Effect of Petroleum Profit Tax on Capital Expenditure in Nigeria

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Abstract

Taxation is considered the most sustainable and reliable source of revenue used to promote economic growth and development. It is the responsibility of the government to identify, generate, and harness the various revenue opportunities and effectively allocate such scarce resources among the productive sectors in the economy. To this end, the study examines the effect of petroleum profit tax in Nigeria covering a period of 36 years ranging from the year 1985 – 2020. Secondary data were collected from the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics (NBS), Federal Inland Revenue Service (FIRS), and Organisation for Economic Cooperation and Development (OECD) for the period 1985 - 2020. The data were analysed using multiple regression techniques. Findings reveal the tax revenue exerts a positive and significant effect on public expenditure in Nigeria. In addition, the F-test and coefficient determination discloses that the models of the study were significant in explaining the relationship between the dependent and independent variables which were captured by CE and PPT. The study, therefore concludes that; tax revenue has a significantly positive impact on public expenditure and by extension on public sector financial management and does substantially reduce the inefficiencies associated with the budgetary frameworks, particularly in the agricultural sector in Nigeria. The study recommended that Government should focus not only on petroleum profit tax revenue generation but should also re-direct its attention to proper management of the tax revenue and effective control of necessary expenditure that would adequately enhance economic growth. Revenue generated from CED should be used judiciously to develop other sectors of the economy most especially the agricultural sector at large to boost economic growth.

Keyword: Taxation, Tax revenue, Capital expenditure, Government

INTRODUCTION

Globally, fiscal administration of the government considers revenue (tax and non-tax), government expenditure, and deficit or surpluses to be the fundamental elements of the fiscal policy of any state. Tax is a major source of a country's income which is used to develop the economy of the nation (Saeed & Somaye, 2012). According to Collins, Barikusi, Sira, and Igbara (2019), every government in power desires to ensure improvement in the welfare of the people it represents. This no doubt is done through the provision of basic infrastructures, provision of good roads, stable power supply, creation of jobs, payment of wages and salaries, the establishment of an investment-friendly environment for its industries to develop while also encouraging foreign investors. However, the government cannot achieve any of this without funds or financial resources. Government actions to achieve all these are carried out under the term of its fiscal policy which entails mobilization of revenue from various sources such as tax and use of such revenue to perform the listed tasks under capital and recurrent expenditure.

According to Maku (2009), there is a general view that public expenditure either recurrent or capital on social or economic infrastructure can be growth-enhancing although the financing of such expenditure to

provide essential infrastructural facilities-including transport, electricity, telecommunications, water and sanitation, waste disposal, education and health can be growth-retarding. Azubike (2009) opines that tax is a major player in every society of the world while recognizing the tax revenue as an opportunity for the government to collect additional revenue needed in discharging its pressing obligations. Therefore Nzotta (2007) stated that taxes constitute key sources of revenue to the federation account shared by the federal, state and local governments especially in Nigeria.Ebieri and Ekwueme (2016), noted that taxes are the major source of revenue to many governments and that it is a fiscal instrument for regulating and resolving economic and social policies and a mechanism for enhancing economic growth. As a fiscal instrument, it reduces private consumption and transfers resources to the government for economic development by financing public utilities, performing social responsibilities and greasing the administrative wheel of the government. Chartered Institute of Taxation of Nigeria (2002) defined tax as an enforced contribution of money to the government according to defined authorized legislation.The government expenditure consists of expenses that a government incurs in protecting its citizens and increasing their economic and social welfare. The expenditure incurred by the government to help other countries is also a part of the total government expenditure (Jingan, 2004). Taxes in Nigeria have been, and still are an important source of government revenue and the most dependable source of governing funding. In many countries, tax relief has become significant to boost economic growth by providing social amenities.

Taxation is an age-long concept which dates to the pre-colonial era in Nigeria. Taxes were paid through different kinds of manual labour for the entire community benefit. Some examples of such services are cleaning of bushes, digging of well etc; for the benefit of the community, failure to render such services usually resulted in seizing of property which will be claimed only on payment of money. In 1904, during colonial rule, the late lord Lugards government introduces income tax to Nigeria and community tax was being paid in Sokoto caliphate, northern Nigerian. Adabayo (2004) defines taxation as a legal demand made by the federal government or states government for its citizens to pay money on an income of goods and services. Taxation policy itself is a fundamental element for economic policies, ensuring that countries can maintain and improve their global competitiveness and expand. Public expenditure is spending made by the government of a country in collective needs and wants such as pension and provision of infrastructure, until the 19th century, public expenditure was limited to laissez-faire philosophy which believed that money left in private hands could bring better returns. The pattern of government expenditure in Nigeria over the years has to a large extent been driven by crude oil endowment, which is reflected in generated revenue (Akanbi, 2014). Therefore, it is evidence that taxation is the most sustainable and reliable source of revenue used to promote economic growth and development. An extensive studyhas been carried out on tax revenue and government expenditure, but this study will focus on the effect of tax revenue on public expenditure in the agriculture sector of Nigeria from 1985 – 2020. The hypothesis of the study is stated thus:

$H0_1$: Petroleum profit tax has no significant impact on capital expenditure in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Petroleum Profit Tax (PPT)

The Petroleum Profits Tax Act requires all companies engaged in the extraction and transportation of petroleum products to pay tax. It is particularly related to rents, royalties, margins, and profit-sharing elements associated with oil mining, prospecting, and exploration leases. Oil-producing companies are liable to tax under the Petroleum Profit Tax Act CAP P13 LFN 2004 at the following rates: Joint Venture Contracts, Risks Service Contracts and Sales Risk Operations – First Five years 65.75 percent; subsequently 85 percent; production Sharing Contract (PSCs) – 50 percent of chargeable profit (mainly for deep off-shore exploration and production). One of the sources of revenue to the government is

petroleum income as available statistic shows that Nigeria has proven oil reserves of 36 billion barrels, condensate of 4 billion barrels, proven gas reserves of 187 trillion cubic feet and the present average daily production of oil is put at 2.6 million bbl/b (Agbogun, 2004; Egbogah, 2006; EIA, 2015). Petroleum Profit Tax has been defined as legislation that imposes a tax upon profits from the mining of petroleum in Nigeria and provides for the assessment and collection thereof and the purposes connected therewith (Attamah, 2004). Accounting for income from oil and gas producing activities differ in many respects from financial accounting (Gallun& Stevenson, 1986). Odusola (2006) defined petroleum profit tax as a tax applicable to upstream operations in the oil industry. It is particularly related to rents, royalties, margins and profit-sharing elements associated with oil mining, prospecting and exploration leases. Attamah (2004) asserted that Petroleum Profit Tax is the most important tax in Nigeria in terms of its share of total revenue contributing 95 and 70 percent of foreign exchange earnings and government revenue respectively. According to Jakir (2011), Nigerian law under the Petroleum Profits Tax Act (2004) which was further amended in 2007 requires an Act to impose a tax upon profits from the winning of Petroleum in Nigeria, to provide for the assessment and collection thereof and purposes connected therewith. Adigbe (2011) further stated that the taxable income of a petroleum company comprises proceeds from the sale of oil and related substances used by the company in its refineries. Adereti (2011) explained that the taxable income of a petroleum company is subject to tax at 85 per cent, but this percentage is lowered to 65.75% during the first 5years of operation but where oil companies operate under production sharing contracts, they will be liable to tax at a rate of 50 percent.

Due to the importance attached to oil exploration and production by the Federal Government of Nigeria, the taxation of profit of companies engaging in such operation became inevitable under a tax Act different from the company's income tax Act (Success, Success &Ifurueze, 2012). According to Success et al., this Act became effective on 1st January 1959 since the export of oil to the international market started in 1958. This ordinance under which petroleum profit is taxed is referred to as the Petroleum Profit Tax Act (PPTA). It was first amended in January 1967 by the Federal Military Government through decree No 1 of 1967. There have been further amendments since the last amendment in 1967. The principal Act governing the taxation of profits from petroleum in Nigeria is the Petroleum Profits Tax Act 2007. Section 2 of the PPTA defines petroleum operations as "the winning or obtaining and transportation of petroleum chargeable oil in Nigeria by or on behalf of a company for its account by any drilling, mining, extracting or other like operations or process, not including refining at a refinery, in the course of a business carried on by the company engaged in such operations and all operations incidental thereto and any sale of or any disposal of chargeable oil by or on behalf of the company". The purpose of this legislation is to regulate and control the procedure of taxation of petroleum companies which involves petroleum exploration, development, production, and sale of crude oil. However, Section 8 of the Petroleum Profit Tax Act (PPTA) states that every company engaged in petroleum operations is under an obligation to render a return, together with properly audited annual accounts and computations, within a specified time after the end of its accounting period.

Petroleum Profit Tax involves the charging of tax on the incomes accruing from petroleum operations (Nwezeaku, 2005). It was further noted that the importance of petroleum to the Nigerian economy gave rise to the enactment of a different lawregulating the taxation of incomes from petroleum operations. The petroleum profit tax is charged, assessed and payable upon the profits of each accounting period of any company engaged in petroleum operations during any such accounting period, usually one year; January to December (Anyanwu, 1993). According to Ofe, Onyemachi and Caroline (2008), the administration of PPTA is under the care and management of the Federal Board of Inland Revenue. The tax laws according to Adekanola (2007), have vested the authority to assess, administer and collect all taxes from corporate entities on the Federal Inland Revenue Services. Taxes administered at the Federal level include the Petroleum Profits Tax, Companies Income Tax, and the Value Added Tax as well as the Capital Gain Tax when such capital gains are generated by corporate entities. The administration of taxes in Nigeria has also been focused on revenue generation to the detriment of stimulating economic development (Adekanola, 2007).

Companies Income Tax (CIT)

Company income tax was introduced in 1961. The original law that created it has been amended many times and is currently codified as the Companies Income Tax Act of 2004 (CITA CAP C21 2004 LFN) amended in 2007. The profit or gain of any company accruing in, derived from, brought into, earned in or received in Nigeria are assessable to tax under Companies' Income Tax Act CAP C21 2004 LFN amended in 2007. The Finance Act 2020 exempt small companies (companies that earn a gross turnover of less than 25 million naira in a year of assessment) from payment of minimum tax. While 20% tax rate for medium companies (gross turnover of more than 25 million naira and less than 100 million naira) and 30% tax rate now applicable to only large companies and it is applied to the total profit or chargeable profit of the company. Education Tax at the rate of 2% on the assessable profit. The education tax is treated as an allowable expense. Other changes include the amendment of CITA to capture non-resident companies that provide digital services within the Nigerian digital space. According to Ola, (2004), companies' income tax administration in Nigeria does not measure up to appropriate standards. He further said that company income tax is a major source of revenue in Nigeria but non-compliance with laws and regulations by taxpayers is deep in the system because of weak control. There is a need for general tax reform in the Nigerian company income tax system.Ogbonna and Appah (2016) define companies income tax as a tax imposed on the profit of companies (excluding profit from companies engaged in petroleum operations) accruing in, derived from, brought into, or received in Nigeria in respect of any trade or business, rent, premium, dividends, interest, loyalties, and any other source of annual profit. Chigbu and Njoku (2015) denote that company income tax is a tax on profit made by companies. Company income tax is introduced in Nigeria in1961 and administered by the Federal Inland Revenue Services.

Since enactment, the law on CIT has passed through series of the amendment and the rate of CIT varies according to operation and size of turnover per annum. Company income tax is imposed on the income of all companies operating in the country except those specifically exempted under the Act. The income tax is imposed on:

i The profits of Nigerian companies irrespective of whether they are bought into or relieved in Nigeria being Nigerian companies incorporated under the Companies and Allied Matters Act.
ii The profit of non-Nigeria companies operating in Nigeria. The Non-Nigerian companies are foreign companies as defined by section 54 of the Companies and Allied Matter Act as "any companies or corporation established by or under the law in force in any territory or country outside Nigeria" This means such company is not incorporated under the Companies and Allied Matters Act.
iii Dividend, interest or royalties due to non-Nigerian companies which are assessed at 10 per cent (withholding tax rate) on the net is payable to the respective companies. On the tax chargeable, section 9 (1) of the Companies Income Tax Act 2007 provides that Subject to the provisions of this Act, the tax shall, for each year of assessment, be payable at the rate specified in subsection (1) of section 40 of this Act upon the profits of any company accruing in, derived from, brought into, or received in, Nigeria in respect of any trade or business for whatever period such trade or business may have been carried on; and rent or any premium arising from a right granted to any other person for the use or occupation of any property; and where any payment on account of such rent as is mentioned in this paragraph is made before the expiration of the period to which it relates and is included for this paragraph in the profits of a company.

According to Osho, Omotayo and Ayorinde (2018), the mere existence of provisions on imposition of tax by CITA is not sufficient; strict enforcement of the regulation is the key. According to the Federal Inland revenue service, about 30 percent of companies in Nigeria are involved in tax evasion and 25 per cent of registered companies in the country are not paying tax when this is quantified in terms of revenue loss it is worrisome.

Customs and Excise Duties

Customs duties in Nigeria are the oldest form of modern tax revenue. Their introduction dates to 1860 known as import duties, which represents taxes on imports into Nigeria, charged either as a percentage of the value of imports or as a fixed amount contingent on quantity (Buba 2007). Customs duty is a major source of revenue for the Federal Government which is payable by importers of specified goods (Buyonge 2008). According to Buba (2007), excise duties were also introduced on several goods to broaden the revenue base in Nigeria in 1962. Customs and excise duties is an important component of the non-oil revenue and have remained an important source of revenue before and after the discovery of oil in Nigeria and over the years contributed significantly to national development. He further stated that the Nigeria customs service is saddled with the responsibility of collecting duties, excise, fees, tariffs, and other levies imposed by the Federal Government on imports, exports and statutory rates. It is crucial facilitation of trade and a key instrument of state sovereignty.

Capital Expenditure

Capital expenditure is long-term expenditure by any government for purpose of providing economic growth and development. It is also a means of providing finances for new facilities and major renovation and repairs to existing facilities with more than oneyearof useful life. The benefits that result from capital expenditure extend beyond the year of payment. Capital expenditure (CAPEX) is spending on long-term assets. It is the purchase of items that will last and will be used time and time again in the provision of a good or service. In the case of the government, examples would be the building of a new hospital, the purchase of new computer equipment or networks, building new roads, and so on (Modebe, 2012). Anyafo (1996), describes expenditure as an actual payment or the creation of an obligation to make a future payment for some benefit, items or service received. Hales (1994) defines expenditure as payment or promise of future payment and the obligation incurred thereunder, for goods and services delivered.Attamah (1999), opines that the traditional function of government expenditure is the maintenance of the bureaucratic structure (i.e., the civil service) and defence. Today, governments perform a variety of economic functions. According to him during the industrial revolution, poverty was increasing at an alarming rate, and as an offshoot of the increasing suffering of the labourers (proletariat), Karl Marx and his followers agitated for a communist revolution. In reaction to this growing suffering, the governments of many countries started to increase their presence in the economic arena by acting as a redistributive agent to lessen the burden of the poor.

Capital expenditure is government cash outflow incurred on infrastructural development (Olopade & Olopade, 2010). Infrastructure development can be explained as spending that bridges the gap between the rich and poor by making available public goods (Calderon and Serven, 2004). Infrastructural development has also been linked with economic growth (Calderon and Serven, 2004). Thus, capital expenditure is an important variable that the government can tweak to arrive at the desired objective. In respect of this view, Onodje (2009) showed that capital expenditure increased between 1974 and 1986 during the time of the oil boom in Nigeria and observed that because of the increase in capital expenditure, the government was able to invest in various sectors thus providing the basis for the opening up of industrial activities across various sectors from which tax revenue can be raised. Based on the knowledge of public sector reporting, the record of actual capital expenditure incurred by the government can be gotten from the capital development fund account (Omolehinwa and Naiyeju, 2015).

Empirical Review

Several studies have examined petroleum profit tax and its effect on public expenditure in different countries with diverse techniques. This review was done in line with the specific objective of the study. Efuntade, Efuntade and Akinola (2020), examine tax revenue and its effect on government expenditure in Nigeria for 1982 – 2017. The secondary data source was explored in presenting the facts of the situation. The secondary data were obtained from relevant literature, Central Bank of Nigeria Statistical Bulletin, and National Bureau of Statistics publications among others. Data were tested using the Ordinary Least

Square Linear Regression model. From the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics, information concerning Total Expenditure, Petroleum Profit Tax, Value Added Tax, Company Income Tax, and Personal Income Tax in Nigeria was extracted. The findings show that tax revenue has a significant effect on government expenditure in Nigeria. The study concluded that Increase tax revenue is a function of effective enforcement strategy which is the pure responsibility of tax administrators and Tax administration requires highly trained personnel to match up with the sophistication of tax evasion with the use of modern technology. The study recommends among others, that a carefully planned tax policy that is consciously and faithfully implemented can help to generate revenue that can transform a nation in totality. Craig, Adetola, Maminu (2020), examine effect of tax revenue on capital expenditure in Nigeria Economic between 1989 – 2018. A longitudinal research design was adopted, while secondary data were collected from audited financial statements of the Federal Inland Revenue Service, CBN statistical bulletin, and National Bureau of Statistics between 1989 - 2018. The data collected were analyzed using a linear regression method to explain the relationship between variables of tax revenues (oil and non-oil) (independent variable), capital expenditure (dependent variable). The results revealed a statistically significant positive effect of non-oil revenue on capital expenditure. Their finds further revealed that the relationship between the oil tax revenues, total tax revenues, and capital expenditure are not statistically significant. The study concludes that revenue generated from tax has no impact on capital expenditure allocation. The study, therefore, recommends that Government should utilize the revenue generated from oil and non-oil tax revenues to invest in other domestic sectors such as Agriculture and the manufacturing sector to expand the revenue source of the economy and further increase the revenue base of the economy which will in turn increase fund allocated for capital expenditures.

Audu (2020), investigates effect of the spending pattern of the private and public sectors on the level of tax revenue in Nigeria. For ten years (2009 to 2018), secondary data were obtained from the Central Bank of Nigeria statistical bulletin 2018 to extract data for the period covered by this study. The data were analysed using a simple regression model. The result shows that public recurrent expenditure has a moderate relationship with the level of tax revenue in Nigeria and has more impact when compared with other independent variables (public capital expenditure or private household expenditure level). The study concluded that, both government spending and household spending do not have a significant effect on the level of tax revenue in Nigeria. It is recommended that to boost the level of tax revenue in Nigeria, rather than the government increasing the consumption tax rate which will increase the cost of living in Nigeria, the government should focus on promoting the manufacturing of goods locally to boost economic activities within the country from where taxes can be raised. Chinedu, Onyekachi and Ruth (2020), examine effect of tax revenue and years of tax reforms on government expenditure in Nigerian. Tax revenue was explained using custom and excise duties, company income tax, value-added tax, and tax reforms explained by the years in which reforms took place measured by dummy variables as proxies. Annual time-series data from central bank statistical bulletins and the Federal Inland Revenue Service of Nigeria spanning from 1994-2017 were employed. The data were tested for stationarity using the Augmented Dicker-Fuller Unit Root Test and found stationary at first difference. The Johansen cointegration test was also conducted and showed that the variables are co-integrated at the 5% level, which implied that there is a long-run relationship between the variables in the model. Findings revealed that Customs and Excise Duties has an impact on government expenditure, Company Income Tax harms government expenditure, Value added tax has a positive impact on government expenditure and Tax reforms periods harms government expenditure. The study thus concluded that tax revenue and tax reforms significantly affect the Nigerian economy with the direction of causation running from government revenue to government expenditure, supporting the revenue-spend or tax spend hypothesis. It was recommended while seeking to increase its revenue base via tax should also increase their expenditure profile to create a balance with the tax revenue and every other tax reform should be geared towards this balance.

Collins, Barikusi, Sira, and Igbara (2019), examine the role of taxation on capital and recurrent expenditure and its implications for economic growth covering the period 1998 to 2017. Data were collected from CBN statistical bulletin. Ordinary Least Square in the form of single and multiple regression technique was adopted for analysis. Findings from the study revealed that tax revenue has a positive and significant relationship with capital and recurrent revenue. In addition, it was found that the ratio of taxation on capital and recurrent expenditure has a positive relationship with GDP. In other words, an increment in taxation revenue will bring about a corresponding increase in government capital and recurrent expenditure and economic growth in Nigeria. Based on the findings and conclusion, the study recommended that government see taxation as an important source of revenue. Government should also strengthen the electronic tax collection system to enhance the effective mobilization of taxes

Theoretical Framework

Wagner's Law of Increasing State Activity

The Law of increasing State activity was propounded by Adolf Wagner a nineteen-century German economist to explain the growth of the share of public expenditure in GNP. He divided government expenditures into three categories, namely, administration and defence: cultural and welfare, and provision of direct services by the government in case of market failure. It is well known that rather than allow for a monopoly to emerge, the government usually creates Statutory Corporations such as NITEL, Post Office, Water Boards, PHCN to cater for the welfare of the people. Wagner's Law states that as per-capita income increases, the relative size of the public sector will grow. According to Wagner as the economy becomes industrialized, the population tends to concentrate in the urban areas. This, in turn, leads to externalities (market failure) and congestion which require government intervention and regulations. Legal authorities and the police emerge to address problems of law and order, peace, and security. Banking services by the State arise to link surplus funds with those who have investment opportunities. The increase in public expenditures on education, recreation, health, and welfare services is explained in terms of the high population in the urban centres. Wagner argued that as real income increase, public expenditure on education, health etc would increase more than the increase in real income. This explains the increasing ratio of government expenditure to gross national product. Wagner's theory of increasing State activity has many defects. First, it is not a well-articulated theory of public wants; rather it is an organic theory of the State where the State behaves as if it were an individual and takes decisions independent of members of the society. Secondly, the predictive power of the theory is very much in doubt. It is not always true that as par-capita income grows, the share of public expenditure in GNP increases. The share of public expenditure may decrease as the economy grows particularly when the private sector is strong and dynamic.

Peacock and Wiseman Theory of Public Expenditure

Allan Peacock and Jack Wiseman theory (1961), otherwise known as PWT, was based on the political theory of public expenditure determination which states that government likes to spend more money, that citizens do not like to pay more taxes, and that government needs to pay some attention to the aspiration and wishes of their people. Peacock and Wiseman theory attempted to explain the circular trend or time pattern of change in government expenditure in response to the development in the political economy while the taxable capacity of the electorate acts as a constraint. Their theory is known as Displacement Hypothesis and is based on the experience of Great Britain. The Displacement hypothesis states that government expenditure grows in a stepwise fashion. During periods of catastrophe or wars, government expenditure grew rapidly in Great Britain and remain constant during the war, famine, or disaster otherwise catastrophe period. They argued that government expenditures are largely determined by government revenue or taxation, PWT maintains that as the economy and income grew, tax revenue would rise thereby enabling government expenditures to rise in line with Gross Net Product.

The acceptance of the existence of a tolerable level of taxation that acts as a constraint on government behaviour is consistent with Clark's "Catastrophe School" of taxation. PW make a destination in government expenditure growth between normal or peak time and war, crisis or social upheaval period. According to PW, during peak, public expenditures would tend to experience an upward trend, even though there may be some discrepancy between a desirable level of government expenditure and a desirable level of taxation.During war, famine or social upheaval this normal and steady growth in government expenditures would be disturbed. This was because of the displacement hypothesis as unproductive government spending during social upheavals displaced productive government expenditure leading to a rapid increase in public expenditure. The government imposes higher taxes which are regarded as acceptable during the period of crisis. During this period, public expenditure is displaced upward (i.e., displacement effect). War-related expenditure displaces private and other government expenditure. However, after the war or crisis, aggregate public expenditures do not fall back to their original level since war is not fully paid for from taxation alone. The inspection effect may also occur as the government attempts to increase expenditures to improve social conditions which have deteriorated during the period of the crisis. Government finances the high expenditure from the increased and tolerable level of taxation that does not return to its former level. Two possible scenarios may occur after the war or social upheaval. First, total private expenditures may return to their original growth path and second, government expenditures experienced during the war may continue in the post-war period along with an increase in civilian government expenditures until the desired growth is reached. Peacock and Wiseman theory of public expenditure is the underpinning theory for this study because it centres more on increasing public expenditure and the disconnect that exist between citizen and government based on demand for social infrastructures.

METHODOLOGY

The research design adopted in this study isthe ex post facto.The study adopta time-series research design, made use of secondary data, which were collected for each of the stated variables, covering the period of 36 years from 1985 to 2020. The choice of this period is to make room for broad coverage of the petroleum profit tax and public expenditure indicators, as well as the investigation of both the short-run and long-run relationship between petroleum profit tax and public expenditure in Nigeria. These annual data series were collected mainly from CBN Statistical Bulletin, CBN Annual Report and Statement of Accounts (various issues), NSE books, SEC Market Bulletins, National Bureau of Statistic (NBS), Federal Inland Revenue Service (FIRS), and Organisation for Economic Cooperation and Development (OECD).Thus, specifying the model in the form in which it can be estimated in line with the research hypothesis stated in chapter one, the models of the study are reflected below.

$$C_{EXP} = \beta_0 + \beta_1 PPT + \beta_2 CIT + \beta_3 CED + \varepsilon \quad \text{.....(i)}$$

Where:

β_0 = Constant term
PPT = Petroleum Profit Tax
CIT = Company Income Tax
CED = Customs and Excise Duties
C_{EXP} = Capital Expenditure
$\beta_1 - \beta_3$ = the coefficient of the function
ε = error term.

RESULT AND DISCUSSION

Descriptive Statistics Result

	CE	PPT	CIT	CED
Mean	31.50667	1268.473	406.9417	246.8500
Median	18.97500	661.3000	101.0500	179.5500
Maximum	111.0600	4365.000	1624.000	936.7000
Minimum	0.040000	4.810000	1.000000	1.700000
Std. Dev.	35.95189	1409.419	517.2052	258.9635
Skewness	0.958149	0.823875	1.031142	1.003192
Kurtosis	2.489451	2.339788	2.653808	3.039915
Jarque-Bera	5.899287	4.726441	6.559293	6.040751
Probability	0.052358	0.094117	0.037642	0.048783
Sum	1134.240	45665.03	14649.90	8886.600
Sum Sq. Dev.	45238.85	69526142	9362544.	2347173.
Observations	36	36	36	36

Source: E-View 10 Output (2021)

Table 4.1 presents the descriptive statistics of the effect of petroleum profit tax on capital expenditure in Nigeria, during the period of 1985 to 2020. The table shows that capital expenditure (CE) as a measure of public sector expenditure has a mean of 31.50667 with a standard deviation of 35.95189 and the minimum and maximum values of 0.040000and 111.0600respectively. Although the range between the minimum and maximum is wide, it implies a stable performance as the standard deviation indicated that there is no wide dispersion of the data from the mean value. For the other measure of public sector expenditure, recurrent expenditure (CE), from the table shows a mean value of 20.54361 with a standard deviation of 21.51795 and the minimum and maximum values of 0.030000 and 65.40000 respectively. This implies that public sector expenditure in terms of budgetary expenditures witnessed substantial fluctuations during the study period, as the standard deviation is large compared to the mean, together with the minimal range between the minimum and maximum values. Similarly, the mean values for the measures of tax revenue, indicates that; petroleum profit tax (PPT) is 1268.473, companies income tax (CIT) is 406.9417, while customs and excise duties (CED) stands at 246.8500. The standard deviations of petroleum profit tax (PPT), companies income tax (CIT) and customs and excise duties (CED) are 1409.419, 517.2052 and 258.9635 respectively. The minimum and maximum values of petroleum profit tax stand at 4.810000 and 4365.000, the minimum and maximum values of companies income tax reflect1.000000 and 1624.000, while the minimum and maximum values of customs and excise duties are1.700000 and 936.7000 respectively.

The standard deviation values shown in table 4.1 indicate the dispersion or spread in the data series. The higher the value of the standard deviation, the wider the deviation of the series from its mean. Similarly, the smaller the value of the standard deviation, the lower the deviation of the series from its mean. The variable with the highest degree of dispersion from the mean is companies income tax, while the variable with the lowest degree of dispersion from the mean is recurrent expenditure. Skewness which measures the shape of the distribution and equally shows the measure of the symmetry of the data set indicated that CIT and CED are all positively skewed and have values greater than zero which suggests that the distribution tails to the right-hand side of the mean, except for CEand PPT, which though are not negatively skewed but have values less than one. Hence, the distributions of all the variables (CE, PPT, CIT and CED) are positively skewed, considering that their values are greater than zero, in addition to the fact that their mean is greater than their median.For the descriptive statistics, which is based on the raw data and at 5% level of significance, two variables of the study (CIT and CED) showed that individually, their P-values are less than 5%, therefore, the null hypotheses are hereby rejected and it can be concluded that the two variables are statistically significant. However, the variables of CE and PPT, showed that

individually, the P-value of these variables of interest are greater than 5% at 0.052358and 0.094117 respectively, therefore the null hypotheses for these four variables are hereby accepted and it can be concluded that individually, the variables are statistically insignificant.

Correlation Matrix

Table 2: Correlation Matrix Result

	CE	PPT	CIT	CED
CE	1.00000			
RE	0.874703			
AVG	0.978982			
PPT	0.758302	1.00000		
CIT	0.947919	0.817503	1.00000	
CED	0.958505	0.81555	0.978811	1.00000

Source: E-View 10 Output (2021)

The Pearson correlation coefficient (r) was employed to establish the measures of associations between the variables. Table 4.2 above shows the Pearson correlation coefficient (r) and the respective probabilities of the relationship between tax revenue variables (PPT, CIT and CED) and public sector expenditure variables (CE). The result showthe coefficient of the correlation between CE and PPT stands at 0.758302, which is also positive, the coefficient of the correlation between CE and CIT stands at 0.947919, and the coefficient of the correlation between CE and CED also stands at 0.958505. The implications of these results are that; an increase in CE would lead to a significant increase in PPT, CIT and CED.

Table 3: Unit Root Test (CE at 1st Difference)

Null Hypothesis: D(CE) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.694722	0.0000
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

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

Source: E-View 10 Output (2020

From the table above, the traditional test of Augmented Dickey-Fuller (ADF) indicated that the Probability value under the ADF is 0.0000, less than 0.05 at 1st difference. This implies that capital expenditure (dependent) variable was non-stationary at level (as attached in the Unit root test in the appendix)but became stationary at 1st difference. Similarly, the Augmented Dickey-Fuller (ADF) t-Statistic (6.694722) is greater than the absolute critical values of

(2.954021) at 5% level of significance. This implies the Null Hypothesis must be rejected and it can be concluded that CE has no unit root and the data is stationary.

Table 4: Unit Root Test (PPT at 1st 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		-5.163399	0.0002
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.
Source: E-View 10 Output (2020

Similarly, from the table above, the traditional test of Augmented Dickey-Fuller (ADF) indicated that the Probability value under the ADF is 0.0002, less than 0.05 at 1st difference. This implies that petroleum profit tax (independent) variable was non-stationary at level (as attached in the Unit root test in the appendix), but became stationary at 1st difference. Similarly, the Augmented Dickey-Fuller (ADF) t-Statistic (5.163399) is greater than the absolute critical values of (2.951125) at 5% level of significance. This implies the Null Hypothesis must be rejected and it can be concluded that PPT has no unit root and the data is stationary.

Table 5: Unit Root Test (CIT at 1st Difference)
Null Hypothesis: D(CIT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.375648	0.0015
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.
Source: E-View 10 Output (2020

In addition, table 4.7 indicates that the traditional test of Augmented Dickey-Fuller (ADF) indicated that the Probability value under the ADF is 0.0015, less than 0.05 at 1st difference. This implies that company income tax (independent) variable was non-stationary at level (as attached in the Unit root test in the appendix), but became stationary at 1st difference. Similarly, the Augmented Dickey-Fuller (ADF) t-Statistic (4.375648) is greater than the absolute critical values of (2.951125) at 5% level of significance. This implies the Null Hypothesis must be rejected and it can be concluded that CIT has no unit root and the data is stationary.

Table 6: Unit Root Test (CED at 1st Difference)

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

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.882897	0.0004
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

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

Source: E-View 10 Output (2020

Similarly, from the table above, the traditional test of Augmented Dickey-Fuller (ADF) indicated that the Probability value under the ADF is 0.0004, less than 0.05 at 1st difference. This implies that customs and excise duties (independent) variable was non-stationary at level (as attached in the Unit root test in the appendix), but became stationary at 1st difference. Similarly, the Augmented Dickey-Fuller (ADF) t-Statistic (4.882897) is greater than the absolute critical values of (2.951125) at 5% level of significance. This implies the Null Hypothesis must be rejected and it can be concluded that CED has no unit root and the data is stationary.

Table 7: Summary Results of Augmented Dickey-Fuller Unit Root Tests

Variables	Test Critical Values	Probability Values	Order of integration
CE	-2.954021	0.0000**	I(1)
PPT	-2.951125	0.0002**	I(1)
CIT	-2.951125	0.0015**	I(1)
CED	-2.951125	0.0004**	I(1)

*Note: **indicate significant at 5% levels; Source: E-View 10 Output (2021)*

The summary results of the Augmented Dickey-Fuller Unit Root Tests for all the six variables of the study; capital expenditure (CE), petroleum profit tax (PPT), companies income tax (CIT) and customs and excise duties (CED), are presented in table 4.9 as shown above.

Test of Hypothesis One

H_{01}: Petroleum profit tax has no significant effect on capital expenditure inthe Agricultural Sectorof Nigeria.

The result of the estimated regression model is presented below:

Table 4.8: Regression Result (Hypothesis One)

Dependent Variable: CE
Method: Least Squares
Date: 08/26/21 Time: 11:42
Sample: 1985 2020
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.460489	2.782380	0.165502	0.8696
PPT	-0.002180	0.002186	-0.997285	0.3261
CIT	0.018846	0.016836	1.119426	0.2713
CED	0.105903	0.033464	3.164702	0.0034

R-squared	0.923368	Mean dependent var	31.50667
Adjusted R-squared	0.916184	S.D. dependent var	35.95189
S.E. of regression	10.40845	Akaike info criterion	7.627553
Sum squared resid	3466.750	Schwarz criterion	7.803500

Log likelihood	-133.2960	Hannan-Quinn criter.	7.688963
F-statistic	128.5265	Durbin-Watson stat	1.696835
Prob(F-statistic)	0.000000		

Source: E-View 10 Output (2021)

From table 4.15 above, the coefficient of multiple determinations (R^2) is 0.923368. This indicates that about 92% of the total variations in capital expenditure is explained by the variations in the independent variables (PPT, CIT and CED), while the remaining 8% of the variation in the model is captured by the error term. This indicates that the line of best fit is highly fitted. The standard error test is applied to measure the size of the error and determine the degree of confidence in the validity of the estimates. Usually, if the standard error is smaller than half the numerical value of the parameter estimate, it can be concluded that the estimate is statistically significant. Having carried out a standard error test on the parameters estimated and as also indicated by their respective probability values, the parameter estimates for PPT and CIT is not statistically significant, given that the individual probabilities are 0.3261 and 0.2713 respectively which is greater than 5%, while that of CED is statistically significant, given that the individual probability is 0.0034.

The Durbin Watson test is usually adopted to test for Autocorrelation. The Durbin Watson statistic is given as 1.6, which falls within the acceptable region of 1.5 to 2.0. The Durbin Watson test of 1.6 in this regression analysis is an indication that there is no autocorrelation in the model. Similarly, when taken collectively the value of the F-statistic is 128.5265 and the value of the probability of F-statistic is 0.000000. This result implies that the overall regression is positive and statistically significant at 5%.The coefficient of petroleum profit tax (PPT) is -0.002180, that of companies income tax (CIT) is 0.018846, while that of customs and excise duties (CED) is 0.105903. This shows that both CIT and CED as independent variables are positively related to CE, while PPT is negatively related to CE, such that a unit increase in CE will increase CIT and CED, while a unit increase in CE will not lead to an increase in PPT. This result is consistent with a prior expectation which hypothesizes that an increase in CIT and CED will lead to a significant increase in CE and the empirical evidence suggests that the relationship between CE, PPT, CIT and CED is statistically significant. Consequently, when taken collectively and based on the probability (F-Statistics) value of 0.000000 the null hypothesis is hereby rejected. In other words, the empirical analysis of the study shows that there is evidence to accept that; Petroleum profit tax has a significant effect on capital expenditure in the Agricultural Sector of Nigeria.

CONCLUSION AND RECOMMENDATIONS

The conclusion of the study, therefore, is that;tax revenue has a significantly positive impact on public expenditure and by extension on public sector financial management and does substantially reduce the inefficiencies associated with the budgetary frameworks, particularly in the agricultural sector in Nigeria. This conclusion is substantive where tax revenue is proxied by petroleum profit tax (PPT), companies income tax (CIT) and customs and excise duties (CED). The result and the findings of the study present implication for regulators such as the Federal Inland Revenue Service (FIRS), the Ministry of Finance, Budget and National Planning, financial regulating council and professional bodies like ICAN and ANAN, just to mention a few.

The study recommends thatGovernment should focus not only on petroleum profit tax revenue generation but should also re-direct its attention to proper management of the profit tax revenue and effective control of necessary expenditure that would adequately enhance economic growth.Based on the finding of this research work, the country stands a good chance of benefiting more from company income tax. Therefore, the research recommended that proper and adequate improvement in the CIT generation via effective enforcement of all regulatory provisions in the economy is needed which can be achieved through robust advocacy. Finally, embezzlement of funds and reckless spending of revenue generated from custom and excise duties has remained one of the major problems affecting the growth of Nigeria economy. The study thus recommends that revenue generated from CED should be used judiciously to

developthe sector of the economy most especially the agricultural sector at large to boost economic growth.

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