies, regulatory constraints, or structural issues within the economy. Moreover, the intricate interplay of global economic dynamics, technological advancements, and changing consumer preferences could dilute the immediate influence of corporate tax adjustments on overall economic growth, leading to statistical insignificance despite the theoretically positive direction of the relationship.

This is explained by the endogenous growth theory which emphasizes that economic growth is not solely determined by exogenous factors like capital and labor, but also by endogenous factors such as innovation, human capital accumulation, and technological progress. The insignificant relationship between VAT and CIT can also be attributed to the Laffer curve theory which holds that until the desired level of tax rate is determined, the expected revenue cannot be determined.

The country's apportionment tax rate over time may be somewhat to blame for the lack of correlation between the two taxing components and economic growth.

4.5.3 Effect of custom and excise duty on Economic Growth

The third objective, which delved into the influence of excise and customs duties on economic growth, as assessed by gross domestic product, was subjected to rigorous examination. The results pointed towards a beneficial and noteworthy effect. Customs and excise duties exhibit a constructive and robust connection with economic expansion, implying that alterations in these taxes directly influence shifts in the pace of economic growth. It is improbable that this correlation arises merely by happenstance.

Customs duties are essentially taxes imposed on goods that are imported from other countries, while excise duties are taxes imposed on certain goods produced domestically, often luxury items or products with potential negative externalities. These duties are commonly used by governments to achieve a range of economic and policy objectives, including protecting local industries, generating government revenue, and influencing consumer behavior. When an economy demonstrates a positive and statistically significant relationship between these duties and economic growth, it implies that as the duties are increased, economic growth tends to strengthen as well. This connection suggests that the adjustment of these duties somehow contributes to an environment that fosters economic growth. It might indicate that higher duties protect domestic industries, encourage local production, or provide the government with additional funds that can be invested in infrastructure and public services, all of which can contribute to economic expansion.

The significant correlation between custom and excise duty and economic growth was also established by past researchers. Canavire-Bacarreza *et al.* (2013) in a study revealed that at higher

levels of taxation, personal income tax could have significant negative effects on economic growth and greater reliance on custom and excise duties has significant positive effects on growth in Latin America in general. Okafor (2012) also established that there is a positive and significant relationship between customs and excise duties and GDP. A similar finding was discovered by Ogwuru and Agbaraevah (2017) who also conducted their study elsewhere in Nigeria. Meanwhile, Bilal (2015) who examined the customs and excise duty and economic growth nexus revealed that customs and excise duty collection has a positive but insignificant relation with GDP.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter presents a summary of the findings after assessing the taxation and economic growth relationship. Conclusions were also drawn based on the findings together with recommendations to policy and future researchers.

5.1 Summary of Findings

The average real GDP for Ghana stood at 3.250, reflecting economic output. The range of real GDP spanned from 1.606 to 4.249. The average tax rate for Corporate Income Tax was 3.289,

demonstrating consistency in tax application. Value-Added Tax had an average rate of 20.711, revealing a wide spectrum ranging from 16.401 to 22.532. Customs and Import Duties exhibited minimal duty, with an average of 0.002 and low variance. Foreign Direct Investment showed an average of 20.778, with fluctuations between 17.892 and 22.079. Lastly, the average inflation rate was 2.664, oscillating between 1.966 and 3.726.

Correlation coefficients were calculated to examine relationships between the variables. Positive correlations were observed between GDP and CIT (0.727), CED and GDP (0.713), VAT and GDP (0.724), CIT and VAT (0.824), CIT and CED (0.713), and VAT and CED (0.734). FDI showed a strong positive correlation with GDP (0.945), while INFL exhibited a negative correlation with GDP (-0.655). Negative correlations were also observed between INFL and FDI (-0.531) and between INFL and CIT (-0.532).

Furthermore, unit root tests were performed to assess the stationarity of the variables. It was discovered that while variables in their original form were non-stationary, their first differences became stationary. This indicated that first-differenced variables were suitable for subsequent analysis.

The multiple regression model had high explanatory power ($R\text{-squared} = 0.983$). Among taxation variables, CED had a significant positive effect on GDP, as did FDI, while CIT and VAT did not show significant impacts though they had a positive effect on GDP. INFL had a negative coefficient but was not statistically significant, suggesting a potential negative relationship between inflation and economic growth.

5.2 Conclusions

This study aimed to examine the impact of taxation on economic growth in Ghana by examining how value-added tax, corporate income tax, and customs and excise duty affect the gross

domestic product of the country. Foreign direct investment and inflation were controlled against gross domestic product. Literature was reviewed on the relationship between taxation and economic growth with a focus on the Laffer curve theory and endogenous growth theory. Data on the study variables was collected from secondary data sources within the period 1990 to 2020. Unit root tests were conducted to determine the stationarity of the variables alongside ordinary least square regression to determine the relationship between the studied variables. Data collected was analysed with the aid of STATA. After the analysis of the data collected, it emerged that the model employed in the study displayed a high level of explanatory power, indicating that the chosen variables collectively explain a significant portion of the variation in Ghana's economic growth. On the other hand, taxation has a significant effect on economic growth in Ghana. Meanwhile, customs and excise duty emerged as a significant contributor positively affecting GDP suggests that raising customs and excise duties could have a positive effect on economic growth, probably by using the money raised for development projects.

However, both corporate income tax and value-added tax did not exhibit significant direct impacts on economic growth. This implies that changes in these tax components may not have substantial immediate effects on Ghana's GDP. Nevertheless, it is important to consider their potential indirect influence on economic growth through their impact on business activities and consumer behavior. This is in support of the Laffer Curve theory which posits that there is an optimal tax rate, often referred to as the "revenue-maximizing tax rate," at which tax revenue is maximized. Beyond this point, if tax rates are increased further, tax revenue will start to decline. Therefore, if the optimal tax rate was not established, taxes would not significantly affect economic growth. It was discovered that while inflation has a negligible and insignificant impact on GDP, foreign direct investment (FDI) has a significant positive impact on GDP, suggesting

that increasing FDI could be a useful tactic for fostering economic growth in Ghana. Conversely, as inflation rises, the state of the country's economy deteriorates. From the above findings, it is concluded that customs and excise duty and FDI have a positive influence on Ghana's economic growth, while corporate income tax and value-added tax do not appear to have significant direct impacts. Therefore, the fact that tax is a source of revenue does not necessarily mean any amount of tax charge on goods and services would automatically improve revenue and economic growth. Rather, the tax rate charged goes a long way to determining the growth and expansion of an economy as some consumers would avoid the tax payment especially if the rate is higher than expected.

5.3 Recommendations

Based on the study limitations and findings discovered, the following recommendations were made to guide policymakers and future researchers on how to reach a conclusive outcome on the taxation and economic growth relationship.

5.3.1 To Policymakers

1. Policymakers should carefully review value-added tax and corporate income tax. Since it was determined that these taxes have little to no direct effect on economic expansion, it is possible that their rates may be reduced to reduce the burden on consumers. This includes tax incentives for firms or streamlining tax regulations.
2. In line with the Laffer curve theory, policymakers should work to determine the optimal tax rate that maximizes tax revenue without hampering economic growth.
3. Given that customs and excise duty have a positive impact on GDP, policymakers should explore avenues to increase revenue through these means. This involves measures to reduce tax evasion and streamline customs and excise procedures.

4. Policymakers should Implement effective monetary policies and fiscal discipline to control inflation. High inflation can erode the purchasing power of consumers and hinder economic growth.

5.3.2 To further studies

1. To examine the effect of taxation on economic growth in Ghana over a long period of time, future researchers might think about undertaking longitudinal studies. This will give a more thorough grasp of how tax laws change over time and how they affect the economy in the long run.
2. Further research can delve into the microeconomic effects of taxation, such as its impact on specific industries, employment, and income distribution. This can provide a more detailed picture of how different sectors are affected by tax policies.

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