Personal Income Tax and Economic Development in Lagos State, Nigeria

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Certification

This is to certify that **Diekolola Babatunde OSINUPEBI** with the matriculation number **LCU/PG/001868** carried out this research work titled "Personal Income Tax and Economic Development in Lagos State" in the Department of Management & Accounting, Faculty of Management & Social Sciences, Lead City University, Ibadan, Oyo State, for the Award of Master of Science Degree (MSc) in Accounting and that this has not been previously submitted.

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Dedication

It is with genuine gratitude and warm regards that I dedicate this thesis to God Almighty through our Lord Jesus Christ, all praise and adoration belongs to Him for strengthening and sustaining me in the course of my study.

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Even though the above-mentioned institution and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any, found in the work.

Abstract

The rate at which Nigeria economy (GDP) continuously nosedives urgently calls for the attention of researchers. The effect of personal income tax on economic development, particularly within the context of Lagos State, is a multifaceted issue that warrants comprehensive investigation. This research aims to determine the effect of Personal Income Tax on Economic Development, using the personal income tax of Lagos State as a case study. The time scope of this study spans from 2012 to 2023. This study adopts an ex post facto research design. Using documentation method of data collection, secondary data was collected from Lagos State Internal Revenue Services (LIRS) reports, National Bureau of Statistics (NBS) data, etc. Data collected were analyzed using a Hierarchical Regression in testing the hypotheses of the study with the aid of SPSS 25 Version. This study revealed that personal income tax, tax base and tax compliance rate contributed significantly to the gross domestic product of Lagos state. Arisen from the findings of the study, the researcher recommended that there is urgent need for the state government of Lagos state to encourage and develop various mechanisms for generating more PIT in order to increase the gross domestic product. To ensure that PIT base increases, government should create opportunities for employment generation. To increase compliance rate, government should engage tax professionals, employ faithful, dedicated and hardworking staff to assist in the area of tax collection from small and medium scale business in Lagos state. Also, there is need for proper documentation and management of this revenue.

Keywords: Personal Income Tax, Tax Base, Tax Compliance Rate, Gross Domestic Product

Word Count: 253

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Chapter One

Introduction

1.1 Background to the Study

The study of personal income tax and its relationship with economic development is a multifaceted field that attracts significant attention from scholars and policymakers globally. Lagos State in recent times has improved on tax generation to support economic development goals, with a focus on enhancing revenue mobilization, reducing inequality, and improving public service delivery. In contrast to challenges such as tax evasion and informal sector activities, Nigeria's progressive tax system contributes to financing key development priorities and promoting economic development. Despite existing research on the relationship between personal income tax and economic development, research gaps persist. Methodologically, there is a need for more rigorous empirical studies that employ advanced econometric techniques such as Hierarchical Regression Model (HRM) to analyze this relationship between tax revenue, tax base, compliance rate and development outcomes.

At the world level, personal income tax policies are shaped by intereconomic standards and trends, reflecting the complex interplay between economic goals, social objectives, and political consideration[1]. Continental variations in tax systems further highlight the diverse approaches to taxation and development across regions. In developed nations such as the United States, personal income tax serves as a cornerstone of fiscal policy, contributing substantially to government revenue and financing various public services and welfare program[2]. The progressive nature of income taxation in countries like the US ensures that higher-income individuals bear a greater tax burden, allowing for wealth redistribution and social welfare provision[3]. This progressive tax structure is designed to promote economic equity while supporting economic development goals. Similarly, in European nations like the United Kingdom and Germany, personal income tax plays a crucial role in funding public goods and services essential for societal well-being and economic growth[4].

Progressive tax systems in these countries aim to mitigate income inequality and facilitate investment in infrastructure, education, and healthcare, thereby contributing to long-term development outcome[5].

In contrast, African nations face distinct challenges in harnessing personal income tax for economic development due to factors such as informal economies, weak tax administration, and governance issues[6]. However, countries like South Africa, Nigeria, and Kenya have made strides in reforming their tax systems to enhance revenue mobilization and support sustainable development agendas[7]. In South Africa, personal income tax constitutes a significant source of government revenue, funding key social programs and infrastructure projects aimed at addressing historical inequalities and promoting inclusive growth[6]. Economic development means more than economic growth. Its scope includes the processes and policies by which a nation improves the economic, political and social well-being of its people.[8]. Similarly, Nigeria has embarked on tax reforms to broaden the tax base, improve compliance, and enhance revenue collection for financing critical development initiatives[9]. The country's efforts to strengthen tax administration and governance mechanisms are essential for leveraging personal income tax for sustainable development outcomes[10].

The variables and sub-variables underpinning the relationship between personal income tax and economic development encompass a wide range of economic, social, and institutional factors.

Key variables include tax revenue generation, tax compliance, government expenditure, economic growth, income distribution, and social welfare outcomes [9].

Tax revenue generation is influenced by factors such as tax rates, tax administration efficiency, and the size of the informal economy[9]. Effective tax compliance mechanisms, taxpayer education, and enforcement measures are essential for maximizing revenue collection and supporting sustainable development initiatives[10]. The effectiveness of public spending programs in achieving development objectives depends on revenue availability, fiscal management practices, and institutional capacity. Economic growth is both a determinant and an outcome of tax policies, with progressive taxation potentially stimulating investment, consumption, and productivity. Income distribution, influenced by tax progressivity and social spending, reflects the impact of tax policies on different income groups and their contribution to social welfare outcomes[7]. All these strategic objectives are towards achieving an improved welfare of the ever-increasing population of the state. Tax reforms are changes that are made in the Nigerian Tax system to increase the revenue potential of government so as improve peoples' welfare. No matter the angle from which personal income tax is viewed, the purpose is to generate more revenue to the government.[11].

In Nigeria like other countries of the world, the government needs to generate revenue from tax and other sources for the provision infrastructure such as power supply, good roads for efficient transportation system, healthcare facilities, and schools, security of lives and properties and defense against internal and external aggression.[12].

Understanding how tax policies impact development outcomes is essential for policymakers seeking to design effective fiscal strategies that promote inclusive growth and poverty reduction[13]. This is however not limited to government alone. Furthermore, with increasing globalization and interconnectedness, insights from cross-country comparisons can inform best practices and policy reforms tailored to specific economic contexts[1]. By analyzing experiences from developed and African nations alike, researchers can identify lessons learned, challenges faced, and strategies for improving the effectiveness of tax systems in supporting sustainable development goals. Ultimately, a better understanding of the relationship between taxation and development is essential for achieving inclusive and sustainable growth outcomes globally[2].

1.2 Statement of the Problem

The effect of personal income tax on economic development, particularly within the context of Lagos State, is a multifaceted issue that warrants comprehensive investigation. At the heart of this inquiry lies the recognition of various problems impeding economic development and the role of personal income tax in addressing or exacerbating these challenges. Lagos State, being one of the economic hubs of Nigeria, provides a compelling case study due to its significant contribution to the economic gross domestic product (GDP). One of the central problems hindering economic development is the pervasive issue of poverty, inequality, and inadequate social infrastructure. Inadequate healthcare, education, and transportation systems further perpetuate the cycle of poverty and hinder overall development.

Furthermore, the contribution of Lagos State to the economic GDP cannot be overstated. Lagos State accounts for a significant portion of Nigeria's GDP, driven largely by its vibrant economic activities, including trade, finance, and manufacturing. However, despite its economic prowess, Lagos State still grapples with infrastructural deficits and socio-economic disparities. Personal income tax revenue plays a critical role in funding essential services and infrastructure projects necessary for development. However, the effectiveness of this revenue stream is contingent upon factors such as compliance levels and prudent expenditure. On one hand, poor compliance with personal income tax obligations diminishes the revenue available for development initiatives. Tax evasion and avoidance undermine the government's capacity to fund critical projects and address socio-economic challenges. Conversely, robust compliance enhances revenue generation and enables governments to invest in human capital development, infrastructure, and social welfare programs[14]. Moreover, how personal income tax revenue is used affect its contribution to economic development in Lagos State. Mismanagement, corruption, and inefficiencies in public expenditure will limit the usefulness of tax revenue on development growth in Lagos State. Despite existing research on the nexus between personal income tax and economic development, several research gaps persist. Methodologically, there is a need for more rigorous empirical studies that employ advanced econometric techniques to analyze the causal relationship between tax revenue, expenditure, and development outcomes. Theoretical conflicts within the literature further hinder our understanding of the relationship between personal income tax and economic development. While some scholars advocate for progressive taxation as a tool for redistributive justice and equitable development, others argue that excessive taxation can stifle economic growth and discourage investment[15]. Resolving these conflicts necessitates clear theoretical frameworks that consider the contextual factors influencing tax policy effectiveness.

1.3 Aim and Objectives of the Study

This research aims to determine the effect of Personal Income Tax on Economic Development, using the personal income tax of Lagos State as a case study. The specific objectives of this study are to:

1. To determine the effect of personal income tax revenue on the gross domestic product of Lagos state

2. To determine the effect of personal income tax base on the gross domestic product of Lagos state

3. To determine the effect of personal income tax compliance rate on the gross domestic product of Lagos state

1.4 Research Questions

1. What is the effect of personal income tax revenue on the gross domestic product of Lagos state?

2. What is the effect of personal income tax base on the gross domestic product of Lagos state?

3. What is the effect of personal income tax compliance rate on the gross domestic product of Lagos state?

1.5 Hypotheses

$H_0$1: Personal income tax revenue has no significant effect on the gross domestic product of Lagos state.

$H_0$2: Personal income tax base has no significant effect on the gross domestic product of Lagos state.

$H_0$3: Personal income tax compliance rate has no significant effect on the gross domestic product of Lagos state.

1.6 Significance of the Study

The significance of this study extends across multiple dimensions, encompassing policy, practical, academic, and methodological realms.

Understanding the relationship between personal income tax and economic development in Lagos State holds immense policy relevance. As Lagos State serves as a major economic hub in Nigeria, insights from this study can inform policymakers about the efficacy of current tax policies and guide future reforms aimed at enhancing revenue mobilization and fostering sustainable development. By elucidating the impact of personal income tax revenue, expenditure, and compliance on the gross domestic product (GDP) of Lagos State, policymakers can tailor fiscal strategies to optimize resource allocation, prioritize key sectors, and address socio-economic disparities effectively.

Practically, the findings of this study can offer actionable insights for tax administrators, government agencies, and stakeholders involved in fiscal management and public service delivery. By assessing the effectiveness of personal income tax revenue in driving economic growth and development outcomes, stakeholders can devise targeted interventions to improve tax compliance, enhance revenue collection, and ensure transparent utilization of tax funds. Moreover, understanding the dynamics of personal income tax base can guide resource allocation decisions, enabling policymakers to allocate funds to sectors critical for human capital development, infrastructure improvement, and poverty alleviation.

From an academic perspective, this study contributes to the existing literature on the nexus between taxation and development, particularly in the context of Lagos State, Nigeria. By empirically investigating the relationships between personal income tax revenue, expenditure, compliance, and GDP growth, this research adds to the body of knowledge on fiscal policy effectiveness and its implications for socio-economic development. Theoretical frameworks and empirical findings generated from this study can enrich academic discourse, inform future research inquiries, and provide a basis for comparative analyses across regions and countries facing similar developmental challenges.

Methodologically, this study offers insights into the application of advanced econometric techniques to analyze complex relationships between tax policy variables and development outcomes. By employing rigorous empirical methods, including longitudinal analysis and econometric modeling, this research enhances the methodological rigor of studies exploring the impact of taxation on economic development. The adoption of robust methodologies strengthens the validity and reliability of findings, facilitating evidence-based policymaking and fostering a deeper understanding of the mechanisms through which tax policies influence economic development trajectories.

The significance of this study transcends disciplinary boundaries, offering actionable insights for policymakers, practitioners, scholars, and methodologists alike. By shedding light on the role of personal income tax in driving economic development in Lagos State, Nigeria, this research contributes to informed decision-making processes, fosters inclusive growth, and advances the overarching goal of sustainable development.

1.7 Scope of the Study

This study focuses on the relationship between personal income tax and economic development, with specific emphasis on Lagos State, Nigeria. It examines how personal income tax revenue, expenditure, and compliance influence the gross domestic product (GDP) of Lagos State, thereby providing insights into the role of taxation in driving economic growth and socio-economic development within the state.

The time scope of this study spans from 2012 to 2023. This period allows for the analysis of trends and dynamics in personal income tax revenue, expenditure, compliance, and GDP growth within Lagos State over a significant timeframe. By examining developments over a decade, the study aims to capture long-term patterns and assess the impact of tax policies on economic performance and development outcomes in the state.

1.8 Limitation of the Study

This research work is with some limitations that need to be looked into in future studies. The use of Gross Domestic Product as Sub-dependent variable is prone to bias or subjectivity. Tax has many indicators that can be used for measurement. A further concern arises in the use of period of observation restricted to twelve years in the study**.**

1.9 Operational Definitions of Terms

In the study the following concepts will be used as explained'

Personal Income Tax: A direct tax levied on the income earned by individuals, including wages, salaries, bonuses, and other sources of personal income, within a specified jurisdiction, such as Lagos State, Nigeria. Personal income tax is typically assessed based on progressive tax rates and may vary according to the individual's income level.

Economic Development: The process of improving the economic, social, and institutional conditions within a nation-state to enhance the well-being and quality of life of its citizens. Economic development in Lagos State encompasses various dimensions, including economic growth, poverty reduction, infrastructure development, social welfare provision, and equitable distribution of resources and opportunities.

Gross Domestic Product (GDP): A measure of the total value of goods and services produced within the geographical boundaries of a country or region during a specific period, typically expressed in monetary terms. GDP in Lagos State serves as a key indicator of economic activity and is often used to assess the overall size and performance of its economy.

Tax Revenue Generation: The process of collecting income from taxes imposed on individuals, businesses, and other entities by governmental authorities, such as the Lagos State Internal Revenue Service (LIRS). Tax revenue generation involves the assessment, collection, and administration of various taxes, including personal income tax, corporate income tax, value-added tax (VAT), and others.

Tax Compliance: The extent to which individuals and businesses adhere to tax laws and regulations by accurately reporting their income, calculating and paying the appropriate amount of taxes owed, and submitting required tax returns and documentation to tax authorities, such as the Lagos State Internal Revenue Service (LIRS). Tax compliance is essential for ensuring the integrity and effectiveness of the tax system and maximizing revenue collection for government purposes.

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Chapter Two

Literature Review

This chapter would deal with the review of relevant literature. It also deals with the contribution of both past and present scholars and researcher contribution in related to the current studies. It has four sections of which the first section is the conceptual review the second section is the theoretical review the third section is the empirical review and the last section is conceptual model.

2.1 Conceptual Review

2.1.1 Economic Development

Economic development is a multifaceted concept that encompasses various aspects of a country's progress, including economic growth, social welfare, infrastructure development, and human capital enhancement. Scholars have extensively studied the dynamics and determinants of economic development to understand its complexities and devise strategies for fostering sustainable growth. A significant body of literature exists on this subject, offering insights into different dimensions of development and their interplay. Economic development is crucial for economic progress, enhancing living standards, and overall well-being. Inclusive economic institutions play a pivotal role in fostering sustained economic growth and development[1]. These institutions encompass secure property rights, contract enforcement, and the establishment of a level playing field for economic activities. Through such mechanisms, innovation and entrepreneurship are stimulated, thereby propelling economic progress. Furthermore, Researchers underscores the significance of tailored industrial policies in promoting economic development in a country as it builds better living conditions and enhance. The advocacy for governments t concentrate on building capabilities and nurturing industries where they possess a comparative advantage. This approach aligns with the notion of crafting context-specific strategies to leverage a nation's strengths and resources effectively[2].

Inclusive economic institutions are vital for providing a conducive environment for economic activities. Secure property rights and contract enforcement instill confidence among individuals and businesses, encouraging investment and entrepreneurship. Moreover, a level playing field ensures fair competition, which drives efficiency and innovation. By fostering an environment conducive to economic dynamism, inclusive institutions lay the groundwork for sustainable growth and development. This perspective emphasizes the fundamental role of governance in shaping economic outcomes and underscores the need for policies that prioritize institutional reform and strengthening. Rather than adopting a one-size-fits-all approach, governments should devise strategies that capitalize on their inherent strengths and address specific developmental needs. By focusing on sectors where they have a comparative advantage, countries can foster the growth of industries that are well-positioned to compete globally. This approach not only enhances economic efficiency but also contributes to long-term prosperity by nurturing domestic capabilities and fostering innovation[3]

Furthermore, the discussion on industrial policies underscores the critical role of the state in guiding economic development. While market forces play a significant role in resource allocation, government intervention is often necessary to correct market failures, address coordination problems, and promote strategic sectors. Effective industrial policies require a delicate balance between state intervention and market mechanisms, ensuring that interventions are targeted, transparent, and aligned with broader development objectives. By leveraging its regulatory and fiscal powers, the state can facilitate private sector investment, promote technology transfer, and create an enabling environment for sustainable economic growth[4].

Inclusive economic institutions provide the foundation for sustained growth by fostering innovation, entrepreneurship, and fair competition. Meanwhile, tailored industrial policies enable countries to capitalize on their comparative advantages and address specific developmental challenges. Ultimately, effective economic development requires a holistic approach that integrates institutional reforms, targeted policies, and strategic interventions to unlock a nation's full potential and promote inclusive prosperity.

The discussion on the significance of inclusive economic institutions and tailored industrial policies in fostering economic development directly relates to the broader conversation surrounding Gross Domestic Product (GDP) as an indicator of economic progress. Inclusive economic institutions in driving sustained GDP growth by fostering innovation, entrepreneurship, and fair competition. Similarly, it underscores the importance of tailored industrial policies in maximizing GDP through strategic investment and sector-specific development[2]. However, the reliance on GDP as a sole measure of economic development has been subject to criticism, as it may not fully capture the multidimensional aspects of well-being and societal progress[5].

Gross Domestic Product (GDP) is commonly used as a measure of economic development, reflecting the total value of goods and services produced within a country's borders over a specific period. However, while GDP provides a snapshot of economic activity, it may not fully capture the quality of life or well-being of a population. GDP alone does not adequately reflect the inclusivity or sustainability of economic growth. Inclusive economic institutions, as they suggest, are essential for ensuring that the benefits of growth are distributed equitably across society. Therefore, while GDP growth is necessary for economic development, it must be accompanied by policies that promote social inclusion and address disparities in wealth and opportunity. While GDP growth may result from increased industrial output, the quality of growth matters. Industrial policies that focus solely on maximizing GDP may overlook important considerations such as environmental sustainability, social equity, and technological innovation. Therefore, a narrow focus on GDP as a measure of economic development may lead to policies that prioritize short-term gains over long-term sustainability. Instead, policymakers should adopt a more holistic approach that considers a range of indicators, including income distribution, access to education and healthcare, and environmental quality.[6]

Incorporating a broader set of indicators alongside GDP can provide a more comprehensive understanding of economic development. For instance, measures such as the Human Development Index (HDI), which incorporates factors such as life expectancy, education, and income, offer a more perspective on development outcomes. By complementing GDP with multidimensional indicators, policymakers can better assess the effectiveness of policies in improving the overall well-being of society. Ultimately, while GDP remains a valuable tool for measuring economic activity, its limitations underscore the importance of adopting a broader framework for assessing economic development that accounts for social, environmental, and institutional factors.

Infrastructure development is a cornerstone of economic growth. Investments in infrastructure, especially in transportation and energy sectors, have been shown to yield substantial positive impacts on economic development. By reducing transaction costs and enhancing connectivity, well-designed infrastructure projects stimulate both short-term demand and long-term productivity gains[7]. Moreover, infrastructure development plays a crucial role in promoting regional convergence. Disparities in economic opportunities across regions can hinder overall growth and exacerbate social inequalities. However, targeted investments in infrastructure can help bridge these gaps by improving access to markets, education, and healthcare. Furthermore, the benefits of infrastructure development extend beyond purely economic considerations. Improved infrastructure, such as better roads, ports, and telecommunications networks, enhances the overall quality of life for citizens. From this perspective, infrastructure development becomes not only a driver of economic growth but also a means of promoting social inclusion and empowerment[8].

However, it is essential to acknowledge the challenges associated with infrastructure development, particularly in developing countries. Limited financial resources, institutional capacity constraints, and environmental concerns can impede the planning and implementation of infrastructure projects. Addressing these challenges requires a coordinated effort involving governments, multilateral organizations, and the private sector. This underscores the importance of effective governance and strategic planning in maximizing the developmental impact of infrastructure investments.

Infrastructure development plays a role in facilitating economic growth and promoting inclusive development. By reducing transaction costs, enhancing connectivity, and promoting regional convergence, investments in infrastructure stimulate productivity and foster balanced growth. However, realizing the full potential of infrastructure requires addressing various challenges and adopting a holistic approach that considers economic, social, and environmental dimensions. In this regard, the insights of scholars from diverse disciplines, including economics, political science, and development studies, provide valuable guidance for policymakers and practitioners seeking to harness the transformative power of infrastructure for sustainable development[9].

Industrial growth is a pivotal driver of economic development, shaping the trajectory of economies worldwide. Central to the process of industrial growth is the role of government intervention. Governments play a crucial role in providing strategic guidance, coordinating stakeholders, and investing in human capital and innovation systems. Effective governance is thus essential for creating an enabling environment conducive to industrial expansion and innovation-driven growth[10].

Moreover, fostering linkages between domestic industries and global value chains emerges as a key strategy for enhancing competitiveness and integration into the global economy. This notion underscores the interconnected nature of contemporary industrial systems, wherein participation in global value chains offers opportunities for knowledge transfer, technology absorption, and access to larger markets. By taking good advantages of these process, developing countries can put themselves better in the global economy, accelerating their industrial development in record time.

However, the pursuit of industrial growth must be accompanied by considerations of sustainability and inclusivity. While industrialization can drive economic progress, it also raises concerns about environmental degradation and social inequalities. Therefore, policies aimed at fostering industrial growth should be designed with a view towards balancing economic objectives with environmental sustainability and social equity. This necessitates investments in green technologies, regulatory frameworks, and social safety nets to mitigate adverse impacts and ensure that the benefits of industrialization are equitably distributed[9].

Industrial growth remains a critical component of economic development strategies, offering pathways for structural transformation and employment generation. Effective industrial policies should prioritize technological upgrading, diversification, and integration into global value chains, with governments playing a proactive role in providing strategic guidance and investments. However, the pursuit of industrialization must be accompanied by efforts to address sustainability and inclusivity concerns, ensuring that economic gains are compatible with environmental protection and social equity. By adopting a holistic approach to industrial development, nations can harness the full potential of their industrial sectors to drive sustainable and inclusive growth.

Human capital development stands as a cornerstone for nurturing a skilled and efficient workforce, indispensable for propelling innovation, technological progression, and economic prosperity. These investments bolster individuals' productive capacities and contribute substantially to overall productivity escalation. Quality education and healthcare systems play a paramount role in furnishing individuals with the requisite skills and knowledge to adeptly navigate dynamic economic landscapes and engage fruitfully in the labor market[10]. Human capital serves as a primary determinant of economic development, with investments in education and health amplifying individuals' productivity and ultimately fostering economic advancement.

Education emerges as a critical component of human capital development, significantly influencing individuals' earning potential and overall economic well-being. Moreover, investments in education not only bolster individual outcomes but also foster societal progress by equipping individuals with the skills needed for technological adaptation and innovation. A well-educated workforce is better positioned to grasp and implement technological advancements, thereby fostering productivity growth and spurring economic development[11]. Health, alongside education, constitutes a fundamental aspect of human capital development, exerting a profound impact on individuals' economic outcomes and overall quality of life. Investment in healthcare infrastructure and services not only enhances individuals' well-being but also augments their productivity and earning potential. Improved health outcomes lead to reduced absenteeism, increased labor force participation, and heightened productivity, ultimately contributing to economic growth and development. Therefore, robust healthcare systems are indispensable for cultivating a healthy and productive workforce, essential for sustained economic advancement[12].

Furthermore, the interplay between human capital development and economic growth underscores the significance of policy interventions aimed at fostering education and healthcare access. Governments and policymakers play a pivotal role in shaping the human capital landscape through investments in education and healthcare infrastructure. Policies aimed at improving access to quality education and healthcare, particularly among marginalized populations, can yield substantial dividends in terms of economic development and societal well-being. Moreover, targeted interventions aimed at enhancing human capital development can mitigate disparities in income and opportunity, thereby fostering inclusive economic growth.

Human capital development constitutes a linchpin for fostering a skilled and productive workforce, indispensable for driving innovation, technological advancement, and economic growth. Investments in education and health emerge as key determinants of long-term economic development, enhancing individuals' productive capabilities and contributing to overall productivity growth. Quality education and healthcare systems play a pivotal role in equipping individuals with the skills and knowledge necessary to adapt to evolving economic landscapes and participate effectively in the labor market. Therefore, fostering human capital development through targeted policy interventions is imperative for nurturing inclusive economic growth and societal progress.

Innovation and technology serve as catalysts for economic transformation and sustainable development, shaping the trajectory of societies worldwide. Government policies are pivotal in steering technological innovation towards addressing societal needs and ensuring equitable distribution of its benefits. This approach not only drives innovation but also fosters inclusive growth by addressing societal concerns. In the realm of economic development and innovation, it is important to nurture a conducive environment for innovation to flourish. This entails substantial investments in research and development, which serve as the bedrock for technological breakthroughs and subsequent economic growth. Additionally, supporting entrepreneurship plays a crucial role in harnessing innovative ideas and translating them into viable businesses. Governments and institutions must create regulatory frameworks that facilitate entrepreneurship while ensuring fair competition and consumer protection[13].

Furthermore, the collaboration between public and private sectors is paramount in driving innovation-led economic development. Governments can provide funding, incentives, and infrastructure to support research and development initiatives, while businesses bring in expertise, resources, and market-driven insights. This synergy fosters a dynamic ecosystem where innovation thrives, leading to job creation, productivity enhancements, and overall economic prosperity. However, effective collaboration requires clear communication, mutual trust, and alignment of goals between the public and private sectors.

Moreover, the role of education and skills development cannot be overstated in the context of fostering innovation-driven economic growth. Investing in education systems that emphasize critical thinking, creativity, and problem-solving skills cultivates a workforce capable of driving technological advancements and adapting to rapidly changing industries. Additionally, promoting lifelong learning initiatives ensures that individuals remain competitive in the labor market amidst evolving technological landscapes. By investing in human capital, societies can unlock the full potential of innovation to drive sustainable development and improve quality of life for all citizens.

Innovation and technology are pivotal drivers of economic transformation and sustained development, with government policies playing a central role in shaping their direction and impact. Mission-oriented innovation policies, coupled with investments in research and development, support for entrepreneurship, and conducive regulatory environments, form the cornerstone of effective innovation ecosystems. Collaboration between public and private sectors, coupled with investments in education and skills development, is essential for unlocking the full potential of innovation to address societal challenges and foster inclusive growth. By embracing innovation as a catalyst for progress, societies can navigate the complexities of the modern world and create a more prosperous and equitable future for all.

Several studies have explored the interrelationships between these different dimensions of economic development and identified synergies and trade-offs that policymakers need to consider. For instance, infrastructure development can enhance the productivity of industries and facilitate human capital accumulation by improving access to education and healthcare services[14]. Similarly, investments in human capital can stimulate technological innovation and industrial growth by expanding the pool of skilled labor and fostering entrepreneurship. However, achieving balanced and inclusive development requires addressing inequalities in access to opportunities and ensuring that the benefits of growth are widely shared across society.

2.1.2 Personal Income Tax

Personal income tax, as a fundamental component of fiscal policy, plays a pivotal role in modern economies worldwide. It is a direct tax levied on the income of individuals and households by the government. The primary purpose of personal income tax is to generate revenue to fund government expenditures, including public services, infrastructure development, and social welfare programs. This revenue is crucial for governments to fulfill their obligations and responsibilities towards their citizens. The importance of personal income tax revenue for government cannot be overstated. It serves as one of the primary sources of revenue for funding various public expenditures, including education, healthcare, defense, and social security programs. In many countries, personal income tax contributes significantly to overall government revenue, making it essential for financing public goods and services that benefit society as a whole. Without sufficient revenue from personal income tax, governments would struggle to maintain essential services and address societal needs[15].

Furthermore, personal income tax has a profound impact on individuals and families, both economically and socially. Economically, it affects the disposable income available to individuals and households, influencing their consumption patterns, savings behavior, and overall financial well-being. The progressive nature of personal income tax, wherein higher-income individuals are taxed at higher rates, can also contribute to reducing income inequality by redistributing wealth to fund social programs aimed at assisting low-income families[16]. Moreover, personal income tax can influence individuals' decisions regarding work, investment, and entrepreneurship. High marginal tax rates may discourage labor force participation and incentivize tax evasion or avoidance strategies, while lower tax rates may encourage economic activity and stimulate growth. Additionally, tax deductions and credits designed to incentivize certain behaviors, such as homeownership or charitable giving, can influence individuals' financial decisions and behavior[17]

On a social level, personal income tax reflects societal values and priorities by funding public goods and services that benefit the entire population. It contributes to the provision of essential services, such as healthcare and education, which are fundamental to promoting social mobility and reducing disparities in opportunity. Moreover, the progressive nature of personal income tax reflects a commitment to equity and fairness by imposing higher tax burdens on those with greater ability to pay. This progressive taxation helps mitigate the impact of income inequality and promotes social cohesion by ensuring that the wealthy contribute their fair share to support the common good. Personal income tax has been a subject of extensive research and debate among economists, policymakers, and scholars. One area of focus has been the design and structure of the tax system to achieve various economic and social objectives while balancing efficiency, equity, and simplicity. Researchers have explored different tax policies, such as flat taxes, consumption taxes, and wealth taxes, to assess their impact on economic growth, income distribution, and tax revenue. These studies provide valuable insights into the trade-offs inherent in tax policy decisions and inform policymakers' efforts to design effective tax systems[18].

Furthermore, the globalization of economic activity has raised questions about the taxation of personal income in an increasingly interconnected world. The mobility of capital and labor across borders has made it challenging for governments to effectively tax personal income and prevent tax evasion and avoidance. As a result, there has been growing interest in intereconomic cooperation and coordination to address tax evasion and ensure that individuals pay their fair share of taxes[19]. Initiatives such as the Common Reporting Standard and the Base Erosion and Profit Shifting (BEPS) project aim to enhance transparency and combat tax evasion by multieconomic corporations and high-net-worth individuals. Moreover, technological advancements have transformed the landscape of personal income taxation, both in terms of administration and compliance. The use of digital platforms and electronic filing systems has streamlined the tax filing process and improved taxpayer compliance. Additionally, advances in data analytics and artificial intelligence have enabled tax authorities to better identify tax evasion and enforce tax laws more effectively. However, these technological developments also raise concerns about privacy, data security, and the potential for algorithmic bias in tax enforcement[20].

In recent years, there has been increasing attention to the distributional effects of personal income tax policies and their implications for economic inequality. Studies have examined the progressivity of tax systems and the extent to which they mitigate or exacerbate income disparities. Research has also highlighted the role of tax expenditures, such as deductions and credits, in shaping after-tax income distribution and social welfare outcomes. Understanding the distributional impact of tax policies is crucial for policymakers seeking to promote inclusive growth and reduce poverty and inequality. Furthermore, the COVID-19 pandemic has brought renewed focus to the role of personal income tax in supporting economic recovery and resilience. Governments around the world have implemented various tax measures, such as temporary tax cuts, credits, and deferrals, to provide relief to individuals and businesses affected by the pandemic[21]. These tax policies have aimed to stimulate demand, support employment, and alleviate financial hardship during times of crisis. However, the long-term implications of these measures for fiscal sustainability and income inequality remain subject to debate.

Taxable income determination is a fundamental aspect of personal income tax systems worldwide, shaping the tax liabilities of individuals and households. Taxable income refers to the portion of an individual's earnings or income that is subject to taxation by the government. It is calculated by subtracting allowable deductions and exemptions from gross income, resulting in the amount on which taxes are levied. Understanding the concept of taxable income is essential for taxpayers and policymakers alike, as it forms the basis for determining tax obligations and administering tax laws. Various sources contribute to taxable income, reflecting the diverse ways in which individuals earn income in modern economies. The most common sources of taxable income include wages and salaries earned from employment, which represent the primary source of income for many individuals. Additionally, income from self-employment, business profits, and freelance work is also subject to taxation, reflecting the growing trend of independent work and entrepreneurship. Furthermore, investment income, such as dividends, interest, and capital gains, constitutes another significant source of taxable income for individuals who earn returns from their investments[22].

However, not all income is subject to taxation, as tax laws provide for certain exclusions and deductions aimed at reducing tax burdens and promoting specific policy objectives. Exclusions refer to types of income that are not included in taxable income calculations and are therefore not subject to taxation. Common examples of exclusions include gifts and inheritances, certain types of insurance proceeds, and qualified distributions from retirement accounts. These exclusions recognize that certain types of income are not earned through active participation in the economy and should not be taxed as such. In addition to exclusions, taxpayers may also be eligible for various deductions, which reduce taxable income by subtracting specific expenses or contributions from gross income. The most well-known deduction is the standard deduction, which provides a flat dollar amount that taxpayers can subtract from their taxable income without needing to itemize deductions. Itemized deductions, on the other hand, allow taxpayers to deduct specific expenses, such as mortgage interest, medical expenses, and charitable contributions, if they exceed certain thresholds. Furthermore, taxpayers may be entitled to exemptions for themselves, their spouses, and dependents, further reducing taxable income. The determination of taxable income involves complex rules and calculations that can vary significantly across jurisdictions and tax systems. Tax laws often contain provisions governing the treatment of specific types of income, deductions, and exemptions, reflecting policymakers' objectives and societal values. Moreover, tax planning and compliance require taxpayers to navigate these rules effectively to minimize tax liabilities while adhering to legal requirements . Therefore, understanding the intricacies of taxable income determination is essential for taxpayers, tax professionals, and policymakers alike, as it influences individual tax burdens, revenue collection, and the overall fairness and efficiency of the tax system[23].

Personal income tax, as a cornerstone of fiscal policy, holds significant implications for individuals, governments, and society as a whole. A recap of key points regarding personal income tax underscores its multifaceted nature and pervasive influence. Firstly, personal income tax constitutes a primary revenue source for governments, providing funds for essential public services, infrastructure development, and social welfare programs. This revenue is crucial for maintaining the functioning of governments and fulfilling their obligations to citizens. Additionally, personal income tax plays a vital role in income redistribution, as it employs a progressive tax structure wherein higher-income individuals are taxed at higher rates, aiming to reduce income inequality and promote social equity[24].

Understanding tax obligations is essential for individuals to comply with legal requirements, fulfill their civic responsibilities, and manage their finances effectively. Taxpayers need to comprehend the tax laws applicable to their income sources, deductions, and exemptions to accurately report their taxable income and minimize tax liabilities within the bounds of the law. Moreover, awareness of tax obligations enables individuals to plan their financial affairs prudently, considering the tax implications of various transactions, investments, and life events. Failure to understand and meet tax obligations can lead to penalties, fines, and legal consequences, underscoring the importance of tax literacy and compliance. On a broader societal level, personal income tax serves as a mechanism for funding public goods and services that benefit the entire population. It supports investments in education, healthcare, infrastructure, and social safety nets, contributing to economic development, social mobility, and quality of life. Furthermore, personal income tax reflects societal values and priorities, as it allocates resources to address pressing issues such as poverty alleviation, healthcare access, and environmental protection. By financing collective endeavors, personal income tax fosters social cohesion and solidarity, reinforcing the social contract between citizens and the state[25].

The role of personal income tax in society extends beyond revenue generation and resource allocation; it also serves as a tool for shaping behavior and achieving policy objectives. Tax policy decisions, such as tax credits for renewable energy investments or deductions for charitable donations, incentivize desirable behaviors and activities while disincentivizing others. Moreover, personal income tax can influence labor market dynamics, savings behavior, and investment decisions, impacting economic growth, productivity, and innovation. As such, policymakers must carefully consider the design and implementation of tax policies to balance economic efficiency, equity, and social welfare objectives[26].

At the core of the discussion is the impact of personal income tax on economic growth. While taxation can potentially dampen incentives for work, investment, and entrepreneurship, well-designed tax systems can also support economic development by providing resources for public investments in infrastructure, education, and healthcare. Research suggests that the effects of personal income tax on economic growth depend on various factors, including tax rates, tax bases, and the efficiency of public spending. High marginal tax rates may discourage productive activities and reduce labor force participation, thereby inhibiting economic expansion. Conversely, lower and more equitable tax systems can stimulate economic activity by providing individuals with greater incentives to work, save, and invest. Furthermore, the distributional impact of personal income tax policies is crucial for social welfare and equity. Progressive tax systems, wherein higher-income individuals are taxed at higher rates, can contribute to reducing income inequality and promoting social cohesion[27]. By redistributing resources from the wealthy to the less affluent through progressive taxation and social spending, governments can enhance social welfare, reduce poverty, and improve overall well-being. However, the effectiveness of redistributive policies depends on the progressivity of the tax system, the level of compliance, and the efficiency of social programs in reaching those in need.

Moreover, personal income tax revenue plays a crucial role in financing infrastructure development, which is essential for fostering economic growth and enhancing productivity. Investments in transportation, communication, energy, and other infrastructure sectors enable the efficient movement of goods and people, facilitate business operations, and attract private sector investment. By funding infrastructure projects through tax revenue, governments can address infrastructure gaps, reduce bottlenecks, and create an enabling environment for sustainable development[28].

Additionally, personal income tax policies can impact human capital enhancement by influencing individuals' decisions regarding education, training, and skill development. Tax deductions for education expenses or credits for lifelong learning initiatives can incentivize investments in human capital, leading to a more skilled and productive workforce. Conversely, high marginal tax rates on labor income may discourage individuals from pursuing education or training opportunities, thereby hindering human capital accumulation and economic advancement. Therefore, tax policies that support access to education and skill development can contribute to economic development by enhancing workforce productivity and fostering innovation. Furthermore, the efficiency and effectiveness of personal income tax administration are critical for realizing the developmental benefits of taxation. Tax compliance costs, administrative burdens, and enforcement challenges can undermine the efficacy of tax policies and deter economic activity[29]. Simplifying tax systems, improving compliance mechanisms, and enhancing transparency can enhance tax compliance and revenue collection, ensuring that resources are effectively mobilized for economic development initiatives. Moreover, combating tax evasion and avoidance through intereconomic cooperation and information exchange can help governments capture revenue from mobile capital and ensure that all individuals contribute their fair share to economic development effort[30].

2.1.3 Personal Income Tax Compliance

Personal income tax compliance stands as a multifaceted domain that has garnered substantial attention within academic literature for its profound implications on government revenue, taxpayer behavior, and broader economic efficiency. Scholars have delved into an array of facets concerning personal income tax compliance, diligently examining factors that sway compliance rates, evaluating the efficacy of enforcement mechanisms, and dissecting the behavioral responses of taxpayers in light of shifts in tax policies. This comprehensive exploration not only sheds light on the intricacies of tax compliance but also aids policymakers in crafting more effective strategies to enhance revenue collection while fostering a conducive environment for taxpayer cooperation and economic growth. Through meticulous research, academics have dissected the dynamics surrounding personal income tax compliance, offering insights into the intricate interplay between regulatory measures, taxpayer attitudes, and socioeconomic factors. By scrutinizing these components, scholars contribute to a deeper understanding of how tax systems function in practice, enabling policymakers to devise more targeted interventions that foster greater compliance and minimize tax evasion[31]. This scholarly endeavor ultimately serves to fortify the fiscal foundation of governments, bolstering their capacity to fund essential public services and support sustainable economic development.

One major focus of the literature is on the determinants of personal income tax compliance. Scholars have identified a range of factors that influence taxpayers' decisions to comply with tax laws, including perceptions of fairness, social norms, enforcement measures, and the complexity of the tax system[17]. Understanding these determinants is crucial for policymakers seeking to design effective tax policies and enforcement strategies. Several studies have examined the role of enforcement mechanisms in promoting tax compliance. Enforcement measures such as audits, penalties, and information reporting requirements can act as deterrents to non-compliance by increasing the perceived risk of detection and punishment. However, the effectiveness of enforcement strategies depends on various factors, including the level of resources allocated to enforcement activities and the perceived probability of detection.

The taxpayer perceptions in shaping compliance behavior is very key. Perceptions of fairness, trust in government institutions, and attitudes towards taxation can influence individuals' willingness to comply with tax laws. Moreover, social norms and peer influence play a significant role in shaping compliance behavior, with individuals often conforming to the behavior of their peers and social networks[32].

Tax complexity is another key factor that affects personal income tax compliance. A complex tax system can confuse taxpayers, increase the likelihood of errors, and create opportunities for non-compliance. Simplifying the tax code and reducing compliance costs can improve taxpayer compliance and enhance overall tax administration efficiency The effectiveness of tax compliance strategies depends on the context-specific factors such as cultural norms, institutional capacity, and the socio-economic characteristics of taxpayers[33]. Therefore, policymakers must consider these factors when designing tax policies and enforcement measures. Recent research has also examined the behavioral responses of taxpayers to changes in tax policy. For example, studies have investigated how changes in tax rates, deductions, and credits affect compliance behavior and revenue outcomes. Understanding these behavioral responses is essential for predicting the impact of tax policy changes and designing policies that achieve desired outcomes.

One area of ongoing research is the use of technology and data analytics to improve tax compliance. Advances in technology have enabled tax authorities to better identify non-compliance, target enforcement efforts, and streamline tax administration processes. However, the use of technology also raises concerns about privacy, data security, and the potential for unintended consequences. Additionally, the literature underscores the importance of taxpayer education and communication in promoting compliance. Providing clear and accessible information about tax obligations, rights, and responsibilities can help taxpayers understand their obligations and reduce the likelihood of errors or non-compliance. Moreover, effective communication strategies can enhance trust in government institutions and foster cooperation between taxpayers and tax authorities. Research also suggests that voluntary compliance programs, such as tax amnesty initiatives and voluntary disclosure programs, can be effective in encouraging non-compliant taxpayers to come forward and regularize their tax affairs[34]. These programs offer incentives for taxpayers to voluntarily disclose previously unreported income or assets in exchange for reduced penalties or amnesty from prosecution. However, the success of voluntary compliance programs depends on factors such as the design of the program, the level of publicity and outreach, and the credibility of the amnesty offer.

The literature on personal income tax compliance highlights the importance of a balanced approach to tax enforcement, combining deterrence measures with strategies to promote voluntary compliance. While enforcement actions such as audits and penalties are necessary to deter non-compliance and maintain the integrity of the tax system, efforts to promote voluntary compliance through education, communication, and outreach can help build trust, foster cooperation, and reduce the need for enforcement actions.

Moreover, research suggests that tax compliance is not solely driven by economic incentives but is also influenced by social, psychological, and cultural factors. Therefore, policymakers must adopt a holistic approach to tax compliance that takes into account the diverse motivations and behaviors of taxpayers. This may involve tailoring compliance strategies to specific taxpayer segments, addressing underlying drivers of non-compliance such as perceptions of unfairness or distrust, and fostering a culture of tax compliance through social norms and peer influence.

2.1.4 Personal Income Tax Base

The base of the Personal Income Tax is the taxable income calculated from the income earned by an individual during a tax period which is usually one year. The applicable tax definition of what types of incomes are taxed is determined in the tax law but sometimes courts also play a role in determining what incomes are taxable. Certain incomes may be exempt and not be included in the gross income at all. While the income that is taxable includes income that arises from sources within the country, it may also include income arising from foreign sources in the case of tax residents.

To arrive at the income subject to tax from the gross income, the “taxable income”, deductions may be provided which may be specific to each category of income. These deductions may sometimes result in a loss under the separate category of income and such losses may or may not be allowed to be set-off against income from other categories. Some deductions are generally applicable in calculating taxable income, as opposed to being related to specific categories of income. The unit of taxation may be the individual, married couple or even a family. This means that the gross incomes are aggregated for all the sub-units within the taxable unit and the taxable income is calculated for the taxable unit. The tax is calculated by applying the tax rate on the taxable income. The tax rate structure may include a zero-rate bracket which is the threshold on which a zero-rate of tax is applied band after which a positive rate(s) may be applied with increasing rates typically applied on higher bands of taxable income. Some countries apply preferential rates to certain categories of income (say capital gains) or certain types of individuals (say senior citizens) or taxing units (say married). After the tax is calculated, some countries may provide for tax credits that reduce the amount of tax payable to provide relief to certain taxpayers or as a tax incentive. An example is the Child Tax Credit which allows a certain amount of reduction from the tax for an individual with underage children. Whether tax credits versus deductions should be used to provide relief is a critical policy variable as it has equity implications. In addition, if tax credits are used, the question arises whether the credit is refundable or not, on other words, does the taxpayer receive the full benefit of the credit if the credit exceeds the amount of tax due.

Its effects on various aspects of the economy, including savings, investment, labor supply, and income distribution, have been examined by researchers from different perspectives. One significant aspect explored is the impact of tax expenditure on household behavior and welfare. Studies suggest that tax expenditures influence household decisions regarding savings and consumption, thereby affecting overall economic activity[35].

The effectiveness of personal income tax base in stimulating economic growth has been a topic of debate among economists. While proponents argue that tax incentives encourage investment and entrepreneurship, critics raise concerns about the potential inefficiency and inequity associated with such policies. Empirical research has shown mixed results regarding the effectiveness of tax expenditure in promoting economic growth, with some studies finding positive effects on investment and others suggesting limited impact. Another area of research focuses on the distributional effects of personal income tax base. Tax deductions and credits often benefit higher-income households disproportionately, leading to concerns about their impact on income inequality. Studies have found that tax expenditures tend to favor higher-income individuals who are more likely to itemize deductions and take advantage of credits. This regressive nature of tax expenditure has implications for social equity and fiscal policy[36].

Moreover, the interaction between personal income tax base and labor supply has been studied extensively. Tax incentives, such as credits for childcare expenses or education, can affect individuals' decisions regarding work participation and hours. Research suggests that while some tax expenditures may encourage labor force participation, others may create disincentives to work, particularly for certain demographic groups[37]. Understanding these dynamics is crucial for designing tax policies that promote both economic efficiency and social welfare.

The role of personal income tax base in promoting specific policy objectives, such as homeownership or charitable giving, has also received attention in the literature. Tax deductions for mortgage interest payments and charitable contributions aim to incentivize certain behaviors deemed socially beneficial. However, studies have questioned the effectiveness of these incentives in achieving their intended goals, highlighting unintended consequences and administrative complexities. Furthermore, the impact of personal income tax base on government revenues and budget deficits has been analyzed by economists. While tax expenditures reduce government revenue in the short term, their long-term effects on fiscal sustainability are subject to debate. Some researchers argue that tax incentives can stimulate economic growth, leading to higher tax revenues in the future, while others caution against the potential for revenue loss and increased reliance on debt financing[38].

The effectiveness of personal income tax base as a tool for achieving social policy objectives has been a topic of interest for policymakers and researchers alike. While tax incentives can be used to promote specific behaviors and address social issues, their design and implementation require careful consideration to avoid unintended consequences and ensure equitable outcomes. Research in this area continues to inform debates on tax policy and fiscal reform, highlighting the complex trade-offs involved in using tax expenditures to achieve policy objectives.

In addition to its economic effects, personal income tax base can also have implications for administrative complexity and compliance costs. Tax incentives often require detailed record-keeping and documentation, increasing the burden on taxpayers and tax authorities alike. Moreover, the complexity of tax expenditure provisions can create opportunities for tax planning and evasion, undermining the effectiveness of the tax system.

The intereconomic dimension of personal income tax base has also been explored in the literature. Cross-country comparisons reveal variations in the use and effectiveness of tax incentives across different tax systems and economic contexts. While some countries rely heavily on tax expenditures to achieve policy goals, others favor alternative approaches such as direct spending or regulation[39]. Understanding these differences can provide valuable insights for policymakers seeking to design effective tax policies. Furthermore, the relationship between personal income tax base and economic efficiency has been a subject of theoretical and empirical analysis. Tax incentives aim to alter individuals' behavior in ways that promote economic growth and social welfare. However, their effectiveness in achieving these goals depends on various factors, including the design of the incentives, the responsiveness of taxpayers, and the broader economic environment[40]. Research in this area seeks to identify the conditions under which tax expenditures are most likely to be effective and efficient.

The behavioral responses to personal income tax base, such as changes in savings behavior or investment decisions, have been studied using empirical methods. Researchers use microeconomic data to analyze how individuals respond to changes in tax incentives, providing insights into the effectiveness of different policy interventions[41]. These studies help policymakers understand the mechanisms through which tax expenditures influence economic behavior and inform the design of future tax policies. Moreover, the distributional effects of personal income tax base have important implications for social equity and economic justice. Tax incentives that disproportionately benefit higher-income individuals can exacerbate income inequality and undermine efforts to promote inclusive growth. Understanding the distributional impact of tax base is essential for designing policies that promote both economic efficiency and social welfare.

The political economy of personal income tax base has also been a topic of interest for researchers. Tax incentives are often subject to lobbying and political pressure from special interest groups seeking to preserve or expand favorable provisions. Understanding the political dynamics shaping tax policy decisions can provide insights into the factors driving the adoption and reform of tax expenditure programs[42]. Furthermore, the efficiency and effectiveness of personal income tax base depend on the broader institutional context in which they operate. Tax systems vary widely across countries in terms of their complexity, progressivity, and administrative capacity. Understanding the institutional factors that influence the design and implementation of tax expenditure programs is essential for assessing their impact and identifying best practices.

Moreover, ongoing debates persist regarding the trade-offs involved in using personal income tax base as a policy tool. While tax incentives can provide targeted support to specific industries or activities, they may also distort market incentives and lead to allocative inefficiencies[43]. Researchers continue to explore the optimal balance between using tax expenditures to achieve policy goals and maintaining a neutral tax system that minimizes economic distortions. The effectiveness of personal income tax base in achieving environmental and sustainability objectives has garnered increasing attention in recent years. Tax incentives for renewable energy, energy efficiency, and carbon emissions reduction aim to incentivize environmentally friendly behavior and mitigate climate change. However, the design and implementation of these incentives raise complex issues related to competitiveness, equity, and fiscal sustainability.

Furthermore, the behavioral responses to personal income tax base may vary across different demographic groups and socioeconomic contexts. Studies have examined how individuals with different income levels, education levels, and household compositions respond to changes in tax incentives, highlighting the importance of considering heterogeneity in policy design[44]. Understanding these differential responses can help policymakers tailor tax expenditure programs to better target specific populations and achieve desired outcomes. The long-term fiscal implications of personal income tax base have also been a subject of concern for policymakers and economists. While tax incentives may provide short-term stimulus to the economy, they can also lead to revenue losses and exacerbate budget deficits over time.

Assessing the fiscal sustainability of tax expenditure programs requires careful analysis of their revenue impact, economic benefits, and long-term costs[45].

Moreover, the interaction between personal income tax base and social insurance programs, such as Social Security and Medicare, has important implications for income security and retirement savings. Tax incentives for retirement savings, health insurance, and other social benefits can complement or substitute for traditional social insurance programs, shaping individuals' reliance on private versus public sources of support in retirement[46]. The role of personal income tax base in shaping intergenerational equity and social mobility has also been examined in the literature. Tax incentives for education, homeownership, and entrepreneurship aim to provide opportunities for upward mobility and economic advancement. However, the distributional effects of these incentives can vary across generations, leading to disparities in access to resources and opportunities[47].

Furthermore, the intereconomic competitiveness implications of personal income tax base have been a subject of debate in the context of globalization and intereconomic tax competition. Tax incentives aimed at attracting foreign investment or encouraging domestic production can affect countries' competitiveness relative to one another. Understanding the impact of tax expenditure on intereconomic trade and investment flows is essential for formulating effective tax policies in a globalized economy. Finally, the role of personal income tax base in promoting innovation, research, and development has been explored in the literature. Tax incentives for research and development (R&D) spending aim to stimulate innovation and technological progress, which are critical drivers of long-term economic growth. However, the effectiveness of these incentives depends on various factors, including the availability of skilled labor, access to financing, and the regulatory environment[48].

2.1.5 Personal Income Tax Revenue

Personal income tax revenue is a critical component of government finances worldwide, with its implications extending far beyond fiscal matters. Extensive literature explores its effects on various economic, social, and political dimensions. Economists have long studied the relationship between personal income tax revenue and economic growth, finding mixed results. Some argue that high tax rates disincentives work and investment, leading to lower economic growth. However, others suggest that progressive tax systems can reduce income inequality, which may positively impact economic growth by enhancing social cohesion and consumption.

Moreover, personal income tax revenue plays a crucial role in funding government expenditures, including public goods and services, social welfare programs, and infrastructure development. Studies indicate that variations in tax rates and structures can significantly influence government spending patterns, affecting socioeconomic outcomes. For instance, higher tax revenues may enable governments to invest more in education and healthcare, potentially enhancing human capital and productivity in the long run[49].

The distributional effects of personal income tax revenue are another focal point in the literature. Progressive tax systems, which impose higher tax rates on higher income brackets, aim to redistribute wealth and reduce income inequality. Research suggests that such tax policies can mitigate disparities in income and wealth distribution, promoting social equity and inclusivity. However, the effectiveness of progressive taxation in achieving these goals depends on various factors, including tax enforcement, loopholes, and exemptions.

Additionally, personal income tax revenue influences individuals' behavior and decision-making processes. Behavioral economics literature explores how changes in tax rates and incentives affect savings, consumption, labor supply, and investment choices. For instance, tax deductions and credits may incentivize certain behaviors, such as charitable donations or retirement savings, while high marginal tax rates could discourage labor force participation or entrepreneurship. The efficiency and administrative aspects of personal income tax systems are also subjecting of scholarly inquiry. Research examines the costs and benefits associated with different tax collection mechanisms, compliance strategies, and enforcement measures. Efficient tax administration is crucial for maximizing revenue collection while minimizing compliance costs and tax evasion[50]. Moreover, administrative reforms aimed at simplifying tax codes and procedures can enhance transparency, compliance, and public trust in the tax system.

Furthermore, the impact of personal income tax revenue on intereconomic competitiveness and capital flows has garnered attention in the literature. Some argue that high tax rates may drive away talent and investment, leading to capital flight and brain drain. Conversely, others contend that well-designed tax policies, coupled with robust public infrastructure and institutions, can attract skilled workers and foster innovation and entrepreneurship.

The role of personal income tax revenue in shaping fiscal policy and macroeconomic stability is a central theme in economic literature. Taxation affects aggregate demand, inflation, and monetary policy transmission channels[51]. Moreover, variations in tax revenues influence government budget deficits and debt levels, with implications for interest rates, borrowing costs, and sovereign risk premiums. In addition to economic considerations, the literature also examines the political dynamics surrounding personal income tax policies. Taxation often sparks debates over fairness, efficiency, and social welfare objectives, reflecting divergent ideological perspectives and vested interests. Policymakers must navigate these complexities while balancing competing priorities and electoral considerations.

Moreover, the effectiveness of personal income tax revenue in achieving social objectives, such as poverty alleviation and redistribution, is a subject of scholarly debate. While progressive taxation can contribute to reducing income disparities, its impact on poverty rates and social mobility varies depending on contextual factors, including labor market dynamics and social safety nets. Furthermore, globalization and technological advancements have reshaped the landscape of personal income taxation, posing new challenges and opportunities for policymakers. Cross-border tax evasion, profit shifting, and digital taxation issues have prompted calls for intereconomic cooperation and regulatory reforms to ensure tax fairness and sustainability. The literature also explores the interplay between personal income tax revenue and other fiscal instruments, such as consumption taxes, property taxes, and wealth taxes. The design and coordination of these tax policies affect economic efficiency, equity, and revenue adequacy, necessitating a holistic approach to fiscal management. Additionally, empirical studies investigate the dynamic effects of tax reforms and policy changes on various economic indicators, including GDP growth, employment, investment, and income distribution. Understanding these dynamics is crucial for policymakers seeking to design tax policies that promote sustainable and inclusive economic development[52]

Furthermore, behavioral economics research sheds light on how individuals perceive and respond to changes in tax policies, highlighting the importance of framing, salience, and psychological factors in shaping tax compliance and public attitudes toward taxation. Moreover, the literature examines the long-term sustainability of personal income tax systems in the face of demographic shifts, such as population aging and labor market transformations. Adapting tax policies to evolving socioeconomic trends and technological disruptions is essential for ensuring fiscal resilience and intergenerational equity[53]. Furthermore, comparative studies analyze the effectiveness and efficiency of personal income tax systems across countries and regions, identifying best practices and policy lessons. Intereconomic tax cooperation and knowledge sharing can facilitate policy learning and capacity building, contributing to global efforts to address common challenges and achieve shared goals.

Furthermore, research delves into the intersection of personal income tax revenue with environmental sustainability and climate change mitigation efforts. Tax policies, such as carbon taxes or green incentives, can influence consumption patterns, investment decisions, and technological innovation toward more environmentally friendly practices[54]. Understanding the potential synergies and trade-offs between tax revenue generation and environmental objectives is crucial for designing coherent policy frameworks that address both economic and ecological imperatives. Additionally, the literature examines the spillover effects of personal income tax revenue on other sectors of the economy, including housing markets, labor markets, and financial markets. Tax policies can influence asset prices, income distribution, and economic stability, with implications for wealth accumulation, social mobility, and systemic risks.

Moreover, studies explore the implications of demographic changes, such as urbanization, migration, and aging populations, for personal income tax systems. Adapting tax policies to demographic trends requires addressing evolving patterns of labor force participation, consumption behavior, and social welfare needs, while ensuring intergenerational equity and fiscal sustainability[55]. Furthermore, the literature investigates the role of personal income tax revenue in promoting innovation, entrepreneurship, and human capital development. Tax incentives for research and development, education, and skills training can spur productivity growth and technological advancement, driving long-term economic competitiveness and prosperity.

Moreover, behavioral research delves into the psychological and social factors that shape taxpayers' compliance behavior and attitudes toward taxation. Understanding taxpayer perceptions, motivations, and preferences can inform the design of more effective tax policies and communication strategies that enhance voluntary compliance and public trust in the tax system.

Additionally, the literature examines the impact of personal income tax revenue on wealth accumulation, intergenerational transfers, and social mobility. Tax policies, such as inheritance taxes or gift taxes, can influence the distribution of wealth across generations and mitigate inequalities in wealth inheritance, thereby fostering meritocracy and social cohesion. Furthermore, empirical studies analyze the incidence and effectiveness of tax enforcement measures, such as audits, penalties, and information reporting requirements, in deterring tax evasion and ensuring tax compliance. Strengthening tax administration capacity and leveraging technology can enhance revenue collection while minimizing compliance costs and administrative burdens. Moreover, research explores the role of personal income tax revenue in financing public goods and services that contribute to societal well-being and economic development. Investments in infrastructure, education, healthcare, and social protection are essential for enhancing human capital, productivity, and resilience to economic shocks[56].

Furthermore, the literature examines the impact of personal income tax revenue on income mobility, poverty dynamics, and social cohesion. Progressive tax systems can mitigate income inequalities and provide social insurance against income fluctuations, thereby reducing poverty and promoting social stability.

2.1.6 Personal income tax revenue on the gross domestic product

Personal income tax revenue plays a significant role in shaping a country's economy, and its effect on gross domestic product (GDP) has been a subject of extensive research in economic literature. One prominent argument in this discourse is that personal income tax revenue can either stimulate or hinder economic growth depending on how it is utilized by the government. Advocates of lower personal income taxes often argue that reducing tax rates can incentivize individuals to work more, invest, and innovate, thus stimulating economic activity and ultimately boosting GDP[57].

However, the relationship between personal income tax revenue and GDP growth is not always straightforward. Several studies have highlighted that excessively high tax rates can discourage work effort and hinder entrepreneurial activities, thus negatively affecting economic growth[58]. This perspective underscores the importance of finding an optimal tax rate that maximizes revenue without stifling economic productivity. Furthermore, the allocation of personal income tax revenue by the government also influences its impact on GDP. For instance, if tax revenue is used to finance productive investments in infrastructure, education, or research and development, it can enhance long-term economic growth by improving the country's productive capacity and competitiveness. On the other hand, if a significant portion of tax revenue is allocated towards non-productive expenditures or inefficient welfare programs, its positive effect on GDP may be limited.

Empirical studies exploring the relationship between personal income tax revenue and GDP growth have yielded mixed results. Some research suggests that higher tax rates are associated with lower GDP growth, particularly in the long run[59]. However, the magnitude of this effect varies depending on factors such as the overall tax burden, the efficiency of public spending, and the institutional quality of the country. Moreover, the effectiveness of personal income tax revenue as a tool for promoting economic growth may depend on the broader fiscal policy context. For example, if tax cuts are accompanied by corresponding reductions in government spending or are offset by increases in other taxes, their simulative effect on GDP may be muted. Similarly, the timing of tax policy changes relative to the business cycle can also influence their impact on economic activity.

The distributional effects of personal income tax policies are another crucial aspect to consider. While progressive tax systems aim to redistribute income and reduce inequality, they can also have implications for economic growth. High-income individuals, who often bear the brunt of progressive taxation, may reduce their labor supply or engage in tax avoidance strategies, which could dampen overall economic output[60]. Furthermore, the intereconomic competitiveness of a country's tax system can influence its ability to attract talent, investment, and entrepreneurship. High personal income tax rates relative to other countries may lead to talent flight or capital outflows, undermining economic growth prospects. Therefore, policymakers often need to strike a balance between raising revenue for public goods and maintaining a tax environment conducive to economic dynamism.

The dynamic nature of globalization and technological change introduces additional complexities into the relationship between personal income tax revenue and GDP growth. For instance, in an increasingly digitalized and interconnected world, individuals and businesses have greater flexibility to relocate to jurisdictions with more favorable tax regimes, making it challenging for governments to rely solely on traditional tax sources. Moreover, the COVID-19 pandemic has underscored the importance of fiscal policy in stabilizing economies during times of crisis. Many governments implemented temporary changes to personal income tax policies, such as tax deferrals or credits, to mitigate the economic fallout from the pandemic. Understanding the short-term and long-term effects of these policy responses on GDP growth will be essential for informing future tax policy decisions[61].

Furthermore, the literature on the effect of personal income tax revenue on GDP growth also highlights the importance of considering the elasticity of taxable income. The elasticity of taxable income refers to the responsiveness of taxpayers' behavior to changes in tax rates. High-income individuals, who often have more flexibility in adjusting their labor supply, investments, and tax planning strategies, may be particularly sensitive to changes in personal income tax rates[62]. Studies have found evidence suggesting that high-income earners exhibit greater responsiveness to changes in tax rates, implying that tax policy changes targeting this group can have significant effects on revenue and economic activity. For instance, reductions in tax rates for high-income individuals may lead to increased labor supply, entrepreneurship, and investment, potentially stimulating economic growth.

Conversely, tax increases targeting high-income earners could lead to adverse effects on GDP growth if they discourage productive economic activities or encourage tax avoidance behavior. Therefore, policymakers need to carefully consider the behavioral responses of different income groups when designing and evaluating personal income tax policies to minimize unintended consequences on economic growth. Moreover, the interaction between personal income tax revenue and other fiscal policy instruments, such as government spending and monetary policy, can influence their combined impact on GDP. Fiscal policy coordination is essential for ensuring macroeconomic stability and promoting sustainable economic growth. For instance, a balanced mix of tax cuts and targeted government investments can amplify their simulative effects on GDP by addressing supply-side constraints and boosting aggregate demand[63].

Additionally, the efficiency and transparency of tax administration and compliance mechanisms can affect the overall effectiveness of personal income tax policies. Complex tax codes, loopholes, and inadequate enforcement can undermine revenue collection efforts and erode public trust in the tax system. Strengthening tax administration capacity, simplifying tax codes, and enhancing compliance measures can help maximize revenue collection while minimizing distortions to economic activity. Furthermore, the political economy considerations surrounding personal income tax policies also deserve attention in the literature. Tax policy decisions are often influenced by a complex interplay of political dynamics, interest group pressures, and ideological preferences. Understanding how these factors shape the design and implementation of tax policies can provide valuable insights into their economic implications and distributional effects.

Finally, the long-term sustainability of personal income tax revenue hinges on broader trends such as demographic shifts, technological advancements, and globalization. Aging populations, rising income inequality, and evolving labor market dynamics pose challenges for traditional tax systems based on labor income[64]. Policymakers may need to explore alternative revenue sources, such as consumption taxes or environmental levies, to ensure fiscal adequacy and equity in the face of changing economic realities.

2.1.7 Personal income tax base on the gross domestic product

Personal income tax base is a critical component of fiscal policy with potentially profound effects on a nation's gross domestic product (GDP). The relationship between personal income tax base and GDP has been extensively examined in the literature, with scholars exploring various dimensions and mechanisms through which these two factors interact[65]. At its core, personal income tax base refers to the foregone revenue resulting from tax deductions, credits, exemptions, and other incentives provided to individuals. This expenditure can influence GDP through multiple channels, including consumption, investment, labor supply, and overall economic activity.

One of the primary ways in which personal income tax base affects GDP is through its impact on consumer spending. Tax deductions and credits can increase disposable income, prompting individuals to spend more on goods and services. This heightened consumption can stimulate economic growth, as increased demand encourages businesses to expand production and hire more workers. However, the magnitude of this effect depends on various factors, including the income elasticity of demand and the distributional effects of tax policies[66]. Moreover, personal income tax base can also influence investment decisions, particularly among households and businesses. Tax incentives such as accelerated depreciation allowances or investment tax credits can lower the cost of capital, encouraging firms to invest in new equipment, technologies, and infrastructure. These investments can enhance productivity, drive innovation, and ultimately contribute to GDP growth by expanding the economy's productive capacity.

Furthermore, the impact of personal income tax base on GDP is intertwined with its effects on labor supply and human capital formation. Tax policies that reduce the marginal tax rates on labor income can incentivize individuals to work more hours or participate in the labor force. This increased labor supply can boost output and GDP, although the magnitude of the effect may vary depending on labor market dynamics, including wage elasticity and labor force participation rates[67]. Additionally, personal income tax base can influence the distribution of income and wealth within the economy, which in turn can affect aggregate demand and GDP growth. Tax deductions and credits targeted at low- and middle-income households may have a greater simulative effect on consumption than those benefiting high-income earners, as lower-income individuals tend to have higher marginal propensities to consume. Consequently, changes in the progressivity of the tax system can alter consumption patterns and overall economic activity. Moreover, the effectiveness of personal income tax base in stimulating GDP growth depends on the broader macroeconomic context, including monetary policy, exchange rates, and external factors. For instance, in an environment of low interest rates and ample liquidity, tax incentives may have a more pronounced impact on investment and consumption behavior. Similarly, the openness of the economy to intereconomic trade and capital flows can influence the transmission mechanisms through which tax policies affect GDP.

Furthermore, the design and implementation of personal income tax base programs can significantly shape their effectiveness in promoting GDP growth. Complex tax provisions, administrative burdens, and uncertainty about future tax policies may dampen the simulative effects of tax incentives by creating disincentives for economic agents to respond[68]. Therefore, simplifying tax codes, improving transparency, and providing certainty in tax planning can enhance the efficacy of personal income tax base as a tool for economic stimulus. In addition to their short-term effects on GDP, personal income tax base policies can also have long-term implications for economic growth and sustainability. For example, tax incentives aimed at promoting investment in research and development, education, and skills training can foster human capital accumulation and technological progress, which are essential drivers of productivity growth and competitiveness[69]. Similarly, tax policies that encourage savings and investment can contribute to capital formation and enhance the economy's potential output over time.

Moreover, the distributional effects of personal income tax base are an important consideration in assessing its overall impact on GDP and societal welfare. While tax incentives may stimulate aggregate demand and economic activity, they can also exacerbate income inequality if they disproportionately benefit higher-income households or certain industries. Addressing these distributional concerns through targeted tax relief for low- and middle-income earners or through complementary policies such as social safety nets and education subsidies can help mitigate adverse effects on equity while still supporting economic growth[70]. Furthermore, the effectiveness of personal income tax base as a tool for stimulating GDP growth may vary across countries and over time due to differences in institutional settings, economic structures, and policy contexts. What works in one country or during a particular period may not necessarily yield the same results elsewhere or in different economic conditions. Therefore, policymakers need to carefully evaluate the specific context and objectives of tax expenditure programs to ensure they align with broader economic goals and priorities.

Additionally, the dynamic nature of the economy and the interplay of various macroeconomic factors pose challenges for evaluating the causal relationship between personal income tax base and GDP. Empirical studies employing econometric techniques such as time-series analysis, panel data models, and natural experiments have sought to disentangle the effects of tax policies from other factors influencing economic outcomes. However, identifying causal relationships and quantifying the magnitude of tax expenditure effects remain subject to methodological limitations and data constraints[71].

Furthermore, the political economy dynamics surrounding personal income tax base can shape the formulation and implementation of fiscal policies, influencing their effectiveness in driving GDP growth. Tax expenditure programs often reflect competing interests and ideological perspectives, with different stakeholders advocating for policies that align with their preferences and objective[72]. Navigating these political dynamics while promoting sound economic principles and fiscal sustainability poses a formidable challenge for policymakers seeking to harness tax policy as a tool for economic stimulus. Moreover, the fiscal implications of personal income tax base warrant careful consideration, particularly in light of budgetary constraints and long-term fiscal sustainability concerns. While tax incentives may provide short-term stimulus to GDP growth, they also entail revenue losses for the government, which can exacerbate budget deficits and public debt accumulation if not offset by corresponding spending cuts or revenue-raising measures. Balancing the short-term benefits of tax expenditure with the need for fiscal discipline and intergenerational equity requires prudent fiscal management and a holistic approach to fiscal policy.

Furthermore, the empirical evidence on the effectiveness of personal income tax base as a tool for promoting GDP growth is mixed and context-dependent. While some studies find positive effects of tax incentives on economic activity, others suggest more modest or even negligible impacts, highlighting the importance of considering heterogeneity across countries, time periods, and policy designs[73]. Moreover, the magnitude and duration of tax expenditure effects may vary depending on the specific economic conditions and structural characteristics of the economy, such as its degree of openness, financial development, and industrial composition.

Additionally, the spillover effects of personal income tax base on other macroeconomic variables, such as inflation, interest rates, and exchange rates, further complicate the assessment of its overall impact on GDP. Tax policies that stimulate domestic demand may put upward pressure on prices and inflationary expectations, potentially leading to monetary policy responses aimed at stabilizing price levels[74]. Similarly, tax incentives that attract foreign investment or influence capital flows can affect exchange rate dynamics and external balances, with implications for trade competitiveness and GDP growth.

Moreover, the behavioral responses of economic agents to personal income tax base can introduce feedback loops and nonlinearities that complicate the prediction of its effects on GDP. For instance, individuals may adjust their savings behavior in response to changes in tax rates or incentives, affecting aggregate demand and investment. Similarly, businesses may alter their hiring and investment decisions based on expectations about future tax policies and economic conditions, adding another layer of uncertainty to the relationship between tax base and GDP. Furthermore, the interaction between personal income tax base and other fiscal policy instruments, such as government spending and monetary policy, can influence the overall effectiveness of fiscal stimulus efforts. Tax incentives aimed at boosting consumption or investment may complement expansionary fiscal policies, such as infrastructure investment or social welfare programs, by providing additional support to aggregate demand[75]. However, coordination and coherence among different policy tools are essential to ensure their synergistic effects and avoid potential trade-offs or policy inconsistencies that could undermine the overall stimulus efforts.

Additionally, the distributional implications of personal income tax base policies deserve careful attention, as they can shape not only economic outcomes but also social cohesion and political stability. Tax policies that disproportionately benefit high-income earners or certain industries may exacerbate income inequality and widen socioeconomic disparities, potentially undermining social welfare and public trust in the tax system. Conversely, well-designed tax incentives that promote inclusive growth and equitable access to opportunities can contribute to sustainable development and shared prosperity[76]. Moreover, the long-term sustainability of personal income tax base programs hinges on their revenue implications and implications for fiscal balances. While tax incentives may provide short-term stimulus to economic growth, they can also erode the tax base and undermine the government's ability to finance essential public services and investments. Therefore, policymakers must strike a balance between using tax expenditure as a countercyclical tool to support GDP growth during economic downturns and ensuring fiscal prudence and sustainability over the medium to long term. Furthermore, the effectiveness of personal income tax base in promoting GDP growth may be contingent on the institutional capacity and governance frameworks of the country. Weak administrative capacity, institutional corruption, and regulatory inefficiencies can undermine the implementation and enforcement of tax policies, limiting their impact on economic outcomes[77]. Therefore, efforts to strengthen institutional quality enhance transparency, and combat tax evasion and avoidance are essential for maximizing the effectiveness of tax expenditure as a policy tool.

Additionally, the globalization of economic activity and the increasing interconnectedness of financial markets pose challenges and opportunities for personal income tax base policies. In an era of globalized capital flows and tax competition, countries must carefully consider the intereconomic spillover effects of their tax policies and coordinate efforts to address cross-border tax evasion and base erosion[78]. Moreover, intereconomic cooperation and coordination are essential for ensuring a level playing field and preventing harmful tax practices that could distort economic incentives and undermine global growth prospects.

Moreover, the evolving nature of work and the rise of digitalization pose challenges for traditional tax systems and raise questions about the adequacy of current tax policies in capturing income generated in the digital economy. As digital platforms and online marketplaces enable cross-border transactions and remote work arrangements, governments face challenges in taxing digital activities and ensuring a fair distribution of tax burdens. Addressing these challenges requires intereconomic cooperation and innovative policy responses that reflect the changing nature of economic activity and employment relationships. Furthermore, the societal and environmental externalities associated with economic activity underscore the importance of incorporating environmental and social considerations into personal income tax base policies. Tax incentives that promote sustainable development, renewable energy, and climate resilience can contribute to green growth and environmental sustainability while supporting economic diversification and job creation[79]. Similarly, tax policies that encourage corporate social responsibility and inclusive business practices can foster social cohesion and equitable development outcomes.

Moreover, the intergenerational implications of personal income tax base policies highlight the need for a balanced approach to fiscal policy that considers the interests of future generations. Tax policies that prioritize short-term consumption over long-term investments in education, infrastructure, and research and development may undermine the economy's productive capacity and diminish opportunities for future generations[80]. Therefore, policymakers must adopt a forward-looking perspective and ensure that tax expenditure programs contribute to intergenerational equity and sustainable development goals.

2.1.8 Personal income tax compliance on the gross domestic product

Personal income tax compliance plays a pivotal role in the economic landscape of a country, potentially influencing its gross domestic product (GDP) through various channels. The relationship between personal income tax compliance and GDP has been a subject of extensive research in the literature. One of the key aspects explored is the impact of tax compliance on government revenue, which in turn affects the government's ability to fund public goods and services. High levels of compliance can lead to increased revenue collection, contributing positively to GDP growth by financing infrastructure projects, education, and healthcare[81].

Several studies have highlighted the importance of tax compliance in enhancing government fiscal capacity and promoting economic development. When taxpayers comply with personal income tax obligations, governments can allocate resources more efficiently, thereby fostering economic growth. Moreover, a robust tax compliance framework instills confidence in investors and creditors, which can attract foreign investments and spur domestic entrepreneurship, further bolstering GDP. However, the literature also acknowledges that excessive tax burdens and complex tax systems may hinder compliance and economic growth. High tax rates can incentivize tax evasion and avoidance strategies, leading to revenue losses for the government and distorting market activities. Moreover, administrative inefficiencies and corruption within tax authorities can undermine compliance efforts and erode public trust, ultimately impeding GDP growth.

Research suggests that improving tax compliance requires a combination of effective enforcement mechanisms, taxpayer education programs, and simplified tax systems. By reducing compliance costs and enhancing taxpayer awareness, governments can incentivize voluntary compliance and minimize the need for costly enforcement measures. Strengthening institutional capacities and promoting transparency in tax administration are also crucial for building trust and fostering a culture of compliance, which can positively influence GDP dynamics[82]. The literature further explores the role of tax policy in shaping compliance behavior and its implications for GDP growth. Progressive tax systems that distribute the tax burden based on income levels may enhance equity and social welfare but could also affect incentives for compliance. High marginal tax rates on higher-income individuals may incentivize tax planning strategies, while lower-income taxpayers may find compliance more burdensome, potentially leading to non-compliance.

Moreover, the effectiveness of tax compliance measures may vary depending on cultural, social, and economic factors unique to each country. Cultural attitudes towards taxation, perceptions of government legitimacy, and the prevalence of informal economies can significantly impact compliance levels and, consequently, GDP outcomes[83]. Therefore, tailoring compliance strategies to the specific context of each country is essential for achieving optimal results. The literature also delves into the role of technology and digitalization in enhancing tax compliance and its implications for GDP growth. Digital platforms and electronic tax filing systems can streamline the compliance process, reduce administrative burdens, and minimize opportunities for evasion. Furthermore, data analytics and artificial intelligence tools enable tax authorities to identify non-compliant behavior more effectively, improving enforcement outcomes and revenue collection. However, while technology can enhance compliance efforts, its adoption may exacerbate existing inequalities and access barriers, particularly in developing countries with limited digital infrastructure. Ensuring equitable access to digital services and addressing privacy concerns are essential considerations for leveraging technology to enhance tax compliance and promote inclusive economic growth.

In addition to its direct effects on government revenue and economic activities, tax compliance can also influence broader macroeconomic variables, such as inflation, interest rates, and investment levels, which in turn affect GDP dynamics. Research suggests that improving tax compliance can contribute to macroeconomic stability by reducing budget deficits, lowering borrowing costs, and attracting investment capital, thereby fostering sustainable GDP growth over the long term. Furthermore, the literature emphasizes the importance of intereconomic cooperation in combating tax evasion and promoting compliance, given the increasing globalization of economic activities. Cross-border tax evasion schemes and illicit financial flows pose significant challenges to tax authorities worldwide, necessitating coordinated efforts to enhance transparency, information exchange, and regulatory harmonization[84]. By addressing tax evasion at the global level, countries can mitigate revenue losses, promote fair competition, and create a level playing field for businesses, ultimately supporting GDP growth globally.

Moreover, the literature underscores the role of behavioral economics in understanding taxpayer compliance behavior and designing effective policy interventions. Insights from behavioral studies suggest that individuals' decision-making processes are influenced by cognitive biases, social norms, and perceived fairness, which can affect their willingness to comply with tax obligations. By incorporating behavioral insights into compliance strategies, policymakers can design interventions that nudge taxpayers towards voluntary compliance, such as personalized communication, social norms messaging, and simplification of tax procedures. Furthermore, the literature explores the impact of tax compliance on income inequality and social cohesion, which are closely linked to GDP dynamics. Progressive tax systems that redistribute income from high-earners to low-income individuals through social welfare programs can mitigate inequality and enhance social welfare, ultimately supporting GDP growth[85]. However, if tax evasion is prevalent among high-income groups or if regressive tax policies disproportionately burden low-income earners, it could exacerbate inequality and undermine social cohesion, potentially hampering long-term economic development.

Additionally, the literature examines the relationship between tax compliance and economic informality, which is prevalent in many developing countries. Informal economies often emerge as a response to excessive taxation, regulatory burdens, and limited access to formal employment opportunities. High levels of informality can impede tax compliance efforts by reducing the tax base and creating unfair competition for formal businesses. Addressing the root causes of informality through targeted reforms, such as simplifying tax regimes, reducing regulatory barriers, and promoting formalization incentives, can enhance compliance levels and contribute to GDP growth by expanding the formal sector[86]. Moreover, the literature discusses the role of trust and perceived fairness in shaping taxpayer compliance behavior. Research suggests that when taxpayers perceive tax systems as transparent, equitable, and accountable, they are more likely to voluntarily comply with tax obligations. Conversely, perceptions of corruption, arbitrary enforcement, and unfair treatment can erode trust in tax authorities, leading to increased tax evasion and reduced government revenue. Building trust through responsive governance, effective anti-corruption measures, and participatory decision-making processes is essential for fostering a culture of compliance and supporting sustainable economic growth.

Furthermore, the literature highlights the importance of tax morale—the intrinsic motivation to pay taxes—in driving compliance behavior. Factors such as social norms, perceived reciprocity, and civic duty influence individuals' willingness to contribute to the common good through taxation. Tax morale can be nurtured through public awareness campaigns, education programs, and inclusive policymaking processes that emphasize the benefits of tax-funded public services and collective responsibility. Strengthening tax morale can enhance compliance levels and promote GDP growth by fostering a sense of solidarity and civic engagement within society[87].

In addition to its direct effects on government revenue and economic activities, tax compliance can have indirect impacts on human capital development and productivity, which are critical determinants of long-term GDP growth. Tax-funded investments in education, healthcare, and social protection contribute to human capital accumulation, thereby enhancing workforce skills, productivity, and innovation. By ensuring adequate revenue collection and efficient resource allocation, tax compliance supports investments in human capital development, which in turn drive sustainable economic growth and prosperity. Furthermore, the literature examines the role of tax incentives and exemptions in promoting compliance and economic growth. While tax incentives can stimulate investment, entrepreneurship, and job creation, their effectiveness depends on design features, enforcement mechanisms, and alignment with broader policy objectives. Ill-designed incentives that disproportionately benefit certain industries or favor specific taxpayers may undermine revenue integrity and distort market dynamics, ultimately hindering GDP growth. Therefore, policymakers must carefully evaluate the costs and benefits of tax incentives and ensure their alignment with broader economic development goals to maximize their positive impact on compliance and GDP.

Moreover, the literature discusses the interplay between tax compliance, economic resilience, and sustainability. Effective tax systems that generate stable revenue streams enable governments to respond to economic shocks, mitigate vulnerabilities, and invest in resilience-building measures. By diversifying revenue sources, reducing reliance on volatile revenue streams, and promoting fiscal discipline, countries can enhance their capacity to withstand external shocks and sustain long-term economic growth. Furthermore, aligning tax policies with environmental objectives, such as carbon pricing and pollution taxes, can promote sustainable development while generating additional revenue to support GDP growth. Additionally, the literature highlights the importance of political economy factors in shaping tax compliance dynamics and their implications for GDP growth. Political stability, governance quality, and institutional integrity play critical roles in fostering an enabling environment for tax compliance and economic development. Countries with strong institutions, accountable leadership, and inclusive policymaking processes are more likely to implement effective tax reforms, build trust in government institutions, and promote compliance, thereby supporting sustainable GDP growth and prosperity.

2.2 Theoretical Framework

2.2.1 Fiscal Policy Theory

Fiscal Policy Theory, founded by John Maynard Keynes in the 1930s, revolutionized economic thought by emphasizing the role of government intervention in managing economic fluctuations.

Keynes argued that during times of economic downturns, governments should increase spending or reduce taxes to stimulate demand and boost economic activity, known as expansionary fiscal policy. Conversely, during periods of inflation or overheating, governments should decrease spending or raise taxes to reduce demand and curb inflation, known as contractionary fiscal policy. The rationale behind fiscal policy is rooted in the belief that market economies are prone to instability and that government intervention can smooth out economic fluctuations, promoting stability and full employment.

Supporters of fiscal policy, advocate for its efficacy in stabilizing economies, especially during recessions. They argue that fiscal stimulus measures, like increased government spending or tax cuts, can trigger multiplier effects[88]. As government spending injects money into the economy, households and businesses experience a rise in income, leading to heightened consumption and investment. This cyclical effect propels economic growth and helps mitigate the negative impacts of downturns. Moreover, proponents highlight fiscal policy's capacity to address market failures. In situations where aggregate demand is insufficient to spur economic activity or where there's underinvestment in public goods like infrastructure and education, targeted government spending can bridge these gaps. By strategically allocating resources, fiscal policy can foster long-term growth and enhance societal well-being, aligning with Keynesian ideals of government intervention to achieve macroeconomic stability. Blanchard and Perotti's perspective underscores the proactive role that fiscal policy can play in shaping economic outcomes. Their argument emphasizes the importance of timely and targeted government intervention to counteract economic downturns effectively. By acknowledging the limitations of relying solely on monetary policy, which may be constrained by the zero lower bound or liquidity traps, proponents of fiscal policy advocate for a more comprehensive approach to economic management. Through strategic fiscal measures, governments can not only stabilize economies but also address underlying structural deficiencies, thereby promoting sustainable growth and prosperity. This perspective resonates with policymakers seeking to navigate complex economic challenges and underscores the enduring relevance of fiscal policy theory in contemporary economic discourse.

Conversely, critics of fiscal policy express skepticism regarding its effectiveness and highlight potential adverse consequences. Critics posits that individuals, anticipating future tax hikes to finance current deficits, may choose to save rather than spend any temporary tax cuts, thus diminishing the intended stimulus effect[89]. This perspective challenges the notion of fiscal policy's efficacy in stimulating demand during economic downturns, suggesting that its impact may be muted by rational forward-looking behavior. Furthermore, critics raise concerns about the potential politicization of fiscal policy, arguing that governments may prioritize short-term electoral gains over long-term economic stability. In practice, this could manifest as excessive government spending or tax cuts aimed at garnering voter support, regardless of their fiscal sustainability. Such short-sighted policies could exacerbate inflationary pressures or lead to unsustainable levels of public debt, undermining macroeconomic stability in the long run. The critique underscores the complexities and potential pitfalls associated with fiscal policy implementation. By highlighting the limitations of traditional Keynesian approaches, critics challenge policymakers to carefully consider the unintended consequences of fiscal interventions. Additionally, their emphasis on the politicization of fiscal policy serves as a reminder of the importance of prudent fiscal management and the need to insulate economic decision-making from short-term political considerations[90]. As governments grapple with economic challenges, understanding and addressing these criticisms can inform more nuanced and effective fiscal policy frameworks, aimed at achieving sustainable economic growth and stability over the long term.

The current study on the effect of Personal Income Tax (PIT) on Economic Development resonates deeply with fiscal policy theory on multiple fronts. Firstly, by delving into the impact of PIT revenue on the gross domestic product (GDP) of Lagos State, the research echoes the Keynesian principle of government intervention to stimulate economic growth. This investigation recognizes the pivotal role of government revenue in driving economic activity, as increased PIT revenue can potentially fuel government spending on infrastructure, education, healthcare, and other critical sectors, thereby fostering economic expansion and job creation.

Secondly, the analysis of the effect of PIT expenditure on GDP provides valuable insights into the effectiveness of government spending in promoting development and meeting societal needs. This aspect of the study reflects the fundamental tenets of fiscal policy, which emphasize the strategic allocation of resources by the government to address market failures and promote long-term prosperity. By evaluating how PIT expenditures contribute to GDP growth, the research sheds light on the impact of public investments on economic productivity and overall well-being, aligning with the objectives of fiscal policy aimed at enhancing economic development.

Thirdly, the exploration of the relationship between PIT compliance and GDP underscores the significance of tax policies in mobilizing resources for public investment and fostering economic productivity. This aspect of the study speaks directly to the importance of fiscal policy implementation for sustainable development, as it assesses the effectiveness of tax administration and enforcement in ensuring adequate revenue collection for government initiatives. By examining the extent to which PIT compliance correlates with GDP growth, the research offers insights into the efficiency of tax policies and their implications for economic performance, highlighting the integral role of fiscal measures in driving economic development agendas.

2.2.2 Public Finance Theory

Public Finance Theory, originating from the groundbreaking contributions of Richard Musgrave in 1959, represents a pivotal juncture in economic thought, especially concerning the role of government in economic affairs. Musgrave provided a robust framework for comprehending the dynamics of fiscal policy and government intervention[91]. Central to Musgrave's theory is the recognition of government as a vital actor in shaping economic outcomes, with a primary focus on resource allocation and income distribution. By emphasizing the importance of public goods provision and addressing market failures, Musgrave laid the groundwork for understanding the rationale behind government involvement in the economy. Furthermore, Musgrave's theory delves into the intricacies of fiscal policy tools, elucidating their role in stabilizing the economy and promoting societal welfare. Through his work, Musgrave highlighted the nuanced relationship between taxation, government expenditure, and economic development, shedding light on how these components interact to influence overall economic performance. By stressing the significance of equitable distribution of resources and the mitigation of externalities, Public Finance Theory serves as a guiding principle for policymakers grappling with complex economic challenges. In essence, Musgrave's contributions paved the way for a deeper understanding of the role of government in fostering economic prosperity and societal well-being through prudent fiscal management and intervention.

At the core of Public Finance Theory lies a profound acknowledgment of market failures, which form the cornerstone of its rationale. Proponents argue that while markets excel in many aspects of resource allocation, they often fall short in providing certain public goods and addressing externalities. These market imperfections create inefficiencies and inequities, compelling government intervention to rectify them. By intervening through taxation and expenditure policies, governments can ensure the provision of essential public goods, such as infrastructure, education, and healthcare, which are crucial for societal well-being but may not be adequately supplied by the market alone. Additionally, Public Finance Theory underscores the importance of government intervention in addressing externalities, such as pollution or congestion, which result from market transactions but are not adequately accounted for by market prices. Through regulatory measures and fiscal incentives, governments can internalize these external costs and promote a more efficient allocation of resources.

Moreover, Public Finance Theory highlights the broader role of government in promoting economic stability and equity. Beyond addressing market failures, governments play a pivotal role in income distribution and macroeconomic stabilization. By levying progressive taxes and implementing redistributive policies, governments can mitigate income inequality and enhance social cohesion. Furthermore, through fiscal policy tools such as taxation, government expenditure, and debt management, governments can influence aggregate demand, smooth business cycles, and promote sustainable economic growth[92]. Thus, Public Finance Theory underscores the multifaceted role of government in shaping economic outcomes and underscores the importance of strategic fiscal interventions to foster long-term prosperity and societal welfare.

Supporters of Public Finance Theory champion its capacity to offer a structured framework for discerning the most effective role of government within the economy[91]. Economists underscore the crucial role of government intervention in the provision of public goods and rectification of market failures. They contend that without government intervention, essential services like education, healthcare, and infrastructure would be undersupplied, leading to inefficiencies and societal disparities. His advocacy aligns with Public Finance Theory's emphasis on government's responsibility to ensure societal welfare and economic efficiency through strategic intervention. Similarly, critics advocate for a balanced approach to government finance that prioritizes fiscal responsibility and efficient allocation of resources. Their stance underscores the importance of prudent fiscal management to avoid excessive debt accumulation and ensure sustainability. By advocating for efficient allocation of resources, this aligns with the core tenets of Public Finance Theory, emphasizing the need for governments to optimize resource allocation through judicious spending and revenue-raising measures. Together, the perspectives of the critics reinforce the significance of Public Finance Theory as a guiding principle for policymakers seeking to navigate the complexities of government intervention in the economy.

Critics of Public Finance Theory raise concerns about the potential drawbacks of extensive government intervention in economic affairs and its impact on economic efficiency and individual liberties[93]. Figures like Milton Friedman, as evidenced in "Capitalism and Freedom" (1962), advocate for a more laissez-faire approach, emphasizing the importance of limited government involvement to foster economic growth and innovation. Friedman cautions against excessive taxation and government expenditure, arguing that such interventions can distort market mechanisms and impede the efficient allocation of resources. His critique underscores the tension between government intervention and economic freedom, suggesting that excessive regulatory measures may curtail individual liberties and stifle entrepreneurial initiatives. The research on the effect of Personal Income Tax (PIT) on Economic Development in Lagos State provides a nuanced exploration into the intricate dynamics between fiscal policy and economic growth, aligning closely with the principles espoused by Public Finance Theory. By delving into the impact of government revenue, expenditure, and compliance on economic development, the study offers valuable insights into how fiscal policies shape regional prosperity. Through an examination of how PIT revenue and expenditure influence the Gross Domestic Product (GDP) of Lagos State, the research aims to elucidate the efficacy of government interventions in driving regional development through strategic fiscal measures. This aligns with the core tenets of Public Finance Theory, which emphasize the role of government in mobilizing resources and leveraging fiscal policy tools to promote economic growth and societal welfare.

Furthermore, the study's focus on investigating the relationship between PIT compliance and GDP unveils critical insights into the effectiveness of tax policies in fostering economic stability and growth at the sub economic level. By analyzing the extent to which tax compliance influences economic outcomes, the research sheds light on the efficacy of government efforts to incentivize compliance and enhance revenue collection. This aspect of the study resonates with the broader objectives of Public Finance Theory, which underscores the importance of efficient tax administration and compliance in ensuring fiscal sustainability and economic development. By elucidating the nexus between tax compliance and GDP growth, the research contributes to the ongoing discourse on the optimal design and implementation of tax policies to foster economic prosperity.

In essence, the research on the effect of PIT on Economic Development in Lagos State serves as a practical application of Public Finance Theory, providing empirical evidence to inform policy decisions and shape fiscal interventions aimed at promoting regional development. By examining the impact of PIT revenue, expenditure, and compliance on economic growth, the study offers valuable insights into the role of government in driving economic development through fiscal policy initiatives. Through its rigorous analysis and empirical findings, the research contributes to a deeper understanding of the complex interplay between taxation, government expenditure, and economic growth, thereby enriching the discourse on the optimal role of government in fostering sustainable and inclusive development.

2.2.3 Tax Compliance Theory

Tax Compliance Theory, pioneered by Allingham and Sandmo in 1972, represents a fundamental shift in understanding taxpayer behavior within the realm of economics [94]. At its core, the theory proposes that individuals make rational decisions regarding tax compliance by assessing the costs and benefits associated with adherence to tax laws. Drawing upon principles of rational choice theory, Tax Compliance Theory suggests that taxpayers carefully weigh factors such as the likelihood of detection, the severity of penalties for non-compliance, and personal attitudes toward taxation when determining their compliance behavior. By framing tax compliance as a rational decision-making process, the theory provides a comprehensive framework for analyzing taxpayer behavior and understanding the determinants of compliance. Moreover, Tax Compliance Theory highlights the multidimensional nature of tax compliance, emphasizing that it is influenced by a myriad of socio-economic and psychological factors. Beyond mere enforcement measures, the theory acknowledges the role of individual characteristics, societal norms, and perceptions of fairness in shaping compliance behavior. Factors such as trust in government institutions, perceptions of tax fairness, and social norms regarding compliance play pivotal roles in influencing taxpayers' decisions. By recognizing the complexity of taxpayer behavior, Tax Compliance Theory offers valuable insights into the design and implementation of effective tax policies and enforcement strategies aimed at enhancing compliance rates and optimizing revenue collection.

Authors advocating for Tax Compliance Theory contend that it offers a robust and comprehensive framework for comprehending the intricacies of taxpayer behavior. Their opinion underscores the significance of social norms and moral considerations in shaping tax compliance decisions. They highlight how trust in government institutions and perceptions of fairness play pivotal roles in influencing taxpayers' willingness to comply with tax laws. By integrating insights from sociology and psychology, Torgler's research demonstrates how factors beyond mere enforcement mechanisms contribute to compliance behavior, thus emphasizing the holistic nature of Tax Compliance Theory in understanding taxpayer actions. Similarly, studies advance the notion that Tax Compliance Theory provides valuable insights into the psychological processes that underpin tax behavior[95]. Through his research, Kirchler elucidates how perceptions of procedural justice and trust in tax authorities influence individuals' compliance attitudes and behaviors. By delving into the cognitive and affective dimensions of tax compliance, Kirchler's work enriches our understanding of the psychological mechanisms at play, thus highlighting the explanatory power of Tax Compliance Theory in elucidating taxpayer behavior. Together, the contributions of Torgler and Kirchler underscore the multifaceted nature of tax compliance and affirm the relevance of Tax Compliance Theory as a comprehensive framework for analyzing taxpayer behavior.

Critics of Tax Compliance Theory highlight its inadequacies in providing a comprehensive understanding of taxpayer behavior. They contend that the theory's exclusive focus on economic incentives oversimplifies the complex dynamics that govern taxpayer decision-making. By neglecting the influence of social norms, cultural factors, and moral beliefs, Tax Compliance Theory fails to capture the nuanced interplay of psychological, sociological, and economic forces that shape compliance behavior. The critique underscores the need for a more holistic approach to studying taxpayer behavior, one that acknowledges the multifaceted nature of human decision-making and incorporates a broader range of factors beyond purely economic considerations. Similarly, studies argue that Tax Compliance Theory's narrow emphasis on deterrence overlooks the diverse motivations driving tax compliance[96]. The theory's exclusive focus on enforcement measures fails to account for the myriad social, psychological, and ethical factors that influence taxpayers' decisions to comply with tax laws. By ignoring the role of social pressure, ethical considerations, and other non-monetary motivations, Tax Compliance Theory provides an incomplete picture of taxpayer behavior. Jackson and Milliron's critique underscore the need for a more nuanced understanding of tax compliance that takes into account the multifaceted nature of human behavior and the diverse array of factors that shape compliance decisions.

The study on the effect of Personal Income Tax (PIT) on Economic Development in Lagos State represents a significant alignment with Tax Compliance Theory across multiple dimensions. Firstly, by scrutinizing the relationship between personal income tax revenue and Gross Domestic Product (GDP), the research delves into the economic implications of tax compliance. Tax Compliance Theory posits that taxpayers' decisions are influenced by various factors, including enforcement, penalties, and perceptions of fairness. Through empirical analysis, the study aims to elucidate how variations in tax compliance levels impact government revenue and, consequently, economic growth. By examining the intricate interplay between tax revenue and GDP, the research contributes to a deeper understanding of the mechanisms through which tax compliance shapes economic outcomes, aligning closely with the core tenets of Tax Compliance Theory. Secondly, the study delves into the impact of personal income tax base on GDP, thereby considering how government spending, financed by tax revenue, contributes to development. Tax Compliance Theory recognizes that the efficacy of tax policies extends beyond revenue generation to encompass the utilization of tax funds for public expenditure. By exploring how personal income tax base affects GDP, the research sheds light on the role of government intervention in leveraging tax revenue to promote economic growth and societal welfare. This aspect of the study underscores the broader implications of tax compliance for economic development and reinforces the importance of efficient fiscal management in driving economic progress.

Furthermore, the study directly addresses the central premise of Tax Compliance Theory by investigating the effect of tax compliance on GDP. By examining how taxpayer behavior influences economic outcomes, the research provides valuable insights into the mechanisms through which tax compliance contributes to economic development. Through empirical analysis, the study endeavors to uncover the nuances of taxpayer behavior and its implications for economic growth in Lagos State. By aligning with Tax Compliance Theory's focus on the interplay between taxpayer behavior and economic outcomes, the research contributes to a deeper understanding of the role of taxation in driving economic development at the sub economic level, thereby enriching the discourse on tax compliance and its broader implications for economic progress.

2.2.4 Regional Development Theory

Regional Development Theory, credited to Walter Isard and his colleagues in the 1950s, stands as a foundational framework for comprehending and mitigating the disparities in economic development among regions within countries. This theory emerged in response to the glaring inequities observed in the distribution of economic opportunities and resources across different geographical areas. By delving into the underlying factors driving these regional disparities, Regional Development Theory seeks to provide insights into the complex interplay of spatial dynamics, including geographical location, natural endowments, infrastructural investments, and governmental interventions. Through this lens, the theory underscores the multifaceted nature of regional development, recognizing that a variety of factors contribute to the economic fortunes of different areas, from their access to transportation networks to the availability of skilled labor. Moreover, Regional Development Theory is geared towards devising strategies and policies to foster balanced economic growth and mitigate regional inequalities. By identifying the structural impediments and disparities that hinder the development of certain regions, policymakers can formulate targeted interventions aimed at leveling the playing field and promoting inclusive prosperity. This entails not only addressing immediate challenges such as inadequate infrastructure or limited access to capital but also implementing policies that encourage investment, innovation, and entrepreneurship in historically disadvantaged regions. Ultimately, Regional Development Theory serves as a guiding framework for policymakers and practitioners seeking to promote spatial equity and unlock the full economic potential of all regions within a country.

Supporters of Regional Development Theory contend that it offers a holistic framework for understanding the intricate dynamics of regional economies and devising tailored strategies to spur development. This underscores the significance of coordinated planning and investment in infrastructure as foundational pillars for fostering balanced regional development. By improving transportation networks, telecommunications, and other critical infrastructure elements, governments can facilitate the efficient movement of goods and people, enhance connectivity between regions, and attract investments. Isard's emphasis on infrastructure development aligns with the theory's overarching goal of addressing the structural barriers that impede economic growth in certain regions, thus laying the groundwork for more equitable and sustainable development trajectories. Furthermore, study contributes to the discourse by highlighting the role of agglomeration economies and externalities in shaping regional growth patterns. He argues that the clustering of economic activities, facilitated by factors such as knowledge spillovers, labor market pooling, and supply chain efficiencies, can lead to productivity gains and innovation enhancements. The insights underscore the importance of policies that promote the concentration of industries and businesses in specific regions, as this can create virtuous cycles of growth and prosperity. By fostering agglomeration effects through targeted incentives and investments, policymakers can harness the potential of regional economies to drive overall economic development and enhance competitiveness on both regional and global scales.

Critics of Regional Development Theory raise significant concerns about its limitations and applicability in addressing regional disparities. They argue that the theory tends to oversimplify the complexities inherent in regional economies, overlooking critical factors such as institutional arrangements, social networks, and cultural dynamics that profoundly influence development outcomes. By emphasizing spatial factors like geography and infrastructure, Regional Development Theory may fail to capture the intricate interplay of social, political, and historical forces that shape regional economic trajectories. Storper and Scott's critique underscores the need for a more nuanced understanding of regional development processes, one that acknowledges the multifaceted nature of regional economies and the diverse array of factors that contribute to their evolution.

Critics also challenge the emphasis on spatial agglomeration within Regional Development Theory, arguing that it may exacerbate existing inequalities and neglect the needs of less-developed regions[97]. While agglomeration effects can indeed generate productivity gains and innovation, they may also concentrate economic activity in already prosperous regions, leaving behind marginalized areas. This highlights the potential pitfalls of policies that prioritize clustering without adequately considering the broader social and economic implications. To address regional disparities effectively, critics argue for a more inclusive approach that takes into account the unique characteristics and challenges of each region, while also promoting policies that foster equitable development across all areas.

The current study on the effect of Personal Income Tax (PIT) on Economic Development in Lagos State represents a significant contribution to the field of regional economics and aligns closely with the principles of Regional Development Theory. By focusing on a specific region within Nigeria, the study examines the intricate relationship between fiscal policy and regional economic outcomes. By investigating how PIT revenue, expenditure, compliance, and gross domestic product (GDP) interact within Lagos State, the research delves into the regional dimension of economic development, recognizing that fiscal policies implemented at the regional level can have a profound impact on the economic performance of specific areas and contribute to broader disparities in economic development. This aligns with the core tenets of Regional Development Theory, which emphasizes the importance of understanding the unique characteristics and dynamics of regional economies in shaping overall economic growth and development.

Moreover, the study's empirical analysis seeks to provide valuable insights into the mechanisms through which fiscal policies influence regional economic dynamics. By examining the relationship between PIT revenue and expenditure and their subsequent impact on GDP, the research aims to elucidate the effectiveness of fiscal policy interventions in promoting economic growth and development within Lagos State. Additionally, by considering the role of PIT compliance in shaping regional economic outcomes, the study sheds light on the importance of tax administration and enforcement in mobilizing resources for public investment and fostering economic productivity. Through this comprehensive analysis, the study contributes to a deeper understanding of regional development processes and provides policymakers with evidence-based insights to inform the design and implementation of effective fiscal policies aimed at promoting balanced and inclusive growth at the regional level.

Furthermore, the study's focus on Lagos State as a case study holds broader implications for regional development strategies and policy interventions across Nigeria and other countries facing similar challenges. By highlighting the specific factors influencing economic performance within Lagos State, the research offers valuable lessons that can be extrapolated to other regions seeking to address regional disparities and promote sustainable development. By informing policymakers about the effectiveness of fiscal policies in driving regional economic growth, the study provides a roadmap for designing targeted interventions aimed at fostering inclusive and equitable development across regions, thereby advancing the broader goals of economic development agendas.

2.3 Review of Empirical Studies

The impact of personal income tax (PIT) on economic growth in China and Thailand, utilizing data collected from 1999 to 2018 following Thailand's economic crisis in 1997. Employing the ordinary least squares (OLS) method, the study analyzed annual data to assess PIT's long-term effect on economic growth. The findings indicated a significantly positive correlation between PIT and economic growth in China throughout the study period, contrasting with Thailand, where PIT exhibited a significantly negative association with economic growth. Additionally, corporate income taxes (CIT) in both countries were found to have a negative impact on economic growth. Thailand's value-added tax (VAT) demonstrated a negative relationship with economic growth, while VAT in China did not significantly affect economic growth. Consequently, the study recommends that fiscal revenue policies aimed at stimulating economic growth should prioritize reducing CIT over PIT and VAT[98].

The long-run impact of personal income taxation on economic development in Croatia. Drawing on endogenous growth theory and public finance principles, which suggest a negative relationship between taxation and economic growth due to tax revenue distortions, the study reviewed relevant literature and conducted empirical analysis using the Johansen cointegration approach. By analyzing monthly data from January 2000 to March 2016, the study examined the existence of cointegration and estimated an error correction model. The findings revealed a significant negative impact of personal income taxation on economic growth in Croatia over the long term, consistent with theoretical predictions and previous empirical research. Thus, the study concludes that personal income taxation adversely affects economic conditions in Croatia. Consequently, the research suggests reevaluation of personal income tax policies to foster economic growth in the country[99].

The problems associated with personal income tax on revenue generation in Gombe State, Nigeria. Utilizing a survey methodology that encompassed both primary and secondary data, the research employed purposive sampling to select 150 respondents from employees of the state board of internal revenue service and taxpayers in the state. Data analysis was performed using the chi-square statistics test to test hypotheses. The study identified tax avoidance/evasion and the absence of information technology as significant challenges impacting revenue generation in the state. Consequently, the research recommends that the government implement stringent measures to address and penalize individuals involved in tax avoidance and evasion. Furthermore, the adoption of information technology is advocated as a solution to mitigate the problems encountered in personal income tax collection. This technological integration is deemed essential for effectively reducing challenges in revenue generation processes[100].

The relationship between Personal Income Tax (PIT) and economic growth in Nigeria. Anchored on the Laffer Curve Theory (LCT), the research utilized yearly time series data of personal income tax and gross domestic product (GDP) obtained from the Federal Inland Revenue Service (FIRS) and the Central Bank of Nigeria (CBN) statistical bulletins spanning the period 1987–2017. Employing the Vector Autoregression (VAR) model via STATA 13.0, the study aimed to investigate the effect of PIT on economic growth in Nigeria. The findings revealed a significant contribution of personal income tax to the level of economic growth in Nigeria, albeit negatively. Consequently, the study recommends the establishment of a more effective tax revenue generation system, emphasizing accountability and better administration of personal income tax. Additionally, the authors advocate for the establishment of a well-equipped database on personal income tax or taxpayers by the government to identify all possible sources of income for taxpayers, thus enhancing tax collection efficiency[101].

The dynamic effects of personal and corporate income tax changes in the United States, aiming to discern their impact on various economic aspects. Employing a novel narrative approach, they identify exogenous tax changes and distinguish between personal and corporate income taxes. Their methodology involves developing an estimator that utilizes narratively identified tax changes as proxies for structural tax shocks, which they apply to quarterly post-WWII data. Their findings reveal significant short-term output effects of tax shocks, underscoring the importance of discerning between different tax types when evaluating their influence on the labor market and expenditure components. The study identifies cuts in personal income taxes as leading to decreased tax revenues, while corporate income tax cuts have minimal impact on tax revenues. Furthermore, reductions in average personal income tax rates stimulate employment, consumption, and investment, while cuts in average corporate income tax rates primarily boost investment, without immediate effects on employment and private consumption. This research underscores the challenges in identifying the impacts of economic policy changes, particularly in tax policy, due to endogeneity and the diversity of policy instruments. By focusing on two homogenous tax categories rather than total tax revenues, the study provides a nuanced[102]

The relationship between tax revenue components and the economic development of Nigeria, employing an ex-post facto research design and utilizing secondary time series data spanning from 2003 to 2017. The study assesses various components of tax revenue, including value-added tax, petroleum profit tax, personal income tax, company income tax, and custom and excise duties, while economic development is measured through real GDP and the Human Development Index (HDI). Analysis is conducted using the Autoregressive Distributed Lag technique alongside other statistical tools. The findings suggest a negative relationship between petroleum profit tax and measures of economic development, indicating a disconnect between revenue generated from this tax and its allocation towards infrastructure development. Consequently, the study recommends directing significant portions of revenue, particularly from petroleum profit tax, towards infrastructural development to foster economic growth in Nigeria. This underscores the need for a more effective fiscal policy aimed at channeling tax revenue into critical areas that promote sustainable economic development[103].

The impact of income tax revenue on GDP economic growth in Nepal, focusing on data. The study utilizes the Economic Survey of Nepal and data from Nepal Rastra Bank, employing a linear regression model to analyze the relationship. Through meticulous data collection and comprehensive statistical analysis, the study demonstrates a significant positive influence of income tax revenue on Nepal's GDP progression. The findings reveal that an increase in income tax revenue corresponds to a rise in economic growth, emphasizing the significance of effective tax policies and revenue collection mechanisms in fostering economic development and stability. Consequently, the study underscores the importance of income tax revenue as a critical driver of Nepal's economic trajectory, highlighting the necessity for policy interventions and reforms to ensure sustained prosperity in the country. This research provides valuable insights for policymakers as Nepal navigates its path towards economic advancement in the 21st century[104].

The impact of tax revenues and domestic investments on economic growth in Tunisia spanning from 1976 to 2018. Utilizing co-integration analysis and Vector Error Correction Model, the study aims to assess the implications for social and economic well-being in Tunisia. Empirical findings reveal a negative long-term impact of domestic investment on economic growth, contrasting with the positive influence of tax revenues. Moreover, the study highlights a reciprocal positive relationship between domestic investment and tax revenues, while tax revenue and economic growth do not significantly affect domestic investment in the long run. These results underscore the instability of Tunisia's tax revenue strategy for domestic investment and the inadequacy of its domestic investment policy for fostering economic growth. Consequently, the study recommends prompt intervention to implement necessary measures to avert potential adverse outcomes. This research underscores the urgency for policymakers to reassess tax and investment policies to ensure sustainable economic development in Tunisia[105].

The impact of tax expenditure on import tax revenue mobilization in Ghana. The study utilized the Autoregressive Distributed Lag (ARDL) model with structural breaks, analyzing monthly time series data from January 2012 to June 2019. Structural breaks were identified using the innovational outlier model within the bounds testing cointegration framework. The findings revealed a significant negative effect of expenditure on interest payment, compensation of employees, and grants to other government units on import tax revenue in the long run. Additionally, macroeconomic variables such as inflation rate and exchange rate were found to have a negative impact on import tax revenue in the long term. Consequently, the study concluded that tax expenditure and tax revenue mobilization in Ghana exhibited an inverse relationship. As a recommendation, the government is advised to implement financing measures to effectively manage wage bills, ensuring efficient delivery of public services in a fiscally sustainable manner. Moreover, it is suggested that the government should consider the macroeconomic environment and various tax incentives when mobilizing import tax revenue[106].

The optimal public expenditure financing policy across different levels of economic development. Conducted at the Centre for Growth and Business Cycle Research, Economic Studies, University of Manchester, UK, the study aimed to determine how the optimal mode of public finance varies with the stage of economic development. The authors employed a theoretical analysis based on an overlapping generation’s growth model with an imperfect capital market, considering random shocks that create a demand for liquidity and establish a role for financial intermediaries. They found that inflation affects the relative rates of return on assets, leading to money becoming the preferred asset in banks' portfolios, thereby negatively impacting economic growth. This effect was observed to be stronger in lower-income countries due to higher default risks associated with lending. Consequently, income taxation was considered a relatively less distortionary way of financing public expenditure for low-income countries compared to high-income countries, where seigniorage was more feasible. Empirical support for these findings was provided using a panel of 21 OECD and 40 developing countries observed from 1972 to 1999. Therefore, the study concluded that the optimal public expenditure financing policy depends on the level of economic development. The authors recommended tailoring financing methods to the economic context, advocating for income taxation in low-income countries and seigniorage in high-income countries to mitigate distortionary effects and promote economic growth[107].

Assessing the fiscal and equity impact of tax expenditures in the European Union (EU). The research, based at the European Commission's Joint Research Centre in Seville, utilized the EU-wide micro simulation model, EUROMOD, to quantify the effects of tax expenditures in 27 European countries. The study focused on four specific categories of preferential tax treatments related to personal income taxation: housing, pension, education, and health expenditures. By embedding the interaction between different tax instruments and benefits entitlement, EUROMOD enabled a comprehensive assessment of the fiscal and equity impact of tax expenditures within the EU tax systems. Through a benchmark tax system scenario, where tax expenditures were explicitly considered, the study quantified the impact on governments' tax revenues and households' disposable income. The findings revealed significant variations across Member States, household types, and generations, suggesting that the impact of tax expenditure on tax revenues and income inequalities can be substantial and varied. Removal of tax expenditures was found to have redistributive impacts that could either be progressive or regressive depending on the country and the specific tax expenditure considered. Consequently, the study underscores the importance of careful country-specific scrutiny for each type of tax expenditure and recommends policy measures that are tailored to the particular context of each country[108].

Analyzing trends in tax expenditures and their implications for the US federal budget. Situated within the context of understanding the budgetary costs and composition of tax expenditures, the research focused on the period between 2013 and 2029. The methodology employed involved estimating the budgetary costs of tax expenditures as a percentage of gross domestic product (GDP) over this period. The findings revealed that the sum of tax expenditure costs ranged from approximately 8.5 percent of GDP in fiscal year 2017 to 6 percent in fiscal years 2024 and 2025. The Tax Cuts and Jobs Act of 2017 (TCJA) played a significant role in reducing tax expenditure costs between 2019 and 2025; however, after 2025, when most provisions of the TCJA will expire, total costs are projected to rebound to 7.6 percent of GDP by 2029. The study also highlighted changes in the composition of tax expenditures, emphasizing their role in promoting economic and social policy objectives. In conclusion, the research underscores the importance of monitoring and understanding the implications of tax expenditure policies for the federal budget. The recommendation arising from these findings suggests the need for policymakers to carefully evaluate and potentially reform tax expenditure provisions to ensure fiscal sustainability and alignment with broader economic and social goals[109].

The relationship between taxpayers' awareness and tax compliance in local governments, focusing specifically on Lira district in Uganda. The research aimed to establish the correlation between understanding tax laws, knowledge of tax regulations, and awareness of tax obligations. Employing a correlational research design, the study utilized questionnaires and interviews for data collection, with a sample size determined through purposive and simple random sampling techniques. Data analysis was conducted using SPSS software, with 172 respondents participating in the study. The findings revealed a positive correlation between understanding tax laws and tax compliance, indicating that a better understanding of tax laws contributes to higher tax compliance. Additionally, knowledge of tax regulations and policies, as well as awareness of tax rights and obligations, were found to positively correlate with tax compliance. Based on these results, the study recommended improving taxpayer compliance in Lira district through tax training, seminars, and workshops aimed at enhancing understanding of tax laws, regulations, and obligations, thereby maximizing taxpayer compliance[110].

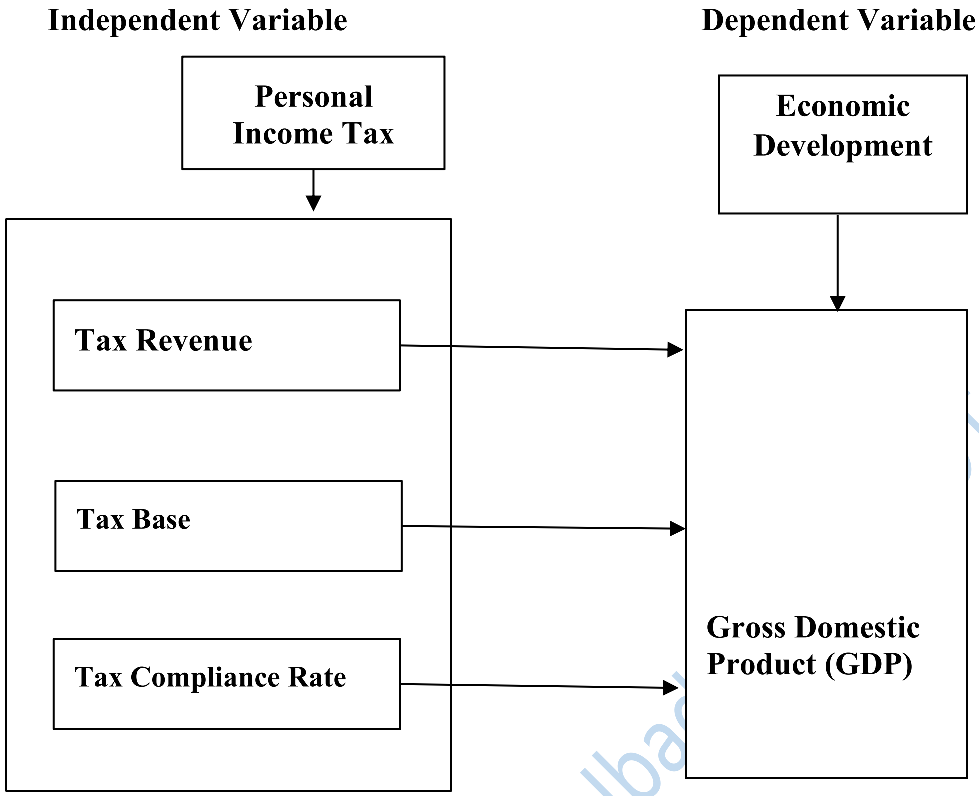
The impact of tax compliance behavior on economic growth in Nigeria, aiming to evaluate the factors influencing citizens' willingness to comply with tax and how this compliance affects economic growth. The study employed a comparative analysis of tax payment willingness between citizens in Nasarawa and Plateau States. Primary data were collected via questionnaires administered to self-employed individuals in each senatorial district. Demographic variables and factors affecting tax compliance willingness were measured using frequencies, percentages, and the Chi-square technique to compare differences between the two states. Results indicated a significant difference in tax payment willingness, with Plateau State showing higher compliance. Factors such as government trustworthiness, provision of infrastructural amenities, tax accountability, income, and tax knowledge influenced willingness to pay taxes. The study concluded that tax compliance, driven by citizens' willingness to pay taxes, is crucial and suggested that the government should address factors influencing tax payment willingness to enhance revenue and economic growth nationwide[111].

The relationship between tax compliance and economic growth in Nigeria, focusing on the moderating effect of tax morale. Conducted at the Department of Accounting, Faculty of Management Sciences, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Rivers State, Nigeria, the study employed a quantitative research design. Descriptive statistics were used to explain the study's variables, and secondary data were sourced from the Statistical Bulletin of the Central Bank of Nigeria and the Economic Bureau of Statistics. Regression analysis, including panel regression, was conducted to analyze the data, with Gross Domestic Product (GDP) and Human Development Index (HDI) serving as control variables and logged revenue as the independent variable representing tax compliance. The findings revealed a negative significant effect of tax compliance on HDI but a positive significant impact on RGDP, with tax morale having a weak moderating effect on tax compliance and economic growth in Nigeria. The study concluded that enhancing voluntary tax compliance requires the provision of essential services by the government and translating taxes collected into human capital development to boost economic growth[112].

Informal Sector Tax Compliance Issues and the Causality Nexus between Taxation and Economic Growth: Empirical Evidence from Ghana. The research aimed to investigate the determinants of informal sector compliance issues and the causality nexus between tax evasion and Gross Domestic Product (GDP). Situated at the School of Management and Economics, University of Electronic Science and Technology of China, Chengdu, China, the study employed a two-part approach. Firstly, questionnaires were administered to 600 respondents, comprising informal sector taxpayers across all ten regions in Ghana, with regression analysis used to depict the results. The findings indicated that attitudes, subjective norm, and perceived behavioral control were the main determinants of informal sector compliance issues. Secondly, the research examined the causality between taxes and GDP in Ghana's economy from 1980 to 2015. Employing the Augmented Dickey Fuller Unit Root test and the Johansen test, the study found co-integration between the variables and a unidirectional causality from taxation to GDP. As a conclusion, the study recommends efforts to enhance tax systems to augment the country's GDP[112].

The effects of compliance and growth opinions on Small and Medium Scale Enterprises (SMEs) compliance decisions in Ghana. Conducted at the Faculty of Business and Management, Koforidua Technical University, Koforidua, Ghana, the study aimed to analyze respondents' subjective opinions on the growth of their businesses, how their growth opinions affect their perception on taxes, and how those perceptions contribute to tax compliance. A total of 840 questionnaires were distributed to registered SMEs across all ten regions of Ghana, and the data were analyzed using Stata 12 and E-views 7.1. The findings revealed that SMEs have negative subjective opinions on their growth, which in turn negatively affect their general perception towards taxes, thereby impacting SMEs' compliance with taxes. The study suggests that the Ghana Revenue Authority formulate strategies on taxation and SMEs growth to address this issue efficiently and effectively[114].

2.4 Conceptual Model



Source- Researcher Field Work 2024

i. Personal Income Tax (Independent variable)

ii. PIT Compliance rate (Independent variable)

iii. PIT Base (Independent variable)

iv. Gross domestic product in Lagos State (Dependent variable)

Gross domestic product is dependent on personal income tax and PIT Compliance rate. Hence, gross domestic product is the dependent variable, while, personal income tax, PIT Compliance rate and tax base are independent variables.

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Chapter Three

Methodology

3.1 Research Design

This study adopts an ex post facto research design to investigate the effect of Personal Income Tax (PIT) on Economic Development, focusing on Lagos State as a case study. The research aims to examine the relationship between personal income tax revenue, expenditure, compliance, and the gross domestic product (GDP) of Lagos State. Data will be collected retrospectively from existing records over a specified period, avoiding manipulation of variables. Secondary data sources such as government reports, tax records, and economic indicators will be utilized to measure personal income tax revenue, expenditure, compliance rates, and GDP. Statistical analyses, including correlation and regression, will be employed to determine the impact of personal income tax variables on GDP, allowing for the identification of trends and patterns. This design allows for an exploration of the causal relationship between personal income tax and economic development, providing insights into the effectiveness of tax policies and compliance strategies in promoting economic growth.

3.2 Population of the Study

Since this study employs secondary data and no questionnaire is administered to any individual, hence, population of the study is not applicable in this study. The entire figure of personal income tax and the GDP of the entire Lagos state forms the unit of analysis.

The source of data for this research project is the secondary source. The data for this study which bother on personal income tax and gross domestic product compiled by the Lagos State Internal Revenue Service, Ministry of Finance, Budget and Planning Office, Lagos.

3.3 Description of the Research Instrument(s)

Using documentation method of data collection, secondary data was collected from Lagos State Internal Revenue Services (LIRS) reports, National Bureau of Statistics (NBS) data, Central Bank of Nigeria (CBN) reports, Lagos State Government budgets and reports and World Bank and International Monetary Fund (IMF) reports. The data span from the period of 12 years (2012 to 2023).

3.4 Validity Test of Instrument

3.4.1 Data Cleaning - Test of Unit Root

Test of unit root adopted for this study is based on the nature of data. The unit root test was adopted for the secondary data collected. The unit root test of validity and reliability is only applicable for secondary data that is of time series nature. Unit root test helps to determine a regression model that is not spurious and also tackles the problems of trends that usually occur in economic time series. Hence, the necessity to determine the most appropriate form or model before analysis. If the series is trending, then some form of trend demand is required. This study adopted the Dickey Fuller Test (ADF) for the testing procedure for unit root so as to ensure normality of variable using the following formula.

ADF is applied to the model.

The unit root test is carried out under the null hypothesis.

H0: B2 = 0 against

H1: B2 < 0

The Dickey Fuller's (DF) test statistics is

$$DF = \frac{B2}{S\,(B2)}$$

Where:

α is a constant,

B1 is the lag of the autoregressive process.

If DF is less than the critical value, then the null hypothesis is rejected and no unit root is present[1]. As earlier stated, the relevance of this test is to determine the order of integration of the variables so that appropriate model can be filled for the data.

3.4.2 Unit Root Test

V `The characteristics of the data gathered on the variables to be used for analysis have to be examined before carrying out the analysis. Testing the stationary nature of time series data is important since standard econometric methodologies assume Stationarity in the time series while they are in the real sense non-stationary[2]. Hence the usual statistical tests are likely to be inappropriate and the deductions made are likely to be erroneous and misleading. For example, the Hierarchical Regression Model estimation of regressions in the presence of non-stationary variables gives rise to spurious regressions if the variables are not co- integrated[2].

Table 3.1 Stationarity Test

Null Hypothesis: GDP has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		5.469673	0.0019
Test critical values:	1% level	4.420595	
	5% level	3.259808	
	10% level	2.771129	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 9

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP)

Method: Least Squares

Date: 10/5/24 Time: 01:08

Sample (adjusted): 2012 2023

Included observations: 9 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP (-1)	-0.279124	0.189922	1.469673	0.2021
D (GDP (-1))	0.171280	0.401493	0.426607	0.6874
D (GDP (-2))	-1.000927	0.406834	2.460283	0.0572
C	3.08E+09	1.26E+09	5.440330	0.0586

R-squared	0.679653	Mean dependent var	5.29E+08
Adjusted R-squared	0.487445	S.D. dependent var	1.83E+09
S.E. of regression	1.31E+09	Akaike info criterion	45.12214

Sum squared resid	8.55E+18	Schwarz criterion	45.20979
Log likelihood	-199.0496	Hannan-Quinn criter.	44.93298
F-statistic	3.536029	Durbin-Watson stat	2.331931
Prob(F-statistic)	0.003811		

Test for stationary nature of the variables was carried out using Augmented Dickey-Fuller (ADF) test. The results of the unit root tests are presented in table 1. The result showed that all the variables are stationary at level (ADF = 5 > 4.42, 3.26, and 2.77), and also stationary at first difference.

When variables produce a stationary series, co-integration among them in the long run is feasible. Stationarity is obtained by comparing the test statistics with the critical value(s), if the test statistics is greater than the critical value numerically, the variable is stationary and if the reverse, it is non-stationary. The entire ADF statistics is greater than the critical value (that is, ADF = 5 > 4.42, 3.26, and 2.77), hence, stationarity exist among variables. As a result, data are adequate enough for further treatment and analysis since they are found to be stationary. To establish the existence of long run relationship among variables, a co-integration test was performed using the Johansen's co-integration test[3].

3.5 Variables Used for The Study

The following are the variables used for analysis:

v. Personal Income Tax (Independent variable)

vi. PIT Compliance rate (Independent variable)

vii. PIT Base (Independent variable)

viii. Gross domestic product in Lagos State (Dependent variable)

Gross domestic product is dependent on personal income tax and PIT Compliance rate. Hence, gross domestic product is the dependent variable, while, personal income tax, PIT Compliance rate and tax base are independent variables.

3.6 Method of Data Collection

Data for this study will be collected retrospectively over a span of 12 years (2012 to 2023) from primary sources including government reports, tax records, and economic indicators provided by the Lagos State Internal Revenue Service and other relevant agencies. The data will encompass variables such as personal income tax revenue, expenditure, compliance rates, and Gross Domestic Product (GDP) of Lagos State. The process will involve identification of data sources, authorization for access, compilation, validation, cleaning, coding, and secure electronic storage, ensuring the availability of reliable and systematically organized data for analysis, thus enabling an effective investigation into the relationship between personal income tax and economic development in Lagos State.

3.7 Method of Data Analysis

Data collected were analyzed using a Hierarchical Regression in testing the hypotheses of the study with the aid of SPSS 25 Version. The Hierarchical Regression has the following assumptions:[3]

a. The relationship between the variables (X and Y) is almost linear,

b. Errors or residuals are statistically independent,

c. All the errors have a common variance (Homoscedasticity).

The Hierarchical Regression model is most appropriate to explain the effect of independent variables on the dependent variable[3]. Since this study is to ascertain the effect of personal income tax on gross domestic product, this method of data analysis is most appropriate.

3.7.1 Model Specification

The model for this research study is stated as follows:

$GDP_t = \alpha_0 + \beta_1 PIT_t + \varepsilon_t$ … (1)

$GDP_t = \alpha_0 + \beta_1 PIT_t + \beta_2 PIT\text{-}Base_t + \varepsilon_t$ … (2)

$GDP_t = \alpha_0 + \beta_1 PIT_t + \beta_2 PIT\text{-}Base_t + \beta_3 PIT\text{-}Compl_t + \varepsilon_t$ … (3)

Where:

GDP_t = Gross domestic product at time t

PIT = Personal Income Tax at time t

PIT-Base = Personal Income Tax Base at time t

PIT-Compl. = Personal Income Tax Compliance rate at time t

t= the time period chosen for this study from 2012 to 2023.

α_0 = the constant term from models

$\beta_1 - \beta_3$ = slopes of the independent variables. α_1 is expected to be > 0

ε_t = the error term. It captures other variable not mentioned in the models.

3.8 Ethical Approval

Ethical approval for this research study was obtained from the appropriate regulatory bodies, ensuring adherence to ethical principles and guidelines for conducting research involving human subjects and sensitive data. The research protocol will be submitted to the Institutional Review

Board (IRB) or Ethics Committee, detailing the objectives, methodology, data collection procedures, and measures to protect participants' rights and confidentiality. Informed consent will be obtained from participants, guaranteeing their voluntary participation, right to withdraw, and protection of personal information. Additionally, measures will be implemented to ensure data security, confidentiality, and anonymity throughout the research process, safeguarding the privacy and welfare of participants. Ethical considerations were paramount in every aspect of the research, fostering trust, integrity, and respect for all individuals involved.

Endnotes

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Chapter Four

Results and Discussion of Findings

4.1 Presentation of Data

This chapter deals with presentation and analyses of data utilized in the research work. The data collected were from secondary sources including the Central Bank of Nigeria, National Bureau of Statistics and Lagos State Internal Revenue Service. The data are presented in tables 4.1 and analyzed thereafter.

Table 4.1 PIT Revenue, Compliance rate, Tax Base and GDP for the years 2012 – 2023

YEAR	PIT	PIT Compliance rate (%)	PIT-Base (%)	GDP (#'Trillion)
2012	72.44	14.00	45	13.15
2013	67.14	25.00	46	10.05
2014	53.61	24.00	43	15.54
2015	175.43	30.00	54	20.45
2016	190.66	34.00	55	27.125
2017	192,54	35.00	55	431
2018	187.64	37.00	53	628
2019	201.32	38.00	50	451
2020	89.24	19.00	38	189
2021	220.21	31.00	39	267
2022	214.24	33.00	34	347
2023	224.36	44.00	33	574

Source: Lagos State Government Approved Budget Document from 2012 – 2023

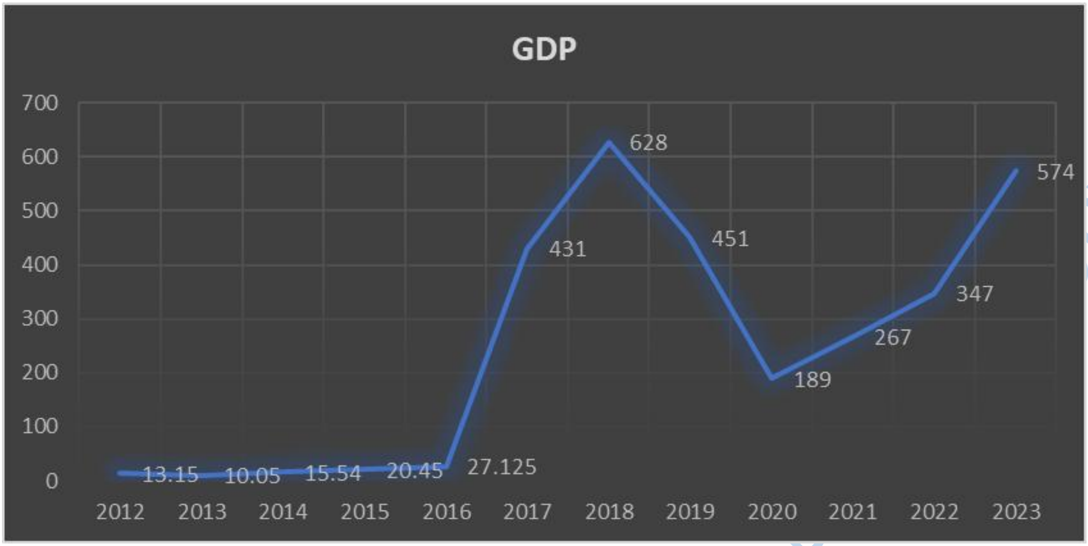

Figure 4.1, Graphical presentation of GDP from (2012 – 2023)

Source: Researcher's computation (2024)

Figure 4.1 shows the analyses of the GDP data in graphical form (year on year) and reveal the fluctuations in the growth rate of GDP. The GDP reduced by -0.24% in year 2013, grows by 0.55% in 2014, 0.32% in year 2015, 0.33% in year 2016, year 2017 recorded a significant increase by 14.89%, further reduced by -0.58% in year 2020, growth of 0.41% was recorded in year 2021 and an increase of 0.65% was recorded in year 2023.

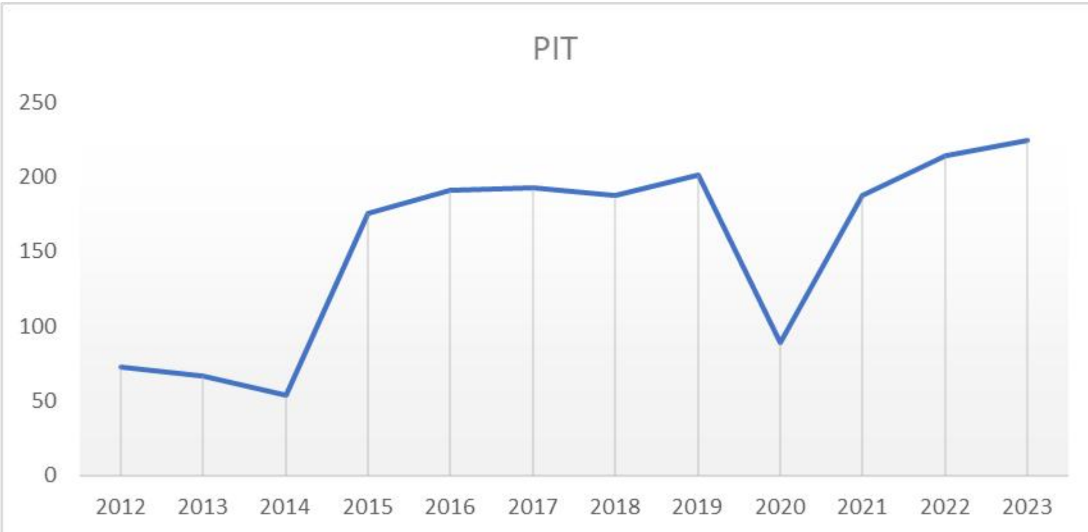

Figure 4.2, Graphical presentation of Personal Income Tax from (2012 – 2023)

Source: Researcher's computation (2024)

The analyses of the Personal Income Tax data in percentages (year on year) show fluctuations in the growth rate. The tax trend between years 2012 and 2023 indicated personal income tax reduces by -0.07% in year 2013, further reduced by -0.20% increase in 2014, PIT increased by 2.27% in year 2015, 0.09% in year 2016, 0.01% in year 2017, reduction of -0.56% was recorded in the year 2020, and an increase of about 0.05% was recorded in 2023.

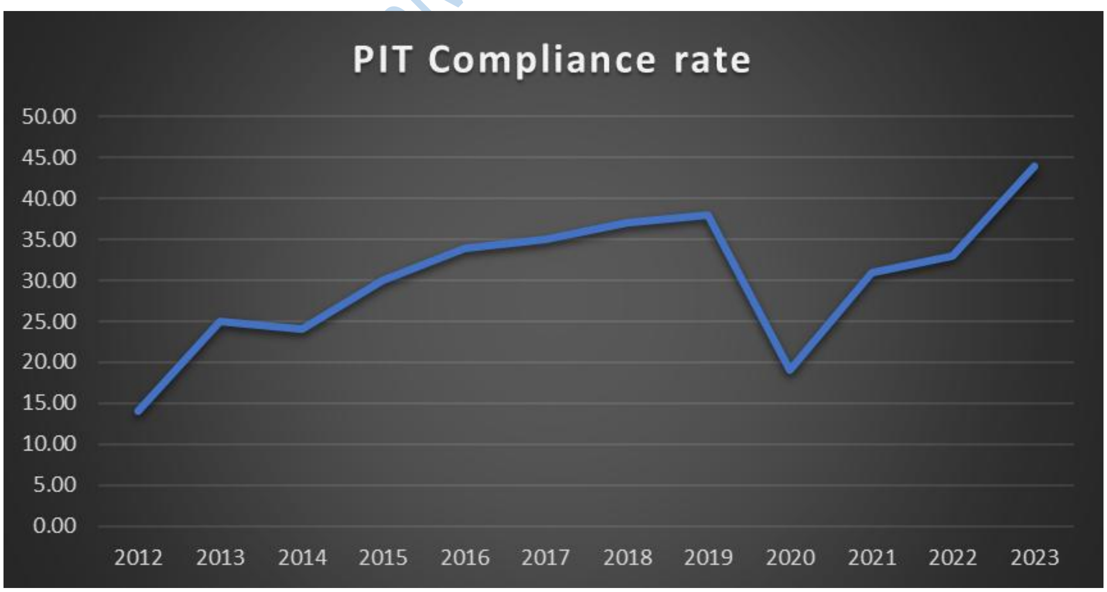

Figure 4.3, Graphical presentation of PIT Compliance rate from (2012 – 2023)

Source: Researcher's computation (2024)

The analyses of PIT Compliance rate data in percentages (year on year) show fluctuations in the growth rate. The PIT Compliance rate trend between years 2012 to 2023 indicated that PIT Compliance rate grew by 79% in year 2013, decline of -4% in 2015, 25% increase in year 2016, 13% in year 2017, 6% and 3% increase was recorded in the year 2018 and 2019 respectively, 50% decline was further recorded in the year 2020, growth of 63% was recorded in year 2022, and an increase of 33% was recorded in the year 2023.

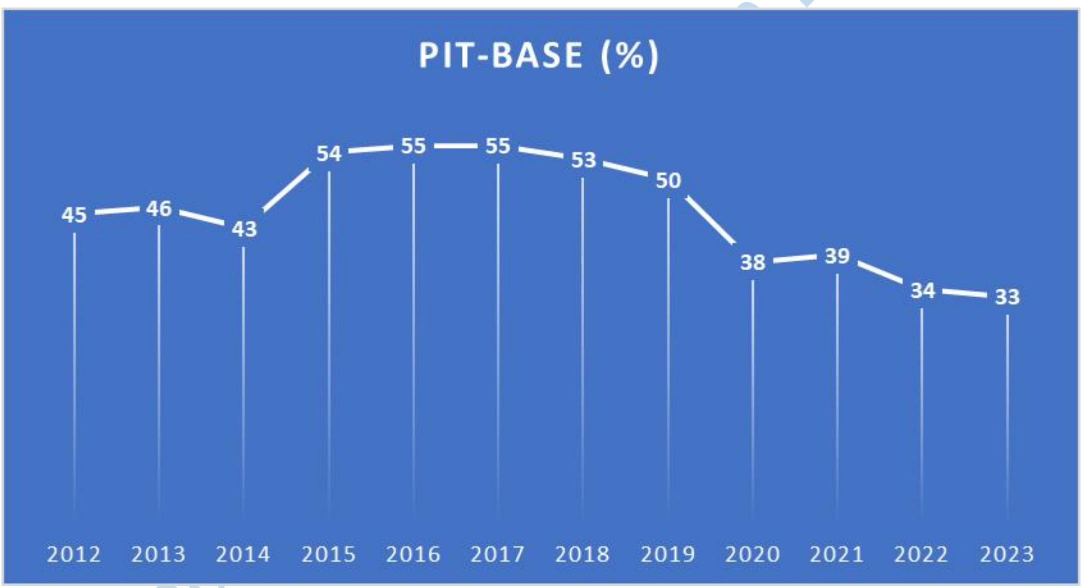

Figure 4.4, Graphical presentation of PIT Base from (2012 – 2023)

Source: Researcher's computation (2024)

The analyses of PIT Base data in percentages (year on year) show fluctuations in the growth rate. The PIT Base trend between years 2012 to 2023 indicated that PIT Base grew by 2% in year 2013, decline of -7% in 2015, 26% increase in year 2016, 2% in year 2017, 2% increase was recorded in the year 2018, -4% decline was further recorded in the year 2020, growth of 3% was recorded in year 2021, and a decline of -13% and -3% was recorded in the year 2022 and 2023 respectively.

4.2 Research Questions

1. What is the effect of personal income tax revenue on the gross domestic product of Lagos state?
2. What is the effect of personal income tax base on the gross domestic product of Lagos state?
3. What is the effect of personal income tax compliance rate on the gross domestic product of Lagos state?

4.2.1 Hypothesis One

Using Hierarchical Regression Model, focus shall be placed on the Change Statistics, where only Personal Income Tax was considered as the independent variable against the GDP.

H_01: Personal income tax revenue has no significant effect on the gross domestic product of Lagos state.

$$GDP_t = \alpha_0 + \beta_1 PIT_t + \varepsilon_t \quad \ldots (1)$$

Table 4.2 Model Summary for Hypothesis One

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.952[a]	.907	.900	8885.9537	.907	136.559	1	14	.000

a. Predictors: (Constant), PIT

Table 4.3 Coefficients[a] for Hypothesis One

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
1 (Constant)	5591.908	3775.947		1.481	.161			
PIT	96.349	8.245	.952	11.686	.000	.952	.952	.952

a. Dependent Variable: GDP

R explain the relationship between variable. As shown in the model summary (table 4.2), the relationship between PIT and GDP is about 95%. R square explain the extent to which the independent variable (PIT) could explain the dependent variable (GDP). R square as shown in model summary is about 91%, this implies that PIT can predict or determine GDP up to 91%. Adjusted R square explain the ability of the model to predict the effect of independent variable

(PIT) on the dependent variable (GDP). The adjusted R square for this model is 90%, which implies that the model is good enough to predict the relationship.

Table 4.3 revealed that a unit change in the beta value of PIT account for about 96-unit change in GDP (Beta =96.349), this represents about 95% change in GDP.

Decision

Since the P value (0.000) is less than 0.05, we reject the null hypothesis and conclude that personal incomes tax (PIT) has significant effect on gross domestic product (GDP) of Lagos State.

4.2.2 Hypothesis Two

Using Hierarchical Regression Model, focus shall be placed on the change statistics, where both personal income tax and tax base were considered as the independent variables against the GDP.

H_02: Personal income tax base has no significant effect on the gross domestic product of Lagos state.

$GDP_t = \alpha_0 + \beta_1 PIT_t + \varepsilon_t$ … (1)

$GDP_t = \alpha_0 + \beta_1 PIT_t + \beta_2 PIT\text{-}Base_t + \varepsilon_t$ … (2)

Table 4.4 Model Summary for Hypothesis Two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.861[a]	.742	.723	146.35329	.742	40.228	1	14	.000

Table 4.4 Model Summary for Hypothesis Two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.861[a]	.742	.723	146.35329	.742	40.228	1	14	.000

a. Predictors: (Constant), Tax Base

Table 4.5 Coefficients[a] for Hypothesis Two

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	12.545	67.236		.187	.855					
PIT Base	.144	.023	.861	6.343	.000	.861	.861	.861	1.000	1.000

a. Dependent Variable: GDP

After considering the impact of personal income tax, tax base was introduced as additional predictor of GDP. Table 4.4 shows that the relationship between personal income tax base and GDP is about 86%. R square change statistics explain the extent to which the independent variable (tax base, after the impact of personal income tax) could explain the dependent variable (GDP). R square change statistics as shown in model summary is about 74%, this implies that personal income tax base (increase of decrease in PIT base) can predict or determine GDP of Lagos state up to 74%. Adjusted R square explain the ability of the model to predict the effect of independent variable on the dependent variable (GDP). The adjusted R square for this model is 72%, which implies that the model is good enough to predict the relationship.

This study also shows that a unit change in personal income tax base will result to a unit change in GDP of Lagos state by 0.144 which is about 86% change.

Decision

This study revealed that personal income tax base has significant effect on GDP (table 4.5. $p = 0.000 < 0.05$). Null hypothesis is hereby rejected and conclude that personal incomes tax (PIT) base has significant effect on GDP of Lagos state.

4.2.3 Hypothesis Three

Using Hierarchical Regression Model, focus shall be placed on the change statistics, where personal income tax, tax base and tax compliance rate were considered as the independent variables against the GDP.

$H_0 3$: Personal income tax compliance rate has no significant effect on the gross domestic product of Lagos state.

$$GDP_t = \alpha_0 + \beta_1 PIT_t + \varepsilon_t \quad \ldots (1)$$
$$GDP_t = \alpha_0 + \beta_1 PIT_t + \beta_2 PIT\text{-}Base_t + \varepsilon_t \quad \ldots (2)$$
$$GDP_t = \alpha_0 + \beta_1 PIT_t + \beta_2 PIT\text{-}Base_t + \beta_3 PIT\text{-}Compl_t + \varepsilon_t \quad \ldots (3)$$

Table 4.6 Model Summary for Hypothesis Three

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.52[a]	.47	.400	8885.9537	.37	136.559	1	14	.000

a. Predictors: (Constant), PIT

Table 4.7 Coefficients[a] for Hypothesis Three

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	5591.908	3775.947		1.481	.161			
	PIT Compl	16.349	8.245	.952	11.686	.000	.952	.952	.952

a. Dependent Variable: GDP

R explain the relationship between variable. As shown in the model summary (table 4.6), the relationship between PIT compliance rate and GDP is about 52%. R square change statistics explain the extent to which the independent variable (PIT compliance rate) could explain the dependent variable (GDP). R square as shown in model summary is about 37%, this implies that PIT compliance rate can predict or determine GDP up to 37%. Adjusted R square explain the ability of the model to predict the effect of independent variable (PIT compliance rate) on the dependent variable (GDP). The adjusted R square for this model is 40%, which implies that the model is good enough to predict the relationship.

Table 4.7 revealed that a unit change in the beta value of PIT compliance rate account for about 16-unit change in GDP (Beta =16.349), this represents about 16% change in GDP.

Decision

Since the P value (0.000) is less than 0.05, we reject the null hypothesis and conclude that personal incomes tax (PIT) compliance rate has significant effect on gross domestic product (GDP) of Lagos State.

4.3 Discussion of Findings

This study reveals that personal income tax contributed significantly to the gross domestic product of Lagos state. The study also shows that personal incomes tax base has significant effect on gross domestic product (GDP) of Lagos State; and personal incomes tax compliance rate has significant effect on GDP of Lagos state.

Findings from this study is in line with study conducted[1], where the researchers focused on personal income tax, fiscal federalism and economic, industrial and social development of Nigeria with focus on Personal income tax and economic growth in Nigeria. Time series data on the Gross Domestic Product (GDP), Personal income tax. Findings showed that the ratio of PIT to GDP averaged 1.3% compared to 4.5%, though PIT accounts for as much as 95% significant variations in GDP in Nigeria. A positive and significant correlation exists between PIT and GDP. Both economic variables fluctuated greatly over the period though PIT was more stable. No causality exists between the GDP and PIT, but a lag period of two years exists.

In the same light, in a research work conducted[2], the researchers examined the incidence of the personal income tax with the least square methodology and specification on the line-log model of human development index. The findings revealed that personal income tax, Company Income Tax and Excise Tax exhibit a positive relationship with the level of national development, and a negative relationship between human development index and corporate tax.

A research study on how personal income tax affect economic growth using panel data from 1975 to 2022 for 25 rich Organization for Economic Cooperation Development countries, they found a negative influence on economic growth from both taxation of corporate and personal income. The study revealed a more robust economic growth in correlation with personal income tax[3].

Findings from this study is in line with study conducted in 2023 on taxation theory and practice[4]. The researchers analysed the impact of Personal income tax base on Economic Growth from 2021 to 2023 in Nigeria. The result from the test shows that there exists a positive impact of Personal income tax base on economic growth in Nigeria.

Findings from this study is in line with study conducted in (2023), where the researchers examined the impact of Personal income tax base on revenue generation in Nigeria. The secondary data were sourced from Central Bank of Nigeria statistical Bulletin (2022), Lagos State Internal Revenue Service Annual Reports and Chartered Institute of Taxation of Nigeria

Journal. Data analysis was performed with the use of stepwise regression analysis. Findings showed that Personal income tax base has significant effect on revenue generation in Nigeria[5].

A study equally conducted in the year 2023, also examines the impact of Personal income tax base on the economic growth of Nigeria. Relevant secondary data were collected from the Central Bank of Nigeria (CBN) and the Lagos State Internal Revenue Service (FIRS) from 2021 to 2022. The secondary data collected from the relevant government agencies in Nigeria were analysed with relevant econometric tests of Breusch-Godfrey Serial Correlation LM, White Heteroskedasticity, Ramsey RESET, Jarque Bera, Johansen Co-integration and Granger Causality. The results revealed that there exists a long run equilibrium relationship between economic growth and petroleum profit tax. It was also found that petroleum profit tax causes growth of gross domestic product of Nigeria[6].

Some researchers[7] in the year 2023 investigated a similar issue with a sample of 13 Asian countries for the period 2019-2020 using the Arellano and Bond (1991) generalized method of moments (GMM). The results showed that Personal income tax base, defense expenditure together with distortionary taxes and the budget balance all have negative and significant effects on economic growth. Government expenditures on health and education showed a highly significant positive effect on economic growth[7].

A study the effect of taxation in sub-Saharan Africa. The study found that taxes levied on false personal and corporate income bases reduces economic growth. From the study, it concluded that the tax base or structure was largely irrelevant in less developed economies, but embedded in an effective tax system are benefits for both the taxpayers and the government[8].

As far back as 2014, a study on the importance of personal income tax compliance to the GDP in providing funds towards infrastructural development[9]. The study highlighted that GDP of any nation is highly subjected to the personal income tax compliance rate, because those who fail to fully comply with tax payment has subjected the economy of that nation to jeopardy, GDP serves as the nerve center of the social contract, it makes government more responsible and more responsive to the needs of the people, it serves as a tool for economic development, it is an important consideration in the planning of savings and investment and a powerful fiscal weapon to plan and direct the economy.

In the similar study conducted in the year 2001 in Lagos State, the author found out that the effect of personal income tax compliance rate results into high internal revenue generation (economic growth) which has leads to infrastructural development[10]. The researchers also discovered that the poor infrastructural development could be as a result of inadequate personal income tax compliance rate which latter led to decline in gross domestic product and that revenue generation supports infrastructural development. However, the researcher found that Lagos state is ahead of other states in the provision of basic infrastructures due to its efficiency in generating revenue internally[10].

Endnotes

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Chapter Five
Conclusion

5.1 Summary of Findings

This study revealed that personal income tax contributed significantly to the gross domestic product of Lagos state. The study also shows that:

Personal income tax revenue has significant effect on the gross domestic product of Lagos state.

Personal income tax base has significant effect on the gross domestic product of Lagos state.

Personal income tax compliance rate has significant effect on the gross domestic product of Lagos state.

5.2 Conclusion

This study considered the effect of personal income tax on gross domestic product of Lagos state (2012 – 2023). Furthermore, the study considered contribution of personal income tax compliance rate and tax base to the GDP of Lagos state. For the purpose of this study, only salary earners pay personal income tax faithfully through the Pay As You Earn (PAYE) system, which deducts tax at source. It has remained arduous, if not infeasible to get the self-employed to pay tax faithfully and since the government has not been able to contrivance an expedient of assessing the income of those in self-employment, they have been eschewing tax so prosperously, to the ignominiousness of the Internal Revenue accommodation. This study evaluates the contribution of personal income tax to gross domestic product in Lagos state, with a view to examining the salient factors responsible for inadequate GDP in Lagos state and evaluate the contributions of personal income tax to GDP in Lagos state.

In conclusion, personal incomes tax (PIT) has significant effect on gross domestic product (GDP) of Lagos State, in the same light, personal incomes tax compliance rate and tax base has significant effect on GDP of Lagos state.

5.3 Recommendations

i. There is urgent need for the state government of Lagos state to encourage and develop various mechanisms for generating more PIT in order to increase the gross domestic product.

ii. To ensure that PIT base increases, government should create opportunities for employment generation.

iii. To increase compliance rate, government should engage tax professionals, employ faithful, dedicated and hardworking staff to assist in the area of tax collection from small and medium scale business in Lagos state. Also, there is need for proper documentation and management of this revenue.

5.4 Contribution to Knowledge

i. This study has successfully established the effect of personal income tax on gross domestic product of Lagos state.

ii. This Study assert the need for the state government of Lagos State to encourage and develop various mechanisms for generating gross domestic product by employing faithful, dedicated and hardworking staff to assist in the area of tax collection from small and medium scale business in Lagos State.

iii. This study will also serve as a literature guide to other researchers.

5.5 Suggestion for Further Research

Other researchers can also replicate this study to each state of the federation and the entire country at large so as to establish the effect of personal income tax on gross domestic product of the country.

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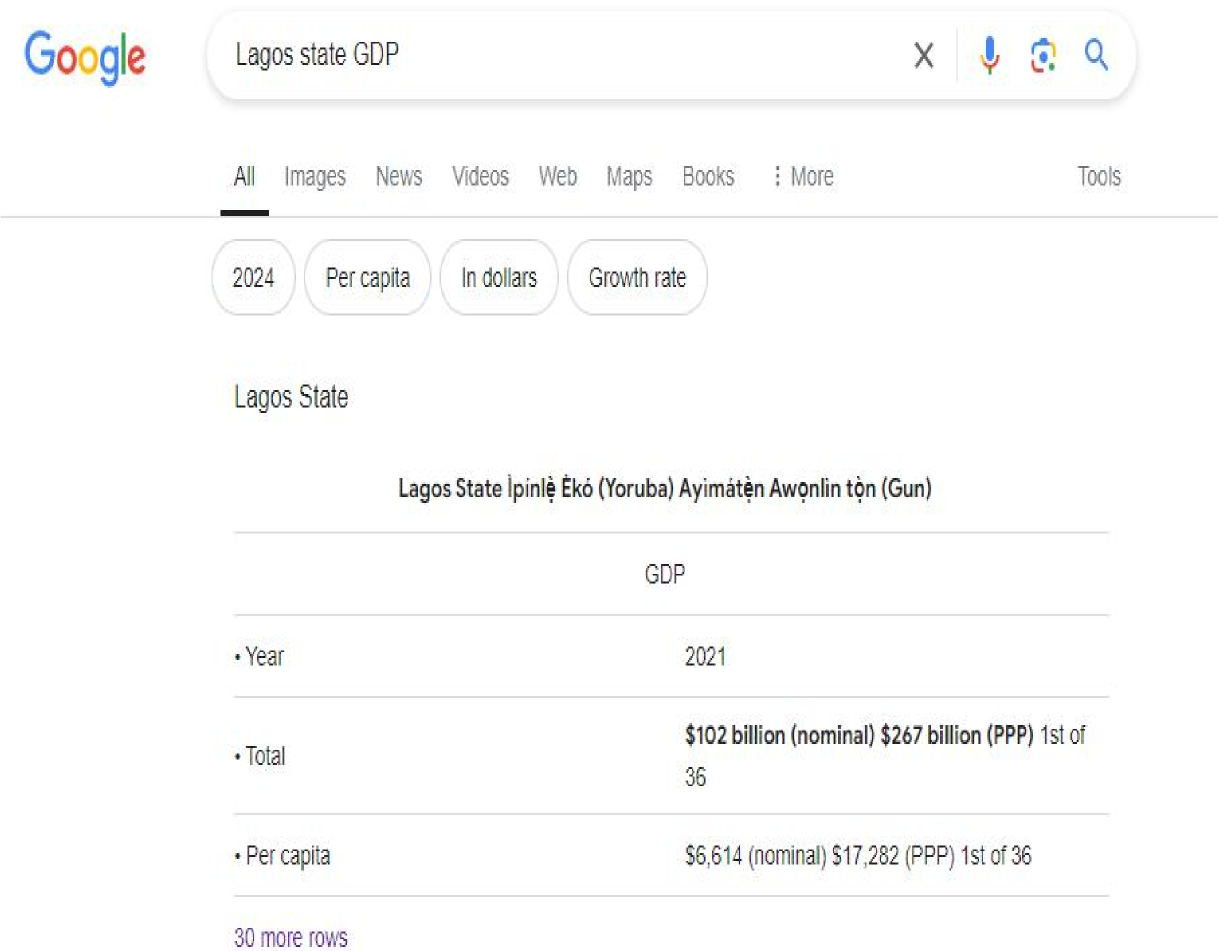
Appendix



Lagos state GDP

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2024 Per capita In dollars Growth rate

Lagos State

Lagos State Ìpínlẹ̀ Èkó (Yoruba) Ayimátẹ̀n Awọnlin tọ̀n (Gun)

GDP	
• Year	2021
• Total	**$102 billion (nominal) $267 billion (PPP)** 1st of 36
• Per capita	$6,614 (nominal) $17,282 (PPP) 1st of 36

30 more rows

lagosstate.gov.ng/about-lagos/#:~:text=The%20estimated%2...

LAGOS STATE ECONOMY

Lagos State plays a pivotal role in the Nigerian economy and as a nation's commercial nerve centre, remains the focal point of economic activities. The Lagos Gross Domestic Product [GDP] accounted for 26.7% of Nigeria's total GDP and more than 50% of non-oil GDP. Over 50% of Nigeria's non-oil industrial capacity is located in Lagos.

Lagos is also Nigeria's financial hub with all major banks having their headquarters in the City. It is also home to the Nigerian Stock Exchange [NSE]. It accounts for over 80% of the country's foreign trade flows, and generates over 50% of Nigeria's port revenues. The estimated GDP of Lagos was put at N27.125trillion [$145.141billion] in 2016 by the Lagos Bureau of Statistics and is expected to rise to N628trillion [$157.728billion] by 2018 with projected average annual growth rate of 4.2% up to 2018. Lagos economy, with an estimated population of 24million is larger than any other economy in the ECOWAS sub-region despite the rebasing of Ghana's GDP.

Fuelled by Public-Private investments, as well as an estimated population of over 24million, Lagos diverse economy is the leading contributor to Nigeria GDP. A 10% growth is expected in the local economy as the State plans to widen the tax base and improve collection methods to boost Local Tax Receipts towards at least NGN360bn by 2017 up from N200bn in 2012, edging towards 80% of annual revenues from 70% of income in the late 2000.

Lagos State remains the economic, financial and commercial nerve centre of Nigeria and the ECOWAS. Regionally, her Gross National Product [GNP] is three times that of any West Africa Country, thus making Lagos State ECOWAS economic hub and the springboard for innovatio and development in Nigeria and sub-Saharan Africa.

LAGOS STATE MACRO-ECONOMIC INDICATORS JANUARY - DECEMBER, 2001 - 2023

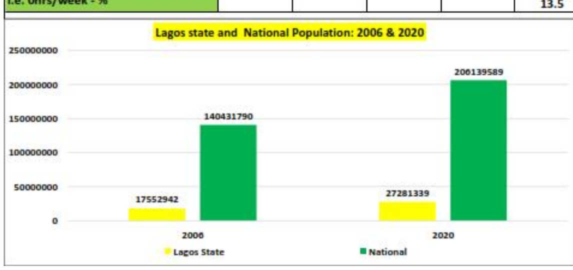
INDICATORS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Inflation Rate: National	16.47	17.33	18.17	18.12	17.93	17.75	17.38	17.01	16.63	15.99	15.4	15.63
Inflation Rate: Lagos State	12.6	17.9	18.8	20.5	21.5	21.7	19.52	19.39	19.44	17.17	16.52	17.59
Consumer Price Index National	361.2	366.8	372.5	376.1	379.9	384	387.5	391.5	396	399.9	404.2	411.5
ConsumerPrice Index : Lagos	200	217.9	224.3	227.6	229.9	230.9	226.1	226.6	229.8	227.8	232.6	237.9
Crude Oil Production (mbpd)	1.33	1.49	1.4	1.5	1.6	1.3	1.3	1.23	1.451	1.335	1.42	1.42
Crude Oil Price: (per barrel)$	54.77	69.51	66.16	67.41	72.02	77.14	70	74.46	85.42	83.54	74.15	74.17

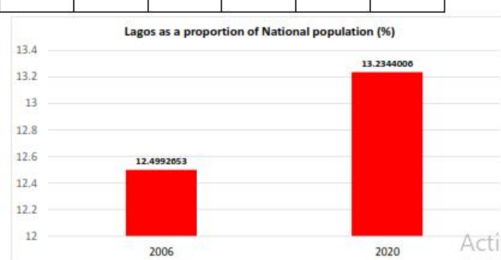
GROSS DOMESTIC PRODUCT (GDP) ESTIMATES : NATIONAL AND LAGOS STATE

GDP INDICATORS	Total GDP 2019	QUARTER 1, 2020	QUARTER 2, 2020	QUARTER 3, 2020	QUARTER 4, 2020	Total GDP 2020	QUARTER 1, 2021	QUARTER 2, 2021	QUARTER 3, 2021	QUARTER 4, 2021	Total GDP 2021
National (N)	144,21trn	35.65trn	34.02trn	39.09trn	43.6tn	152.3tn	40.01trn	39.123trn			
Lagos state (N)	30.875trn					29.72 trn					
GDP Growthrate (%), NATIONAL	2.27%	1.87%	-6.10%	-3.62%	0.11%	-1.94%	0.51%	5.01%			
GDP Growthrate (%) Lagos State	4.13%					-3.75%					

UNEMPLOYMENT RATE: NATIONAL AND LAGOS STATE

UNEMPLOYMENT INDICATORS	Total 2019	QUARTER 1, 2020	QUARTER 2, 2020	QUARTER 3, 2020	QUARTER 4, 2020	Total 2020	QUARTER 1, 2021	QUARTER 2, 2021	QUARTER 3, 2021	QUARTER 4, 2021	Total 2021
Unemployment Rate (National) : work Less than 40hrs/week - %					56.1						
Unemployment Rate (National) : work Less than 20hrs/week - %					33.3						
Under Employment Rate (National)- %					22.8						
Unemployment Rate (ILO- National) : No work i.e. 0hrs/week - %					17.5						
Unemployment Rate (Lagos) : work Less than 40hrs/week - %					41.66						
Unemployment Rate (Lagos) : work Less than 20hrs/week- %					37.14						
Under Employment Rate (Lagos)-%					4.52						
Unemployment Rate (ILO - Lagos) i.e. 0hrs/week - %					13.5						





EXCHANGE RATE AND MONEY MARKET INDICATORS, JANUARY - DECEMBER, 2010 - 2023												
Naira Exchange Rate	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Dollar($)	379	379	379	380	410	410	410	410	410.96	411.09	411.91	413.49
Pound(#)	528	527	528	523	579	567	564	560	565	566	543	557
Yen(Y)	3.6	3.5	3.5	3.5	3.7	3.7	3.7	3.7	3.6	3.6108	3.61	3.591
Liquidity%	30	30	30	30	30	30	30	30	30	30	30	30
Monetary Policy Rate%(MPR)	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Interbank Lending Rate(%)	11.35	11.25	12.2	13.29	16.26	12.06	12.16	12.5	13.45	15	18	9.47
Prime Lending Rate (%)	11.35	11.25	11.25	11.13	11.24	11.29	11.67	11.62	11.62	11.73	11.61	11.68
Maximum Lending Rate (%)	28.31	28.3	28.3	28.74	28.64	28.39	29.05	28	28	27.1	27.1	27.58
Tax Complaince Rate	0.03	0.52	0.52	2	2	2.5	2.5	2.5	2.5	2.5	2.5	2.49
Tax Base Ratio	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
Tax Base Rate	1.25	12.32	4.4	10.1	15.18	15.23	16.57	13.45	13.45	13	10	0

LAGOS STATE MACRO ECONOMIC INDICATORS JANUARY - DECEMBER, 2010 - 2023												
INDICATORS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Inflation Rate: National	12.13	12.2	12.26	12.34	12.4	12.56	12.82	13.22	13.71	14.23	14.89	15.75
Inflation Rate: Lagos State	14.5	14.7	15.8	13.3	14.1	14.6	14.8	13.9	15.6	16.9	17.5	15.7
Consumer Price Index : National	310.2	312.6	315.2	318.4	322.2	326.1	330.1	334.6	339.5	344.7	350.3	355.9
Consumer Price Index : Lagos	179.4	179.8	183.8	183.8	185.5	186.5	187.2	186.4	190.5	195.3	202.4	203.1
Crude Oil Production (mbpd)	1.74	1.74	1.8	1.79	1.99	I.50	1.49	1.48	1.31	1.49	1.47	1.42
Crude Oil Price: (per barrel) $	66.44	55.66	32.01	18.38	29.38	36.03	44.21	44.94	40.86	42.54	41.69	50.37
Dollar($)	306.96	306.45	326.63	361	361	387.21	388.5	387.46	379	379	379	379
Pound (#)	401.2	397.31	403.79	451.83	446.2	493.41	452.17	517.48	490	492	506	509
Yen(Y)	2.8	2.78	3.02	3.39	3.37	3.6	3.67	3.68	3.63	3.63	3.63	3.69
Liquidity %	30	30	30	30	30	30	30	30	30	30	30	30
Monetary Policy Rate % (MPR)	13.5	13.5	13.5	13.5	12.5	12.5	12.5	12.5	11.5	11.5	11.5	11.5
Interbank Lending Rate (%)	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.6	11.6
Prime Lending Rate (%)	14.97	15.04	14.71	14.92	14.92	14.73	15.65	14.99	11.76	11.55	11.31	11.6
Maximum Lending Rate (%)	30.77	30.63	30.48	30.73	30.73	30.69	30.57	31.29	30.77	28.45	28.36	28.85
Treasury Bill Rate	3.45	3	2.39	1.91	2.45	2.45	1.9	1.38	3.45	1.1	0.86	0.03
Cash Reserve Ratio	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
Interbank call Rate	6.64	8.91	10.29	7.33	4.35	4.35	5.75	5.4	5.74	2	1.75	0
Market Capitalization(N)	26.216tn	27.210tn	24.513tn	26.045tn	27.210tn	27.479tn	28.595tn	28.26trn	30.525trn	33.199trn	35.771trn	38.590trn

Bio-data

A. Personal Data

1. Full Names:	Babatunde Diekolola ***OSINUPEBI***
2. Email:	osinupebi.bd@lasustech.edu.ng
3. Phone No:	08098684988, 08027575860
4.Address	45, Adeniyi Street, Powerline Bus Stop Via Olusegun Osoba Iju- Ishaga, Agbado Crossing
5. Date and Place of Birth	July 11th 1975
6. Nationality	Nigerian
7. Next of kin:	Romoke, Osinupebi (Mrs.) 45, Adeniyi Street, Powerline Bus Stop Via Olusegun Osoba Road Iju- Ishaga, Agbado Crossing 07087868098, 09169844049 (romokeosinupebi@yahoo.com)

B. Educational Background with Dates

1. Educational Institutions attended with dates

❖ Lead City University, Ibadan, Oyo State	2021 - 2024
❖ Lagos State University, Ojo, Lagos State	2015 – 2016
❖ Babcock University, Ilisan_Remo, Ogun State	2013 – 2015
❖ Moshood Abiola Polytechnic, Ojere, Abeokuta, Ogun State	1999 – 2003
❖ Government College Lagos, Eric Moore, Lagos State	1987- 1993
❖ Randle Avenue Pry School, Surulere, Lagos State	1982 – 1987

2.Academic Qualifications Obtained with dates

❖ M.Sc. Accounting in View	2024
❖ Master's in Business Administration (MBA) Fin. Magt.	2016
❖ B sc. In Accounting	2015
❖ Senior Secondary School Certificate	1993
❖ First Leaving Certificate	1987

3. Professional Qualifications with Dates

- Institute of Chartered Accountant of Nigeria (ICAN) Fellow 2021
- Institute of Chartered Accountant of Nigeria (ICAN) Associate 2010
- Chartered Institute of Taxation of Nigeria (CITN) Student Member 2006

C. Work Experience with dates

- Lecturer-Lagos State University of Science and Technology 2022- Till Date
- Lecturer- Lagos State Polytechnic 2010- Till Date
- Principal Accountant - Lagos State Polytechnic, Ikorodu 2008 – 2022
- Audit Trainee- M.O Ogunsanya & Associate (Chartered Accountants) 2006 – 2007
- NYSC- Government Secondary, Takum, Taraba State 2005 - 2006
- Accountant-Layi Alabi & Associate (Structural Engineers) 2003

D. Award and Fellowship (if any)

E. Member of Academic Professional

F. Publication(s)

G. Major Conference Attended with Dates

- A – Day Training on Teaching Technological Entrepreneurship Organized by the Centre for Entrepreneurship and Skills Development (CESD) in Collaboration with Human Resource Board (HRB) of LASUSTECH Ikorodu, Lagos **8^{th} 0ctober, 2024**
  Theme: Enhancing Lecturers' Capacity in Teaching Technological Entrepreneurship
- Workshop on Research Master Class Series for Academic Staff: fostering a high-quality research culture. Organized by DRID & HRB- of LASUSTECH Ikorodu Lagos. **June 13^{th} 2024.**
- Workshop on Strengthening University Culture organized by HRB, DRID & QA of LASUSTECH Ikorodu Lagos State. **6^{th} May 2024**
- 18^{th} Western Zonal Accountants' Conference Organized by The Institute of Chartered Accountant of Nigeria (ICAN) Jogo Centre Liberty Road, Ibadan, Oyo State. **31^{st} January-3rd February, 2024**
  Theme: Economic Resilience-Navigating the Bottlenecks
- Entrepreneurship Training at LASUSTECH Ikorodu Lagos State by CESA & HRB. Theme – Creating an Entrepreneurial Mindset in Academics- on **12th December 2023**
- 17^{th} Western Zonal Accountants' Conference Organized by The Institute of Chartered Accountant of Nigeria (ICAN) Ascon, Badagry, Lagos State. **6^{th}-9^{th} February, 2023**
  Theme: Professional Accountants, Uncertain Economy & Sustainable Development

H. Reference

- Dr. Biyi Oyetade

Department of Accounting,
Lagos State University of Science and Technology, Ikorodu.

- Dr Abiodun Awoyemi

Department of Business Administration,

…………………………… ……………………

Signature Date

The university Compliance Certificate

This is to certify that this thesis was written by Diekolola Babatunde OSINUPEBI with Matriculation Number LUC/PG/001868 in the Department of Management & Accounting, Faculty of Management and Social Sciences, Lead City University, Ibadan in full compliance with approved University format and style

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Signature   Date