

Does Tax Revenue Enhance Economic Growth in Nigeria?

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Abstract

This aim of this study is to examine the effects of tax revenue on the economic growth of Nigeria with the utilization of time series data for the time frame of 24 years (1998-2021) both years inclusive. The study's specific goal is to evaluate the influence of petroleum profit tax, company income tax, custom and excise duty, value added tax and educational tax on economic growth in Nigeria. The study employed secondary data which have been sourced from Central Bank of Nigerian statistical bulletin and published Federal Inland Revenue Statement. Ex-post facto and correlational research design was used for this study. Additionally, the study utilized fixed effects regression model to analyze petroleum profit tax, company income tax, custom and excise duty, value added tax and education tax on gross domestic product (economic growth). The findings revealed that petroleum profit tax, custom and excise duty, value added tax and education tax has a statistically positive and significant effect on gross domestic product (economic growth) in Nigeria. It also reveals that company income tax has a negative and significant effect on gross domestic product (economic growth) in Nigeria. Based on these findings, the inquiry suggests that seminars, trainings, periodic sensitizations and workshops should be organized by the relevant tax agencies to the general public in Nigeria and corporate entities on the importance and significant benefits of tax revenue to the nation. The tax authorities should also venture to support companies to pay tax in other to enhance the growth of Nigerian economy.

Keywords: Profit, company, growth, economic and tax.

Introduction

It is obvious that the Nigeria's revenue from oil can no longer fully support her growth objectives due to the serious cry off in price of oil in the recent years which has led to a decline in the funds obtainable to the government (Arowoshegbe *et al.* 2017). This gives the need for government to generate sufficient revenue from domestic sources as a matter of tremendous necessity and significance. This need underscores the keenness on the part of government to look for new sources of revenue or to become aggressive and innovative in the manner by which revenue from existing sources are collected. Aguolu (2004) stated that taxation may not be the most important source of revenue to the government in terms of the magnitude of revenue derivable from taxation. However, taxation is the most important basis of revenue to the government, from the point of view of certainty and consistency characteristics.

Chartered Institute of Taxation of Nigeria CITN (2002) and Institute of Chartered Accountants of Nigeria ICAN (2006) define tax as an enforced contribution of money to government pursuant to a defined authorized legislation. In other words, every tax must be based on a valid statute. Without a valid statute no legitimate tax can be imposed. The

income tax is levied on incomes such as salaries, business profits, interest, dividends, commissions, royalties and rent. It may also be charged on capital gains and petroleum profits. Taxation yields very substantial revenue to government. Consequently, it has comportment on the gross domestic product (GDP) which is the standard pointer for measuring the economic growth of a nation. The nature and level of taxes differ according to the economic policies adopted by the government in power.

Kusi, (1998) stated that numerous countries around the globe depend mostly on taxation for generating required income to meet their financial wants. Taxation provides a unsurprising and stable stream of revenue to back development objectives (Pfister, 2009). However, in Nigeria it has been observed over the years that revenue derived from income taxes has been grossly understated due to inappropriate tax administration, under assessment and ineffective apparatus for collection (Arowoshegbe *et al.* 2017). Persons and companies are known to routinely evade and avoid taxes due to corrupt practices and the existence of various loopholes in the tax laws. Mohammed *et al.* (2022) opined that effective and efficient tax system can aid the government generate adequate revenue to take care of its estimated expenditure, meet the needs of the citizenry and effectively contribute in the world economy. The success or failure of any tax system depends on the extent to which it is properly managed, interpreted and implemented (Kumai, 2020).

Recently the Nigerian government undertook various tax law reforms to improve tax administration and to increase tax yield. The Value Added Tax (Amendment) Act of 2007 was for example intended to broaden the value added tax base and improve the machinery for its collection. Similarly, the Companies' Income Tax (Amendment) Act of 2007 the Federal Inland Revenue Services (Establishment) Act of 2007 and The Personal Income tax (Amendment) Act of 2011, were all intended at encourage tax compliance and raise taxation yield. Moreover, Economic Recovery and Growth Plan (ERGP, 2017) revealed that 4.8% annual growth range between 2011 and 2015 was mostly driven by high oil prices and was usually not complete. In addition, majority of Nigerian citizens suffers from relentless poverty, discrimination and idleness (ERGP, 2017). Despite the revenue reported by the government over the years, the revenue has been insufficient in meeting its social and public spending which is important to enhance economic growth.

This research focus to achieve and to inspect the role of petroleum profit tax, company income tax, custom and excise duty, value added tax and educational tax on gross domestic product in Nigeria for the time frame of 24 years 1998–2021. The precise objective of this study is as narrated below:

- i. To inspect the cause of petroleum profit tax on gross domestic product in Nigeria.
- ii. To investigate the role of company income tax on gross domestic product in Nigeria.
- iii. To examine the contribution of custom and excise duty on gross domestic product in Nigeria.
- iv. To investigate the role of value added tax on gross domestic product in Nigeria.
- v. To investigate the role of educational tax on gross domestic product in Nigeria.

Given the foregoing, the following research questions were raised in order to achieve the objectives of this study:

- i. What is the effect of petroleum profit tax on economic growth in Nigeria?
- ii. Of what effect is company income tax on economic growth in Nigeria?
- iii. How does custom and excise duty influence economic growth in Nigeria?
- iv. What is the effect of value added tax on economic growth in Nigeria?
- v. To what extent does education tax have an effect on economic growth in Nigeria?

In line with the stated objectives and research questions above, the following null hypotheses were formulated:

- Ho₁:** Petroleum profit tax has no significant effect on economic growth in Nigeria.
Ho₂: Company income tax has no significant effect on economic growth in Nigeria.
Ho₃: Custom and excise duty has no significant effect on economic growth in Nigeria.
Ho₄: Value added tax has no significant effect on economic growth in Nigeria.
Ho₅: Education tax has no significant effect on economic growth in Nigeria.

The findings of this research would be of immense benefit to investors, regulators, policy makers, researchers, etc. The research would provide management with the insight on the nature, powers and the focus of the external auditors and hence enable management to cooperate fully.

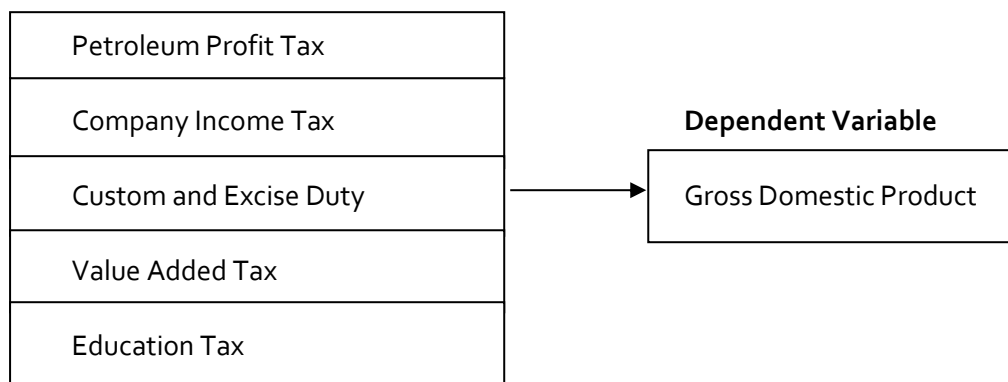
Literature Review

Economic Growth

Onoja and Ibrahim (2020) economic growth involves increasing the capacity of a country's economy to satisfy the wants and needs of inhabitants of that nation. Economic growth refers to increase in output, while economic development refers to all the changes in the economy, including the social, political and institutional changes that accompany changes in output (Adefolake & Omodero, 2022).

Tax Revenue

Arowoshegbe *et al.*, (2017) & Jakir (2011) asserted that tax is a contribution exacted by the state; it is a compulsory and unrequited transfer of resources from the private to the public sector, levied on the basis of predetermined criteria. Anyanwu (1998) defined tax revenue as a compulsory transfer or payment from private individuals, institutions or groups to the government. The classical economists were of the view that the only objective of tax revenue was to generate revenue for the government. As the result of the foregoing, the figure below represents this study's conceptual framework.

Independent Variables

Source: Generated by the Authors, 2023.

Figure 1: Conceptual Framework of this Study

Empirical Review

Adefolake and Omodero (2022) assessed the effects of tax revenue on the economic growth of Nigeria utilizing time series data spanning from year 2000 till 2021. The study employed secondary form of data which have been sourced from CBN statistical bulletin and published Federal Inland Revenue Statement. Ex-post facto research design is used for this study. The findings reveal that petroleum profit tax and value added tax have positive and significant effects on gross domestic product. It also reveals that company income tax has a negative and significant effect on gross domestic product.

Etim *et al.* (2021) examined the effects of direct and indirect taxation on the growth of the Nigerian economy. The study used a descriptive and inferential statistical technique, correlational and regression statistics and an ex-post facto research design. This study demonstrated that indirect taxes have a greater detrimental impact on economic growth.

Mukolu and Ogodor (2021) examined the impact of value added tax on the Nigerian economic growth for the year 1994 to 2018 using an Augmented Dickey Fuller analysis method. Data were gotten from CBN statistical bulletin and FIRS. The study showed that there is a positively significant impact of value added tax on gross domestic product.

John and Dickson (2020) analyzed the influence of tax revenue on economic growth using both unadjusted and adjusted gross domestic product from 1984 till 2018. Petroleum profit tax had a negative and insignificant impact on adjusted gross domestic product, but value added tax had a positive and considerable impact, and company income tax had a negative and significant one. When gross domestic product was not adjusted for inflation, petroleum profit tax had a minor but beneficial effect on economic growth, whereas value added tax and company income tax had a large but negative impact on gross domestic product.

Yadawananda and Achal (2020) investigated the long-run and short-run relationship between tax structure and state-level growth performance for the year 1991 till 2016 using the panel regression method. The findings revealed that commodity and service tax were

bad for the economy and an increase in those taxes will lead to inflation while income taxes were found to be significant for the economic growth.

Bruno and Emmanuel (2019) conducted their research using after the fact design. The study used secondary data from the Central Bank of Nigeria statistical bulletin in several editions to look at tax income and the Nigerian economy from 2000 to 2017. The statistical analyses were performed using the Ordinary Least Squares (OLS) regression approach. Findings of the study demonstrated that tax revenue had a little impact on economic growth.

Yahaya and Bakare (2018) analyzed the influence of petroleum profit tax and company income tax on Nigeria's economic growth from 1981 to 2014. Data used for the study was gotten from the Federal Inland Revenue Service and the CBN statistical bulletin. They employed a time series study approach and ordinary least square regression analysis. Petroleum profit tax and firm income tax have a favorable significant impact on economic growth in Nigeria.

This study is underpinned by the Arthur Laffer Theory of 1974. This theory simply documented that any change in tax rate will have economic effect in areas of employment, work, output, and in corollary the tax base by contributing to increase the activities through welfare. The findings showed that tax revenues variables of company tax, petroleum tax and value added tax had significant impact on the economy as a whole. Thus, any change in any of the variable is likely to affect gross domestic product in Nigeria.

Methodology

Correlational and ex-post facto research design was adopted because it describe the statistical relationship between two or more variables (Mustapha *et al.*, 2020; Shaheen *et al.*, 2022; Abdulwahab *et al.*, 2022 and Bala *et al.* 2022). The population of this study covered petroleum profit tax, company income tax, custom and excise duty, value added tax, education tax and gross domestic product in Nigeria for the time frame of 24 years (1998-2021). These taxes were selected as the result of their effectiveness when harnessed fully. The data of this study are secondary in nature, which includes; petroleum profit tax, company income tax, custom and excise duty, value added tax, education tax and gross domestic product extracted from the abstract of National Bureau of Statistics (NBS) and Central Bank of Nigeria (CBN) Statistical Bulletin from 1998-2021 both years inclusive.

Table 1:

Variables Measurement and Source

Variables	Measurements	Source
Dependent Variable		
Gross Domestic Product (GDP)	GDP as stated in National Bureau of Statistics.	Anyaduba and Efionayi (2019).
Independent Variables		

Petroleum Profit Tax (PPT)	PPT as stated in annual abstract of National Bureau of Statistics.	Adefolake and Omodero (2022)
Company Income Tax (CIT)	CIT as stated in annual abstract of National Bureau of Statistics.	Anyaduba and Efionayi (2019).
Custom and Excise Duty (CED)	CED as stated in annual abstract of National Bureau of Statistics.	Adefolake and Omodero (2022)
Value Added Tax (VAT)	VAT as stated in annual abstract of National Bureau of Statistics.	Anyaduba and Efionayi (2019).
Education Tax (EDT)	EDT as stated in annual abstract of National Bureau of Statistics.	Arowoshegbe <i>et al.</i> (2017)

Source: Generated by the Authors, 2023.

This study's specific model is as stated below:

$$GDP_t = \beta_0 + \beta_1 PPT_t + \beta_2 CIT_t + \beta_3 CED_t + \beta_4 VAT_t + \beta_5 EDT_t + \varepsilon_{it} \text{-----} 1$$

The linear function was changed into log form for better interpretation of results.

$$\log GDP_t = \beta_0 + \beta_1 \log PPT_t + \beta_2 \log CIT_t + \beta_3 \log CED_t + \beta_4 \log VAT_t + \beta_5 \log EDT_t + \varepsilon_{it} \text{-----} 2$$

Where:

GDP = Gross Domestic Product

PPT = Petroleum Profit Tax

CIT = Company Income Tax

CED = Custom and Excise Duty

VAT = Value Added Tax

EDT = Education Tax

β_0 = Constant

$\beta_1 - \beta_6$ = Co-efficient of GDP, PPT, CIT, CED, VAT and EDT.

ε = other factors that were not included by this model.

t = Time variable (t = 24 years).

Results and Discussion

Descriptive Statistics

Descriptive statistics gives basic features of a dataset i.e mean, minimum, maximum and standard deviation, which are presented in summary and describes the data sample and its measurements.

Table 2:
Descriptive Statistics

Variables	Obs.	Min	Max.	Mean	Std. Dev.
LGDP	22	10.103	11.246	10.834	0.506
LPPT	22	5.432	8.174	7.237	0.843
LCIT	22	3.879	7.468	6.217	1.213
LCED	22	4.586	9.213	5.718	0.935
LVAT	22	6.783	13.782	9.297	2.783
LEDT	22	7.312	9.782	7.783	3.147

Source: Generated from STATA 17 by the Authors, 2023.

Table 2 revealed the greatest and lowest values for the log of gross domestic product were 10.103 and 11.246 respectively. The log of petroleum profit tax has maximum and minimum values of 8.174 and 5.432 accordingly. While, the minimum value for the log of company income tax is 3.879 and the maximum 7.468. Also, log of custom and excise duty has 4.586 for minimum value and the maximum value is 9.213. The maximum value for the log of value added tax was 13.782 and the minimum value 6.783. Lastly, log of education tax has 7.312 for minimum value and the maximum value is 9.782.

Table 3:
Correlation Matrix

Variables	GDP	PPT	CIT	CED	VAT	EDT
GDP	1.000					
PPT	0.475	1.000				
CIT	0.532	0.264	1.000			
CED	0.482	-0.182	0.456	1.000		
VAT	0.366	0.592	-0.442	0.352	1.000	
EDT	0.542	0.365	0.524	0.256	0.541	1.000

Source: Generated from STATA 17 by the Authors, 2023.

Table 3 indicated that petroleum profit tax, company income tax, custom and excise duty, value added tax and education tax are positively related with gross domestic product (economic growth) in Nigeria for the period of 1998 to 2021.

Table 4:
Diagnostic Test (Multicollinearity)

Variables	VIF	Tolerance Value
PPT	1.23	0.823
CED	1.20	0.839
EDT	1.17	0.856

CIT	1.15	0.873	
VAT	1.11	0.889	
Mean VIF			1.17

Source: Generated from STATA 17 by the Authors, 2023.

Table 4 found that the variable are free from multicollinearity, this is because none of the VIF of the variables is up to 6 (Gujarati, 1995).

Table 5:

Heteroskedasticity Test

Chi ²	Prob.
100.452	0.365

Source: Generated from STATA 17 by the Authors, 2023.

Table 5 documented that the data of the study are homoskedastic in nature. This implies that no heteroskedasticity was observed.

Table 6:

Summary of Fixed Effects Regression Model

Variables	Coefficients	Z-value	P-value
PPT	0.376	1.22	0.025
CIT	-0.263	0.15	0.005
CED	0.345	2.03	0.014
VAT	0.498	1.17	0.000
EDT	0.356	0.87	0.005
R ²			0.741
Wald Chi ²			0.132
Prob. Chi ²			0.000

Source: Generated from STATA 17 by the Authors, 2023.

Table 6 revealed that petroleum profit tax has a p-value of 0.025 with a coefficient value of 0.376. This signifies that petroleum profit tax is positively related with gross domestic product in Nigeria. This implies that for every 1% increase in revenue derived from petroleum activities, gross domestic product will on the same vein increase by 37.6%. This study finds that petroleum profit tax enhances gross domestic product in Nigeria positively. Therefore, in line with the result the null hypothesis 1 is rejected.

Company income tax has a p-value of 0.005 with a coefficient value of -0.263. This signifies that company income tax is negatively related with gross domestic product in Nigeria. This implies that for every 1% increase in revenue derived from the income of companies, gross domestic product will decrease by 26.3%. This study finds that company income tax

impacted gross domestic product in Nigeria negatively. Therefore, in line with the result, the null hypothesis 2 is accepted.

Conversely, custom and excise duty has a p-value of 0.014 with a coefficient value of 0.345. This signifies that custom and excise duty is positively related with gross domestic product in Nigeria. This implies that for every 1% increase in revenue derived from custom and excise duty, gross domestic product will increase by 34.5%. This study finds that custom and excise duty influenced gross domestic product in Nigeria positively. Therefore, in line with the result, the null hypothesis 3 is rejected.

Similarly, value added tax has a p-value of 0.000 with a coefficient value of 0.498. This signifies that value added tax is positively related with gross domestic product in Nigeria. This implies that for every 1% increase in revenue derived from value added tax, gross domestic product will increase by 49.8%. This study finds that value added tax influenced gross domestic product in Nigeria positively. Therefore, in line with the result, the null hypothesis 4 is rejected.

In addition, education tax has a p-value of 0.005 with a coefficient value of 0.356. This signifies that value added tax is positively related with gross domestic product in Nigeria. This implies that for every 1% increase in revenue derived from education tax, gross domestic product will increase by 35.6%. This study finds that education tax influenced gross domestic product in Nigeria positively. Therefore, in line with the result, the null hypothesis 5 is rejected.

Lastly, this study's model explained (petroleum profit tax, company income tax, custom and excise duty, value added tax and education tax collectively) the dependent variable (gross domestic product) at 74% and the remaining 26% will accounted for by the random error term.

Conclusion

The aim of this study is to investigate the influence of petroleum profit tax, company income tax, custom and excise duty, value added tax and education tax on gross domestic product (GDP) in Nigeria for the period of 24 years (1998 to 2021). The findings revealed that petroleum profit tax, custom and excise duty, value added tax and education tax were positively significant with economic growth in Nigeria. While on the other hand, company income tax documented a negative association with economic growth in Nigeria. As a result of the above development, this study concluded that the relevance of tax revenue to an improved Nigerian economy remained sacrosanct. Thus, tax revenue is an avenue for the government to source for funds to use and improve the welfare and security of the economy and this likely to enhance economic growth in Nigeria.

Recommendations

- This study recommends workshop, training, and public awareness (sensitization) should be organized by relevant government tax agencies to the Nigerian public.

- It necessary to emphasis on the importance and benefits of tax revenue to the economy by means of providing programs to our students in the conventional institutions.
- More and effective supervision by the tax regulatory authorities is encouraged to enable compliance. This would improve the safety and security of the purposes of tax revenue in Nigeria.
- Nigerian government is encouraged to judiciously use the funds of the tax to improve on the Nations' infrastructures. This will enable the citizenry to benefit from the tax paid, encourage consistent payment of the tax and this will likely reduce tax avoidance.

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