# THE IMPACT OF COMPANY INCOME TAX AND VALUE-ADDED TAX ON ECONOMIC GROWTH: EVIDENCE FROM NIGERIA

## Dr. Lyndon M. Etale and Dr. Paymaster F. Bingilar

Department of Finance and Accountancy, Faculty of Management Sciences, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria

**ABSTRACT:** *This study examined the impact of companies' income tax, value-added tax on economic growth (proxy by gross domestic product) in Nigeria. Secondary time series panel data was collected for the period 2005 to 2014 from the Statistical Bulletin of the Central Bank of Nigeria (CBN). The study employed Ordinary Least Squares (OLS) technique based on the computer software Windows SPSS 20 version for the analysis of data, where gross Domestic product (GDP), the dependent variable and proxy for economic growth, was regressed as a function of company income tax (CIT) and value-added tax (VAT), the independent variables. The results of the analysis showed that both company income tax and value-added tax have significantly positive impact on economic growth. Based on the findings, the study recommended that government should strengthen the tax administration system to broaden the tax income, and embark on tax education to ensure voluntary tax compliance. The study also recommended that the tax authorities should employ qualified tax professionals who should be regularly trained and be retained in the tax administration system for efficient tax administration and collection.*

**KEYWORDS:** Company Income Tax, Value-Added Tax, Economic Growth, National Income

## INTRODUCTION

Tax revenue mobilization as a source for financing developmental activities in Nigeria has been a different issue primarily because of various forms of resistance, such as evasion, avoidance and other forms of corrupt practices. These activities are considered as sabotaging the economy and are readily presented as part of the reasons for present state of underdevelopment in Nigeria. Government exists in order to effectively collect taxes from available economic resources and make use of same to create economic prosperity such that available and willing manpower and other resources are gainfully employed, infrastructures provided, essential public services (such as the maintenance of law and order) are put in place among others. Tax therefore is one of the major sources of government revenue and thus, an essential feature of government income structure and a component of government fiscal policy thrust (Okafor, 2012).

The serious decline in price of oil in recent years has led to a decrease in the funds available for distribution to the federal and state governments. The need for state and local governments to generate adequate revenue from internal sources has therefore become a matter of extreme urgency and importance. This need underscores the eagerness on the part of state and local governments and even the federal government to look for new sources of revenue or to become aggressive and innovative in the mode of collecting revenue from existing sources (Afuberoh and Okoye, 2004).

Aguolu (2004) stated that though taxation may not be the most important source of revenue to the government in terms of the magnitude of revenue desirable from taxation, however; taxation is the most important source of revenue to the government, from the point of view of the certainty and consistency of taxation. Aguolu (2004) further mentioned that taxation is the most important source of revenue to the government. Owing to the inherent power of the government to impose taxes, the government assured at all times of its tax revenue not matter the circumstances. In both developed and developing economies, the primary purpose of taxation is mainly to generate revenue for the provision of social amenities and the welfare of the populace. Taxation is used as an instrument of economic regulation for the purpose of discouraging and encouraging certain forms of certain behaviour (Okafor, 2012).

The imposition of tax by the government is not a new phenomenon. There is hardly any government today that does not rely on taxation as a source of national income. However, apart from the major complications that have crept into the taxation system in recent times, the reason for the imposition of tax, in fact, ceased to be only for the generation of revenue for the state, it has also become the avenue for the redistribution of wealth and re-adjustment of the economy (Ojo, 2008).

Abiola and Asiweh (2012) stated that in achieving sustainable development in the social and economic sectors of the economy, government should consider the trade-off involved in attracting foreign direct investment (FDI) in terms of giving incentive and the impact of these on the country's sustainable development. Tax is a fiscal instrument used to encourage or discourage specific production or consumption behaviours that affect the economic, environmental or social sustainability.

Several studies have been carried out in the past on this subject. But the review of previous empirical literature revealed a lack of consensus in the research findings of past researchers which indicates the existence of a research gap. This study to examine the impact of company income tax (CIT) and value-added tax (VAT) on economic growth (GDP) is an attempt to fill that gap. The study adopted CIT and VAT as the independent variables while gross domestic product (GDP) is the dependent variable and proxy for economic growth. The broad objective of the study was to examine the impact of the independent variables on economic growth in Nigeria. But more specifically, the objective was to examine the impact of CIT and VAT on GDP in Nigeria. This objective form the basis of the hypotheses tested in this study.

The rest of this paper is structured as follows: Section two provides the review of related empirical literature, while section three deals with the study methodology. The findings of the study and discussion are presented in section four, while section five provides the conclusion and recommendations of the study.

## REVIEW OF RELATED EMPIRICAL LITERATURE

Macek (2014) investigated the impact of taxation revenue on economic growth in OECD countries, using time series secondary data for the period 2000 – 2011. A mathematical multiple regression model was adopted to capture the linearity correlation between the variables of the study. Tax variables by OECD classification include personal income tax, corporate income tax, social security contribution, property tax, value-added tax and tax on consumption. The World Tax Index classification is only short by social security contribution. While economic growth variables captured in the model include gross domestic product, capital

accumulation, human capital and government spending. The regression analysis employed was based on the neoclassical growth model of Mankiw, Romer and Weil (1992), and he found that corporate income tax, personal income tax and social security contribution were harmful for economic growth. The study could not confirm the impact of value-added tax on economic growth, but the property tax had insignificant impact. He then concluded that OECD countries should reduce corporate and personal income taxes and place more emphasis on indirect taxes such as tax on consumption.

Poulson and Kaplan (2008) carried out a study on the impact of taxes on economic growth in the United States of America using data covering the period 1964 – 2004. The results of their study revealed that higher marginal tax rates had significant negative impact on economic growth in the States. Similarly Stoilova and Patonov (2012) examined the impact of taxation on economic growth in 27 European Union countries, using data for the period 1995 - 2010. They conducted comparative cross-country analysis as well as regression analysis. Tax revenue variables include tax on land, building and other structures, social contributions, tax on production and imports and value-added tax. The study found that direct tax revenue made more efficient impact on economic growth in EU countries than indirect taxes.

Ogbonna and Appah (2012) examined the impact of tax reforms on economic growth in Nigeria, using data collected from the Statistical Bulletin of the Central Bank of Nigeria (CBN) for the period 1994 - 2009. They employed descriptive statistics and econometric models such as White test, Ramsey RESET test, Breusch Godfrey test, Jacque Berra test, Augmented Dickey Fuller test, Johansen test, and Granger Causality test to analyze their study data. They found that tax reform variables such as petroleum profit tax, companies' income tax, value-added tax, education tax, personal income tax, and custom and excise duties had significantly positive impact on economic growth in Nigeria. Thus their conclusion that tax reforms improved government revenue.

In a related study, Umoru and Anyiwe (2013) investigated the correlation between the New National Tax Policy and economic growth in Nigeria, using co-integration technique and error correction model to analyze data. They stated that taxes can be structured into direct and indirect. Examples of direct taxes include petroleum profit tax, companies' income tax, education tax and personal income tax. While indirect taxes include custom and excise duties, and value-added tax. The results of their analysis revealed that direct taxation revenue had significant positive relationship with economic growth, while indirect tax revenue had insignificant but negative impact on economic growth in Nigeria. They concluded that Nigeria's tax policy towards indirect taxation lack justification, rather the country should strengthen the structures of direct taxation.

Ihenyen and Mieseigha (2014) examined taxation as a financial instrument for economic growth in using data obtained from the Central Bank of Nigeria for the period 1980 – 2013. They used corporate income tax and value-added tax as the independent variables and proxy for taxation. These were regressed against economic growth measure by gross domestic product (GDP), the dependent variable. The study employed Ordinary Least Squares technique (OLS) data, and the results revealed that corporate income tax and value-added tax impacted positively on gross domestic product. They therefore concluded that taxation is an instrument of economic growth in Nigeria.

In a similar study, Edame and Okoi (2014) examined the impact of taxation on investment and economic development in Nigeria, using data covering the period 1980 – 2010. They collected

data on corporate income tax, personal income tax and gross domestic product (the study variables) from the Statistical Bulletin of the CBN and the National Bureau of Statistics. They defined three regression models, investment, gross domestic product and government expenditure models, and employed multiple regression technique to analysis the study data. The study found that corporate income tax and personal income tax were negatively related to investment, but positively related to government expenditure. Therefore, they concluded that taxation is an instrument for government expenditure. Also, Chude and Chude (2015) investigated the impact of company income tax on the profitability of brewery companies in Nigeria. The study employed the Augmented Dickey Fuller Unit Root test, Johansen co-integration test and Ordinary Least Squares technique to analyze time series secondary data. The study revealed positive correlation between taxation and profitability.

Ayuba, (2014) investigated the impact of non-oil tax revenue on economic growth in Nigeria, using secondary data collected from the Statistical Bulletin of the CBN from the period 1993 - 2012. The study employed ADF Unit Root test, error correction model and OLS technique to analyze the study data collected on the variables. The results showed that non-oil tax revenue impacted positively on economic growth in Nigeria.

## METHODOLOGY

This section provides the methodology adopted for the study of the impact of company income tax and value-added tax on economic growth in Nigeria. The study adopted a longitudinal research design, using secondary time series panel data for the period 2005 – 2014. This time period was considered long enough to establish a causality relationship between the study variables, whereas, the availability of data relevant for the study was also a justification for determining this time period. Data was collected on the study variables (CIT, VAT and GDP) from the Statistical Bulletin of the CBN. This source of data is considered reliable and dependable.

This study adopted the multiple regression analysis with Ordinary Least Square (OLS) econometric technique for data analysis. This technique possesses the unique property of Best Linear Unbiased Estimator (BLUE) as well as the desirable qualities of consistency and efficiency. The statistics tested for the variables in the regression equation include coefficient of determination ($R^2$), T- test, F-test and Durbin Watson (DW) statistics. The Statistics Package for Social Sciences (SPSS) 20 for windows was the statistical computer software used to run the analysis. Where: Coefficient of Determination ($R^2$) measures the explanatory power of the independent variables on the dependent variable; Student T-Test measures the individual significance of the estimated coefficients of the independent variables; F-test tests for the overall statistical significance of the models, which was used to generalize the hypotheses; and the Durbin Watson (DW) Statistics test tests for the auto correlation of the variables in the regression equation.

### Model Specification

To achieve the objectives of this study and test the hypotheses the following regression model was developed to capture the causality relationship between CIT, VAT and GDP:

*GDP = f (CIT, VAT)*

The above model was translated into a specific regression equation as stated below:

$GDP = \beta_0 + \beta_1 (CIT) + \beta_2 (VAT) + e$

Where

GDP = Gross domestic product, the dependent variable and proxy for economic growth

CIT = Company income tax, one of the independent variables

VAT = Value-added tax, the second independent variable

$\beta_0$ = is the constant term

$\beta_1, \beta_2,$ = are the coefficients of the independent variables

$e$ = is the error term of the equation


## FINDINGS AND DISCUSSION

This study examined the impact of CIT and VAT on GDP, using OLS technique based the computer software package windows SPSS 20 version. The data so far collected for the study is presented in table 1 below, while the results of the analysis are in table 2.

**Table 1: Aggregate annual value of GDP, CIT and VAT from 2005 to 2014 in billions of Nigerian Naira**

| Year | GDP | VAT | CIT |
|------|-----|-----|-----|
| 2005 | 14,610.88 | 12.56 | 2,381.20 |
| 2006 | 18,564.59 | 12.82 | 2,643.79 |
| 2007 | 20,657.59 | 13.12 | 2,231.46 |
| 2008 | 24,296.33 | 12.99 | 3,265.30 |
| 2009 | 24,794.24 | 11.93 | 1,595.97 |
| 2010 | 54,204.80 | 14.22 | 2,698.01 |
| 2011 | 63,258.58 | 14.22 | 4,439.49 |
| 2012 | 71,186.53 | 14.56 | 4,012.99 |
| 2013 | 80,222.13 | 15.57 | 3,404.62 |
| 2014 | 89,043.62 | 15.57 | 3,396.86 |

*Source: CBN Statistical Bulletin 2014*

**Table 2: Regression results**

**Dependent variable = GDP**

| Variable | Coefficient | Std. Error | t-statisti | Prob |
|----------|-------------|------------|------------|------|
| **Const.** | **43063.20** | **42990.09** | **-3.165290** | **0.7262** |
| **VAT** | **20201.40** | **4931.357** | **4.096521** | **0.0064** |
| **CIT** | **1.141852** | **3.110845** | **0.367055** | **0.0194** |
| R-Squared | 0.902150 | Mean dependent var | | 46083.93 |
| Adjusted R-Squared | 0.853224 | S. D. dependent var | | 28527.42 |

| S. E. or regression | 10929.23 | Akaike info criterion | 21.72544 |
|---|---|---|---|
| Sum squared resid | 7.17E+08 | Schwarz criterion | 21.84648 |
| Log likelihood | -104.6272 | Durbin-Watson stat | 1.786693 |

*Source: Windows SPSS 20*

Table 2 above shows the summary of the regression results, that is, the correlation between CIT, VAT and GDP. From the results it is found that all the independent variables are significant and positively related to GDP. The results of this study supports the research findings of (Stoilova & Patonov, 2012), (Ayuba, 2014), Umoru & Anyiwe, (2013) and (Ogbonna & Appah, 2012).

The explanatory power of the model as given by the $R^2$ 0.90 or 90 per cent is statistically significant given the high value of the adjusted $R^2$ value of 0.85 or 85 per cent. This also means the independent variables jointly and adequately explained or accounted for changes in the dependent variable. The calculated Durbin Watson (DW) value is 1.7867 which is less than 2.0 indicated that there was no autocorrelation between the independent variables.

The regression model demonstrates a good fit given that about 85 per cent of the variation in the dependent variable (GDP) is jointly explained by changes in the behaviour of CIT and VAT. The relatively high adjusted $R^2$ of 0.85 or 85 percent showed that the model is a good fit.

CIT have statistically positive significant relationship with GDP, this is given the fact the Prob value of CIT is 0.0194, and this is less than the critical value of 0.05. Also VAT had statistically positive significant relationship with GDP given the Prob value of 0.006 and less than critical value of 0.05. This means that both CIT and VAT have positive effect on GDP. The results of the study analysis have shown that company income tax and value-added tax have positive impact on economic growth.

**CONCLUSION**

This study examined the impact of company income tax and value-added tax on economic growth in Nigeria. The study adopted gross domestic product as proxy for economic growth and the dependent variable, while company income tax and value-added tax were independent variables. Data on the variables for the period 2005 – 2014 was collected from the Central Bank of Nigeria Statistical Bulletin. The study employed OLS technique based on Windows SPSS 20 version to analysis the data. The findings from the statistical analysis of data revealed that company income tax and value-added tax have positive significant impact on economic growth in Nigeria.

Based on the above findings, the study recommended that the tax authorities in Nigeria should strengthen the tax administration system as tax revenue has been proven to be an important source of government revenue for sustainable development. The study also recommended that the tax authorities responsible for tax administration should upgrade the tax database to capture all potential tax-payers in order to broaden tax income. Government should embark on massive

public enlightenment campaign and carried out tax education among the citizenry to ensure voluntary tax compliance. Also, qualified tax professionals should be employed and trained regularly, and retained in the system of tax administration. Government should seriously work towards diversifying the revenue base of the economy as the reduction in the price of crude oil at the international market would adversely affect income from petroleum profit tax.

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