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# DIRECT TAX AND THE GROWTH OF THE NIGERIAN ECONOMY: THE CASE OF PETROLEUM PROFIT TAX

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***Abstract:*** *The paper examined direct tax and the growth of the Nigerian economy; the case of petroleum profit tax. The objectives of the study were to examine the impact of petroleum profit tax on economic growth and as well checked the impact of oil rent on economic growth in Nigeria. To achieve these objectives, secondary data was sourced from CBN statistic bulletin and World Bank data base. The technique of dynamic ordinary least square (DOLS) was used to analyze the link between the dependent and the independent variables. Meanwhile, both the Augmented Dickey Fuller unit root test and Johansen co-integration preceded the DOLS test in order to establish both the stationarity and long run equilibrium relationship of the variables. The empirical results showed that, the variable were stationary at I(1) and have long run equilibrium relationship. It was postulated from the DOLS result that the coefficient of determination is 97% and the f-statistics is significant at 5% level. Also, a direct and significant relationship exists between petroleum profit tax and economic growth. While, an indirect relationship exist between oil rent and economic growth. Based on these findings, the paper recommended amongst others that Nigeria government should coordinate the oil industry so that more revenue e generated should be well managed by channeling it to the critical sectors in the absence of systemic corruption in order to enhance economic growth.*

**Key Words:** GDP, PPT, DOLS, Petroleum, Profit, Tax.

## 1.0 INTRODUCTION

In the face of domestic and external financial imbalances confronting developing economies of the world, lots of those nations have been forced to adopt stabilization and adjustment policies which are deem more efficient approaches of mustering domestic financial resources with the view to achieving financial strength and stimulating economic growth (Kiabel & Nwokah, 2009). Thus, fiscal policy is one of the efficient policies implemented to stabilize the economy. By means of definition, fiscal policy is the use of government collected tax and revenue to resolve macroeconomic outcomes such as high rate of unemployment and stunted economic growth. Consequently, tax as an indispensable tool of fiscal policy that helps to engender growth and development can be grouped into direct and indirect tax. One of the components of direct tax which is imposed on individual and factor of production, is the petroleum profit tax (PPT) (Obayori &

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Omekwe, 2019). By means of definition, PPT is a type of direct tax charged on the proceeds of corporations that are involved in upstream petroleum operation. As a follow up, Attamah (2004) posited that "petroleum profit tax, is a legislation which imposes tax upon profits from the mining of petroleum in Nigeria and provides for the assessment and collection thereof and for the purposes connected therewith". Similarly, Odusola (2006) opined that, "petroleum profit tax is particularly related to rents, royalties, margins and profit sharing elements associated with oil mining, prospecting and exploration leases".

As a matter of fact, petroleum profit tax is one of the most important tax in Nigeria in terms of its share of total revenue contributing about 95 and 70 percent's of foreign exchange earnings and government revenue correspondingly (Onaolapo, Fasina & Adegbite, 2013). Thus, the revenue obtained from petroleum sector is of great import to the development of the infrastructural facilities such as construction and maintenance of access roads, building of schools, hospitals and recreation centres amongst others in the entire nation. Another importance of petroleum profit tax and revenue to the Nigerian economy is that, the international price of its primary source which is the petroleum (crude oil), is the basis on which the national budget is determine. Thus, if the prices of crude oil crashes in the international market, it affects the Nigerian economy negatively. This is because, it has risen as the most powerful weapon inside the worldwide economy and one of the solid determinants of the estimation of the dollar in universal market (Opaleye, Okowa & Ohale, 2018; Ewubare & Obayori, 2019).

However, Ogbonna (2009) articulated that the administration of petroleum profits tax in Nigeria which mainly focuses on revenue generation to the detriment of stimulating economy has been branded by tax avoidance, corruption and poor tax administration bottleneck. This consequently, affects macroeconomic and socio-economic indicators such as price stability, economic growth and per capita income of the economy. Similarly, while the revenue from petroleum profit tax in Nigeria has been increasing overtime, it remains difficult to systematically assess its impact on GDP per capita and others human development index which are drivers of economic growth and development. Meanwhile, scholars like Opaleye, Okowa and Ohale (2018) as well as Ewubare and Obayori (2019) averred that the ups and downs in the revenue from petroleum that could cause stunted growth in the Nigerian economy, is as a result of inconsistency in oil rents. This is because if the differential in the price of crude in the international and domestic markets has been encouraging over time, it will trigger more revenue from petroleum profit tax. Given the scenario above, the questions now remains; is the proceed from the petroleum sector not efficiently utilize by government to provoke growth or is the revenue generated from petroleum profit tax not sufficient to trigger economic growth in Nigeria for the past four decades? Also, does inconsistency in rent from oil affects the growth of the Nigerian economy? It is an empirical answers to this pertinent questions that provoked an examination to the effect of petroleum profit tax on economic growth in Nigeria from 1981 to 2019. The other sections of this paper examined literature review, methodology,

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results and conclusion.

## 2.0 LITERATURE REVIEW

Theoretically, this study was proposed on the benefit theory of tax propounded by Erik Robert in 1919. The theory hypothesized that people tend to pay more taxes when they feel they have sufficient benefits from the activities of the nation. It is however argued that the services which are provided by the country may not be quantified and measured since some citizens who pay taxes do not have the opportunity of enjoying them. This theory is relevant as it's evaluate the benefits of taxes to the economy of which petroleum profit tax is one of the essential tax in the Nigerian economy.

Empirically, Inimino, Otubo and Akpan (2020) used GMM and granger causality test to examine the influence of petroleum profit tax on economic growth in Nigeria from1980 to 2017. The outcome showed a direct and significant link between petroleum profit tax and economic growth. Also, there was a bidirectional causality between PPT and economic growth. Edewusi and Ajayi (2019) used cointegration to find out the connection amid tax revenue and economic growth in Nigeria from 1995 to 2015. The study revealed that petroleum profit tax, company income tax and value added tax have positive and significant impact on economic growth in Nigeria. Okoh, Onyekwelu and Iyidiobi (2016) studied the effect of petroleum profit tax on Nigeria's economic growth from 2004 to 2015 with the use of simple linear regression. The outcomes shown that PPT GDP are positively related. Nakhle (2004) assessed petroleum taxation evaluation with special application to the UK Continental Shelf. The research was carried out in the light of current maturity of the UK oil province. The paper demonstrated that complication are associated with petroleum taxation which made it difficult to determine a suitable tax base for optimal tax. Olatunji and Adegbite (2014) utilized OLS to study the effect of petroleum profit tax, interest rate and money supply on Nigerian economy from 1970 to 2010. The enquiry revealed that petroleum profit tax, money supply and interest rate was positively related with economic growth. Onaolapo, Fasina and Adegbite (2013) examined the effect of petroleum profit tax on Nigeria economy for the period 1970 to 2010. The paper used multiple regression and revealed that petroleum profit tax had significant impact on the Nigerian economy. Ogbonna and Appah, (2012) studied petroleum profit tax and economic growth in Nigeria from 1970 to 2010 with the use of both co-integration and Granger causality tests. The co-integration result indicated the existence of long-run relationship between economic growth and petroleum profit tax. While the granger causality test showed an independent causality between petroleum profit and economic growth in Nigeria. Success, Success and Ifurueze (2012) scrutinized the impact of petroleum profit tax on the economic development of Nigeria from 2000-2010. Their findings revealed that petroleum profit tax positively and significantly impacted on gross domestic product in Nigeria minimally.

## 3.0 METHODOLOGY

The variables for this study were extracted from World development indicators and CBN statistical bulletin for period of 1990 to 2019 and were used in their logarithm to base ten form. The paper used the Dynamic Ordinary least Squares (DOLS) proposed by Stock and Watson (1993) to analyze the collected

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data. The essence of using the DOLS is because it has the ability to eliminate endogeneity problem and it is robust to autocorrelation problem. Also, both the descriptive statistics and the Augumented Dickey Fuller unit root test preceded the DOLS test in order to ascertain both the characteristics and stationarity of the variables.

**Model Specification**

:

GDP = f(PPT, ORT)

(1)

$$\text{LnGDP} = \lambda_0 + \lambda_1 \text{LnPPTt} + \lambda_2 \text{LnORTt} + \sum_{i=1}^{n} \Delta\lambda_1 LnPPTt - 1 + \sum_{i=1}^{n} \Delta\lambda_2 \text{LnORT} + \mu t \quad (2)$$

Where; GDP is Gross Domestic Product (proxy for economic growth), PPT is Petroleum Profit Tax, ORT is Oil Rent, u is Error Term, $\lambda_1$ and $\lambda_2$ are Slope Parameters, $\lambda_0$ is Intercept Parameter and $\sum$ is summation.

## 4.0 RESULTS AND DISCUSSION

**Table 1: Descriptive Statistic Result**

| Measurement | LOG(GDP) | LOG(PPT) | LOG(ORT) |
|---|---|---|---|
| Mean | 12.96092 | 13.86976 | 2.241066 |
| Std. Dev. | 0.657365 | 2.462390 | 1.262381 |
| Skewness | -0.735831 | 0.074872 | -0.795623 |
| Kurtosis | 3.404726 | 1.703803 | 1.959281 |
| Jarque-Bera | 2.814923 | 2.057248 | 4.368316 |
| Probability | 0.244764 | 0.357499 | 0.112572 |
| Sum Sq. Dev. | 12.09960 | 169.7742 | 44.62100 |
| Observations | 30 | 30 | 30 |

**Note:** GDP= Gross Domestic Product, PPT= Petroleum Profit Tax and ORT = Oil Rent

**Source:** *Author's Computation from E- view 10*

The specified model adapted the regression model proposed by Onaolapo, Fasina and Adegbite (2013) by extending the time frame and used two independent variables that are related and have direct impact on economic growth. Meanwhile, Onaolapo et al (2013) defined PPT as a function of GDP, instead of GDP as function of PPT. Thus, the paper specified the DOLS model as follows

The descriptive statistics result suggested that on the average GDP, PPT and ORT are; 12.96billion, 13.87billion and 2.24billion naira respectively. The standard deviation of the three variables (GDP, PPT and ORT) are 0.6573, 2.4623 and 1.2623 respectively. Denoting that the standard deviation of the three variables converge around their mean. Meanwhile, the three variables passed Jarque-Bera test at 5% level of significance. Therefore, the variables were normally distributed. But in term of skewnesses, only the variable, PPT is positively skewed, while both GDP and ORT were negatively skewed. Thus, there is the need for unit root test to stabilize the data before further test.

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**Table 2 Result of Augmented Dickey Fuller Unit Root Test at Level and First Difference**

| Variables | ADF @ Level | 5% Critical Value | Decision | ADF @ 1st Diff | 5% Critical Value | Decision |
|---|---|---|---|---|---|---|
| GDP | -0.324280 | -2.945842 | Not stationary | -3.530713 | -2.945842 | Stationary I(1) |
| PPT | -0.510410 | -2.943427 | Not stationary | -8.411109 | -2.945842 | Stationary I(I) |
| ORT | -1.981035 | -2.9718 | Not stationary | -5.6998 | -2.9762 | Stationary I(I) |

**Note:** GDP= Gross Domestic Product, PPT= Petroleum Profit Tax and ORT = Oil Rent

**Source:** *Author's Computation from E- view 10*

The stationarity for each of the series via the ADF test as presented in Table 2 showed that none of the variables were stationary at order zero. Thus, the variables differenced once and they became stationary at first difference prior to estimations of the DOLS to avert incorrect regressions outcomes

**.Table 3: Johansen Test for Cointegration**

| Eigen value K=1, r=1 | Trace Statistics | 5% critical value | Prob. ** | Hypothesis of CE(s) |
|---|---|---|---|---|
| 0.324274 | 19.00450 | 29.79707 | 0.4926 | None |
| 0.152022 | 8.421391 | 15.49471 | 0.4215 | At most 1 |
| 0.136709 | 3.969082 | 3.841466 | 0.0463 | At most 2 * |
| **Eigen value K=1, r=1** | **Max-Eigen Statistic** | **5% critical value** | **Prob. ****| **Hypothesis of CE(s)** |
| 0.324274 | 10.58311 | 21.13162 | 0.6886 | None |
| 0.152022 | 4.452308 | 14.26460 | 0.8088 | At most 1 |
| 0.136709 | 3.969082 | 3.841466 | 0.0463 | At most 2 * |

**Note:** GDP= Gross Domestic Product, PPT= Petroleum Profit Tax and ORT = Oil Rent, *r=number of co-integrating vectors and k = number of lags in model. * rejection of the H0*

**Source:** *Author's Computation from E- view 10*

The results of the Johansen test of co-integration showed via both the Trace and Max-Eigen statistics revealed the existence of one co-integrating equation in the model at 5% level. Thus, the null hypothesis (H0) of no co-integration among the variables was rejected. Based on this result, the paper concludes that there is a long run equilibrium relationship amongst the variables in the model.

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**Table 4: Analysis of DOLS Result**

| Variables | Coefficients | t-statistics | Probability |
|---|---|---|---|
| C | -10.1259 | 31.3611 | 0.0000 |
| Ln(PPT) | 0.2211 | 8.7207 | 0.0000 |
| LN(ORT) | -0.0301 | -0.0092 | 0.0142 |
| R-Squared | 0.9660 | F-statistics | 45.8540 |
| | | Prob(F-statistic) | 0.0000 |

**Note:** GDP= Gross Domestic Product, PPT= Petroleum Profit Tax and ORT = Oil Rent, Ln =Logarithm

**Source:** *Author's Computation from E- view 10.*

In exploring the dynamic long run impact of petroleum profit tax on the growth of the Nigerian economy, the dynamic ordinary least square (DOLS) technique was applied. The estimated DOLS results in Table 4 showed that the value of PPT has a positive and significant impact on economic growth. Thus, a percent increase in PPT causes an increase in economic growth by 0.2%. Since, the P-value of PPT at 0.0000 is less than 0.05 critical value; the alternative hypothesis of significant relationship between PPT and economic growth was accepted. The finding here corroborates the study carried out by Inimino, Otubo and Akpan (2020) as well as Okoh, Onyekwelu and Iyidiobi (2016) who examined petroleum profit tax and economic growth in Nigeria and averred that PPT has a significant positive impact on the growth of the Nigerian economy. Meanwhile, the coefficient of oil rent, is negatively signed to GDP but statistically significant. This implies that a percentage increase in oil rent will lead to decrease in economic growth by 0.03%. But despite this odd relationship between oil rent and GDP, oil rent still impacted on economic growth. This is because, the p-value of oil rent at 0.009 is less than the p-value at 5%. Thus, the alternative hypothesis which state that, a significant relationship exists between oil rent and economic growth was upheld. The finding above is not far from the Nigerian economy situation where enormous revenue from oil rent has not translates into inclusive growth. The result above corroborated the empirical work of Ewubare and Obayori (2019) who averred that despite the enormous oil rent revenue, oil rent does not positively affect the growth of the Nigerian economy. The R-squared value of about 97% showed that the model is a good fit. The probability of f-statistic (0.0000) which is less than p-value of 0.05, showed that the model is significant in explaining the relationship between PPT and economic growth.

## Post Estimation Tests

**Table 5: The Wald Test**

| Test Statistic | Value | Df | Probability |
|---|---|---|---|
| F-statistic | 45.8540 | (2, 14) | 0.0000 |
| Chi-square | 91.7080 | 2 | 0.0000 |

**Source:** *Authors' Computation from E- view 10*

The Wald test helps to measure the joint significant of the explanatory variables in explaining the dependent variable in an estimated model vis-à-vis the p-value of the F-statistics which must be less than 0.05 critical p-value. Given the result in Table 5, the two explanatory variables are significant in explaining the growth of the Nigerian economy since the error terms are normally distributed. This is because the probability values of the Jerque-Bera statistic (J-B

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stat) which is 0.9636 is greater than 0.05 critical value. Thus, it was concluded that the sample data fit a standard normal distribution. In conclusion, the post estimation analyses in both Table 5 and Figure 1, are welcoming as they meet the statistical criteria and authenticate the reliability of the estimated model for policy making

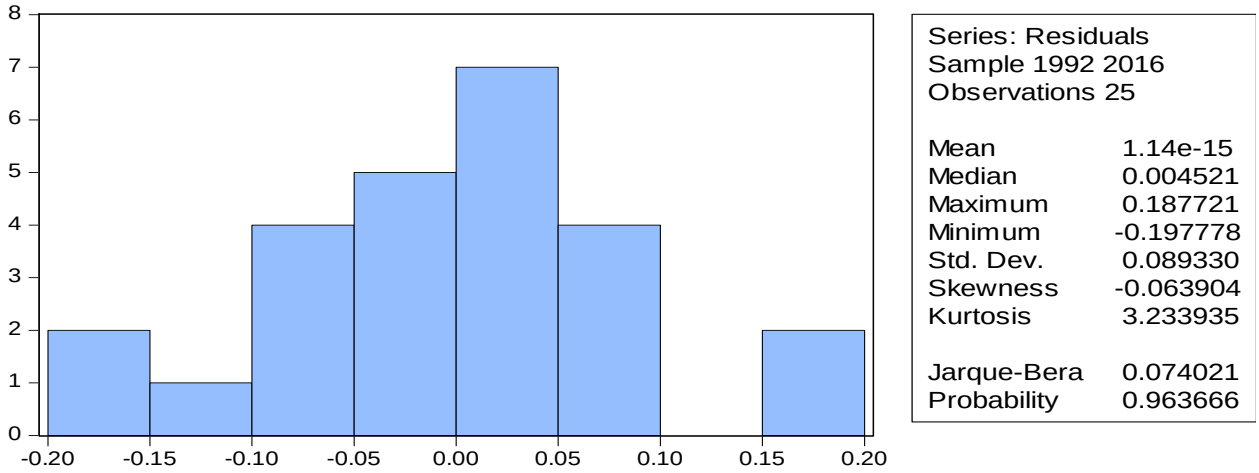


**Figure 1: Normality Test Result**

## 5.0 CONCLUSION

The study used the DOLS technique to examine the impact of direct tax on economic growth in Nigeria with petroleum profit tax in focus. The finding from the empirical showed that the explanatory variables have long run equilibrium relationship to cause growth. Meanwhile, the Also, petroleum profit tax (PPT) as a component of direct tax, has a positive and significant impact on economic growth. The implication of this is that, the revenue from PPT has the potential of increasing the growth rate if well manage. But oil rent has an indirect impact on economic growth. The reason for this is nothing other than corruption that characterized the management of resource from oil in Nigeria. Based on these findings, the paper recommended amongst others that Nigeria government should coordinate the oil industry so that more revenue e generated should be well managed by channel it to the critical sectors in the absence of systemic corruption in order to enhance economic growth.

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