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ISTANBUL AYDIN UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

THE ROLE OF TAXATION ON REVENUE GENERATION: NIGERIA EXPERIENCE

MASTER'S THESIS

Abiola Naheem LAWAL

Department of Business

Business Administration Program

August – 2021

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ONAY FORMU

DECLARATION

I hereby declare with respect that the study "The Role of Taxation on Revenue Generation: Nigeria Experience", which I submitted as a Master thesis, is written without any assistance in violation of scientific ethics and traditions in all the processes from the Project phase to the conclusion of the thesis and that the works I have benefited are from those shown in the Bibliography.

Abiola Naheem LAWAL

FOREWORD

This thesis is written in completion of the Master`s Program in Business Administration, at Istanbul Aydin University. The research is focused on “the role of taxation on revenue generation: Nigeria Experience”.

First and foremost, all thanks to the Almighty Allah for making the program a success. Also, my profound appreciation goes to my thesis supervisor Prof. Dr. Ibrahim Mert who never felt demotivated by my endless mistakes, words alone cannot describe my gratitude, I say thank you, sir.

I would also like to present my gratefulness to my parents (Mr & Mrs Lawal) and my wife (Mrs O. E. Lawal) for their endless support towards the success of this programme, including my family and friends. May God bless you all.

August 2021 Abiola Naheem LAWAL

THE ROLE OF TAXATION ON REVENUE GENERATION: NIGERIA EXPERIENCE

ABSTRACT

The role of taxation on revenue generation and economic growth cannot be underestimated. It was on this note, this study investigated taxation role on revenue generation in Nigeria. Secondary data was used and sourced from Federal Inland Revenue Service and Central Bank of Nigeria Statistical Bulletin between 2011Q1 and 2020Q4. The study employed descriptive analysis, Regression analysis, ARDL, and VAR as the estimation techniques. The findings showed company income tax, value added tax, petroleum profit tax, revenue generation were stationary after first difference while capital gain tax was stationary at level. VAT contributes positively and significantly on revenue generation, that is, when VAT increases by 1, the revenue generation will increase with the value of 0.688648. Petroleum profit tax revealed a significant positive impact on revenue generation in which an increase in PPT will contribute 0.507721 to revenue generation. Company income tax contributes positively to revenue generation, but it was significant. Capital gain tax exhibited a negative impact on revenue generation significantly during the study period. It was concluded that company income tax contributes more to revenue generation, followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax. Though, there was an inconclusive relationship between the role of taxation and revenue generation that is, no adequate report whether there is a long-run or short-run relationship.

Keywords: Tax, Revenue Generation, Value Added Tax, and Tax Evasion

GELİR ÜRETİM ÜZERİNDE VERGİLENDİRMENİN ROLÜ: NİJERYA DENEYİMİ

ÖZET

Vergilendirmenin gelir yaratma ve ekonomik büyüme üzerindeki rolü göz ardı edilemez. Bu notta, bu çalışma Nijerya'da vergilendirmenin gelir yaratmadaki rolünü araştırdı. İkincil veriler, 2011Q1 ve 2020Q4 arasında Federal Inland Revenue Service ve Nijerya Merkez Bankası İstatistik Bülteni'nden kullanılmış ve alınmıştır. Çalışmada tahmin teknikleri olarak betimsel analiz, Regresyon analizi, ARDL ve VAR kullanılmıştır. Bulgular, şirket gelir vergisi, katma değer vergisi, petrol kazanç vergisi, gelir üretiminin birinci farktan sonra durağan olduğunu, sermaye kazancı vergisinin ise düzeyde durağan olduğunu göstermiştir. KDV, gelir üretimine olumlu ve önemli ölçüde katkıda bulunur, yani KDV 1 arttığında gelir üretimi 0,688648 değerinde artacaktır. Petrol kâr vergisi, PPT'deki bir artışın gelir üretimine 0,507721 katkıda bulunacağı gelir üretimi üzerinde önemli bir olumlu etki ortaya koydu. Şirket gelir vergisi, gelir üretimine olumlu katkıda bulunur, ancak önemliydi. Sermaye kazancı vergisi, çalışma döneminde gelir üretimi üzerinde önemli ölçüde olumsuz bir etki göstermiştir. Şirket gelir vergisinin gelir üretimine daha fazla katkı sağladığı, bunu petrol kazanç vergisi, sermaye kazancı vergisi ve katma değer vergisinin takip ettiği sonucuna varılmıştır. Bu arada, uzun vadede şirket gelir vergisi de en yüksek yüzdeye katkıda bulunur, bunu petrol kâr vergisi, katma değer vergisi ve sermaye kazancı vergisi izler. Vergilendirmenin rolü ile gelir yaratma arasında kesin olmayan bir ilişki olmasına rağmen, uzun veya kısa vadeli bir ilişki olup olmadığına dair yeterli bir rapor bulunmamaktadır.

Anahtar kelimeler: Vergi, Gelir Üretimi, Katma Değer Vergisi ve Vergi Kaçakçılığı

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I. INTRODUCTION

The importance of taxation in promoting economic growth and development as well as the survival of many nations cannot be overemphasized. Through it, government ensures that resources are channeled towards important projects in the society. According to Emmanuel (2013), many developed and developing economies around the world had experimented and proven that no nation can truly develop without developing its tax system. Consequently, many countries have embarked on tax reforms and restructuring with a view to developing a tax system that maximizes government revenue without creating decreasing investment. Taxation in Nigeria is imposed by the 3 tiers of government, that is, federal, state, and local governments with each having its sphere clearly spelt out in the taxes and levies (approved list for collection) Decree, 1998. However, the most veritable tax handles are under the control of the federal government while the lower tiers are the state and local governments (Odusola, 2006). The Nigerian tax system even though has been employed to achieve various economic objectives (protection of infant industries, and income redistribution) at notable periods, has basically been structured as a tool for revenue collection which was the legacy from the pre-independence government based on 1948 British tax laws.

The primary aim of taxes is to collect money to fund government expenses as well as redistribute income to control the economy (Bhartia, 2009). According to Anyanwu (1993), there are three fundamental targets of taxation. These goals include increasing government revenue, regulating the environment and industrial practices, and controlling wages and jobs. Nzotta (2007) also pointed out that taxes have allocation, redistributive, and stabilizing features. The specification of the pattern of production, who should manufacture them, the interaction between the corporate sector, and the point of social equilibrium between the two sectors are all part of the distribution mechanism of taxation. The functional form of taxes applies to how the efficient demand for economic goods is dispersed among society's individuals. Tax is punitive in the sense that it is levied on individuals or land based on profits/incomes

or gains, and the value received by taxpayers from tax paying is unrelated to actual taxpayers' contributions (Nightingale, 2000). Furthermore, Ariwodola (2000) asserts that the primary goal and intent of taxes in most countries around the world is to raise revenue for government spending on social safety, such as defense, law and order, health care, including education. Tax proceeds could also be used on capital expenditures, also known as consumer spending, to build social and economic infrastructure that would change people's social lives (Angahar & Alfred, 2012). Taxation, as one of the most possible sources of revenue for any country's economy, has played a vital role as a tool of government's economic, social, and monetary policy, in addition to promoting administrative functions. The role of taxation policy in fostering investment as a vital measure of maintaining a stable economy by generating new resources is the capital distribution component of taxation policy. In Nigeria, the government uses tax incentives and enticing exemptions to lure and persuade potential investors in industries such as manufacturing, export production, oil and gas, and services, all of which are vital and important for the country's economic development and growth.

Taxes are raised from businesses and individual’s income, and through the selling of goods and services. Tax proceeds will be used for structural purpose and social amenities. The structure of the revenue, according to scholars, is one way to maximize resources in ways that is both institutional and democratic, as well as encourage fairness and productivity to the maximum degree possible. However, since the tax is perceived as a strain on community, some individuals have resisted paying their taxes. In terms of the goods, tax has been a contributing factor to rising growth.

It has been noted that tax system in Nigeria has come to play a significant role as a major source of revenue to the government by way of imposing tax on taxpayers. Therefore, the act of evading and avoiding taxes by most registered companies and some individuals have however affected the revenue base of the government especially in providing essential services in the society. A major challenge facing Nigeria’s economy is the diversification of its revenue base. This diversification has become necessary with the realization that dependency on crude oil earnings cannot sustain public expenditure. These issues necessitated this study to further examine the role of taxation on revenue generation in Nigeria.

The amount of revenue provided for the provision of infrastructure in a country determines its political, economic, and social growth. A well-structured tax system is a means of raising the requisite revenue for infrastructure growth. Tax, according to Azubike (2009), is a main player in every country on the planet. The tax structure allows the government to raise extra money that is needed to meet its immediate responsibilities. A tax regime is one of the most powerful ways to mobilize a country's internal capital, and it therefore lends itself to building an environment conducive for the citizenry. In the other hand, Nzontta (2007) claims that taxes are important sources of income for the federation account, which would be shared by the three tiers of governments.

A tax is a mandatory levy imposed by the government on a person or his property for the government to provide stability, social amenities, and establish provisions for the society's economic well-being. Taxes are levied, according to Anyanwu (1996), to govern the production of certain goods and services, monitor industry and mitigate inflation, among other things. Taxation is a huge source of income for governments around the world. Tax receipts are used by the government to fulfill conventional duties such as delivering public utilities, upholding law and order, protecting against international threats, and controlling trade and industry to ensure social and economic stability.

Though there exist many obstacles in the taxing system of the developing countries. In the case of Nigeria, even if the tax regulators dominate the economy, those in the informal sector see little need to pay taxes. Furthermore, the formal sector's labor activities do not even prepare the ground for a strong tax policy implementation. (Ayodele, 2006). Also, revenue collectors are indeed lenient or even aligned with those in the informal sector when it comes to enforcing tax policies. Any of which results in a revenue loss. This research work becomes very important in order to reawaken the consciousness of the Nigerian government and people on the successful use of taxes as a transformative instrument, and to investigate the impact the tax system has had so far on the economy.

One of the recurring difficulties of Nigeria's three-tier system of government is the downturn in revenue production, marked by annual budget deficits and inadequate funds for growth of the economy. This economic justification demonstrates government needs and suggests that, to improve current sources of revenue, it

is important for the government to expand its revenue stream to fulfill its regulatory functions. Myles (2000) notes that the economic ability of every government relies, among several other things, on its financing needs, the economic resources, and the way these resources are raised and used. It is also the government's responsibility to organize potential revenues throughout the nation to avoid economic stagnation. This mobilization includes the introduction of appropriate taxes that will guarantee simple management, verification, monitoring and inspection on the grounds of fairness, transparency, and other virtues of a good tax system. Sales taxation have a broader scope as the cause of detrimental deviation can be effectively regulated under efficient implementation (Leach, 2003). Revenues from sales taxes can contribute to enhance the financial foundation of any government. This, however, entails the exploitation of the opportunity and the adoption of the kind of sales tax that will consider taxpayers as utilities that minimize persons and protect their deflecting conduct. The main criterion is the preference of a consumption tax alternative from other tax strategies, including the estimation of the administrative viability of each tax and its revenue potential, its enforcement, its relative neutrality, and the efficacy of those factors.

The rate of tax evasion and avoidance by tax payers is high in Nigeria, resulting in low revenue, which further decreases government spending, resulting in a decline in household and firm income savings and expenditure, resulting in low economic activity and development (Fagbemi Uadiale, & Noah, 2010). The government requires funding to carry out its social responsibilities to the people, which include, and are not limited to, facilities and social care. According to Murkur (2001), fulfilling the needs of community necessitates large sums of money that no person or society can contribute on their own, and one process of obtaining funds is via taxation. Taxation is a huge source of government income all over the world. Government uses tax revenue to carry out its conventional duties, such as delivering public utilities, upholding law and order, protecting against foreign threats, and controlling trade and industry to ensure social and economic stability (Azubike, 2009).

A. Research Questions

This study tends to provide answers to some pertinent questions as follows:

- What is the effect of value added tax on revenue generation in Nigeria?
- How does petroleum profit tax affect revenue generation in Nigeria?

- What is the effect of capital gain tax reform on revenue generation Nigeria?
- How does company income tax affect revenue generation in Nigeria?

B. Sub-aims of the Study

The main objective of the study is to examine the role of tax reforms on revenue generation in Nigeria. The specific objectives of this study are to:

- examine value added tax on revenue generation in Nigeria;
- evaluate petroleum profit tax on revenue generation in Nigeria;
- investigate capital gain tax on revenue generation in Nigeria;
- examine company income tax on revenue generation in Nigeria.

C. Hypotheses

The following hypotheses are stated in null form:

Ho_1: value added tax has no significant effect on revenue generation in Nigeria.

Ho_2: there is no significant effect of petroleum profit tax on revenue generation in Nigeria.

Ho_3: capital gain tax have no significant effect on revenue generation in Nigeria.

Ho_4: there is no significant effect of company income tax on revenue generation in Nigeria.

D. Purpose/ Importance

The motive of this study is to examine the role taxation on revenue generation in Nigeria. Meanwhile, this research work is utmost relevant to various tax authorities such as the Federal Board of Inland Revenue, State Board of Internal Revenue, and Local Government revenue committee as well as their tax officials who are responsible to collect tax from individuals or corporate bodies. It will give them insight on how to improve the tax administration. This research will also be relevant to the future researchers and students of accounting, economics, business administration and other Social and Management Sciences as well as the legislations which will also benefit immensely from this research because it will form the basis of tax policy formation, implementation and administration.

II. LITERATURE REVIEW

A. Conceptual Review

1. Sub-Introduction

A government's decision of what proportions and on whom to levy tax is referred to as tax policy. Tax policies are introduced for several purposes, with the primary goals of raising revenue to finance government spending, resource utilization, and reducing inequality resulting from wealth distribution among customers. Furthermore, Romer and Romer (2010) reported that tax policies are introduced to fund a government spending or to combat other economic factors. The revenues of the tax are used by the government to carry out its basic duties, such as providing public goods, preserving law and order, defending against foreign threats, and controlling trade and industry to ensure social and economic support (Takumah, 2014). The tax has microeconomic implications (income distribution and resource efficiency) and also macroeconomic effects (capacity production, jobs, prices, and growth) (Musgrave and Musgrave, 2004).

2. Taxation and its Administration

Governments require efficient and effective tax management to produce the revenue required to fulfill their duties in providing facilities such as good highways, health centres, bridges, clinics, drinking water, safe energy, communication networks, protection (Soetan, 2017). The form of tax system in place would decide whether the government would collect the required funds for its task. The operation, system and structure put in place to raise the necessary income for the government is regarded as the tax system (Bird, 2015). Additionally, Bird (2015) considers the tax system to be a center of contact between the citizens and government. The way a country's tax regulation strategy is developed and applied will have a lasting impact on its people. The tax system offers the necessary feedback to taxpayers for simple reporting, registration, and payment of their taxes. The tax system shall decide the political legacy, financial development and viability of the nation. Tax system is a tax policy

execution mechanism that combines the governmental will to enforce the tax policy, the plan to achieve the goal set, and the availability of the necessary tools. Taxation is a revenue-generating tool that increases budget revenue (Ngeni, 2016). More so, Gurama and Mansor (2015) described the tax system as the body administering and regulating the tax laws and other related matters.

Taxation is a mechanism through which the government of a nation, through the enactment of legislation, receives the money it requires to carry out its obligations to its people. Taxation is a tool used by the government to take interest in the incomes of individuals in return for goods and services provided by the government to people. Taxation is an encouragement mechanism used by the government to motivate its residents to carry out such types of practices. Taxation seems to be a mechanism that the government utilized as a disincentive to deter its people from such habits. For example, the government may place a very large tax on cigarettes and alcoholic drinks in order to deter people from smoking cigarettes and tobacco. De Villa (2013) described taxes and income tax as a mechanism through which the sovereign, through its legislative body, generates revenues used to defray government expenses. It also specified taxation and taxation of income as the tool used by the government to collect more funds to improve the health and safety of its people. Tax revenue is classified as income received by the government by taxation. That is the money that the government has levied on its people as a way of fulfilling its duties and commitments for its citizens. The preparation and execution of infrastructure, social and security facilities in the nation depends heavily on the tax income that the government will raise from citizens in that country. Tax revenue is the taxes raised by the citizen to fund public goods and utilities. Tax revenue plays a key and crucial role in the financing of economic growth programs in a nation.

3. Fiscal Policy and Taxation

The development of an effective and equitable tax structure in developing nations seems far from convenient unless their systems are incorporated into the international system. Taxation is the fairest way of collecting taxes from citizens on commodities. The absolute tax mechanism in those nations raise essential revenues without undue borrowing and discouraging economic development. Much of the workforce in sub-Saharan-Africa are working in agriculture or small-scale industries, income taxes and sales taxes, which play a reduced role in these economies. Tax

strategies in developed countries are contradictory in several ways: revenue is relatively small relative to that in industrialized economies. Labor income taxes play a marginal role, and less developed countries typically earn just two-thirds or less of tax income that developed nations earn as a percentage of GDP (Gordon & Li, 2005).

Overhauling a tax system in a developing economy is challenging, particularly when tax officials' incomes are weak and there is no effective computerized service system or well-trained personnel. Many of Africa's potential growth has been stifled by the inability to construct the infrastructure required links efficiently and systematically, especially in transportation and communications. As a result, much governments in Sub-Saharan Africa are compelled to follow a structure that allows them to manipulate any possible alternative rather than developing a fair, modern, and effective tax structure (Shome, 2004). According to Kefela (2009), low spending in developing nations are the product of taxation practices. Changes in taxation practices will result in changes in spending. Different countries' tax regimes vary, representing considerations such as economic model, culture, and tax arrangements in neighboring nations. Health and education are two of the most important fields of public spending. Governments would have to slash spending, boost tax thresholds, or adjust other fundamental features of the economy until tax collections rise enough to fund desired resources over time. Revenue growth can, as a rule, be approximately equal to the rate of economic growth. It is hard to accomplish public demand with a low budget, which is very common in underdeveloped nations. Fiscal policy is required, not only in terms of decreasing spending, but also in terms of tax reform.

Many African countries' tax systems are neither well-structured nor reliable as a revenue stream, making recovery almost impossible. Cutting spending without creating an efficient tax structure would stifle productivity and weaken the development of effective government institutions. To promote confidence in a welcoming and inclusive domestic economy, a sustainable currency is required for market stability, which is accomplished by a variety of mechanisms (FitzGerald, 2003).

4. Tax and Economic Effects

The impact of taxes on economic development refers to what happens to a country 's GDP when a tax is levied. Anyanwu (1997) asserted that tax influences productivity, demand, spending, and job patterns. These effects may be beneficial or harmful. Taxation is a significant source of income for every nation, and the money raised is used to provide social services, provide protection and security to the population, and create jobs, all of which contribute to the country's growth and development.

Taxation is commonly used to close the distance between rich and poor people. As a product of private lands and inheritance, economies are marked by a high degree of disparity. The aim of taxation is to reduce income and wealth disparities, which is incompatible with increased productivity and economic development (Anyanwu, 1997). The utilization of progressive taxes, such as inheritance taxes, income taxes, and gifts taxes, will help to minimize inequalities by achieving long-term redistribution.

The Keynesian theory holds that the capitalist economy has no intrinsic ability to balance, necessitating government interference in the short term. Business incompatibilities between demand and supply are corrected by taxes and spending. Consequently, progressive taxes can be used to counter volatility in wages, outputs, jobs, and costs, among other items. The revenue of the poor with a high marginal propensity to consume should not be charged, as this would help to stabilize the economy's net demand.

Taxation is a macroeconomic instrument for managing inflation, according to Angahar and Sani (2012). During periods of high inflation, the government could raise direct taxes, putting a burden on surplus buying power. They should choose indirect taxes carefully to manage inflation, considering the elasticity of commodity demand and supply. As taxes are raised, products with low demand elasticity and high supply elasticity will not accelerate inflation. Products that are essentials should be taxed less heavily, while luxuries could be heavily taxed, as this would reduce the economy's inflationary pressure. While the terms "economic growth" and "economic development" are frequently used interchangeably, though there is a significant distinction between the two. Worlu and Nkoro (2012) described economic growth as an improvement in the quantity of goods and services generated in a nation over a

given period. Growth is a subset of development Economic development is fueled as a sustained increase in a country's real national income that is followed by positive improvements in the country's economic, political, technology, and social structures.

5. Tax System and Globalization

Significant changes in recent decades, particularly since the 1980s, have altered the economic environment that marked previous decades (Tanzi, 2008). These advancements have the possibility to have far-reaching consequences for tax structures as well as spending policies. Among the most important are:

● Economic liberalization and unprecedented progress in foreign trade: Import substitution hypotheses and policies are out of date. The global economy has been much more intertwined than in the past. This globalization has been fueled by both developed and emerging countries. For Latin America, the movement toward globalization marks a genuinely transformative transition of the 1950s and 1960s import substitution policies.

● The extraordinary rise in cross-border capital mobility: This growth has been helped by the elimination of barriers to capital mobility. New policies and technical advances that have made connectivity cheap and easy have helped in the elimination. The amount of financial resources that now crosses boundaries on a regular basis has risen significantly (Tanzi, 2008). This money is used to fund direct acquisitions, feed portfolio investments, finance deficits, and supply currency to foreign travelers As a result, the previous link between a country's saving rate and its spending rate, which Feldstein and Horioka emphasized, has been eased. Since governments no longer have to rely on domestic deposits, the massive influx of capital has made it possible for them to fund bigger fiscal deficits.

● Multinational companies have become increasingly important in both the funding of direct investment and, more importantly, in the promotion of trade between similar parts of the same businesses based in different countries. Most businesses used to manufacture and sell their goods in the same country, or even the same city or town, where they were based. Trade between connected sections of companies in various countries has developed to become a substantial and increasing portion of overall world trade. It now accounts for over half of all global trade.

● Individual mobility has improved as a result of these foreign policies which have been followed by increasing per capita wages, increased informational flows that immediately educate individuals about evolving relative prices and prospects generated by them, and more liberal regulation, whether in their position as economic agents or merely as visitors and customers. A growing number of people in both developed and developing or emerging economies receive all or portion of the revenue outside of the nations where they were born and may even have their official residence. Simultaneously, an increasing majority of people invest a portion of their earnings outside of the countries where they are legally resident (Tanzi, 2008). Finally, economies have become more globalized.

6. Custom and Excise Duties (CExD)

Import and export taxes are known as custom duties. Custom duties, according to Ayodele (2006), are the most profitable indirect tax. Nigerian Customs Services oversees enforcing the tax. Import duties are thought to be in violation of the concept of comparative cost, limiting the full growth of foreign trade. Import duties are also used to prevent the country's growing businesses. The effect of export duties is transmitted to the target country in the form of higher prices. Import duties are paid by the buyers of the goods and services on which they are imposed.

Excise duties are a form of commodity tax imposed on products produced in the country. This indirect tax has two purposes: it raises income for the country, and it discourages the consumption of specific products (Fasoranti, 2013). The form of service taxed decides who carries the burden of excise duties. Rich people pay excise duty on luxuries, while poor people pay excise duty on necessities (Anyafo, 1996).

7. Company Income Tax (CIT)

This is also known as corporate tax or corporate benefit tax. A tax on a corporation's earnings is known as company income tax. It was first implemented in Nigeria in 1961 and is overseen by the Federal Internal Revenue Service. The CIT law has been amended many times since it was enacted. The CIT rate varies depending on the service and the annual turnover. Companies refuse to accept taxes, according to Onaolapo et al. (2013), since they are penalties for success without consideration for failure. The aim of corporate taxes is to raise revenue from a company's economic profits. The tax is applied to the net accounting profit as follows: administrative,

operating, and interest costs are subtracted from the gross profit. Due to tax concessions, rebates, and tax holidays granted to newly formed businesses, company income tax earnings have been reduced. This low yield is also due to tax avoidance and evasion (Ebiringa & Emeh, 2012).

8. Petroleum Profit Tax (PPT)

This is a levy on oil business income. PPT is singled out due to the importance of oil in Nigeria's public revenue output (Akintoye & Tashie, 2013). The PPT Act of 1959, No. 15, establishes a tax on income from petroleum mining in Nigeria, with effect from January 1, 1959. This is to cover the cost of economic rent on mining property. The PPT covers upstream oil and gas activities, such as the extraction of crude oil and gas and their sale as principal products to downstream operations (Ayodele, 2006). It is Nigeria's most significant levy, accounting for 95 percent of government income and 70 percent of overall foreign earnings. The main source of revenue variance is caused by price fluctuations in the crude oil phase on the global market.

9. Personal Income Tax (PIT)

PIT, according to Akintoye and Tashie (2013), is a tax on one's personal income as opposed to a tax on a company's profits. The owners of an incorporated company pay taxes on both their personal income and the company's income. In partnerships and sole proprietorships, the tax is only charged once on the income of the company. Individuals are subject to the Personal Income Tax, which is levied from a variety of sources of income such as wages, benefits, interest, and dividends. The Personal Income Tax Rate produces a large amount of revenue for the Nigerian government (Anyafo, 1996).

10. VAT -Value Added Tax

Many nations around the world have introduced the value added tax, which is a sales tax that is reasonably easy to enforce and impossible to evade (FIRS, 1993). The Value-added Tax Act of 1993 governs the collection of taxes owed on taxable goods and services (Adereti, 2011). It was imposed to take the place of the previous sales tax. It is a sales tax imposed at each stage of the consumption process, with the final buyer bearing the brunt of the burden. It mandates that a taxable individual fee and receive

VAT at a flat rate of 5% on all invoiced volumes of taxable products and services after registering with the Federal Board of Inland Revenue (Ariyo, 1998). According to Adereti (2011), data suggests that VAT revenue seems to be a significant source of funding in Nigeria. For instance, total VAT income for 1994 was N8.189b, a 36.5 percent improvement over the year's estimated N6 billion. Any person who sells products or makes services in Nigeria under the VAT Act (as amended) is required to register for VAT within six months of starting business in Nigeria, whether they are Nigerian residents or not.

11. Tax Evasion

Tax evasion is described as a deliberate wrongdoing, or a behavior that involves a clear breach of tax laws, norms, and ethics about citizenry obligations to avoid paying taxes. Edwin (2007) described tax evasion as a deliberate attempt by individuals, corporations, and other entities to avoid paying their taxes and disclosing the real and equal value of their earnings. Tax evasion, according to Soyode and Kojola (2006), is the deliberate and aware failure to disclose all taxable profits. The failure to pay the tax rate owed by a taxable individual after the minimum required time is a breach of tax laws (Fagbemi, et al 2010). Tax evasion is characterized as a circumstance in which taxpayers minimize, make, or declare false claims about their revenue tax liabilities by leveraging inefficiency in tax laws and regulations.

Tax evasion normally means taxpayers intentionally misstating or concealing the true state of their affairs from the proper tax authorities to minimize their taxable income. Tax evasion, on the other hand, may be defined as either complete or partial evasion (Fakile & Adegbie, 2011). When an individual or a company understates its profits for tax purposes and reports low wages, this is known as partial evasion. Although complete evasion happens when an individual or corporation qualifies for taxes but fails to file with the IRS to engage in the scheme. This act includes, among other aspects, tax avoidance such as underreporting earnings and exaggerating deductions. In certain nations, tax avoidance is an offence punishable by fines, detention, or even both. Tax evasion refers to a taxpayer's criminal behavior to avoid his civic responsibilities, which are imposed by statute and widely recognized by society or nation. Tax liability and other tax practices are hidden because of this situation, the number or levels of revenue are misrepresented, and the reduction, waiver, or exemption is deliberately overstated (Chiumya, 2006). Nevertheless, tax

avoidance/evasion is more common in the informal sector, where companies and other trading activities are done informally, making evasion simpler. This will arise where a company is not licensed with the tax authority and, as a result, is working in rural areas, moving easily from one place to another. According to Richardson (2008), tax evasion is described as "intentional, unlawful, and unacceptable actions or practices involving a clear breach of tax law in order to evade tax disbursement." Tax evasion is unethical and a violation of tax rules, according to Kim (2008), while tax avoidance is a legitimate means of reducing tax burden. Both are unacceptable, but the latter is less damaging to the former by eroding tax collection for public spending funding.

12. Economic Development

Economic development is the expansion of a country's or region's economic resources for the benefit of its citizens. Economic development, from a policy standpoint, can be described as initiatives that aim to enhance a society 's economic well-being and standard of living by generating employment and promoting or increasing revenue and the tax base. Improvements in a few metrics, such as literacy rates, life expectancy, and poverty rates, imply economic development. GDP is a particular indicator of economic well-being. Economic development refers to policies adopted by governments to accomplish general economic targets like price stability, high wages, a broader tax base, and long-term growth. Economic growth is a pattern characterized by increased consumer productivity and GDP, and it is one part of the economic development process. That is also the increase in the production of goods and services by an economy, which is often referred to as GNP-growth. When the rate of GNP decreases, unemployment and income falls in general. When this arises, the government is obligated to enforce a series of measures aimed at increasing economic production. As a result, every government can emphasize long-term economic growth and sustainability.

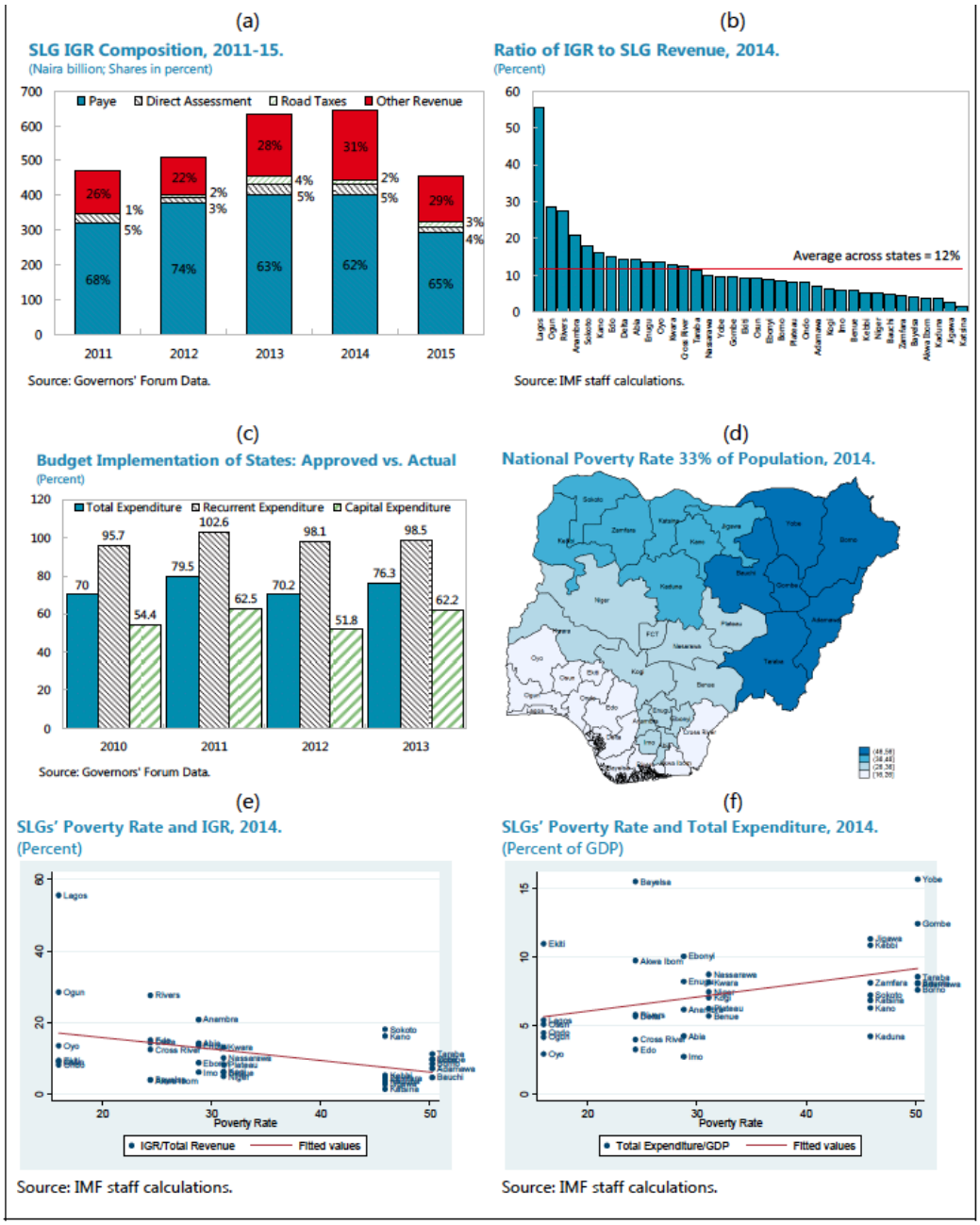

Figure 1: Nigeria Internally Generated Revenue

Source: IMF (2016)

13. Gross Domestic Product:

GDP is seen as an aggregate measure of production equal to the sum of the gross value added of all resident and institutional units engaged in production (as defined by OECD). According to an IMF publication, "GDP calculates the monetary value of final goods and services - that is, those purchased by the final buyer - generated in a country in a given period of time (say, a quarter or a year)".

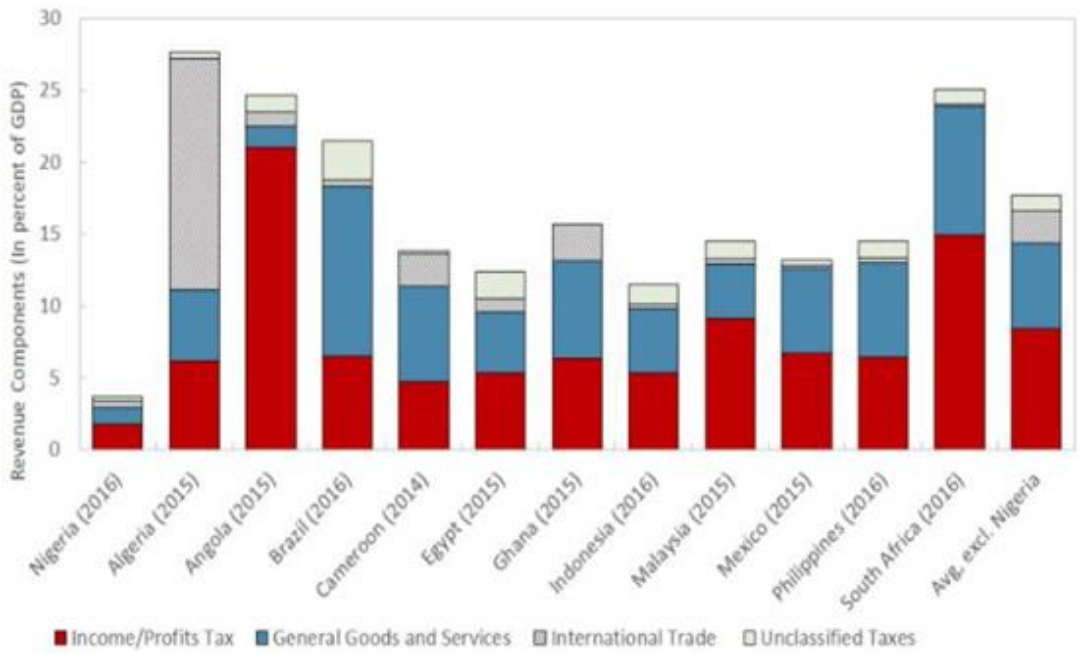

Figure 2: Revenue Components %of GDP

Source: IMF (2016)

The contribution of each business or sector of the economy to GDP may also be subdivided. The per capita GDP is the ratio of GDP to the total population of the country, and it is also known as the living standard.

There are many ways to measure GDP, these include:

Nominal GDP: This is the raw estimate that takes into account price fluctuations. The Bureau of Economic Analysis estimates nominal GDP on a quarterly basis. Every month, it revises the quarterly estimation based on current data.

Real GDP: By comparing economic production from one year to the next, the consequences of inflation must be addressed. The NBS computes actual GDP to do this. This is accomplished using a price deflator. It indicates how much rates have changed after a certain year.

GDP Growth Rate: The GDP growth rate is the percentage rise in GDP from one quarter to the next. It reflects how rapidly a country's economy is rising. To eliminate the impact of inflation, most countries use real GDP.

GDP per capita: This is the most reliable way to measure the gross domestic product of various countries. This is because certain nations have enormous economic outputs due to their large population. GDP per capita will help give a more realistic

image. This is calculated by dividing the gross domestic product by the population. It is an accurate indicator of the country's quality of living.

14. Unemployment Rate

The unemployment rate is the proportion of unemployed jobs in the overall labor population. People are considered unemployed if they are not working despite being qualified and motivated to do so. The unemployment rate is a percentage that is determined by dividing the number of people that are unemployed by the total number of those that are working. During times of depression, the unemployment rate is typically very high. Both employed and unemployed persons in a given economy make up the overall labor force. Unemployment is a multi-faceted phenomenon; it is a structural phenomenon caused by an inequality of economic activity. Furthermore, regardless of its impact on society's social fabric, it is classified as a social phenomenon. The economic and social dimensions of unemployment add to its importance, necessitating in-depth research to comprehend the cause and effects, as well as to determine how to respond to such a phenomenon. The higher the unemployment rate, the less chances for high economic growth and the greater the likelihood of negative social consequences. The unemployment rate reveals the economy's unused potential and underutilized wealth. Unemployment is cyclical, falling as the economy rises as businesses hire more jobs to satisfy rising demand. When the economy slows, unemployment normally rises.

B. Theoretical Discussion

1. The Theory of Ability to Pay

According to this principle, taxes should be levied depending on a person's ability to pay. It also states that public spending should come from "he who hath" rather than "him who hath not." This idea is the cornerstone of a "progressive tax," in which the tax rate rises as the taxable sum rises. It is the fairest tax structure that is commonly used in developed economies. The most common and widely accepted reason for ability to pay is commitment. Taxation is seen as a burden to the taxpayer when he contributed funds to the government that he should have used for his own personal advantage. However, since the equity of sacrificing can be calculated in absolute, relative, or marginal terms, there is no consistent method for measuring it in this

philosophy. As a result, fair sacrifice may be described as: (i) every payer agreed to surrender the reasonable exact amount of benefit that she/he derives from her/his earnings; (ii) each taxpayer sacrifices the same portion of benefit that she/he derives from her/his wages (iii) each surrender the same amount of income; respectively.

2. Optimal Taxation Theory

This is the theory of developing and enforcing a tax to minimize market failure and imbalance (Slemrod, 1990). According to the traditional principle of optimal taxation, a tax must be selected to optimize a social welfare function while keeping a set of restrictions in view (Mankiw et al., 2009). In addition, the concept of the theory is to understand how to maximize the number of outcomes from a specific population using a collectively optimal strategy where the first ideal result is not realistic.

3. Theory of Endogenous growth

In the 1980s, the term "endogenous growth" was used to describe a wide range of theoretical and scientific work (Romer, 1994). According to this hypothesis, government spending and taxes would have a short and long-term effect on economic development (Barro, 1990). According to Barro (1990); Raja and Rebelo (1990), taxation would induce market distortions, and efficient spending will affect long-term growth rates.

4. Theory of Exogenous Growth

The endogenous growth hypothesis, also regarded as the modern growth theory, is the opposite of this theory. Robert Solow (1956) is the inventor of the Solow model, which is an exogenous theory (1956). According to Solow (1956), fiscal policy has little effect on long-term economic development, but it is assumed that the key feature of production, such as labor, and technological advancement, was decided beyond the linear context (Petru-Ovidiu, 2015).

5. Laffer Curve Theory of Tax

The Laffer curve is one of the most important fundamental frameworks in supply-side theory and is sometimes used to summarize supply-side pro-growth hypothesis. The Laffer curve represents the fundamental principle that shifts in taxation rates have two impacts on government revenue: arithmetic and economic

(Laffer, 2004). This hypothesis further explains the link between tax rates and government revenue. In addition to noticing a clear impact of the shadow economy on the level of taxes, Busato and Chiarini (2009) published a Laffer curve for income and corporate taxation in the business shadow economy.

6. Theory of Expediency

Any tax proposal must pass the feasibility test, according to this principle. It has to be the only factor that officials consider before deciding on a tax plan. The state's economic and social goals, as well as the consequences of its tax scheme, should be ignored. This statement is precise since a tax that cannot be assessed and collected efficiently is worthless. Financial, social, and political groups are putting pressure on the government. Any party strives to defend and advance its own interests, and governments are often compelled to restructure their tax structures to satisfy these pressures. Furthermore, the financial system could not be effective enough to raise the tax at a fair rate. Taxation presents authorities with a strong collection of policy instruments that can be used to address societal economic and social ills such as wage inequality, geographical gaps, jobs, cyclical volatility, and so on.

C. Empirical Study

In an empirical study done by Abiola and Asiweh (2012) on tax administration and revenue. They employed descriptive analysis and discovered that tax revenue is a function of tax administration.

Sule and Edogbanya (2013) studied revenue generation on governmental development in Kogi state of Nigeria using secondary data which were sourced from the local council of Kogi east. The regression method revealed that significant connection exists between revenue generated and government developmental effort.

To buttress this survey, Onaolapo, Aworemi, and Ajala (2013) assessed the effect of VAT on revenue generation in Nigeria. Secondary data was used and sourced from CBN and FIRS of Nigeria. the regression analysis reported that VAT impacted significantly on revenue generation during the study period.

In the study conducted by Riakhi and Ahuru (2014) on tax reform and revenue generation in Nigeria using cointegration, granger causality tests and ECM. They found that tax reform boosts the ability to generate more revenue to the government.

Edame and Okoi (2014) wrote on taxation effect on investment and economic growth in Nigeria between 1980 and 2010. The study employed OLS as the estimation technique and found that taxation and investment have an inverse relationship though taxation is statistically significant to impact on investment and spur development in the long run.

Wisdom (2014) wrote on tax revenue and the Ghanaian economic growth between 1986 and 2010. VAR analysis was employed and reported that tax revenue is statistically significant on the Ghanaian economic growth.

Izedonmi and Okunbor (2014) carried out VAT role on Nigeria economy between 1994 and 2010. They used regression analysis and reported that VAT has a significant impact on economic growth in Nigeria.

Chigbu and Njoku (2015) studied tax system and economy of the Nigerian between 1994 and 2012. OLS and cointegration tests were used and revealed that positive and long run relationship exist between taxation and economic growth during the study period.

In the study of Owusu-Gyimah (2015) on the connection between tax revenue and the Ghanaian economic development employing multiple regression analysis and found that a positive significant exists between tax revenue and economic development.

Saidan, Basit and Hamza (2016) wrote on tax role on the growth of the economy within Asian countries. They use panel data analysis between 2011 and 2015. They found that tax revenue is imperative for sustainable development.

Ojong, Anthony and Arikpo (2016) studied taxation impact on the Nigeria economic growth between 1986 and 2010. Regression analysis was used and found that petroleum profit tax and company income tax have no significant effect on the Nigerian economic growth.

Das-gupta, Estrada, and Park (2016) investigated tax administration and tax revenue in India using TAME method. They reported that there is a significant relationship between tax administration and tax revenue.

Inyiama and Ubesie (2016) carried out a study on the relationship between the Nigerian VAT and customs and excise duties between 2000 and 2015. Descriptive and regression analyses were used and reported that VAT and CED are parts of the GDP contributors.

Gatawa1, Aliero and Aishatu (2016) studied VAT impact on economic growth in Nigeria between 1994Q4 and 2014Q4. Descriptive and cointegration tests were employed and found that positive correlation exists between VAT and economic growth in Nigeria.

Omokhuale (2016) conducted a survey on VAT contributions to the Nigerian economy between 2000 and 2012. The study employed OLS technique and found that VAT has a positive significant connection with the Nigerian economy.

The study of Soetan (2017) examined the connection between tax administration and its revenue generation in Nigeria. the study used quantitative survey while descriptive and regression methods were used. It was found that in the study that tax administration revealed no significant impact on revenue generation during the study period.

Animasaun (2017) investigated the connection between tax administration and Ogun state revenue generation in Nigeria. The study employed descriptive and inferential statistics and found that there no connection between tax administration and Ogun stated revenue generation during the study period.

Eja, Idaka, and John (2018) wrote on the factors affecting tax revenue generation in Nigeria using Cross River state as a case study. The study used a structured questionnaire which was subjected to regression analysis. It was found that tax evasion and avoidance with tax revenue revealed a negative significant influence between each other.

The study of Egbunike, Emudainohwo, and Gunardi (2018) on the connection between tax and economic growth; evidence from Ghana and Nigeria. they used regression analysis and reported that positive connection exists between tax revenue and GDP of the two nations.

Folayan and Adeniyi (2018) studied tax evasion on revenue generation, a case study of Nigeria using both qualitative and quantitative data where the quantitative data were sourced from the internally generated revenue of Oyo State in Nigeria. The study found that tax evasion revealed an adverse relationship on revenue generation.

Okeke, Mbonu, and Ndubuisi (2018) used different estimation techniques ranging from regression analysis, cointegration test, and ECM to examine the connection between tax revenue and the Nigerian economic development. The study found that tax revenue has a statistically significant on economic development.

Sorsa and Durga (2018) wrote on the contribution tax on revenue generation in Ethiopia. Descriptive analysis was used and found that tax contributes significantly to revenue generation.

Ironkwe and Agu (2019) examined the connection between tax revenue and the Nigerian economic development between 1986 and 2016. The multiple regression revealed that tax revenue exhibits a positive impact on economic development of Nigeria.

Oladipo, Iyoha, Fakile, Asaleye and Eluyela (2019) studied the connection between tax revenue and the performance of agriculture in Nigeria. They used regression analysis and cointegration test and found that positive and significant relationship exists between tax revenue and the performance of agricultural in Nigeria.

The empirical work conducted by Ozili (2020) used content analysis to investigate the tax evasion and the financial instability in Nigeria and found that tax evasion reduces revenue and weaken financial stability.

Ewa, Adesola, and Essien (2020) wrote tax revenue impact on the Nigeria economic development between 1994 and 2018. They made use of OLS estimation technique and reported that there exists positive connection between tax revenue and economic development during the study period.

1. Summary Empirical Review

Table 1: Summary Empirical Review

Name & Year	Country	Topic	Findings
Abiola and Asiweh (2012)	Nigeria	Tax administration and revenue.	They discovered that tax revenue is a function of tax administration.
Onaolapo, Aworemi, and Ajala (2013)	Nigeria	Assessed the effect of VAT on revenue generation in Nigeria.	The regression analysis reported that VAT impacted significantly on revenue generation during the study period
Sule and Edogbanya (2013)	Nigeria	Revenue generation on governmental development in Kogi state of Nigeria.	The regression method revealed that significant connection exists between revenue generated and government
Riakhi and Ahuru (2014)	Nigeria	Tax reform and revenue generation in Nigeria using cointegration, granger causality tests and ECM.	They found that tax reform boosts the ability to generate more revenue to the government
Edame and Okoi (2014)	Nigeria	Taxation effect on investment and economic growth in Nigeria between 1980 and 2010.	Found that taxation and investment have an inverse relationship though taxation is statistically significant to impact on investment and spur development in the long run.
Wisdom (2014)	Ghana	wrote on tax revenue and the Ghanaian economic growth between 1986 and 2010.	VAR analysis was employed and reported that tax revenue is statistically significant on the Ghanaian economic growth.
Izedonmi and Okunbor (2014)	Nigeria	VAT role on Nigeria economy between 1994 and 2010.	They used regression analysis and reported that VAT has a significant impact on economic growth in Nigeria.
Chigbu and Njoku (2015)	Nigeria	studied tax system and economy of the Nigerian between 1994 and 2012.	The study revealed that positive and long run relationship exist between taxation and economic growth during the study period.
Owusu-Gyimah (2015)	Ghana	Connection between tax revenue and the Ghanaian economic development employing multiple regression analysis.	and found that a positive significant exists between tax revenue and economic development
Saidan, Basit and Hamza (2016)	Asian Countries	Tax role on the growth of the economy within Asian countries.	They found that tax revenue is imperative for sustainable development.
Ojong, Anthony and Arikpo (2016)	Nigeria	Taxation impact on the Nigeria economic growth between 1986 and 2010.	Found that petroleum profit tax and company income tax have no significant effect on the Nigerian economic growth.
Das-gupta, Estrada, and Park (2016)	India	Tax administration and tax revenue in India using TAME method.	They reported that there is a significant relationship between tax administration and tax revenue.
Inyiama and Ubesie (2016)	Nigeria	The relationship between the Nigerian VAT and customs and excise duties between 2000 and 2015.	Descriptive and regression analyses were used and reported that VAT and CED are parts of the GDP contributors.
Gatawa, Aliero and Aishatu (2016)	Nigeria	VAT impact on economic growth in Nigeria between 1994Q4 and 2014Q4.	Descriptive and cointegration tests were employed and found that positive correlation exists between VAT and economic growth in Nigeria.
Omokhuale (2016)	Nigeria	VAT contributions to the Nigerian economy between 2000 and 2012.	The study employed OLS technique and found that VAT has a positive significant connection with the Nigerian economy.
Soetan (2017)	Nigeria	The connection between tax administration and its revenue generation in Nigeria.	It was found that in the study that tax administration revealed no significant impact on revenue generation during the study period.

Table 1 (cont.): Summary Empirical Review

Name & Year	Country	Topic	Findings
Animasaun (2017)	Nigeria	The connection between tax administration and Ogun state revenue generation in Nigeria.	The study employed descriptive and inferential statistics and found that there no connection between tax administration and Ogun stated revenue generation during the study period.
Eja, Idaka, and John (2018)	Nigeria	Factors affecting tax revenue generation in Nigeria using Cross River state as a case study	It was found that tax evasion and avoidance with tax revenue revealed a negative significant influence between each other.
Egbunike, Emudainohwo, and Gunardi (2018)	Ghana and Nigeria	The connection between tax and economic growth; evidence from Ghana and Nigeria.	Reported that positive connection exists between tax revenue and GDP of the two nations.
Folayan and Adeniyi (2018)	Nigeria	Tax evasion on revenue generation, a case study of Nigeria using both qualitative and quantitative data where the quantitative data	The study found that tax evasion revealed an adverse relationship on revenue generation
Okeke, Mbonu, and Ndubuisi (2018)	Nigeria	The connection between tax revenue and the Nigerian economic development.	The study found that tax revenue has a statistically significant on economic development.
Sorsa and Durga (2018)	Ethiopia	Contribution tax on revenue generation in Ethiopia.	Found that tax contributes significantly to revenue generation.
Ironkwe and Agu (2019)	Nigeria	The connection between tax revenue and the Nigerian economic development between 1986 and 2016.	The multiple regression revealed that tax revenue exhibits a positive impact on economic development of Nigeria.
Oladipo, Iyoha, Fakile, Asaleye and Eluyela (2019)	Nigeria	Tax revenue and the performance of agriculture in Nigeria.	They used regression analysis and cointegration test and found that positive and significant relationship exists between tax revenue and the performance of agricultural in Nigeria.
Ozili (2020)	Nigeria	Tax evasion and the financial instability in Nigeria.	Found that tax evasion reduces revenue and weaken financial stability.
Ewa, Adesola, and Essien (2020)	Nigeria	Tax revenue impact on the Nigeria economic development between 1994 and 2018.	Reported that there exists positive connection between tax revenue and economic development during the study period.

III. METHODOLOGY

A. Research Design

The term "research design" relates to the total approach for conducting research that establishes a coherent and logical method for addressing a specific subject of study through data collection, analysis, evaluation, and discussion. The purpose of a research design is to be ensuring that the information acquire allows to clearly address the research topic. Obtaining evidence related to the study topic in social sciences research usually includes identifying the evidence required to test a hypothesis, assess a program, or correctly characterize a phenomenon. Researchers, on the other hand, frequently begin their studies far too early, without thoroughly considering what information is needed to address the research questions of this study. In this study, the design shall be a descriptive type of research design which comprises data gathering, analysis, and interpretation. It fully describes the issue statement, allowing everyone to comprehend the importance of type of study.

B. Source of Data

The study used secondary form of external data which was sourced from the Federal Inland Revenue Service and Central Bank of Nigeria Statistical Bulletin. The data span from 2011Q1 to 2020Q4. The justification for the date was that using the recent data before and during pandemic to investigate the taxation role in relation to revenue generation during this period.

C. Conceptual Framework

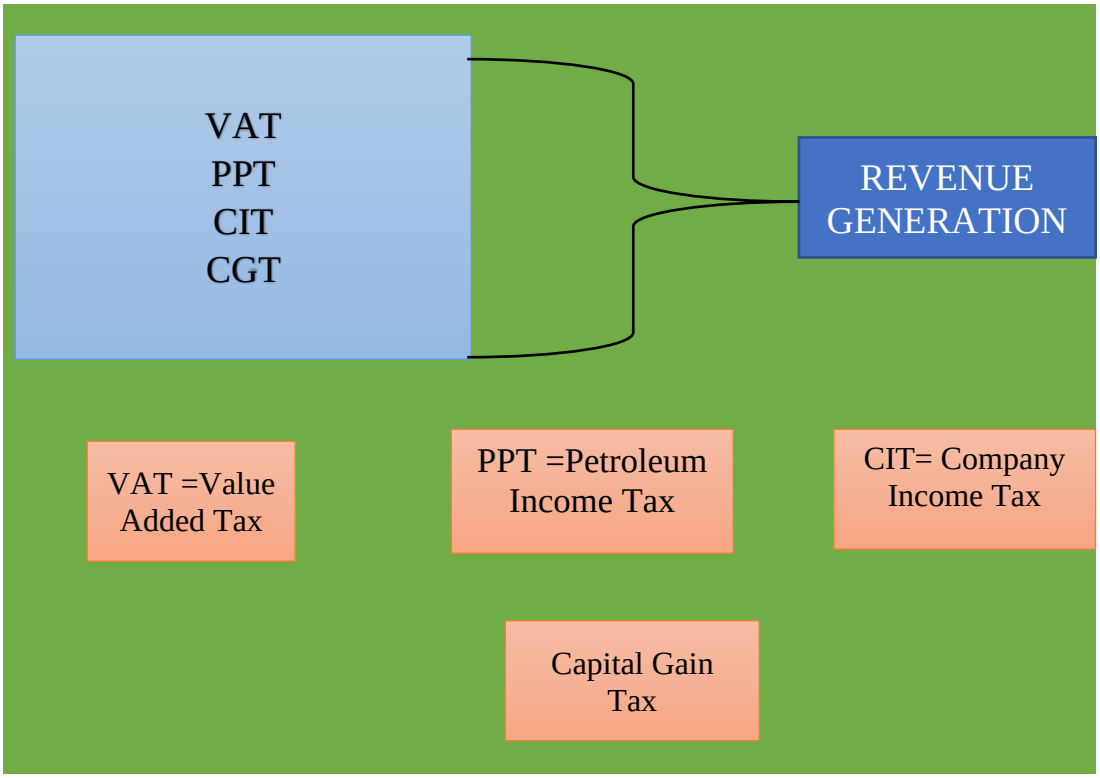

Figure 3: The Conceptual Framework

Source: Author's Design

The conceptual framework shows the link between the control variable and the dependent variable. Taxation serves as the control variable which is being proxied with VAT, PPT, PIT, CIT, and STD and while the dependent variable is proxied with revenue generation.

D. Specification of Model

To achieve the broad objective of the connection between the role of taxation and the revenue generation in Nigeria, A functional model was employed. The model is presented in functionality form, mathematical form, and econometric form below:

$$REVG = f(VAT, PPT, CIT, CGT) \quad (1)$$

Where:

REVG = Revenue Generation

VAT = Value Added Tax

PPT = Petroleum Profit Tax

CIT = Company Income Tax

CGT = Capital Gain Tax

Mathematical Form

$$REVG = \tau_0 + \tau_1 VAT + \tau_2 PPT + \tau_3 CIT + \tau_4 CGT \quad (2)$$

Where:

τ_0 = Constant

τ_1 to τ_4 = intercept/shift parameter

Econometric Form

$$REVG = \tau_0 + \tau_1 VAT + \tau_2 PPT + \tau_3 CIT + \tau_4 CGT + \varepsilon \quad (3)$$

Econometric Time Series Form

$$REVG_t = \tau_0 + \tau_1 VAT_t + \tau_2 PPT_t + \tau_3 CIT_t + \tau_4 CGT + \varepsilon_t \quad (4)$$

Where:

ε_t = Error term

t = time series

E. Estimation Technique

The estimation technique presents the statistical methods/techniques to be employed to achieve the stated objectives. The estimation techniques that will be used are descriptive analysis, pre and post conditions analysis of ordinary least square (OLS), OLS analysis, cointegration analysis, VAR analysis and granger causality testing.

1. Unit Root Testing

The ‘unit root test' is the statistical method used to establish the stationarity of a time series. The most popular approach for evaluating unit root is the Augmented Dickey–Fuller test. ADF's null hypothesis is = 0, whereas the alternative hypothesis is less 0. If we do not reject null, the series is non-stationary; if we do, the series is stationary. The variable's stationarity was investigated using ADF unit root testing in this study.

2. Regression Analysis

Regression is a statistical analysis estimating the unknown variables in a time series model. This was utilized to capture the relationship between variables.

Furthermore, the influence of the reliant variable may be quantified using regression estimation. The regression analysis is a collection of statistical techniques for estimating the links between a control variable and one or more exogenous variables. It may be used to analyze the causal relationship between variables and to forecast their future relationship. There are numerous types of regression analysis, including linear, multiple linear, and nonlinear. Simple linear and multiple linear models are the most popular. Nonlinear regression analysis is commonly used for more complicated data sets in which the dependent and independent variables show a nonlinear relationship.

The following equation represents the simple linear model:

$$Y = a + bX + \varepsilon \tag{5}$$

Where:

Y – Control variable

X – Explanatory variable

a – parameters

b – Gradient

ε – Error term

The criteria for multiple linear regression are the similar as for the basic linear model. However, because multiple linear analysis involves numerous predictor variables.

IV. RESULT DISCUSSION

A. Descriptive Analysis

Table 2: Descriptive Output

	REVG	VAT	PPT	CIT	CGT
Mean	3.380762	2.354513	2.697361	2.418990	4.550070
Median	3.411548	2.316269	2.719894	2.447449	1.128550
Maximum	3.592529	2.657714	2.948524	2.745286	72.59310
Minimum	3.147398	2.184060	2.247354	2.083998	0.056500
Std. Dev.	0.121097	0.112719	0.177078	0.181933	12.03147
Skewness	-0.525270	0.834373	-0.620669	-0.084374	4.818767
Kurtosis	2.369525	3.138627	2.698561	2.071358	27.12950
Jarque-Bera	2.501887	4.673214	2.719639	1.484754	1125.192
Probability	0.286235	0.096655	0.256707	0.475981	0.000000
Sum	135.2305	94.18053	107.8944	96.75960	182.0028
Sum Sq. Dev.	0.571917	0.495517	1.222907	1.290886	5645.498

Source: Author's Computation

The report of the descriptive presented in Table 2 shows that revenue generation (REVG) has the mean value of 3.380762, median value of 3.411548, the maximum value of 3.592529. The standard error value was 0.121097, skewness value of -0.525270, indicating that REVG was negatively skewed, the Kurtosis value was 2.369525, implying a platykurtic form of Kurtosis, while the Jarque-Bera value and its probability are 2.501887 and 0.286235, indicating that REVG was normally distributed, this is because the probability value of the Jarque-Bera is more than 5% alpha level.

Value Added Tax (VAT) has the average value of 2.354513, median value of 2.316269, the maximum value of 2.657714. The standard error value was 0.112719, skewness value of 0.834373, meaning that VAT was positively skewed, the Kurtosis value was 3.138627, implying a leptokurtic form of Kurtosis, while the Jarque-Bera value and its probability are 4.673214 and 0.096655, indicating that VAT was normally distributed.

Petroleum Profit Tax (PPT) reveals the mean value of 2.697361, median value of 2.719894, the maximum value of 2.948524. The standard error value was 0.177078, skewness value of -0.620669, implying that PPT exhibits a negative skewness, the Kurtosis value was 2.698561, implying a platykurtic form of Kurtosis, while the Jarque-Bera value and its probability are 2.719639 and 0.256707, indicating that PPT was normally distributed.

Company Income Tax (CIT) has the mean value of 2.418990, median value of 2.447449, the maximum value of 2.745286. The standard error value was 0.181933, skewness value of -0.084374, indicating that CIT was negatively skewed, the Kurtosis value was 2.071358, implying a platykurtic form of Kurtosis, while the Jarque-Bera value and its probability are 1.484754 and 0.475981, signifying that CIT was normally distributed.

Capital Gain Tax (CGT) has the mean value of 4.550070, median value of 1.128550, the minimum value of 0.056500, maximum value of 72.59310. The standard error value was 12.03147, skewness value of 4.818767, indicating that CGT was positively skewed, the Kurtosis value was 27.12950, implying a leptokurtic form of Kurtosis, while the Jarque-Bera value and its probability are 1125.192 and 0.0000, indicating that CGT was not normally distributed because the probability value of the Jarque-Bera is less than 5% alpha level.

B. Unit Root Report

Table 3: Unit root @Level

Variable	ADF value	Critical Value @5%	Prob Value	Decision
CIT	-1.309013	-2.945842	0.6148	Non-Stationary
VAT	0.633403	-2.938987	0.9889	Non-Stationary
PPT	-1.098711	-2.938987	0.7067	Non-Stationary
REVG	-1.547026	-2.938987	0.4996	Non-Stationary
CGT	-4.944858	-2.938987	0.0002	Stationary

Source: Author's Computation

The report of the ADF unit root @ level shows that CIT has the ADF value of -1.309013, the critical value of -2.945842 with the probability value of 0.6148. The company income tax was not stationary because the critical value in its absolute value

is greater that the ADF value. VAT reveals that ADF value of 0.633403, the critical value of -2.938987, probability value of 0.9889 while the decision was not stationary. The unit root of PPT @level has the ADF value of -1.098711, critical value of -2.938987, probability value of 0.7067, implying that PPT was not stationary at level. The unit root report of REVG has the ADF value of -1.547026, critical value of -2.938987, with p-value of 0.4996, indicating that REVG was not stationary at level. The CGT ADF value was -4.944858, critical value of -2.938987, with p-value of 0.0002, connoting that CGT was stationary at level.

Table 4: Unit Root @ First Difference

Variable	ADF value	Critical Value @5%	Prob Value	Decision
CIT	-16.25464	-2.945842	0.0000	Stationary
VAT	-8.464388	-2.941145	0.0000	Stationary
PPT	-5.591818	-2.941145	0.0000	Stationary
REVG	-8.311365	-2.941145	0.0000	Stationary

Source: Author's Computation

The above table shows the unit root first differencing of the variables that are not stationary at level. It was reported that CIT ADF value was -16.25464, the critical value was -2.945842, while the p-value was 0.0000, indicating that CIT became stationary after converting to first difference. The unit root @ first difference of VAT has the ADF value of -8.464388, critical value of -2.941145, with p-value of 0.0000, implying that VAT was stationary after first differencing. PPT has the ADR value of -5.591818, the critical value of -2.941145, with p-value of 0.0000, meaning that PPT became stationary after first differencing. REVG @ first difference has the ADF value of -8.311365, critical value of -2.941145, with p-value of 0.0000, indicating that REVG also became stationary after proceeding to first difference.

Table 5: Unit Root Integration Order

Variable	@Level	@First Difference	Decision
CIT	Non-stationary	Stationary	Stationary
VAT	Non-stationary	Stationary	Stationary
PPT	Non-stationary	Stationary	Stationary
REVG	Non-stationary	Stationary	Stationary
CGT	Stationary	--	Stationary

Source: Author's Computation

Table 5 presents the integration order of the unit root testing. It was reported that company income tax, value added tax, petroleum profit tax, revenue generation were stationary after first difference while capital gain tax was stationary at level. Accordingly, due to the mix result of the stationarity level autoregressive distributed lag model analysis will later be conducted.

C. Regression Analysis

Table 6: Regression Output

Dependent Variable: REVG				
Sample: 2011Q1 2020Q4				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.345453	0.336360	1.027031	0.3115
VAT	0.688648	0.108802	6.329342	0.0000
PPT	0.507721	0.062737	8.092800	0.0000
CIT	0.021799	0.063163	0.345116	0.7321
CGT	-0.001837	0.000908	-2.023548	0.0507
R-squared	0.756634	Durbin-Watson stat		1.096569
Adjusted R-squared	0.728821	F-statistic		27.20409
		Prob(F-statistic)		0.000000

Source: Author's Computation

Regression analysis output displayed in Table 6 shows when the variables employed are held constant, revenue generation will increase positively and grow with the coefficient value of 0.355453. VAT has one of the independent variables contributes positively and significantly on the revenue generation, that is, when VAT increases by 1, the revenue generation will increase with the value of 0.688648. Petroleum profit tax reveals a significant positive impact on revenue generation in which an increase in PPT will contribute 0.507721 to revenue generation. Company income tax has a coefficient value of 0.021799 with the p-value of 0.7321, connoting that CIT contributes positively to revenue generation but it was significant. The report shows that capital gain tax (CGT) coefficient value was -0.001837 and the sig value was 0.0507, indicating that CGT exhibits a negative impact on revenue generation significantly during the study period.

The R-squared value was 0.756634 and the adjusted R-squared value was 0.7288821, indicating that the coefficient of multiple determination of the variables has above 75% variation and also implies that it is reliable. The Durbin-Watson shows that the variables are not serially correlation while the F-stat and its probability indicates that the joint controlling variables can predict the dependent variables significantly.

D. Post Regression Analysis

Table 7: Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	3.104860	Prob. F(2,33)	0.0581
Obs*R-squared	6.334878	Prob. Chi-Square(2)	0.0821

Source: Author's Computation

The report of the serial correlation test shows the value of F-stat (3.104860) with p-value of 0.0581. the observed R-squared value was 6.334878 with probability of Chi-square value of 0.0821. This indicates that no serial correlation exist among the variables.

Table 8: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.670399	Prob. F(4,35)	0.6169
Obs*R-squared	2.846583	Prob. Chi-Square(4)	0.5838
Scaled explained SS	3.002181	Prob. Chi-Square(4)	0.5575

Source: Author's Computation

The report of heteroskedasticity using Breusch-Pagan-Godfrey shows the F-stat value of 0.670399, the observed R-squared value was 2.846583 with the scaled explained value of 3.002181 while the probability of F-stat value was 0.6169 and probability of Chi-squares are 0.5838 and 0.5575, implying that the variables are not heteroskedasticity rather homoskedasticity.

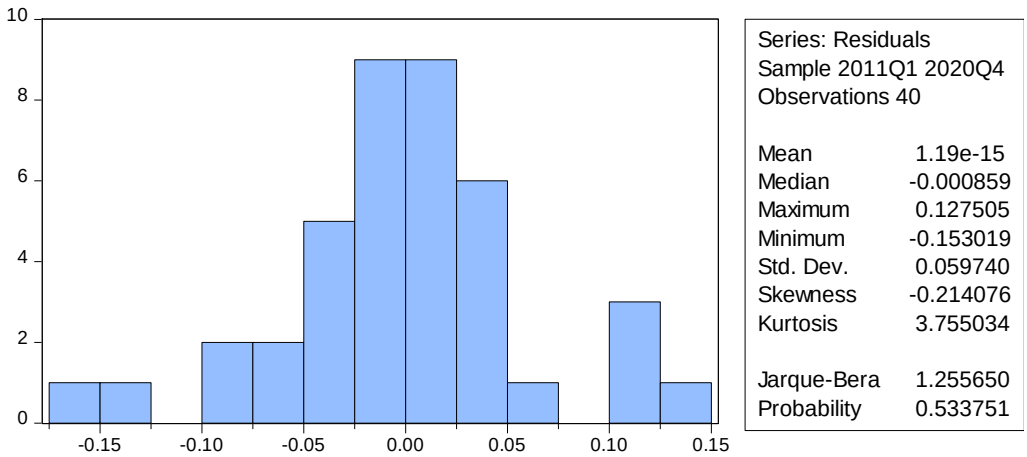

Figure 4: Normality Test

Source: Author's Computation

The above figure indicates that the variables are normally distributed that is the Jarque-Bera value was 1.255650 with its probability value of 0.533751. Since the probability value exceed 5% alpha level, this indicates normally distributed.

Lag Length Testing

Table 9: Lag Length Report

VAR Lag Order Selection Criteria
Endogenous variables: REVG VAT PPT CGT CIT
Sample: 2011Q1 2020Q4

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-27.85392	NA	4.27e-06	1.825218	2.045151	1.901980
1	63.86695	152.8681	1.06e-07	-1.881497	-0.561898*	-1.420922
2	91.09373	37.81497	1.02e-07	-2.005207	0.414058	-1.160819
3	129.8425	43.05421	6.02e-08	-2.769029	0.749902	-1.540828
4	182.9990	44.29708*	2.10e-08*	-4.333279*	0.285318	-2.721264*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion
Source: Author's Computation

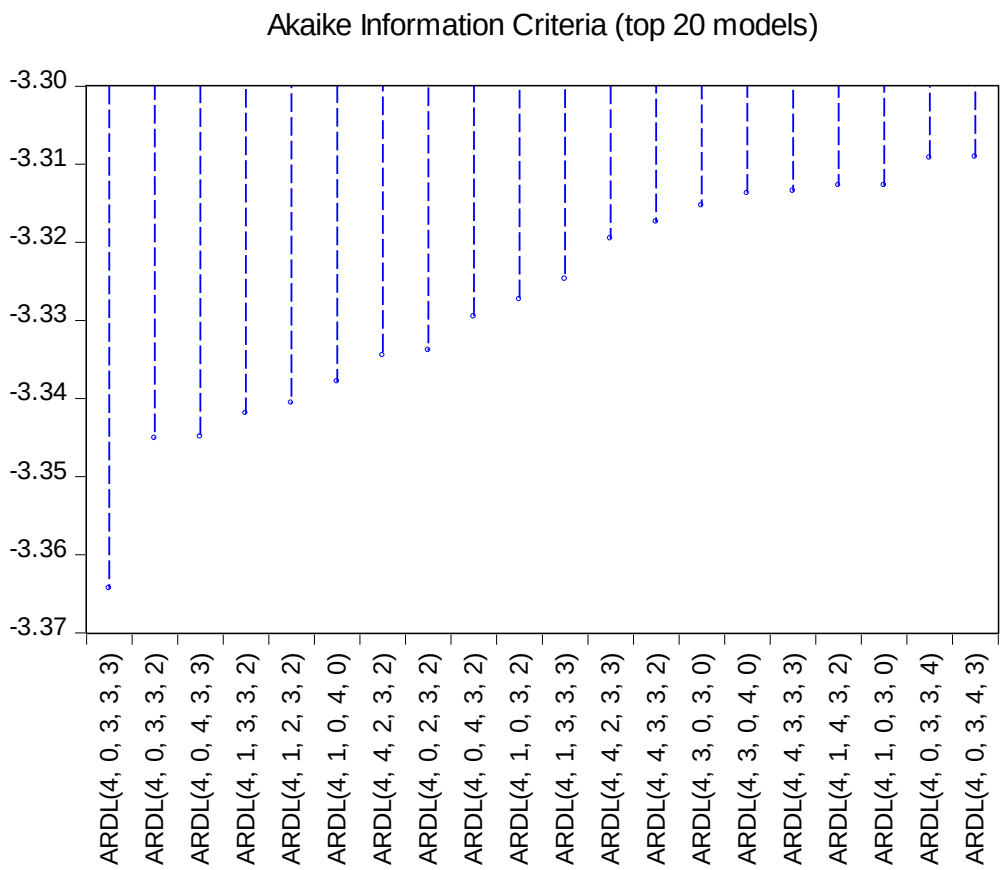

Figure 5: AIC Lag Selection

The above table shows that lag length selection criteria. The selection testing is one of the pre-estimation techniques to be conducted when using auto-regressive distributed lag estimation. Based on the report presented in the above table, likelihood ratio (LR) suggested lag 4, final prediction error suggested lag 4, Akaike information criterion suggested lag 4, schwarz information criterion suggested lag1 while Hannan-Quinn information criterion suggested lag 4. Most of the suggestions chose lag 4 so, this study used lag 4 for the ARDL estimation.

E. Autoregressive Distributed Lag

Table 10: ARDL Report

Selected Model: ARDL(4, 0, 3, 3, 3)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.***
REVG(-1)	0.070220	0.169292	0.414787	0.6832
REVG(-2)	-0.237014	0.160447	-1.477214	0.1569
REVG(-3)	0.148424	0.156325	0.949453	0.3550
REVG(-4)	0.306898	0.143928	2.132299	0.0470
VAT	0.634830	0.139448	4.552466	0.0002
PPT	0.362858	0.096447	3.762243	0.0014
PPT(-1)	-0.064384	0.160523	-0.401089	0.6931
PPT(-2)	0.371052	0.152341	2.435668	0.0255
PPT(-3)	-0.219723	0.138236	-1.589472	0.1294
CIT	0.090888	0.054143	1.678664	0.1105
CIT(-1)	0.002269	0.059236	0.038305	0.9699
CIT(-2)	0.106634	0.053964	1.976002	0.0637
CIT(-3)	-0.072638	0.061448	-1.182108	0.2525
CGT	-0.000920	0.000846	-1.088313	0.2908
CGT(-1)	0.000303	0.000886	0.341538	0.7367
CGT(-2)	-0.002522	0.000862	-2.925778	0.0090
CGT(-3)	0.001909	0.000747	2.556413	0.0198
C	-0.612002	0.341949	-1.789748	0.0903
R-squared	0.951608	Mean dependent var		3.373744
F-statistic	20.82130	Durbin-Watson stat		1.929211
Prob(F-statistic)	0.000000			

Source: Author's Computation

The result of the ARDL presented in Table 10 shows the report of each variable with from lag 1 to lag 4. The coefficient, standard deviation, t-statistic, and probability value were displayed, including the R-squared value, F-statistic and the probability of F-statistic.

F. ARDL Bound Test

Table 11: Bound Test Report

ARDL Bounds Test		
Sample: 2012Q1 2020Q4		
Null Hypothesis: No long-run relationships exist		
Test Statistic	**Value**	**k**
F-statistic	2.928800	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: Author's Computation

The report of the ARDL bound test with the null hypothesis of no long-run relationships exist displayed the F-stat value of 2.928800 and the critical bound values of the lower and upper bounds at 5% are 2.56 and 3.49. This indicates that the null hypothesis failed to be rejected nor accepted.

G. Vector Autoregressive Analysis

Table 12: VAR Report

Vector Autoregression Estimates					
Standard errors in ( ) & t-statistics in [ ]					
	REVG	**VAT**	**PPT**	**CIT**	**CGT**
REVG(-1)	0.000411	-0.245186	-0.135089	0.176278	-3.524357
	(0.27805)	(0.15978)	(0.62249)	(0.51342)	(49.5828)
	[0.00148]	[-1.53450]	[-0.21701]	[0.34334]	[-0.07108]
REVG(-2)	0.050472	0.194539	1.027577	-0.863626	80.47267
	(0.25935)	(0.14903)	(0.58061)	(0.47888)	(46.2472)
	[0.19461]	[1.30534]	[1.76982]	[-1.80343]	[1.74006]
REVG(-3)	0.147102	0.127639	0.145998	-0.149919	63.64494
	(0.21609)	(0.12418)	(0.48377)	(0.39901)	(38.5335)
	[0.68074]	[1.02789]	[0.30179]	[-0.37573]	[1.65168]
REVG(-4)	0.057118	0.015887	-0.600291	-0.539119	-46.87076
	(0.21136)	(0.12146)	(0.47317)	(0.39026)	(37.6894)
	[0.27024]	[0.13081]	[-1.26865]	[-1.38142]	[-1.24361]
VAT(-1)	0.857491	1.127649	1.964432	-1.326938	361.0129
	(0.67804)	(0.38963)	(1.51793)	(1.25197)	(120.907)
	[1.26467]	[2.89416]	[1.29415]	[-1.05988]	[2.98586]
VAT(-2)	0.310428	0.279590	-1.337336	1.288463	-365.8514
	(0.63789)	(0.36656)	(1.42805)	(1.17783)	(113.748)
	[0.48665]	[0.76274]	[-0.93648]	[1.09393]	[-3.21633]
VAT(-3)	0.130796	-0.018130	-1.753030	1.584261	-343.2427
	(0.63131)	(0.36278)	(1.41334)	(1.16570)	(112.576)
	[0.20718]	[-0.04998]	[-1.24035]	[1.35907]	[-3.04898]
VAT(-4)	-0.973531	-0.498540	-1.399227	0.873182	-166.9304
	(0.57793)	(0.33211)	(1.29383)	(1.06713)	(103.057)
	[-1.68451]	[-1.50115]	[-1.08146]	[0.81825]	[-1.61979]

Table 12 (cont.): VAR Report

Vector Autoregression Estimates Standard errors in ( ) & t-statistics in [ ]	REVG	VAT	PPT	CIT	CGT
PPT(-1)	0.251438	-0.079945	1.221945	0.120995	28.44413
	(0.19220)	(0.11044)	(0.43028)	(0.35489)	(34.2727)
	[1.30823]	[-0.72385]	[2.83991]	[0.34094]	[0.82994]
PPT(-2)	0.406151	0.247110	-0.338807	-0.211648	3.596752
	(0.20894)	(0.12006)	(0.46775)	(0.38579)	(37.2577)
	[1.94389]	[2.05814]	[-0.72433]	[-0.54860]	[0.09654]
PPT(-3)	-0.184555	-0.089835	0.094624	0.153512	-83.46535
	(0.25134)	(0.14443)	(0.56269)	(0.46409)	(44.8193)
	[-0.73428]	[-0.62199]	[0.16817]	[0.33078]	[-1.86226]
PPT(-4)	-0.021659	-0.088968	-0.359248	0.604922	-9.639731
	(0.19300)	(0.11091)	(0.43207)	(0.35636)	(34.4155)
	[-0.11223]	[-0.80220]	[-0.83146]	[1.69748]	[-0.28010]
CIT(-1)	0.078858	0.043391	0.528213	-0.466594	91.98201
	(0.20549)	(0.11808)	(0.46003)	(0.37942)	(36.6424)
	[0.38376]	[0.36746]	[1.14822]	[-1.22974]	[2.51026]
CIT(-2)	0.245631	0.117444	0.458093	-0.354010	100.9435
	(0.18097)	(0.10400)	(0.40515)	(0.33416)	(32.2714)
	[1.35727]	[1.12932]	[1.13067]	[-1.05939]	[3.12796]
CIT(-3)	-0.064299	0.013228	0.178196	-0.300913	44.55702
	(0.12372)	(0.07110)	(0.27698)	(0.22845)	(22.0625)
	[-0.51970]	[0.18605]	[0.64334]	[-1.31718]	[2.01958]
CIT(-4)	0.074443	-0.018594	0.334418	0.568334	115.8789
	(0.16334)	(0.09386)	(0.36568)	(0.30160)	(29.1271)
	[0.45575]	[-0.19810]	[0.91452]	[1.88437]	[3.97839]
CGT(-1)	0.000773	0.001397	-0.001903	-0.001298	-0.065456
	(0.00116)	(0.00067)	(0.00260)	(0.00214)	(0.20678)
	[0.66650]	[2.09685]	[-0.73318]	[-0.60607]	[-0.31655]
CGT(-2)	-0.002924	-0.000555	-0.000620	-0.001672	-0.623805
	(0.00130)	(0.00075)	(0.00292)	(0.00241)	(0.23238)
	[-2.24384]	[-0.74136]	[-0.21255]	[-0.69483]	[-2.68444]
CGT(-3)	0.001698	-4.19E-05	-0.000744	-0.001315	0.292867
	(0.00142)	(0.00081)	(0.00317)	(0.00261)	(0.25238)
	[1.19951]	[-0.05150]	[-0.23483]	[-0.50316]	[1.16041]
CGT(-4)	0.000636	0.001404	0.002412	-0.002987	0.307742
	(0.00134)	(0.00077)	(0.00300)	(0.00248)	(0.23902)
	[0.47467]	[1.82238]	[0.80379]	[-1.20672]	[1.28749]
C	-0.302200	-0.409147	1.783682	1.007525	199.6372
	(0.43577)	(0.25041)	(0.97557)	(0.80464)	(77.7070)
	[-0.69348]	[-1.63388]	[1.82834]	[1.25215]	[2.56910]

Source: Author's Computation

The VAR analysis shows the coefficient, standard error, and t-statistic values of all the employed variables. 4 lag length was used to conduct the VAR since the lag selection criteria including the Akaike Information Criterion.

H. Impulse Response Function

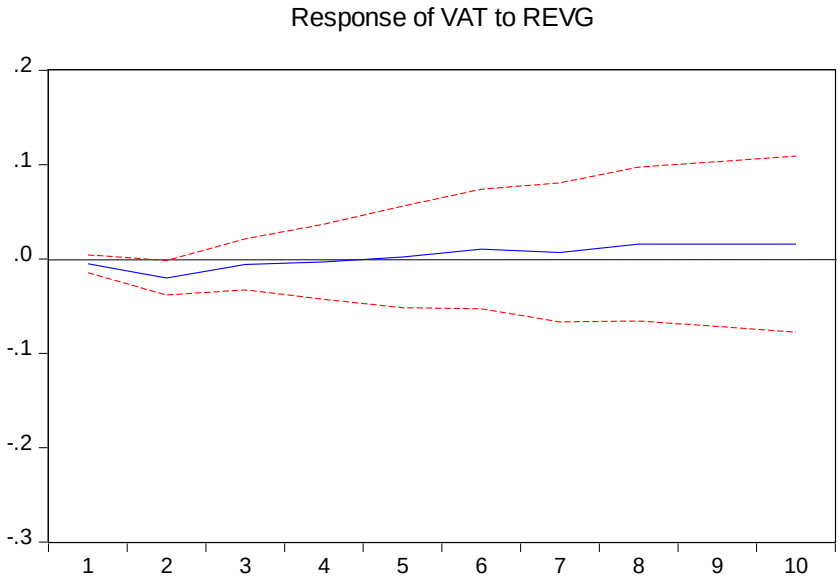

Figure 6: VAT to REVG

The impulse response function of the VAR analysis reveals the response of value added tax (VAT) to revenue generation (REVG). From period 1 to early quarter of period 4, VAT oscillates negatively but closer to zero which later move positively from early period of quarter 5 to the end of period 10 significantly.

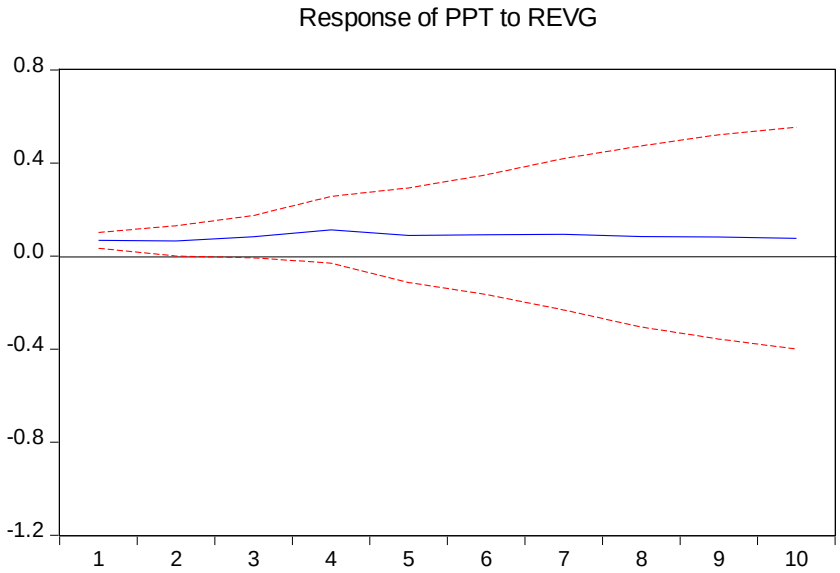

Figure 7: PPT to REVG

Petroleum profit tax PPT) contributes to revenue generation positively from the early quarter of period 1 to the end of period 10 in a significant manner. This indicates that PPT contributes significantly to revenue generation.

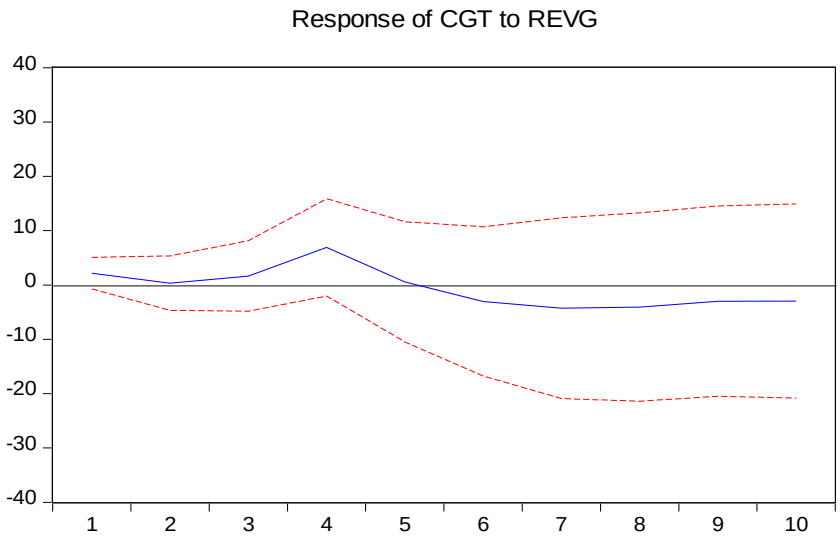

Figure 8: CGT to REVG

The response of capital gain tax (CGT) to revenue generation (REVG), at the beginning of period 1oscillate slightly positive to the early quarter of period 4. It rose significantly positive to the earlier quarter of period 5. It later falls in a negative direction still the end of period 10. This implies that CGT contribution has not been significant on revenue generation.

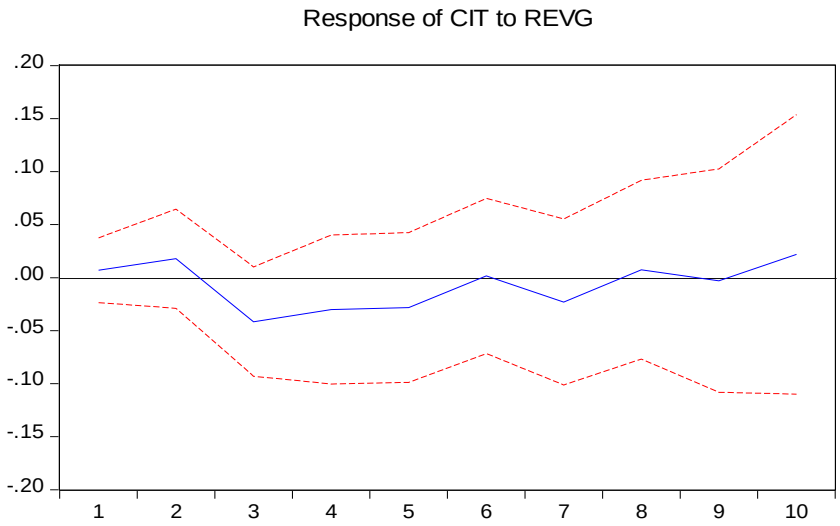

Figure 9: CIT to REVG

The response of company income tax to revenue generation reveals in the above diagram reported that, at the beginning of period 1 to the earliest period 2, CIT moves positively which later move negatively significant at the end of period 2 still mid quart of period 6 to early quarter of period 8. It later oscillates between positive and negative line to the early quarter of period 9 and later move positively to period 10.

I. Variance Decomposition

Table 13: Variance Decomposition of REVG

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	0.049733	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.055809	86.25434	0.461146	12.07315	0.312862	0.898502
3	0.081132	49.63338	0.600713	22.61869	22.76749	4.379729
4	0.098249	46.87087	0.657629	32.07355	16.57674	3.821206
5	0.120490	43.39647	0.837633	30.69048	21.85382	3.221604
6	0.158395	36.94616	1.639225	28.56989	30.81051	2.034211
7	0.203111	31.44993	8.591189	28.01496	30.56685	1.377067
8	0.242201	31.50606	12.08246	25.82156	29.57777	1.012152
9	0.278697	29.41140	16.40798	24.27910	29.08475	0.816770
10	0.327275	25.12643	23.86093	22.44924	27.33445	1.228952

Source: Author's Computation

The variance decomposition of revenue generation against other variables such as VAT, PPT, CIT, CGT. The report shows that the own shock of revenue generation in the short-run period 3 with the value of 49.63338, company income tax accounts for 22.76749 followed by petroleum profit tax which accounts for 22.61869, capital gain tax accounts for 4.379729, and value added tax accounts for 0.600713. in the long-run period 8, company income tax accounts for the highest value of 29.57777, followed by petroleum profit tax which accounts for 25.82156, value added tax accounts for 12.08246, and capital gain tax accounts for 1.012152. This implies that in the short-run, company income tax contributes more to revenue generation, followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax.

V. CONCLUSION AND RECOMMENDATION

A. Discussion of Findings

The revenue generation (REVG) was negatively skewed, the Kurtosis revealed a platykurtic form of Kurtosis and it was normally distributed. Value Added Tax (VAT) was positively skewed, the Kurtosis was leptokurtic form, and it was normally distributed. Petroleum Profit Tax (PPT) revealed a negative skewness, the Kurtosis was platykurtic form and was normally distributed. Company Income Tax (CIT) was negatively skewed, with a platykurtic form of Kurtosis, and it was normally distributed. Capital Gain Tax (CGT) was positively skewed, the Kurtosis was leptokurtic form of Kurtosis, and it was not normally distributed because the probability value of the Jarque-Bera is less than 5% alpha level.

It was reported that company income tax, value added tax, petroleum profit tax, revenue generation were stationary after first difference while capital gain tax was stationary at level. Accordingly, due to the mix result of the stationarity level autoregressive distributed lag model analysis will later be conducted.

Regression output displayed showed when the variables employed are held constant, revenue generation will increase positively and grow with the coefficient value of 0.355453. VAT has one of the independent variables contributes positively and significantly on the revenue generation, that is, when VAT increases by 1, the revenue generation will increase with the value of 0.688648. Petroleum profit tax revealed a significant positive impact on revenue generation in which an increase in PPT will contribute 0.507721 to revenue generation. Company income tax contributes positively to revenue generation, but it was significant. Capital gain tax exhibited a negative impact on revenue generation significantly during the study period.

The coefficient of multiple determination of the variables has above 75% variation and also implies that it is reliable. The Durbin-Watson shows that the variables are not serially correlation while the F-stat and its probability indicates that the joint controlling variables can predict the dependent variables significantly. The

report of the ARDL bound test with the null hypothesis of no long-run relationships exist displayed that the null hypothesis failed to be rejected nor accepted.

The impulse response function of the VAR analysis revealed that, from period 1 to early quarter of period 4, VAT oscillates negatively but closer to zero which later move positively from early period of quarter 5 to the end of period 10 significantly.

Petroleum profit tax PPT) contributes to revenue generation positively from the early quarter of period 1 to the end of period 10 in a significant manner. This indicates that PPT contributes significantly to revenue generation. The response of capital gain tax (CGT) to revenue generation (REVG), at the beginning of period 1oscillate slightly positive to the early quarter of period 4. It rose significantly positive to the earlier quarter of period 5. It later falls in a negative direction still the end of period 10. This implies that CGT contribution has not been significant on revenue generation.

The response of company income tax to revenue generation revealed that, at the beginning of period 1 to the earliest period 2, CIT moves positively which later move negatively significant at the end of period 2 still mid quart of period 6 to early quarter of period 8. It later oscillates between positive and negative line to the early quarter of period 9 and later move positively to period 10.

The variance decomposition of revenue generation showed that in the short-run, company income tax contributes more to revenue generation, followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax.

B. Conclusion

The study had investigated taxation role on revenue generation. From the findings, it was concluded that value added tax contributes positively and significantly on the revenue generation, petroleum profit tax revealed a significant positive impact on revenue generation, company income tax contributes positively to revenue generation, but it was significant. Capital gain tax exhibited a negative impact on revenue generation significantly.

It was also concluded that company income tax contributes more to revenue generation, followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax. Though, there was an inconclusive relationship between the role of taxation and revenue generation that is, no adequate report whether there is a long-run or short-run relationship.

C. Recommendations

The study recommended that:

- Government endeavor to introduce policies to implement the loopholes in its taxing system, by doing this, it will encourage the taxpayers to comply and to enhance government to perform its social obligations.
- Government should encourage regular staff training and development on tax implementation and compl tax and capital gağ tğax need to be monitored and through the provision of high-quality infrastructure, government could boost tax-payers morale.

D. Suggestion for Further Studies

The role of taxation on revenue generation and economic growth cannot be underestimated. It was on this note, this study investigated taxation role on revenue generation in Nigeria. However, it was suggested that further researchers should use a comparative analysis between two or more countries on the role of taxation and revenue generation. Additionally, economic growth should also be included to measure taxation impact on revenue generation and economic growth.

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APPENDICES

Appendices 1

Year	PPT	VAT	CGT	CIT	STD	REVG
2011Q1	3.443922	2.817849	2.208323	1.2819	2.083998	3.44392163559
2011Q2	3.443922	2.8117	2.18406	5.0992	2.461019	3.4439
2011Q3	3.443922	2.948524	2.264202	2.8141	2.404262	3.443922
2011Q4	3.443922	2.942874	2.207044	0.1093	2.180102	3.44
2012Q1	3.425483	2.928779	2.245161	0.5878	2.083998	3.42548315815
2012Q2	3.425483	2.870589	2.25281	2.7694	2.461019	3.4255
2012Q3	3.425483	2.901192	2.232209	4.1602	2.404262	3.425483
2012Q4	3.425483	2.910488	2.267231	1.3992	2.194462	3.43
2013Q1	3.387381	2.903442	2.283745	0.1667	2.188349	3.38738065157
2013Q2	3.387381	2.899506	2.256752	16.7834	2.602786	3.3874
2013Q3	3.387381	2.716405	2.316119	0.1395	2.381427	3.387381
2013Q4	3.387381	2.74179	2.347919	2.5663	2.224831	3.39
2014Q1	3.40092	2.804881	2.327125	0.7838	2.240958	3.40091996597
2014Q2	3.40092	2.805683	2.295028	0.2904	2.745286	3.4009
2014Q3	3.40092	2.774371	2.283488	1.5191	2.425229	3.400920
2014Q4	3.40092	2.764767	2.303718	0.0565	2.24759	3.40
2015Q1	3.237575	2.592218	2.286432	0.2502	2.215496	3.23757525041
2015Q2	3.237575	2.485922	2.294408	12.0074	2.731019	3.2376
2015Q3	3.237575	2.513039	2.286727	4.2449	2.478736	3.237575
2015Q4	3.237575	2.426375	2.263517	0.2995	2.423769	3.24
2016Q1	3.147398	2.247354	2.298273	0.228	2.220154	3.14739803935
2016Q2	3.147398	2.515995	2.296175	72.5931	2.484863	3.1474
2016Q3	3.147398	2.50998	2.316419	24.1888	2.473249	3.147398

2016Q4	3.147398	2.51771	2.351167	2.3935	2.216924	3.15
2017Q1	3.269805	2.529301	2.345139	0.1106	2.183039	3.26980471076
2017Q2	3.269805	2.474029	2.39147	0.8258	2.56139	3.2698
2017Q3	3.269805	2.591848	2.398913	1.8449	2.585387	3.269805
2017Q4	3.269805	2.693381	2.405011	0.399	2.496183	3.27
2018Q1	3.478874	2.809408	2.431032	0.3142	2.299102	3.47887424898
2018Q2	3.445272	2.719209	2.426075	6.1663	2.625108	3.4453
2018Q3	3.422175	2.796841	2.436964	5.8435	2.5417	3.422175
2018Q4	3.511331	2.827737	2.474232	0.2707	2.569745	3.51
2019Q1	3.480865	2.693041	2.466926	0.0964	2.361403	3.48086527100
2019Q2	3.592529	2.701562	2.494075	0.9752	2.704967	3.5925
2019Q3	3.464811	2.772723	2.439516	1.2986	2.71044	3.464811
2019Q4	3.539329	2.720579	2.491197	3.6068	2.549662	3.54
2020Q1	3.559162	2.717948	2.511321	0.6433	2.445059	3.55916199845
2020Q2	3.43117	2.64375	2.514807	0.6174	2.510976	3.4312
2020Q3	3.529647	2.547913	2.628091	1.7837	2.591815	3.529647
2020Q4	3.525367	2.303726	2.657714	0.4742	2.44984	3.53

Appendices II

Descriptive Analysis

	REVG	VAT	PPT	CIT	CGT
Mean	3.380762	2.354513	2.697361	2.418990	4.550070
Median	3.411548	2.316269	2.719894	2.447449	1.128550
Maximum	3.592529	2.657714	2.948524	2.745286	72.59310
Minimum	3.147398	2.184060	2.247354	2.083998	0.056500
Std. Dev.	0.121097	0.112719	0.177078	0.181933	12.03147
Skewness	-0.525270	0.834373	-0.620669	-0.084374	4.818767
Kurtosis	2.369525	3.138627	2.698561	2.071358	27.12950
Jarque-Bera	2.501887	4.673214	2.719639	1.484754	1125.192
Probability	0.286235	0.096655	0.256707	0.475981	0.000000
Sum	135.2305	94.18053	107.8944	96.75960	182.0028
Sum Sq. Dev.	0.571917	0.495517	1.222907	1.290886	5645.498
Observations	40	40	40	40	40

Unit Root Test
CIT @ Level

Null Hypothesis: CIT has a unit root
Exogenous: Constant
Lag Length: 3 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.309013	0.6148
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CIT)
Method: Least Squares
Date: 08/01/21 Time: 15:19
Sample (adjusted): 2012Q1 2020Q4
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CIT(-1)	-0.242372	0.185156	-1.309013	0.2002
D(CIT(-1))	-0.675308	0.165751	-4.074237	0.0003
D(CIT(-2))	-0.731842	0.126173	-5.800314	0.0000
D(CIT(-3))	-0.765374	0.100034	-7.651106	0.0000
C	0.607862	0.448362	1.355738	0.1850

R-squared	0.821987	Mean dependent var	0.007493
Adjusted R-squared	0.799017	S.D. dependent var	0.231538
S.E. of regression	0.103801	Akaike info criterion	-1.564438
Sum squared resid	0.334013	Schwarz criterion	-1.344505
Log likelihood	33.15989	Hannan-Quinn criter.	-1.487676
F-statistic	35.78607	Durbin-Watson stat	1.529221
Prob(F-statistic)	0.000000		

CIT @ First Difference

Null Hypothesis: D(CIT) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-16.25464	0.0000
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CIT,2)
Method: Least Squares
Date: 08/02/21 Time: 12:11
Sample (adjusted): 2012Q1 2020Q4
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CIT(-1))	-3.531658	0.217271	-16.25464	0.0000
D(CIT(-1),2)	1.676425	0.149517	11.21229	0.0000
D(CIT(-2),2)	0.823289	0.090713	9.075713	0.0000
C	0.021389	0.017541	1.219416	0.2316

R-squared	0.926280	Mean dependent var	0.002283
Adjusted R-squared	0.919369	S.D. dependent var	0.369606
S.E. of regression	0.104952	Akaike info criterion	-1.566193
Sum squared resid	0.352476	Schwarz criterion	-1.390246
Log likelihood	32.19147	Hannan-Quinn criter.	-1.504783
F-statistic	134.0257	Durbin-Watson stat	1.534888
Prob(F-statistic)	0.000000		

VAT @ Level

Null Hypothesis: VAT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.633403	0.9889
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VAT)
Method: Least Squares
Date: 08/01/21 Time: 15:20
Sample (adjusted): 2011Q2 2020Q4
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VAT(-1)	0.034548	0.054544	0.633403	0.5304
C	-0.069553	0.128119	-0.542874	0.5905

R-squared	0.010727	Mean dependent var	0.011523
Adjusted R-squared	-0.016010	S.D. dependent var	0.034276
S.E. of regression	0.034549	Akaike info criterion	-3.842930
Sum squared resid	0.044166	Schwarz criterion	-3.757619
Log likelihood	76.93713	Hannan-Quinn criter.	-3.812321
F-statistic	0.401199	Durbin-Watson stat	2.720026
Prob(F-statistic)	0.530367		

VAT @ First Difference

Null Hypothesis: D(VAT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.464388	0.0000
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VAT,2)
Method: Least Squares
Date: 08/01/21 Time: 15:21
Sample (adjusted): 2011Q3 2020Q4
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(VAT(-1))	-1.320010	0.155949	-8.464388	0.0000
C	0.+01,6 3+6000	0.005597	2.858666	0.0070

R-squared	0.665570	Mean dependent var	0.001418
Adjusted R-squared	0.656280	S.D. dependent var	0.055991
S.E. of regression	0.032826	Akaike info criterion	-3.943968
Sum squared resid	0.038793	Schwarz criterion	-3.857779
Log likelihood	76.93540	Hannan-Quinn criter.	-3.913303
F-statistic	71.64587	Durbin-Watson stat	1.774434
Prob(F-statistic)	0.000000		

PPT @ Level

Null Hypothesis: PPT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.098711	0.7067
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PPT)
Method: Least Squares
Date: 08/01/21 Time: 15:21
Sample (adjusted): 2011Q2 2020Q4
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PPT(-1)	-0.104227	0.094863	-1.098711	0.2790
C	0.269006	0.257314	1.045440	0.3026

R-squared	0.031595	Mean dependent var	-0.013183
Adjusted R-squared	0.005422	S.D. dependent var	0.098117
S.E. of regression	0.097850	Akaike info criterion	-1.760832
Sum squared resid	0.354264	Schwarz criterion	-1.675521
Log likelihood	36.33623	Hannan-Quinn criter.	-1.730223
F-statistic	1.207165	Durbin-Watson stat	1.758918
Prob(F-statistic)	0.278993		

PPT @ First Difference

Null Hypothesis: D(PPT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.591818	0.0000
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PPT,2)
Method: Least Squares
Date: 08/01/21 Time: 15:23
Sample (adjusted): 2011Q3 2020Q4
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PPT(-1))	-1.010572	0.180723	-5.591818	0.0000
C	-0.013443	0.016401	-0.819625	0.4178

R-squared	0.464831	Mean dependent var	-0.006264
Adjusted R-squared	0.449965	S.D. dependent var	0.135906
S.E. of regression	0.100794	Akaike info criterion	-1.700286
Sum squared resid	0.365737	Schwarz criterion	-1.614098
Log likelihood	34.30544	Hannan-Quinn criter.	-1.669621
F-statistic	31.26842	Durbin-Watson stat	1.798830
Prob(F-statistic)	0.000002		

REVG @ Level

Null Hypothesis: REVG has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.547026	0.4996
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(REVG)
Method: Least Squares
Date: 08/01/21 Time: 15:23
Sample (adjusted): 2011Q2 2020Q4
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REVG(-1)	-0.135630	0.087672	-1.547026	0.1304
C	0.460119	0.296255	1.553119	0.1289

R-squared	0.060754	Mean dependent var	0.002088
Adjusted R-squared	0.035369	S.D. dependent var	0.066229
S.E. of regression	0.065047	Akaike info criterion	-2.577500
Sum squared resid	0.156550	Schwarz criterion	-2.492189
Log likelihood	52.26125	Hannan-Quinn criter.	-2.546891
F-statistic	2.393290	Durbin-Watson stat	2.439396
Prob(F-statistic)	0.130369		

REVG @ First Difference

Null Hypothesis: D(REVG) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.311365	0.0000
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(REVG,2)
Method: Least Squares
Date: 08/01/21 Time: 15:24
Sample (adjusted): 2011Q3 2020Q4
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(REVG(-1))	-1.314911	0.158206	-8.311365	0.0000
C	0.002854	0.010483	0.272235	0.7870

R-squared	0.657400	Mean dependent var	-0.000113
Adjusted R-squared	0.647883	S.D. dependent var	0.108834
S.E. of regression	0.064581	Akaike info criterion	-2.590588
Sum squared resid	0.150147	Schwarz criterion	-2.504399
Log likelihood	51.22117	Hannan-Quinn criter.	-2.559923
F-statistic	69.07879	Durbin-Watson stat	2.041650
Prob(F-statistic)	0.000000		

CGT @ Level

Null Hypothesis: CGT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.944858	0.0002
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CGT)
Method: Least Squares
Date: 08/01/21 Time: 15:17
Sample (adjusted): 2011Q2 2020Q4
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CGT(-1)	-0.796341	0.161044	-4.944858	0.0000
C	3.685921	2.074813	1.776507	0.0839

R-squared	0.397900	Mean dependent var	-0.020710
Adjusted R-squared	0.381627	S.D. dependent var	15.36437
S.E. of regression	12.08203	Akaike info criterion	7.871236
Sum squared resid	5401.091	Schwarz criterion	7.956547
Log likelihood	-151.4891	Hannan-Quinn criter.	7.901845
F-statistic	24.45162	Durbin-Watson stat	1.939278
Prob(F-statistic)	0.000017		

Regression Analysis

Dependent Variable: REVG
Method: Least Squares
Date: 08/01/21 Time: 15:25
Sample: 2011Q1 2020Q4
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.345453	0.336360	1.027031	0.3115
VAT	0.688648	0.108802	6.329342	0.0000
PPT	0.507721	0.062737	8.092800	0.0000
CIT	0.021799	0.063163	0.345116	0.7321
CGT	-0.001837	0.000908	-2.023548	0.0507

R-squared	0.756634	Mean dependent var	3.380762
Adjusted R-squared	0.728821	S.D. dependent var	0.121097
S.E. of regression	0.063061	Akaike info criterion	-2.572953
Sum squared resid	0.139185	Schwarz criterion	-2.361843
Log likelihood	56.45906	Hannan-Quinn criter.	-2.496622
F-statistic	27.20409	Durbin-Watson stat	1.096569
Prob(F-statistic)	0.000000		

Post Regression Analysis
Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	3.104860	Prob. F(2,33)	0.0581
Obs*R-squared	6.334878	Prob. Chi-Square(2)	0.0421

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 08/02/21 Time: 12:27
Sample: 2011Q1 2020Q4
Included observations: 40
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.040584	0.318636	-0.127367	0.8994
VAT	0.039800	0.104074	0.382414	0.7046
CIT	-0.018381	0.060465	-0.303995	0.7630
PPT	-0.002777	0.060898	-0.045599	0.9639
CGT	-2.66E-05	0.000879	-0.030252	0.9760
RESID(-1)	0.460222	0.186194	2.471726	0.0188
RESID(-2)	-0.107633	0.194077	-0.554586	0.5829

R-squared	0.158372	Mean dependent var	1.19E-15
Adjusted R-squared	0.005349	S.D. dependent var	0.059740
S.E. of regression	0.059580	Akaike info criterion	-2.645370
Sum squared resid	0.117142	Schwarz criterion	-2.349816
Log likelihood	59.90740	Hannan-Quinn criter.	-2.538507
F-statistic	1.034953	Durbin-Watson stat	1.797640
Prob(F-statistic)	0.420611		

Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

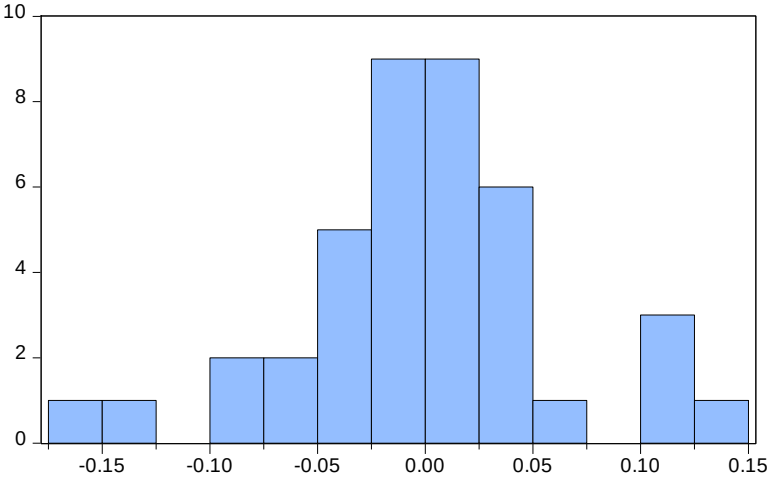
F-statistic	0.670399	Prob. F(4,35)	0.6169
Obs*R-squared	2.846583	Prob. Chi-Square(4)	0.5838
Scaled explained SS	3.002181	Prob. Chi-Square(4)	0.5575

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 08/02/21 Time: 12:28
Sample: 2011Q1 2020Q4
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.014267	0.031740	0.449503	0.6558
VAT	0.005308	0.010267	0.516984	0.6084
CIT	-0.001764	0.005960	-0.295946	0.7690
PPT	-0.006975	0.005920	-1.178147	0.2467
CGT	-4.50E-05	8.57E-05	-0.525319	0.6027

R-squared	0.071165	Mean dependent var	0.003480
Adjusted R-squared	-0.034988	S.D. dependent var	0.005849
S.E. of regression	0.005951	Akaike info criterion	-7.294177
Sum squared resid	0.001239	Schwarz criterion	-7.083067
Log likelihood	150.8835	Hannan-Quinn criter.	-7.217846
F-statistic	0.670399	Durbin-Watson stat	1.648825
Prob(F-statistic)	0.616905		

Normality Test



Series: Residuals
Sample 2011Q1 2020Q4
Observations 40

Mean	1.19e-15
Median	-0.000859
Maximum	0.127505
Minimum	-0.153019
Std. Dev.	0.059740
Skewness	-0.214076
Kurtosis	3.755034
Jarque-Bera	1.255650
Probability	0.533751

Factor Analysis

Factor Method: Maximum Likelihood
Date: 08/02/21 Time: 12:33
Covariance Analysis: Ordinary Correlation
Sample: 2011Q1 2020Q4
Included observations: 40
Number of factors: Minimum average partial

	Communality	Uniqueness
REVG	0.000000	1.000000
VAT	0.000000	1.000000
CIT	0.000000	1.000000
PPT	0.000000	1.000000
CGT	0.000000	1.000000

	Model	Independence	Saturated
Discrepancy	6.472912	6.472912	0.000000
Chi-square statistic	252.4436	252.4436	---
Chi-square prob.	0.0000	0.0000	---
Bartlett chi-square	236.2613	236.2613	---
Bartlett probability	0.0000	0.0000	---
Parameters	5	5	15
Degrees-of-freedom	10	10	---

Lag Length

VAR Lag Order Selection Criteria
Endogenous variables: REVG VAT PPT CGT CIT
Exogenous variables: C
Date: 08/02/21 Time: 12:57
Sample: 2011Q1 2020Q4
Included observations: 36

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-27.85392	NA	4.27e-06	1.825218	2.045151	1.901980
1	63.86695	152.8681	1.06e-07	-1.881497	-0.561898*	-1.420922
2	91.09373	37.81497	1.02e-07	-2.005207	0.414058	-1.160819
3	129.8425	43.05421	6.02e-08	-2.769029	0.749902	-1.540828
4	182.9990	44.29708*	2.10e-08*	-4.333279*	0.285318	-2.721264*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

ARDL

Dependent Variable: REVG
Method: ARDL
Date: 08/01/21 Time: 21:48
Sample (adjusted): 2012Q1 2020Q4
Included observations: 36 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): VAT PPT CIT CGT
Fixed regressors: C
Number of models evalulated: 2500
Selected Model: ARDL(4, 0, 3, 3, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
REVG(-1)	0.070220	0.169292	0.414787	0.6832
REVG(-2)	-0.237014	0.160447	-1.477214	0.1569
REVG(-3)	0.148424	0.156325	0.949453	0.3550
REVG(-4)	0.306898	0.143928	2.132299	0.0470
VAT	0.634830	0.139448	4.552466	0.0002
PPT	0.362858	0.096447	3.762243	0.0014
PPT(-1)	-0.064384	0.160523	-0.401089	0.6931
PPT(-2)	0.371052	0.152341	2.435668	0.0255
PPT(-3)	-0.219723	0.138236	-1.589472	0.1294
CIT	0.090888	0.054143	1.678664	0.1105
CIT(-1)	0.002269	0.059236	0.038305	0.9699
CIT(-2)	0.106634	0.053964	1.976002	0.0637
CIT(-3)	-0.072638	0.061448	-1.182108	0.2525
CGT	-0.000920	0.000846	-1.088313	0.2908
CGT(-1)	0.000303	0.000886	0.341538	0.7367
CGT(-2)	-0.002522	0.000862	-2.925778	0.0090
CGT(-3)	0.001909	0.000747	2.556413	0.0198
C	-0.612002	0.341949	-1.789748	0.0903

R-squared	0.951608	Mean dependent var	3.373744
Adjusted R-squared	0.905904	S.D. dependent var	0.125833
S.E. of regression	0.038599	Akaike info criterion	-3.364314
Sum squared resid	0.026818	Schwarz criterion	-2.572555
Log likelihood	78.55766	Hannan-Quinn criter.	-3.087969
F-statistic	20.82130	Durbin-Watson stat	1.929211
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

Bound Test

ARDL Bounds Test
Date: 08/01/21 Time: 21:49
Sample: 2012Q1 2020Q4
Included observations: 36
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	2.928800	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Test Equation:
Dependent Variable: D(REVG)
Method: Least Squares
Date: 08/01/21 Time: 21:49
Sample: 2012Q1 2020Q4
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(REVG(-1))	-0.365757	0.196207	-1.864136	0.0787
D(REVG(-2))	-0.441066	0.183184	-2.407768	0.0270
D(REVG(-3))	-0.203379	0.158812	-1.280625	0.2166
D(PPT)	0.288980	0.108963	2.652091	0.0162
D(PPT(-1))	-0.140275	0.174134	-0.805561	0.4310
D(PPT(-2))	0.355689	0.147344	2.414005	0.0266
D(CIT)	0.049333	0.065896	0.748641	0.4637
D(CIT(-1))	0.010727	0.098918	0.108444	0.9148
D(CIT(-2))	0.130472	0.069125	1.887488	0.0753
D(CGT)	-0.001112	0.000958	-1.161043	0.2608
D(CGT(-1))	0.001160	0.001207	0.960451	0.3496
D(CGT(-2))	-0.001981	0.000860	-2.304461	0.0333
C	-0.474827	0.386389	-1.228884	0.2349
VAT(-1)	0.678105	0.196632	3.448606	0.0029
PPT(-1)	0.357112	0.186492	1.914893	0.0715
CIT(-1)	0.000855	0.183782	0.004653	0.9963
CGT(-1)	-0.001238	0.001784	-0.693921	0.4966
REVG(-1)	-0.615212	0.281275	-2.187229	0.0422

R-squared	0.791543	Mean dependent var	0.002262
Adjusted R-squared	0.594667	S.D. dependent var	0.069006
S.E. of regression	0.043933	Akaike info criterion	-3.105451
Sum squared resid	0.034742	Schwarz criterion	-2.313692
Log likelihood	73.89812	Hannan-Quinn criter.	-2.829106
F-statistic	4.020513	Durbin-Watson stat	2.223505
Prob(F-statistic)	0.002668		

Cointegrating Form

ARDL Cointegrating And Long Run Form
Original dep. variable: REVG
Selected Model: ARDL(4, 0, 3, 3, 3)
Date: 08/03/21 Time: 20:40
Sample: 2011Q1 2020Q4
Included observations: 36

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(REVG(-1))	-0.214111	0.109488	-1.955559	0.0662
D(REVG(-2))	-0.459846	0.117409	-3.916612	0.0010
D(REVG(-3))	-0.313194	0.119007	-2.631717	0.0169
D(VAT)	0.729692	0.238723	3.056652	0.0068
D(PPT)	0.371636	0.077596	4.789360	0.0001
D(PPT(-1))	-0.128536	0.109822	-1.170399	0.2571
D(PPT(-2))	0.214171	0.098807	2.167562	0.0438
D(CGT)	-0.000899	0.000578	-1.555335	0.1373
D(CGT(-1))	0.000476	0.000664	0.716884	0.4826
D(CGT(-2))	-0.001950	0.000526	-3.709324	0.0016
D(CIT)	0.092600	0.034108	2.714943	0.0142
D(CIT(-1))	-0.026985	0.039015	-0.691669	0.4980
D(CIT(-2))	0.072730	0.038836	1.872753	0.0774
CointEq(-1)	-0.676496	0.144156	-4.692804	0.0002

Cointeq = REVG - (0.8923*VAT + 0.6322*PPT -0.0017*CGT + 0.1787*CIT -0.8602)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VAT	0.892277	0.236033	3.780314	0.0014
PPT	0.632215	0.086047	7.347337	0.0000
CGT	-0.001730	0.002205	-0.784800	0.4428
CIT	0.178718	0.190179	0.939739	0.3598
C	-0.860191	0.548285	-1.568875	0.1341

VIF

Variance Inflation Factors
Date: 08/01/21 Time: 21:56
Sample: 2011Q1 2020Q4
Included observations: 36

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
REVG(-1)	0.028660	7881.839	10.30932
REVG(-2)	0.025743	7069.376	8.915042
REVG(-3)	0.024438	6712.319	8.491509
REVG(-4)	0.020715	5678.700	6.769699
VAT	0.019446	2644.259	5.307420
PPT	0.009302	1617.376	6.599875
PPT(-1)	0.025768	4538.277	16.89790
PPT(-2)	0.023208	4121.714	15.81646
PPT(-3)	0.019109	3405.582	13.10719
CIT	0.002931	421.8799	2.186576
CIT(-1)	0.003509	502.0323	2.763932
CIT(-2)	0.002912	414.8289	2.239689
CIT(-3)	0.003776	537.2223	2.887384
CGT	7.15E-07	3.090350	2.692676
CGT(-1)	7.85E-07	3.393338	2.958504
CGT(-2)	7.43E-07	3.213391	2.796983
CGT(-3)	5.58E-07	2.420699	2.091892
C	0.116929	2825.312	NA

VAR Analysis

Vector Autoregression Estimates
Date: 08/01/21 Time: 21:58
Sample (adjusted): 2012Q1 2020Q4
Included observations: 36 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	REVG	VAT	PPT	CIT	CGT
REVG(-1)	0.000411	-0.245186	-0.135089	0.176278	-3.524357
	(0.27805)	(0.15978)	(0.62249)	(0.51342)	(49.5828)
	[0.00148]	[-1.53450]	[-0.21701]	[0.34334]	[-0.07108]
REVG(-2)	0.050472	0.194539	1.027577	-0.863626	80.47267
	(0.25935)	(0.14903)	(0.58061)	(0.47888)	(46.2472)
	[0.19461]	[1.30534]	[1.76982]	[-1.80343]	[1.74006]
REVG(-3)	0.147102	0.127639	0.145998	-0.149919	63.64494
	(0.21609)	(0.12418)	(0.48377)	(0.39901)	(38.5335)
	[0.68074]	[1.02789]	[0.30179]	[-0.37573]	[1.65168]
REVG(-4)	0.057118	0.015887	-0.600291	-0.539119	-46.87076
	(0.21136)	(0.12146)	(0.47317)	(0.39026)	(37.6894)
	[0.27024]	[0.13081]	[-1.26865]	[-1.38142]	[-1.24361]
VAT(-1)	0.857491	1.127649	1.964432	-1.326938	361.0129
	(0.67804)	(0.38963)	(1.51793)	(1.25197)	(120.907)
	[1.26467]	[2.89416]	[1.29415]	[-1.05988]	[2.98586]
VAT(-2)	0.310428	0.279590	-1.337336	1.288463	-365.8514
	(0.63789)	(0.36656)	(1.42805)	(1.17783)	(113.748)

	[0.48665]	[0.76274]	[-0.93648]	[1.09393]	[-3.21633]
VAT(-3)	0.130796	-0.018130	-1.753030	1.584261	-343.2427
	(0.63131)	(0.36278)	(1.41334)	(1.16570)	(112.576)
	[0.20718]	[-0.04998]	[-1.24035]	[1.35907]	[-3.04898]
VAT(-4)	-0.973531	-0.498540	-1.399227	0.873182	-166.9304
	(0.57793)	(0.33211)	(1.29383)	(1.06713)	(103.057)
	[-1.68451]	[-1.50115]	[-1.08146]	[0.81825]	[-1.61979]
PPT(-1)	0.251438	-0.079945	1.221945	0.120995	28.44413
	(0.19220)	(0.11044)	(0.43028)	(0.35489)	(34.2727)
	[1.30823]	[-0.72385]	[2.83991]	[0.34094]	[0.82994]
PPT(-2)	0.406151	0.247110	-0.338807	-0.211648	3.596752
	(0.20894)	(0.12006)	(0.46775)	(0.38579)	(37.2577)
	[1.94389]	[2.05814]	[-0.72433]	[-0.54860]	[0.09654]
PPT(-3)	-0.184555	-0.089835	0.094624	0.153512	-83.46535
	(0.25134)	(0.14443)	(0.56269)	(0.46409)	(44.8193)
	[-0.73428]	[-0.62199]	[0.16817]	[0.33078]	[-1.86226]
PPT(-4)	-0.021659	-0.088968	-0.359248	0.604922	-9.639731
	(0.19300)	(0.11091)	(0.43207)	(0.35636)	(34.4155)
	[-0.11223]	[-0.80220]	[-0.83146]	[1.69748]	[-0.28010]
CIT(-1)	0.078858	0.043391	0.528213	-0.466594	91.98201
	(0.20549)	(0.11808)	(0.46003)	(0.37942)	(36.6424)
	[0.38376]	[0.36746]	[1.14822]	[-1.22974]	[2.51026]
CIT(-2)	0.245631	0.117444	0.458093	-0.354010	100.9435
	(0.18097)	(0.10400)	(0.40515)	(0.33416)	(32.2714)
	[1.35727]	[1.12932]	[1.13067]	[-1.05939]	[3.12796]
CIT(-3)	-0.064299	0.013228	0.178196	-0.300913	44.55702
	(0.12372)	(0.07110)	(0.27698)	(0.22845)	(22.0625)
	[-0.51970]	[0.18605]	[0.64334]	[-1.31718]	[2.01958]
CIT(-4)	0.074443	-0.018594	0.334418	0.568334	115.8789
	(0.16334)	(0.09386)	(0.36568)	(0.30160)	(29.1271)
	[0.45575]	[-0.19810]	[0.91452]	[1.88437]	[3.97839]
CGT(-1)	0.000773	0.001397	-0.001903	-0.001298	-0.065456
	(0.00116)	(0.00067)	(0.00260)	(0.00214)	(0.20678)
	[0.66650]	[2.09685]	[-0.73318]	[-0.60607]	[-0.31655]
CGT(-2)	-0.002924	-0.000555	-0.000620	-0.001672	-0.623805
	(0.00130)	(0.00075)	(0.00292)	(0.00241)	(0.23238)
	[-2.24384]	[-0.74136]	[-0.21255]	[-0.69483]	[-2.68444]
CGT(-3)	0.001698	-4.19E-05	-0.000744	-0.001315	0.292867
	(0.00142)	(0.00081)	(0.00317)	(0.00261)	(0.25238)
	[1.19951]	[-0.05150]	[-0.23483]	[-0.50316]	[1.16041]
CGT(-4)	0.000636	0.001404	0.002412	-0.002987	0.307742
	(0.00134)	(0.00077)	(0.00300)	(0.00248)	(0.23902)
	[0.47467]	[1.82238]	[0.80379]	[-1.20672]	[1.28749]
C	-0.302200	-0.409147	1.783682	1.007525	199.6372
	(0.43577)	(0.25041)	(0.97557)	(0.80464)	(77.7070)
	[-0.69348]	[-1.63388]	[1.82834]	[1.25215]	[2.56910]

R-squared	0.933054	0.969873	0.824099	0.886178	0.789694
Adj. R-squared	0.843793	0.929703	0.589564	0.734416	0.509286
Sum sq. resids	0.037101	0.012251	0.185944	0.126492	1179.729
S.E. equation	0.049733	0.028579	0.111339	0.091830	8.868405
F-statistic	10.45306	24.14446	3.513754	5.839260	2.816232
Log likelihood	72.71574	92.65993	43.70313	50.63795	-113.8932
Akaike AIC	-2.873097	-3.981107	-1.261285	-1.646553	7.494065
Schwarz SC	-1.949377	-3.057388	-0.337566	-0.722834	8.417784
Mean dependent	3.373744	2.369914	2.677041	2.434173	4.797175
S.D. dependent	0.125833	0.107789	0.173789	0.178191	12.65993

Determinant resid covariance (dof adj.)	2.11E-09
Determinant resid covariance	2.64E-11
Log likelihood	182.9990
Akaike information criterion	-4.333279
Schwarz criterion	0.285318

Variance Decomposition

Variance Decomposition of REVG:

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	0.049733	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.055809	86.25434	0.461146	12.07315	0.312862	0.898502
3	0.081132	49.63338	0.600713	22.61869	22.76749	4.379729
4	0.098249	46.87087	0.657629	32.07355	16.57674	3.821206
5	0.120490	43.39647	0.837633	30.69048	21.85382	3.221604
6	0.158395	36.94616	1.639225	28.56989	30.81051	2.034211
7	0.203111	31.44993	8.591189	28.01496	30.56685	1.377067
8	0.242201	31.50606	12.08246	25.82156	29.57777	1.012152
9	0.278697	29.41140	16.40798	24.27910	29.08475	0.816770
10	0.327275	25.12643	23.86093	22.44924	27.33445	1.228952

Variance Decomposition of VAT:

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	0.028579	3.349608	96.65039	0.000000	0.000000	0.000000
2	0.047616	19.08863	76.78103	0.025551	0.070701	4.034085
3	0.057936	13.89968	77.38878	0.471084	4.541541	3.698916
4	0.067152	10.56905	77.05731	1.083806	7.563649	3.726187
5	0.073656	8.854028	71.74403	1.503684	12.41670	5.481559
6	0.082693	8.630481	61.93761	2.457509	21.84412	5.130283
7	0.091173	7.652635	51.03324	4.854312	31.64536	4.814459
8	0.101713	8.503356	41.43807	7.343293	38.78559	3.929690
9	0.111910	8.976602	35.33535	9.161967	43.26900	3.257077
10	0.124154	8.876802	32.83240	10.99400	44.63425	2.662549

Variance Decomposition of PPT:

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	0.111339	36.23497	25.51015	38.25488	0.000000	0.000000
2	0.159212	34.09972	18.99871	39.05806	7.173948	0.669566
3	0.201955	38.15926	17.33012	32.03221	11.97606	0.502357
4	0.257650	42.45902	17.44953	27.12045	12.42865	0.542348
5	0.313215	36.77208	20.96079	25.44863	15.56848	1.250024
6	0.365541	33.22312	25.54490	24.81318	15.05623	1.362571
7	0.409977	31.59726	28.67114	24.25863	14.22768	1.245297
8	0.453929	29.19642	32.37955	23.03602	13.88977	1.498249
9	0.506866	26.01211	38.05556	20.97532	12.81205	2.144971
10	0.553631	23.71520	43.76939	18.88993	11.04220	2.583274

Variance Decomposition of CIT:

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	0.091830	0.563488	40.69370	1.181373	57.56144	0.000000
2	0.099547	3.676726	36.65282	1.680682	57.19362	0.796159
3	0.114177	16.05389	34.46474	1.894886	43.89686	3.689622
4	0.135265	16.39588	38.36687	2.730569	39.66775	2.838924
5	0.141859	18.84427	34.89491	3.326194	38.65318	4.281444
6	0.149462	16.98683	39.60322	4.266274	35.10648	4.037197
7	0.167847	15.36105	49.00075	3.766010	28.11638	3.755812
8	0.184477	12.87996	55.01955	4.386265	23.28129	4.432942
9	0.197601	11.24770	48.03659	4.555265	31.40027	4.760187
10	0.203155	11.80672	45.46317	6.403977	31.81861	4.507523

Variance Decomposition of CGT:

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	8.868405	5.921131	5.070071	17.45699	11.98164	59.57016
2	11.57931	3.557212	11.02675	10.71500	39.60877	35.09227
3	15.16957	3.232790	25.93633	6.439028	42.21689	22.17497
4	19.72194	14.22105	43.03933	3.893579	25.15274	13.69330
5	21.55508	11.97335	50.66550	3.519943	21.68252	12.15869
6	23.16112	12.11089	51.57792	3.205800	21.83411	11.27127
7	24.14167	14.29708	48.17473	2.961086	22.78377	11.78333
8	25.60508	15.23831	43.07173	3.825542	27.26108	10.60333
9	26.33687	15.69958	40.71411	4.664580	28.87675	10.04497
10	27.73007	15.29316	38.53723	5.082617	31.62144	9.465558

Cholesky Ordering: REVG VAT PPT CIT CGT

RESUME

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EDUCATION AND QUALIFICATION:

Master of Business Administration 2021
Istanbul Aydin University, Turkey
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Secondary School Certificate Examination (SSCE) 2003
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WORK EXPERIENCE:

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Position: Data Processing officer
Responsibilities:

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- Attending to staff and students

Teaching Assistant (Prof. A. A. Owojori, FCA) 2017 -2018
Ekiti State University, Ado-Ekiti, Nigeria
Position: Part-Time Teaching
Responsibilities:

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- Marking and preparing result sheets

COMPUTER SKILLS:

Working knowledge of Microsoft office package especially in Word, Excel and PowerPoint

OTHER SKILLS:

Interpersonal skill
Analytical skill
Good at balancing work and study commitments

Ability to achieve results within deadline

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ATTRIBUTES AND COMPETENCES:
Ability to work under pressure and manage tensed situation
Ability to work with little or no supervision
Good and polite manner of human relation

Publications with date:

Ogunsakin Sanya, (Ph.D) and **Lawal N. Abiola** (2015). Fiscal Deficit and Economic Growth, Nigeria Experience. *International journal for innovation Education and Research. 3(11),* 1-10.

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