

PETROLEUM PROFIT TAX REVENUE AND AGRICULTURAL DEVELOPMENT IN NIGERIA: AN EMPIRICAL INVESTIGATION

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ABSTRACT

This study examined the influence of petroleum profit tax revenue on Agricultural Development in Nigeria from 1985 to 2017. The study adopted the ex-post facto research design as data collected were sourced from relevant publications of the Central Bank of Nigeria statistical bulletins and the releases of the National Bureau of Statistics. The exogenous variable for the study is Revenue from Petroleum Profit Tax while the endogenous variable is government expenditure on agriculture serving as proxy for Agricultural Development. Simple Linear Regression was used to test the hypothesis. The result showed that petroleum profit tax has positive and significant effect on agriculture expenditure at the lag of 6 years. The regression result was strengthened by the residual outcomes which reflected r-squared of 73% and f-statistics that has probability of 1%. Based on the findings, the study therefore concludes that there is a positive and significant association between petroleum profit tax revenue collected and the test variables used in this study. In other words, government revenues from petroleum profit tax flows in the same direction as government expenditure on Agriculture as a measure of the Agricultural Development in Nigeria. The study therefore recommends that the attitude of Nigerians to taxation should be encouraged to grow into voluntary compliance to tax since it has been proved in this study that petroleum profit tax and by extension tax revenues has significant positive impact on various government expenditures particularly on Agricultural Development. The Nigerian government should endeavor to solve the current national problem of mono-economy by investing more funds into Agricultural programmes to further develop the sector. This will invariably fight hunger, create more opportunities for employment, increase in national income, less dependence on oil for income and ultimately lead to national growth. With the increase in VAT from 5% to 7.5%, more funds should be channeled in agricultural research and development for the ultimate benefit of the economy.

Key Words: Petroleum Profit Tax, Agricultural Development, Government Expenditure.

INTRODUCTION

Some challenges confronting various governments of nations are hunger and unemployment of her citizens. Further to these is the provision adequate security, sound health

facilities, educational facilities, infrastructure and the enabling environment for businesses of her citizenry to thrive. To confront these challenges effectively and efficiently, adequate funds are needed to make the necessary investments that will

cause the desired turnaround in these sectors. Nigeria as a nation has majorly derived its revenue, to fund the various programs of government, from the petroleum industry and revenue from this sector has accounted for a significant portion of the national income.

Since the discovery of crude oil in 1967 which witnessed a detrimental shift from the agricultural sector to the oil sector, the Nigerian economy has ever since hung on the income from oil to thrive; less efforts had been made to engender development in other sectors of the economy like the Agricultural sector. The dominance of the economy by the petroleum sector led to the fall in economic contributions of other sectors like agriculture to the nation's economy with the attendant consequence of galloping unemployment situation in the country (Ilaboya & Ofiafor, 2014). It is a known fact that the agricultural sector has the capacity to absorb a high percentage of our teeming youths if properly developed. The attitudes of successive governments in Nigeria towards the development of Agriculture appear to be very appalling since no evidential progress has been made in the sector.

The concept of government expenditure on agriculture is viewed in this study as depicting the commitment of the various administrations in promoting the growth of the agricultural sector in investments in the sector. Additionally, these investments over the years are expected to have had direct impact on the development of the sector through increased food production as well as mechanized and scientific farming innovations and discoveries. So the idea is to assess whether the growth of the Nigerian oil sector in terms of government revenues obtained via taxation of petroleum has been associated with proportionate commitment towards the upgrading of the agricultural sector which has been the mainstay of the country before the era of the oil boom.

Previous studies like Azaiki and Shagari, (2007) had indicated 'that the petroleum industry has been playing a dominant role and occupies a strategic position in the economic growth of

Nigeria'. But how this has translated to improvement of lives of the citizens especially on how it has resulted in the development of the agricultural sector; and considering the continued increase in the nation's population and the recent fall in the price of crude oil still remained unanswered. This perhaps may be because there are no empirical studies to provide the needed direction to various administrations. This is why this study becomes imperative to investigate the effect of the petroleum profit tax revenue on agricultural development in country.

Problem Statement

A decent charge in form of PPT causes the administration to realize income with which to attend to the desires of the populace as well as develop other significant sections of the economy. Of the considerable number of kinds of taxes in Nigeria, oil benefit duty has the most elevated expense pace of 85% charged on the assessable pay of organizations engaged in the upstream part of the oil business. This infers oil benefit charge (PPT) represents the bigger extent of assessment income in Nigeria.

A few contentions have trailed the spot of oil benefit assesses as a device for upgrading infrastructural improvement in Nigeria. Some have presented that oil benefit duty has enormously helped the income base of the legislature and accordingly bolster monetary development. Others have it that the expenses have not altogether influenced financial development in Nigeria.

The over dependence on the oil sector as revealed by previous researchers is also a threat to the stability of economy especially with the fact that there is wide speculation that the oil deposit which is major determinant of petroleum profit tax will dry up in no distant time. Hence, since the economy is driven by revenue from the oil, one wonders what will happen to the nation's survival if the oil dries up. One would have thought that since there is this prediction of oil drying up in the near future, the leaders ought to have utilized the

revenue generated from oil to develop the revenue potentials of critical sectors like agriculture; but this appears not to be so.

Another problem worthy of looking into is the lack of developmental effect on other areas, leaving the entire nation's economy in a perpetual ailing state despite the huge revenue realized from petroleum profit tax over years with no practical effect of economic growth witnessed in the other real sectors. Furthermore, the failure of previous researchers to use economic indicators that would reveal the practical developmental effect of PPT on other sectors of the economy, aside the traditional GDP which is mostly an economic growth indicator, cover up the developmental contributions of petroleum profit tax revenue on those other sectors such as agriculture. It is based on these observed lacunas that this paper delves into the assessment of Petroleum profit tax revenue on the development of agriculture in Nigeria.

Objective of the Study

This paper investigated the effect of Petroleum profit tax revenue on the development of agriculture in Nigeria using government expenditure on agriculture (EXAGR) as the proxy for agricultural development.

LITERATURE REVIEW

Conceptual Review

Concept of Taxation

Taxation 'is a money related charge or other toll forced upon a citizen (an individual or lawful substance) by the state or what might be compared to a state, to such an extent that inability to pay is deserving of law' (Ogbonna & Appah, 2012).

Petroleum Profits Tax (PPT) is tax charged on the income of oil companies in the upstream part of the petroleum business, which manages investigations, panning, improvement, and creation. Adereti (2011) further explained that the taxable income of a petroleum company is subject to tax at 85%, but this percentage is lowered to 65.75% during the first 5 years of operation but

where oil companies operate under the 'production sharing contracts' they will be liable to tax at a rate of 50%. This is said to incorporate conveyance of chargeable oil to the treatment facility, the duty is on the benefit of the organization from oil activity under Petroleum Profit Tax Act (PPTA) in Nigeria. The oil activity as characterized in the demonstration basically includes investigation, advancement, creation, and offers of unrefined petroleum.

In sorrow, the charge is set to build the utilization and diminish the investment funds to expand the total interest and bad habit. Subsequently, the expense approach might be utilized to reinforce impetuses to reserve funds and speculation. In immature nations, there is another job to keep up value security to guarantee development with strength.

Theoretical Framework

Theoretical literary works with regards to this investigation, center on both applicable, speculations of tax assessment and monetary development of critical sectors of the economy. Therefore, this study is hinged on the Benefits Received Theory as propounded by Erik Robert in 1919. This theory is based on the assumption that 'there is basically an exchange relationship between tax-payers and the state' (Robert, 1919). The theory indicates that tax payers' willingness to pay tax to the state is determined by the nature of benefits in terms of services received from the state. This justifies the imposition of taxes for sake of obtaining revenue for the government which is critical for financing state activities, infrastructures and sectors as well as in providing a basis for apportioning the tax burden between members of the society. The study therefore believes that imposing Petroleum profit tax on companies operating in the upstream sector, on the ground of the benefits which are accorded them through the activities of the government in controlling and growing the economy, justifies the choice of benefits received theory as a tax-thought to anchor this work.

Empirical Reviews

Extant researches exist on the role or relevance of taxation in economic development diverse countries and applying different techniques. This review considered influence of taxation as a broad composite of various taxes on economic growth after which the review narrowed down specifically to the effect of petroleum profit tax on economic growth of Nigeria using the expenditure for the development of the Agricultural sector as a proxy.

Eyisi, Oleka and Bassey, (2015) investigated the effect of taxation on Macroeconomic Performance in Nigeria from 2002 to 2011 utilizing normal least square relapse strategy. Result got demonstrated that administration of income from tax collection had positive and noteworthy impact on GDP of Nigeria, government income tax collection had negative huge effect on joblessness rate in Nigeria.

The results suggest income age from tax collection upgrades financial development and development that adjustments in tax assessment, naturally will influence people genuine way of life (GDP), work rate and loan cost. Government ought to consider citizens and other key partners' enthusiasm for monetary approach definition and execution so as to accomplish improved duty. The investigation demonstrate that oil contribute emphatically to pay.

Ilaboya and Ofiafor (2014) also investigated the nexus between petroleum profits charge and financial development of Nigeria from 1980 to 2011. Annual time series data of tax collections and macroeconomic information were gathered from the Federal Inland Revenue Service, Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics. A mix of co-ordination and mistake adjustment estimation methods were adopted in the study.

True to form, petroleum profits tax was discovered to have a factually critical positive association with GDP development rate having announced a positive coefficient of (4.64) and a vigorous t-estimation of (2.30). All out direct

charge, with a positive coefficient of (4.19), and a t-estimation of (2.48), was additionally found to have positive effect on monetary development in Nigeria. Transparency was found to have a negative and unimportant effect on financial development having revealed a negative coefficient of (-0.01), and t-estimation of (-0.15). Abdul-Rahamoh, Taiwo and Adejare (2013) evaluated impact oil benefit charge has had on Nigeria Economy. The examination secured multi-year time span from 1970 – 2010. Investigations were done utilizing different phases. The examination uncovered that oil benefit duty had huge effect on Nigerian economy. Statistical Package for Social Sciences (SPSS) version 17 was utilized by the researchers in testing clear cut explanations; they found that tax collection had a noteworthy commitment on Gross Domestic Product (GDP).

Ogbonna and Appah, (2012), utilizing co-combination test and Granger Causality test as model to examine the association of PPT and Economic Growth of Nigeria from 1970 to 2010. Co-integration results show the presence of long-run connection of financial development and oil benefit charge (PPT). The study further demonstrated that oil benefit expense does impact on financial development in Nigeria. They neglected to write about the financial improvement that was the subject of thought. Be that as it may, the creators were concerned that the gigantic measure of cash produced from Petroleum Profit Tax, and Oil Revenue don't convert into financial advancement of Nigeria. They contend that the expansion in the monetary development rate doesn't reflect in Nigeria's general financial advancement.

Okafor (2012) investigated effect of annual expense income on the monetary development of Nigeria as intermediary to the total national output (TNO). Conventional Least Squares relapse investigation was adopted to investigate the relationship over the period of 1981-2007. The result showed an extremely positive and noteworthy association with oil benefit duty

contributing most to total national output, anyway real charge income created in many years fell beneath the level anticipated.

Jibrin, Ejura and Ifurureze (2012) inspected the effect of oil benefit charge on monetary improvement of Nigeria from 2000 - 2010 and the outcomes demonstrated that oil benefit expense has positive effect on financial advancement proxy by GDP.

Emeh and Ebiringa (2012) analyzed the experimental types of expense on the monetary development in Nigeria. Relapse examination was utilized covering a time series data of 1985-2011. The outcome demonstrated that the determinant factor for monetary development in the nation is custom and exercise obligations which also has a reverse relationship with the GDP. Petroleum assessment has practically zero impact on the GDP of the economy. There are research works that were enlightening in the idea of their investigation. They concluded that oil based revenue if invested efficiently in the economy will to a large extent make material difference on GDP.

From the result of Ogbonna and Ebimobowei (2011), it can be deduced that PPT has a positive impact on Nigeria's economy but it'll be good to further investigate the roles other taxes play on the economy's GDP both individually and as a lump sum.

In the works of Ogbonna and Appah, (2011), a negative relationship of petroleum profit tax and inflation was obtained. The study revealed the impact of petroleum revenue on the economy of Nigeria for the period 1970-2009. Methodology used were Pearson product correlation coefficient, ordinary least squares regression and descriptive statistics. From these empirical works, it could be deduced that no researcher had delved into how the petroleum profit tax has improved the development of the agricultural sector in Nigeria since the sector had sustained the country before the discovery of oil. This is the research gap which motivated in this work.

HYPOTHESIS

Flowing from the objective of this paper, the study proposes the following hypothesis:

Ho: Revenue from Petroleum Profit Tax doesn't have positive and significant effect on agricultural development of Nigeria.

METHODOLOGY

Research Design

The study adopted the *ex-post facto* research design as data used in analysis were already available and were sourced from relevant publications of the Federal Government institutions name: the Central Bank of Nigeria statistical bulletins, the National Bureau of Statistics for period spanning from 1985 - 2017. The exogenous variable used for the study was petroleum profit tax (PPT) while the endogenous variable was government expenditure on agriculture (EXAGR) and the Least Squares method of linear regression was used to analyze the data.

Model Specification

The general model for the study was: $Y_i = f(X_i)$, (1)
Where Y_i represents all endogenous variables while (X_i) will represent all exogenous variables and f represents function.

On the basis of the general model stated above, the following structural models are specified as follows each aims at establishing the effect of petroleum profit tax (PPT) on Government expenditure on agriculture (EXAGR).

Thus, to measure the impact of petroleum profit tax (PPT) on Government Expenditure on Agriculture (EXAGR), the model is specified as:
 $EXAGR = f(PPT) \dots \dots \dots (2)$

Where;
EXAGR = Government Expenditure on Agriculture
PPT = Petroleum Profit Tax

For estimation purposes, we re-specified equation (6) as follows:
 $EXAGR = \gamma_0 + \gamma_1 PPT \dots \dots \dots (3)$

Where γ_0 is the intercept while PPT is the

parameters.

On the premise of “*a priori*” $\gamma_{\text{IPPT}} > 0$

Data Analysis and Discussion

Data collected for this research work as attached in the first appendix to this work were analyzed in this section and the hypotheses tested after some preliminary tests were carried out on each series of data. This section comprises descriptive analyses of variables, and regression analyses which were used to test the hypotheses. These analyses were conducted with the aim of understanding the nature and behavior of the variables, assess the degree and nature of association which could subsist among the exogenous and endogenous variables of this study and conclude on the hypotheses made earlier.

Descriptive Analyses of Variables

Table : Descriptive Analyses of Variables

	LOGPPT	LOGGEXPAGR
Mean	11.31386	9.577229
Median	11.59351	9.877219
Maximum	12.50722	10.81558
Minimum	9.682235	7.308778
Std. Dev.	0.883181	1.067984
Skewness	-0.318207	-0.759976
Kurtosis	1.772628	2.372488
Jarque-Bera	2.628266	3.718034
Probability	0.268707	0.155826
Sum	373.3574	316.0485
Sum Sq. Dev.	24.96030	36.49888
Observations	33	33

Source: Researchers' E-views Analyses 2019

The result of the descriptive analyses conducted for all the variables in this study with the aim of understanding the behaviour of each of the variables in terms of their spread, variability and degree of normality are shown in table 1.

Observations for petroleum profit taxes (LOGPPT) collected by the Federal Government of Nigeria in their logged form showed only a minimal level of variability in the 33 years covered in this research work. This is because the minimum value is 9.68 and maximum of 12.51

approximately with a standard deviation of 0.88 approximately. Additionally, the mean and median values of 11.31 and 11.59 approximately indicate that most observation points which are petroleum profit taxes of various years are closer to the maximum value than they are to the minimum value. It also suggests that the variables are not well dispersed as most observations are inclined to the maximum. The series are normal as indicated by the outcome of its Jarque-Bera statistics of 2.63 and the corresponding probability of 0.27.

Government expenditure on agriculture (LOGGEXPAGR), which is our proxy for agricultural development, also possesses the same range of disparity as petroleum profit taxes in their logged forms. This shows that the variables on government expenditure on agriculture can be compared to those of petroleum profit taxes with respect to their disparity behavior. The comparison is also the same for the measures of central tendencies since the mean and median scores for government expenditures on agriculture is 9.58 and 9.88 respectively; these figures are closer to the maximum value of 10.82 approximately and suggest that more observations on government expenditure on agriculture are inclined to the highest value. In consideration of the normality, a Jarque-Bera statistics value of 0.16 suggests that the series of government expenditure on agriculture is within the normal range.

Test of Hypotheses

H0: Petroleum profit tax revenue does not have any positive and significant effect on agricultural development in Nigeria

Effect of petroleum profit tax on agricultural development in Nigeria

Dependent Variable: LOGGEXPAGR
 Method: Least Squares
 Date: 12/17/19 Time: 14:38
 Sample (adjusted): 1992 2018
 Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.101867	0.924569	2.273348	0.0319
LOGPPT(-6)	0.708698	0.083028	8.535666	0.0000
R-squared	0.744527	Mean dependent var		9.972143
Adjusted R-squared	0.734308	S.D. dependent var		0.688122
S.E. of regression	0.354695	Akaike info criterion		0.836071
Sum squared resid	3.145215	Schwarz criterion		0.932058
Log likelihood	-9.286952	Hannan-Quinn criter.		0.864613
F-statistic	72.85760	Durbin-Watson stat		1.734204
Prob(F-statistic)	0.000000			

Source: Researchers' E-views Analyses 2019

The outcome of the regression estimates, which employed petroleum profit tax as the independent variable and government expenditure on agriculture, – the proxy for agricultural development, as a dependent variable are shown in table 2 above. The result portrays a significant and direct association between the two variables.

The concept of government expenditure on agriculture is viewed in this study as depicting the commitment of the various administrations in promoting the growth of the agriculture in the country through investments in the sector. Additionally, these investments over the years are expected to have had direct impact on the development of the sector through increased food production as well as mechanized and scientific farming breakthroughs and discoveries of improved varieties of crops and animals. So the idea is to assess whether the growth of the Nigerian oil sector in terms of government revenues obtained via taxation of petroleum profit has been associated with proportionate commitment towards the improvement of the agricultural sector which has been the mainstay of the country before the era of the oil boom.

The above results have shown is positive and significant association between petroleum profit tax and expenditure of Federal Government on agriculture. It therefore suggests that the oil, being the highest contributor to the national finances, has been channeled towards the sustenance of the agricultural sector, at least in terms of the funds committed by various administrations. This implies as more revenues are channeled into the agricultural sector and barring any form of diversion of funds, the agricultural sector in Nigeria will be positioned to return to relevance in economic growth and sustenance of the country in the near future.

We can also say that the regression result as obtained in this section is not a chance outcome considering the supporting residual statistics as is evident by the r-squared of 74%, f-statistics of 72.86 and significant at 1%. The incidence of

autocorrelation as a factor to render the regression result spurious is also weakened by the Durbin-Watson statistics outcome of 1.73. Hence we conclude at this juncture having considered the outcome of the regression estimate, that petroleum profit tax has a positive and significant association with government expenditures on agriculture and consequently reject the null hypothesis, which states that petroleum profit tax does not have positive and significant effect on agricultural development in favour of the alternative.

DISCUSSION OF FINDINGS

The various analyses made considered both the individual characteristics of the series and their common interplay to arrive at findings which will enable the provision of research solutions to our study questions as spelt out in the first section of this paper.

The outcome of the descriptive characteristics of each variable spelt out in subsection 4.1, the results show that all the variables passed the normality test and also have comparable measures of central tendencies and dispersion. This indicates the possibility of having a further estimation with considerable degree of significance hence the study proceeded to consider the stationarity of the variables.

The test of the hypothesis considered the hypothesis which was raised to address the central objective of this study. The results of the analyses indicated that petroleum profit tax had positively and significantly influenced government expenditure in the agricultural sector over the years. We therefore conclude that petroleum profit tax has significant and positive impact on the development of agriculture in Nigeria. Also, we observed that the findings made in the course of this work is in agreement with those of Ogbonna and Ebimobwei (2011), Ogbonna, and Appah (2011), *Adegbie and Fakile (2011)*, Success (2012), Abdul-Rahamoh, Taiwo and Adejare (2013), Ilaboya and Ofiafor (2014) and Olatunji and Adegbite (2014).

Implication of this study spells out the benefit of

crude oil products to the development of other sectors and overall performance of the Nigerian economy. But it also highlights the undue dependence of the Nigerian government administrations of the post oil boom eras on the oil sector and thus calls for serious consideration and re-strategizing especially at this period of dwindling oil prices/revenues in the world.

SUMMARY, CONCLUSION AND RECOMMENDATION

Generally, this paper having made progress in actualizing its set objectives as shown on the introduction of this work, found that petroleum profit tax moves in a positive direction as government expenditure on agriculture in Nigeria. This argument is based on the following points:

1. The hypothesis was tested using the outcome of the simple regression which estimated the influence of petroleum profit tax on development of the agricultural sector in Nigeria with government expenditure on agriculture as its proxy. The result obtained showed that petroleum profit tax influences positively and significantly on agricultural development at the lag of 6 years. The regression result was further strengthened by the residual outcomes which reflected r-squared of 73% and f-statistics that has probability of 1%. The finding implied that government income made available by petroleum profit tax may have influenced the development of the agricultural sector through direct financial investments into it. The null hypothesis was rejected on the basis of the findings made and the alternative hypothesis which posits that petroleum profit tax has significant influence on agricultural development was accepted instead.

CONCLUSION

We therefore conclude that petroleum profit tax revenue has positively and significantly influenced the variations that had occurred in government expenditures channeled towards agriculture in Nigeria. This implies that the more

funds are channeled into agricultural development, the better of the economy of Nigeria will be.

RECOMMENDATIONS

Following from the findings of this study and the conclusion consequently arrived at, the following recommendations are made:

1. The attitude of Nigerians to taxation should be encouraged to grow into voluntary compliance to tax since it has been proved in this study that petroleum profit tax and by extension tax revenues significantly and positively influences government expenditure in agriculture and by extension, the development of agriculture in Nigeria.

2. The Nigerian government should endeavor to solve adequately the current national problem of mono-economy. This is because robust regression estimate obtained for petroleum profit tax and government expenditure in agriculture suggests that petroleum profit tax may account for a large part of total government income obtained via taxation. And this reflects a picture of more than proportionate dependence on the oil sector to generate national income.

3. The study also recommends for improved government expenditures on agriculture as investigated in this study to be followed up to ensure implementation by any person charged with such responsibility. This is because in some cases, government expenditures in Nigeria do not adequately reflect the true picture of that particular factor upon which such government expenditure is made. Therefore, it is important that the theoretically established linkage between petroleum profit tax and government expenditure on some factors produce similar results when those factors are being considered in terms of available facilities rather than figures as used in this study.

We also suggest that those charged with the responsibility of tax collection should discharge their duties effectively and efficiently bearing in mind that the overall success of the nation is hinged on the accountability of their activities.

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