Okoror, Justina Adaku; Mainoma, Muhammadu A.; Uwaleke, Uche J.

Article

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Original Research Article

Companies Income Tax and Infrastructural Development in Nigeria

Justina Adaku Okoror[1], Professor Muhammadu A. Mainoma[2] & Professor Uche J. Uwaleke[3]
[1, 2] Department of Accounting, Nasarawa State University
[3] Department of Banking and Finance, Nasarawa State University

*For correspondence, email: justinagreat@yahoo.com

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Abstract

The aim of the study is to examine empirically, the impact of company income tax on infrastructural development in Nigeria. This study adopts an ex-post facto research design. In this study, secondary data retrieved from the CBN statistical bulletin, Federal Inland Revenue Service (FIRS) and National Bureau of Statistics for various years were used. The data covers the period 1981-2017. The data analysis technique that is utilized in this study is the dynamic Least Squares for co-integrated regression. The findings of the study reveal that company income tax is generally not characterized with threatening oscillations year-on-year over the period. This is a good sign for policy makers as it implies that over the business cycle, company income tax revenue will still maintain some considerable stability and hence it can be depended upon in the forecasting, budget planning and fiscal coordination. The results reveal that the coefficient is positive and statistically significant at 5% level. Therefore, we reject the null hypothesis that CIT has no positive and significant impact on Infrastructural development in Nigeria. The study recommends that government should focus on Improving and stimulating Company Income tax *revenue. The positive relationship between Company Income Tax and Infrastructural development is an indication that a higher company Income tax will lead to increased infrastructural development in Nigeria hence efforts should be geared towards expanding the tax base, ensure transparency in collections proper utilisation*

Key words: Company income tax, infrastructural development, dynamic least squares.

JEL Classification Codes: *H250*

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1. INTRODUCTION

The Global Alliance for Tax Justice (2015) considers tax as the most important, reliable, beneficial, and sustainable source of finance for development. Hence, less developed countries are being advised to have a long-run aim of replacing foreign aid with tax revenue especially in Africa. Therefore, to ensure sustainable economic development, generated tax revenue must be sufficient, efficiently and judiciously utilized. The political economy theory of fiscal policy suggests that taxes may either promote or inhibit economic growth through its effects on decisions regarding spending in infrastructural development.

By virtue of section 8 (1) of the companies income tax Act 1990, taxes are payable as specified upon profits of any company accruing in, derived from, brought into, or received in Nigeria in respect of amongst others, any trade or business for whatever period of time the trade or business may have been carried out. With the introduction of the Companies Income Tax (Exemption of Profit) Order 2012 which provides tax incentives to companies on any expenditure incurred on infrastructure which they incur in any accounting period ended after 27 April 2012, an invigorated impact of CIT on infrastructural development is expected though this is not reflected in the public expenditure angle as it constitutes private sector initiative and on the over all infrastructural development is better off. The Order, which elapsed in 2017, provided an opportunity for companies to claim additional 30% of the cost of providing completed public infrastructure/facilities as an allowable deduction in arriving at such company's assessable profits.

In Nigeria, some provisions were included in the CIT Act with the aim of incentivizing private participation in government infrastructure projects. Specifically, Section 34 of the CIT Act provides for a rural investment allowance where a company incurs capital expenditure on the provision of certain infrastructural facilities such as electricity, water, tarred road or telephone. Also, Section 40 provides for an investment tax relief where a company has incurred an expenditure on certain infrastructural projects. Recently, the Federal Executive Council (FEC) also approved the Road Trust Fund (RTF) Scheme in October 2017 with the aim of increasing private sector participation in the construction and rehabilitation of Federal roads in Nigeria by incentivizing investment through tax credit. Following detailed negotiations and relevant consultations with relevant parties, the RTF Scheme has now metamorphosed into the Road Infrastructure Development and Refurbishment Investment Tax Credit Scheme ("The Scheme"). The Scheme, which was introduced in January 2019 via the Presidential Executive Order 007, provides a platform for companies to recover 100% and an uplift of the project cost incurred by them in the construction and refurbishment of eligible roads as tax credit against CIT payable.

The focus of the study is to examine the impact of company's income tax on infrastructural development in Nigeria. The stability of income taxes revenue for Nigeria and the potential for its expansion suggest that it holds enormous prospects for impacting positively on infrastructural development in Nigeria if properly utilized. Current trend is suggestive of the fact that the Nigeria economy and infrastructural projects overwhelmingly lies on the revenue accruing from crude oil. However, empirical validation of the nexus between Company Income Tax and infrastructural development

might be useful in making vital decisions on the importance of Company Income Tax on infrastructural development in Nigeria.

Objective

The specific objective of the study is to examine the impact of company income tax on infrastructural development in Nigeria.

Statement of Problem

It's generally agreed that investment in modern and robust infrastructure lays the foundation for economic growth and development (Mendal, 2000).However, Nigeria is trailing behind in Infrastructure despite revenue from different sources. Indeed, the World Economic Forum (WEF) in her 2016-17 report on global competitiveness index ranks on infrastructure, Nigeria was ranked very low at 132 out of 138 countries. Recently a World Bank report stated that for Nigeria to fill its infrastructure gaps, an annual expenditure of $14.2billion would be required annually for the next 10 years. This is an indication that decades of neglect in the provision of public infrastructure in Nigeria by successive government. has jeopardised the Nation's economic prospects and development..Empirical investigation into the relationship between company income tax and infrastructural development in Nigeria has been looked into by some scholars. For example, Ayanduba and Aronwman (2015) Oladipupo and Ibadin (2016) ad Oliver, Edeh and Chukwuani (2017). However, there are key limitations observed in these studies cited above. Firstly, the stationarity conditions of the data were not ascertained for the necessary measures to then be employed. This study addresses this limitation by conducting unit root testing for the data to address the stationarity issues and thereby avoiding the case of spurious regression . Secondly, the studies were concerned with the relationship between total taxes generated in Nigeria which included Oil and Non oil and infrastructural development. There is need for scholars to review the impact each type of tax revenue has on infrastructural development so Government efforts in revenue mobilisation can be channelled to specific type with positive relationship on infrastructural development. Hence this study is filling the gap by focusing on impact of an old type of tax which has been in existence since 1961, Company Income tax and Infrastructural development.

Hypothesis

H_{01}: Company income tax has no positive significant impact on infrastructural development in Nigeria. The remainder of this paper is structured as follows; Section two examines the literature . Section three examines the theoretical framework. Section four examines the analytical frame work and proposed model and section five is the conclusion.

2. LITERATURE REVIEW

Conceptual Framework

2.1 Infrastructural development

According to Fourie (2006) infrastructure can be looked at from two perspectives. Firstly is by using the features and this defining it in the light of the characteristics and the second perspective involves identifying all infrastructural elements rendering services to the public such as transport, communications, education, energy and water supply. Going by the first perspective, Fourie (2006) defines infrastructure as capital goods that produce public services and this is because in essence infrastructure exhibits the main features of public good such as non-excludability and positive externalities (Fedderke and Garlick, 2008). Though strictly, infrastructures do not necessarily reflect these feature in the same degree and thus in some cases,

Srinivasu and Srinivasa-Rao (2013), defined infrastructure as the stock of all basic facilities including capital equipment that are critical for the sustenance of productive activity and for the proper functioning of a

country. It is an "umbrella" term for several elements both social and economic covering "Social Overhead Capital", "Economic Overheads", "Overhead Capital" and "Basic Economic Facilities" (Srinivasu & Srinivasa-Rao, 2013). Hirschman (2008) is of the view that an activity can be seen as being a component of infrastructure if it aids the continuity and sustenance of other social and economic processes, if it is such that the provision is by public agencies, or where its ownership is private, it is under public control and if it is technically indivisible (Srinivasu and Srinivasa-Rao, 2013). Although there is yet no universally accepted definition of infrastructure, a common thread going across almost all of the definitions is the idea that infrastructure refers to capital goods provided with a long-term perspective, facilitated by either government or the private sector (Baldwin and Dixon, 2008; Snieska and Simkunaite, 2009).

Snieska and Simkunaite, (2009) in their perspective distinguished between two components of infrastructure, namely, economic and social infrastructure. Economic infrastructure is depicted as the type of infrastructure that is responsible for driving and stimulating economic activity, such as, roads, telecommunications, electrical lines, highways, railroads, airports, seaports, supply and sanitation (Fourie, 2006). On the other hand, social infrastructure refers those types of infrastructure that related to the improvement of human welfare and living standards. It is believed that such social infrastructure promotes health, educational and cultural standards of the population. They include; hospitals, schools, universities, libraries, clinics, hospitals, parks and statues.

According to the Economic policy Institute (2012), infrastructural development deals with the improvement of the country's capital stock by financing investment in core basic physical infrastructure such as rail lines, roads, airports, bridges and water distribution, and human capacity development. On the overall, these investments drives economic performance positively for the country, encourages the inflow of foreign direct investment, stimulates local entrepreneurship and small scale businesses which results in economic growth and the improvement of the country's productive capacity and welfare.

IMF (2015), defines infrastructural investment as the overall public gross fixed capital formation (GFCF) and covers the "total net value of general government acquisitions of fixed assets during the accounting period, plus variations in the valuation of non-produced assets (e.g., subsoil assets)". using an expenditure paradigm. The authors opine that infrastructural investments are in themselves public or budget expenditure which may be done annually to develop infrastructure in certain areas and hence increase the already existing public physical capital stock. This includes building of roads, ports, schools, hospitals etc. This view is similar to the definition of public investment in national accounts data, namely, capital expenditure. The authors are of the view that one of the factors that have put more focus on the need for countries to accelerate their infrastructural drives is the renewed emphasis on achieving the MDGs through "big push" strategies built around increasing the levels of investment.

Furthermore, The breakdown of the Nigeria's Infrastructural Master Plan shows that energy will gulp $1billion, transportation $775billion, agriculture, water and mining $400billion, housing and regional development $350billion and ICT $325million, social infrastructure $150billion and vital registration and security $50billion; Nigeria Infrastructure Advisory Facility 2014). Ukanwah (2018) notes further that this Plan paints a vivid picture of the huge investment gap in Nigeria infrastructure development.

$775billion required for the transport sector portrays the dire state of the nation's transport infrastructure.

According to the African Development Bank (2014), out of the 197,000km of federal road network, only 21km/sq.km (18%) is paved. The government provides only 24% of funding requirements. On the other hand, experts estimate that Nigeria has a 17million housing deficit. This can be bridged if the nation can provide 1million housing unit per year for the next 17 years. These statistics show how far behind Nigeria is in infrastructure development. Resources wise, the federal government cannot bridge this gap without private investment. It recognizes this challenge in its National Policy on Public Private partnership by admitting that it needs to make massive investment beyond the means available to it in order to bridge the infrastructure gap. And that it believes the private sector can play an important role in providing some of this additional investment through Public Private Partnership**.** Meeting these illustrative infrastructure targets for Nigeria would cost $14.2billion annually through 2015, most of it for federal infrastructure spending.

2.1.2 Company Income Tax

Company Income Tax Act is the enabling law for taxing companies in Nigeria/ The Act was first introduced in 1961. Thereafter, it has been subjected to several modifications and amendments before coming up with the latest Act 2007. The Federal Inland Revenue Services (FIRS) administers the companies' income tax . company's income is subjected to tax based on total of profit or chargeable profit with the exclusion of companies involved with exploration, drilling and extraction of petroleum. Non - resident companies are chargeable to tax in Nigeria if the profits / gains are connected to the activities executed in Nigeria. Tax is payable yearly on the income generated by an corporate entities at a rate of 30% (Adereti 2011).

As indicated by Ola (2006), if the test of fairness, convenience, certainty,, and administrative efficiency is applied it would be obvious that companies income tax administration in Nigeria does not measure up to standard . Indeed Nigeria will score low considering this accompanying focuses: i. Improper checking and inconsistent monitoring, self employed entrepreneurs and micro and small companies dodge payment of taxes. Festus and Samuel (2007) in their research on companies income tax and the Nigerian economy, concluded that lack of adherence to tax laws and guidelines is still rooted in the tax system due to ineffective internal control despite the fact that companies income tax is a major source non oil tax for government.. There is the necessity for general overhaul and reform of the in the Nigerian company income tax system. The company income tax made provisions for some exemptions. The assessable profits or income of such exempted companies are not liable to tax. Some companies excluded from payment company income tax includes, non-profit organisations, pioneer companies, companies established by statute, (whether federal, state or local government), export companies with emphasis on spare parts, equipments and raw materials,, companies enjoying three years tax holiday, such as companies involved with mining of solid minerals, and companies supplying inputs to manufacturing organizations. The current company income tax rate is 30% though the Act also provides for 20% tax rate for specialized companies with maximum of one million naira (N1M) turnover enjoyable for a maximum period of five years. In Nigeria, different Company Income Tax rate regimes have existed from 1961 compared to Nigeria with a company income tax rate of 30%, Canada has a low rate of 16.5% with Germany accounting for the lowest rate of 15%, Romania 16% and Egypt 20%.

Where in any assessment year, a company made a loss from all its activities, or where the ascertainable total profit results in no tax payable or results in minimum tax, the company shall be required to pay a minimum tax as prescribed in S. 33 (2) of CITA 2007.

2.2Public Debt

Public debt refers basically to the monies that are owed by all levels of government and its agencies which covers both federal or central government, state government and also the local government. These monies may either be owed to individuals or agencies that are within the country or even to those that are outside of the country (Nzotta, 2004). Obadan, (2004) explaining the debt situation for Nigeria notes that the country began to witness external debt problems from the early 1980s, due to the drop in as prices of oil in international market that caused a reduction in foreign exchange earnings of the country

According to the definition given by the IMF (2005) debt can be seen as a liability that is represented by any formal equivalent and it is owed to other parties. The World Bank (2008:12) gives a wider perspective to the issue by looking at debt as the "outstanding liability comprising of principal and interest or principal amount without interest owed by residents of a Country to non residents in form of contractual obligation". Thus the basic point here is that debt deals with financial resources owed and in this context of public debt, we refer to it as those owed by the government or its agencies.

2.3. Empirical Review

Ayanduba and Aronwman (2015) sought to examine the effect of federally collected tax revenues Nigeria's infrastructural development. As already indicated the study examined just taxes collected by the federal government and excludes that of the states or local government. The methodological approach used in the study involves the use of a longitudinal research design was because of the time series nature of the variables. The Error Correction Model was used in the estimation of the specified models. Looking at the findings, it is proven empirically that CIT exerts a significant impact infrastructural development in Nigeria. However, the study period stopped at 2014 and thus there is the need to also consider the more recent periods.

Oliver, Edeh and Chukwuani (2017) study looked critically into the effect of tax revenue on infrastructural development of Nigeria. Particularly, the study looked at revenue from company income tax (CIT) alongside other taxes. The methodological approach used in the study includes the adoption of the ex-post facto research design, use of secondary data covering the period 2006-2015. The Data were sourced from the Central Bank of Nigeria Statistical Bulletin and the Federal Statistical Bureau. The analysis of the data was done using the multiple linear regression technique. The outcome of the study reveals that no significant relationship was found between company income tax and Infrastructural Development in Nigeria. Again the study failed to test the data for stationarity and this is important because unstationary data will yield spurious regression results.

Ofoegbu, Akwu and Oliver (2016) investigate the impact that tax revenue has on the economic development in Nigeria and to also see if using the human development index (HDI) and using GDP as measures of development will yield significantly different results. The methodological approach of the study involves the adoption of the annual time series design with data coverage for the period 2005 -2014. The method of data analysis used for the estimation is ordinary least square (OLS) regression technique and two separate estimations were done to reflect the HDI and GDP measures. Findings show a positively and significantly relationship between tax revenue and

economic development. The result also reveals that measuring the effect of tax revenue on economic development using HDI gives lower relationship than measuring the relationship with GDP. However, the study failed to test the data for stationarity and this is important because unstationary data will yield spurious regression results.

Doki and Abubakar (2015) examine company income tax in the light of its potential for alternative financing for sustainable development in Nigeria. This inquiry has become important because of the need to diversify and increase the revenue base of the government which is currently in distress owing to many factors. The study employed Ordinary Least Square (OLS) method and Co integration Test over the period of 1987 – 2013 to analyse the long-run relationship between company income tax and revenue generation in Nigeria. Results show that increasing the contribution of CIT by one per cent increase revenue generation by 0.42%. The study recommends that, since CIT has shown potential as source of alternative income, conditions for companies to flourish so that taxes from them can be beneficial and should be set in the long-run.

Ekeoha, Ekeoha, Malaolu, Onyema (2012) investigated revenue implications of Nigeria's tax system from 1970 to 2008, using Co-integration test and posited that company income tax is most economically sensitive, responding positively to changes in the current state of the economy, moving in close step with the economy and falling when the economy declines. Worlu and Emeka (2012) examined the impact of Tax Revenue on the economic growth of Nigeria between 1980 and 2007 using its effect on infrastructural development. They reported that tax revenue has direct and indirect relationships with the infrastructural development. The authors argue that the channels through which tax revenue affects economic growth in Nigeria are infrastructural development, foreign direct investment, and GDP. They stressed that availability of infrastructure stirs up an investment that in turn brings about economic growth Adegbie and Fakile (2011) concentrated on the Company Income tax and Nigeria economic development relationship. Using Chi-square and multiple linear regression analysis in analyzing primary and secondary data respectively, they concluded that there is a significant relationship between company income tax and Nigerian economic development.

2.4 Theoretical Framework

Political Economy Theory of Fiscal Policy

The theoretical underpinning for this study builds on the political economy theory of fiscal policy. The theory develops the perspective that governments raise tax revenues and then use the collected resources for the financing of infrastructural investment to improve the availability of public goods and services and pursue the provision of specific quality public infrastructure. The theory outlines quite clearly, that the reason for the collection of tax revenues is chiefly to improve the "fiscal capacity" of the state to undertake infrastructural development spending and investment that can then go a long way to stimulate growth and economic performance. Empirical evidence have shown that it is often the case that in periods of low tax revenues, one area that is worst hit is that of public spending on infrastructure (Palley, 2006; Schade, 2005; Kumar et al. 2007; Gupta et al. 2014). A plausible reason for this may be because the positive gains from investment in infrastructure may not be immediate and comes with a long lag as compared to other direct spending by government such as transfers and wage raises which tends to have immediate gains and benefits that affects the generality of the people. However, it suffices to note that the level of the effect of revenue generation on public investment spending may differ, given

differences in macroeconomic structure and conditions of the economy and level of development (Drether, et al. 2006; Kumar, et al. 2008). Therefore, within the context of the political theory of fiscal policy, the challenge now especially for developing economies like Nigeria is regarding policy decisions made by the government, which decides on how best to allocate the collected limited resources into alternative competing sectors (Battaglini and Coate, 2008).

3.METHODOLOGY

This study adopts an ex-post facto research design.In this study, secondary data retrieved from the CBN statistical bulletin, Federal Inland Revenue Service (FIRS) and National Bureau of Statistics for various years was used... For the estimation of the models, the method of data analysis that will be employed in this study is the co-integrated regression

Model Specification

The model adapts those of Ayanduba and Aronwman (2015) and Oliver, Edeh and Chukwuani (2017). The model for the study is presented below;

$INFDEV= \lambda_0 +\lambda_1 CIT+\lambda_2 DEBT+\mu$---------- (1)

Where:

INFDEV= Infrastructural development measured using Capital expenditure

CIT= Company Income tax

DEBT= Total federal government Debt (Control Variable)

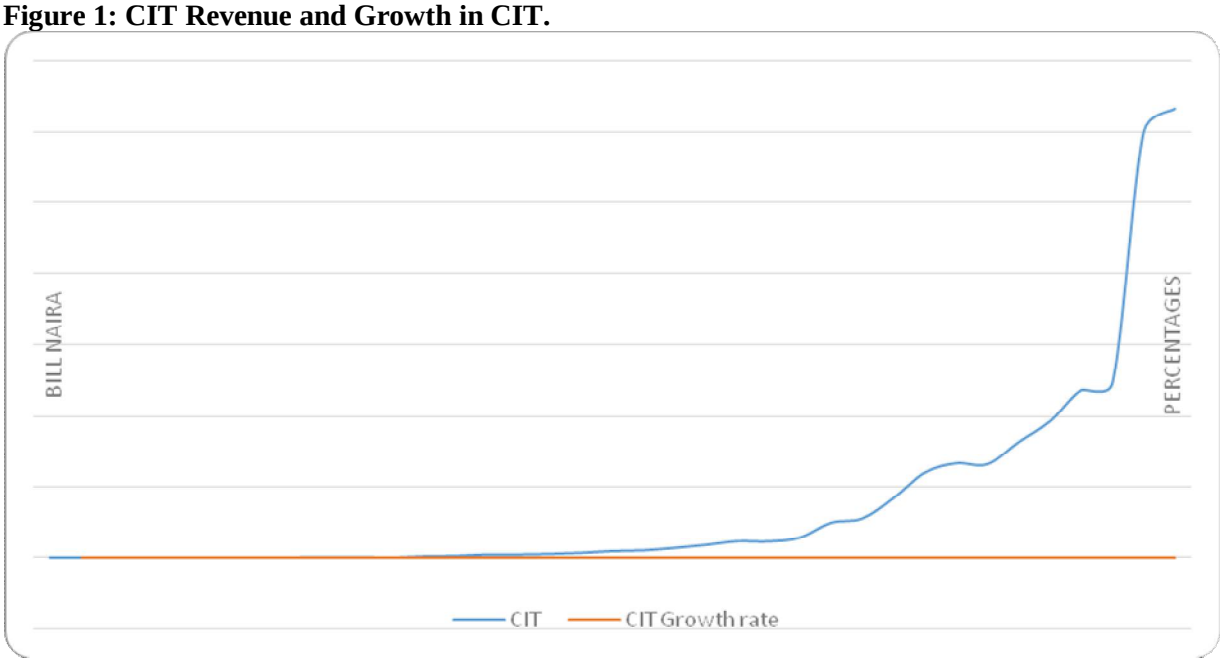
$\lambda_0 -\lambda_3$ = slope coefficients

μ = error term

5.RESULTS AND DISCUSSION

Figure 1 shows CIT revenue performance and growth in CIT from 1980 to 2017. As observed, statistics shows that CIT revenue has been on a steady rise from the beginning of the study to the end of the horizon. The growth rate shows some level of relative stability except n 1992 where a sharp spike was observed though this appeared not to persist as growth retuned back to its previous levels characterized by benign fluctuations over the period horizon.

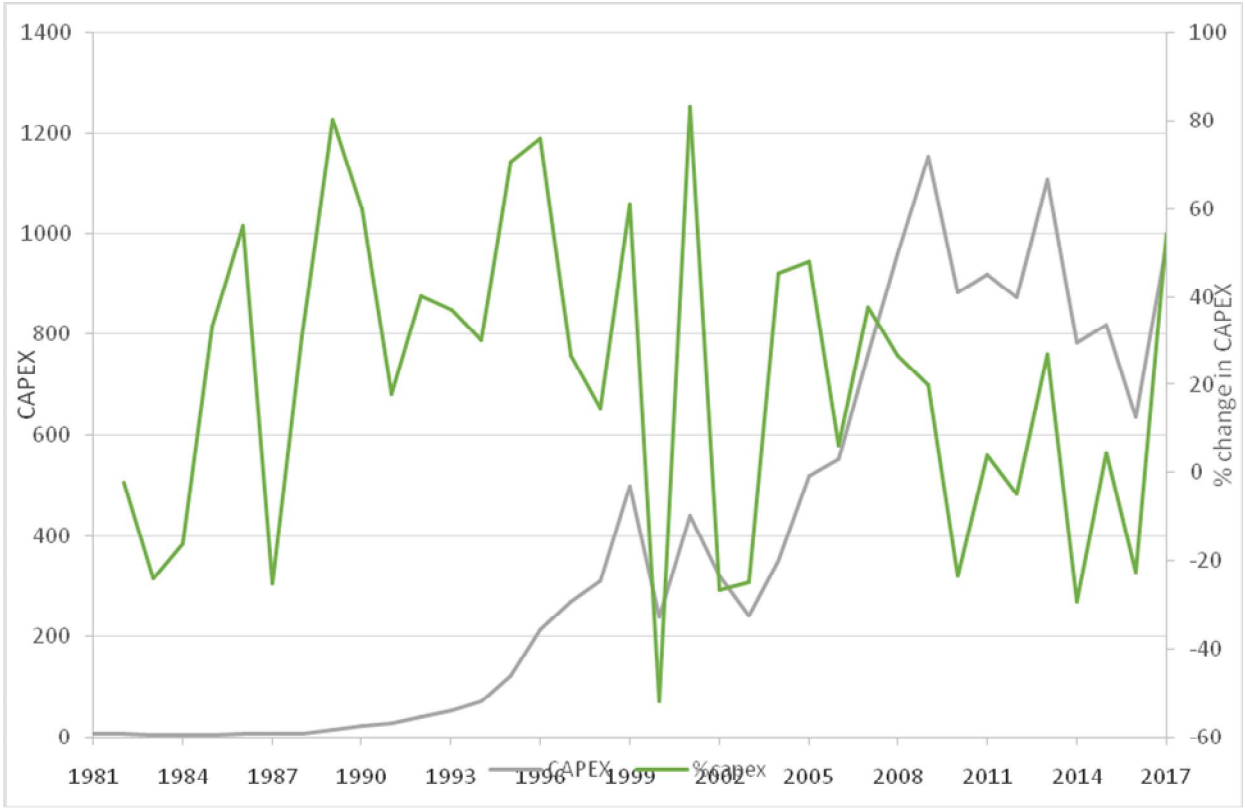
Figure 1: CIT Revenue and Growth in CIT.



Source: CBN, FIRS (2018) and researcher graphical representation

Figure 2 examines the Capital expenditure (CAPEX) data and the growth levels of capital expenditure. As observed from the trend below, a steady growth in capital expenditure can be observed from the beginning of the study period 1981-1999. In 2000, we observed that the trend steeped downward as capital expenditure dropped from 498.0276 billion in 1999 to 239.4509 billion in 2000. A major reason for this is the shortfall in revenue especially resulting from the fall in oil prices. In 2001, CAPEX increased to 438.6965 billion but again dropped to 321.3781 billion in 2002 and also declined further to 241.6883 billion in 20003. In 2004, we observed an increase to 351.3billion and this further rose to 519.5 billion in 2005. In 2006, we observed a further rise in CAPEX to 552.3858 billion and then to 759.323 in 2007. Consistent rise in CAPEX is observed up until 2012 where it dropped to 874.834 billion from 918.5489billion in 2011. A rebound in CAPEX is observed in 2013 moving up to 1108.386 billion and then falling again to 783.1224 billion in 2014. 2015, 2016 and 2017 CAPEX stood at 818.365billion, 634.8036billion and 979.5billion respectively. From the graph below, the change in CAPEX depicts a trend characterized by several spikes and oscillations indicating the high vulnerability of CAPEX to shocks especially those coming from oil prices.

Figure 2: Capital Expenditure (CAPEX) and % change in CAPEX



Source: CBN, FIRS (2019)

Table 1: Descriptive Statistics

	CIT	CAPEX	DEBT
Mean	453797.5	368.1496	3226.285

Median	48650.00	255.6700	1699.660
Maximum	5516900.	1152.797	14537.12
Minimum	517.0000	4.100100	13.52380
Std. Dev.	1043809.	372.3315	3589.829
Skewness	3.706296	0.654023	1.307164
Kurtosis	17.34544	2.058880	4.261853
Jarque-Bera	391.1073	3.895033	12.64047
Probability	0.000000	0.142628	0.001800

Source: Researchers compilation (2019).

The summary/ descriptive statistics is presented for the variables as shown in the table above. As observed, CIT has a mean value of 453697.5 (bn) with standard deviation of 1043809 also indicating significantly high volatility in CIT revenue within the period under review. CAPEX has a mean value of 368.1496 (BN) with standard deviation of 372.3315 also indicating significantly high volatility in CAPEX within the period under review. The Maximum and minimum values are 1152.797(bn) and 4.100 (bn) respectively. DEBT has mean value of 3226.2 (bn) with maximum and minimum values of 14537.12 (bn) and 13.5238 (bn) respectively The Jacque-bera statistic and the p-value indicate that the series are normally distributed and the presence of outliers are unlikely in the series and their residuals.

Table 2. Unit root test Results

Unit root test at levels			
	ADF-Test Statistic	95% Critical ADF Value	Remark
CIT	4.189	-2.96	Non-stationary
INFDEV (CAPEX)	**0.497**	**‘’**	**‘’**
DEBT	1.8372		
Unit root test at 1st difference			
	ADF -Test Ccvtatistic	95% Critical ADF Value	Remark
CIT	4.1819	2.96	Stationary
CAPEX	7.972	‘’	‘’
DEBT	6.9632		

Source: Researchers compilation (2019).

The Augmented -Dickey Fuller (ADF) test is employed in order to analyse the unit roots. The results are presented in levels and first difference. This study determine in comparative terms, the unit root among the time series and also to obtain more robust results. The result indicates that all of the variables at levels except for CIT have ADF values that are less than the 95% critical ADF value of 2.96. The implication of this is that only these variables are stationary in their levels while DEBT and CAPEX are not. Moving forward, we take the first differences for all the variables and perform the unit root test on each of the resultant time series. The rationale behind this procedure is that Box and Jenkins (1976) have argued that differencing non-stationary time series will make it attain stationarity. The result of the unit root test on these

variables in first differencing shows that all variables are adjudged to be stationary. Thus we accept the hypothesis that the variables possess unit roots. Indeed the variables are integrated of order one i.e. I(1) with ADF values of 4.1819 for CIT, 7.972 for CAPEX, and 6.9632 for DEBT.

Table 3. Co-integration Test (Trace Statistics)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5% Critical Value	Prob.**
r = 0*	0.926747	90.13013	47.85613	0.000
r ≤ 1*	0.70763	37.85351	29.79707	0.0048
r ≤ 2*	0.476187	13.25878	15.49471	0.1057

Source: Researchers compilation (2019).

Table 4: Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
r = 0*	0.926747	52.27662	27.58434	0.000
r ≤ 1*	0.70763	24.59473	21.13162	0.0156
r ≤ 2*	0.476187	12.93241	14.2646	0.0803

Source: Researchers compilation (2019).

Following the unit root test results shown in table 2 which indicate that the time series variables are integrated of order one I(1), the next step is to examine whether or not there is at least one linear combination of the variables that is integrated of order zero, I(0), and hence, if there exists a stable and non-spurious co-integrated relationship in the long run between time series variables (Miguel, 2000). The Johansen approach determines the number of co-integrated vectors for any given number of non-stationary variables of the same order. The study utilizes the Johansen co-integration methodology in conducting the co-integrating properties of the data. Using the trace and maximum Eigen-value statistics, the results for the test rejects the null hypothesis that there is no co-integrated vector and hence the variables are co-integrated.

Table 5: Multicollinearity Test using Variance inflation Factor (VIF) Test

Variable	Centered VIF
CIT	1.376
DEBT	1.6747

Source: Researchers compilation (2019).

Multicollinearity among the independent variables implies that they are perfectly correlated. If there exists perfect correlation between the independent variables, the parameter coefficients will be indeterminate. Variance inflation factors (VIF) of 10 and above suggest signs of serious multicollinearity in the variables. As seen from the table above, the vif's for all the explanatory variables are all less than 10 indicating that the threat of serious collinearity is unlikely.

Table 6. Regression Result

Variable	*Aprori Sign*	*Beta, standard error p-values*

C		146.135* {78.807} (0.0785)
CIT	+	0.0007* {0.0003} (0.0366)
DEBT	+	0.0378 (0.0295) [0.2151]
R^2 = 0.905, Adj R^2 = 0.848, S.E of regression = 146.64, F-stat = 0.966, p(f) Stat=0.000,		

Source: Researchers compilation (2018).

From table 6, the R^2 of the regression stood at 0.905 which suggest that the model explains about 90.5 of systematic variations in the dependent variables with an Adj R^2 of 0.848.The result reveals the structural coefficients of the variables and their relationship with Infrastructural development. The coefficient and p-values for CIT; 0.0007 {0.0366}, reveals that CIT has a positive and statistically significant impact on at 5% level. The result suggests that an increase in CIT has a positive impact on Infrastructural development. The coefficient and p-values of DEBT,0.0378 {0.2151} reveals that DEBT a positive but not statistically significant impact on Infrastructural development at 5% level.

Table 7 Post -Estimation diagnostics

Breusch-Godfrey Serial Correlation LM Test:	F-statistic = 1.581	Prob (f) = 0.2585
Heteroskedasticity Test: Breusch-Pagan-Godfrey	F-statistic= 2.227	Prob (f) =0.8294
Ramsey Reset Test	F-statistic= 2.603	Prob (f) =0.1099

Source: Researchers compilation (2018).

The Breusch-Pagan test for heteroskedasticity, Breusch-Godfrey Serial Correlation LM Test an Ramsey Reset test were performed as diagnostics for the estimation and the result confirms the absence of heteroskedasticity, serial correlation and omitted variables bias in the estimation and hence the post estimation diagnostics suggest that the estimation results are valid and satisfies the necessary statistical conditions.

The result reveals the structural coefficients of the variables and their relationship with Infrastructural development. The coefficient and p-values for CIT; 0.0007 {0.0366}, reveals that CIT has a positive and statistically significant impact on at 5% level. Therefore, we reject the null hypothesis that CIT has no positive and significant impact on Infrastructural development in Nigeria. The finding of the study is in tandem with Ayanduba and Aronwman (2015) which found empirically that CIT exerts a significant impact infrastructural development in Nigeria. Oliver, Edeh and Chukwuani (2017)study looked critically into the effect of tax revenue on infrastructural development of Nigeria. The outcome of the study reveals that no significant relationship was found between company income tax and Infrastructural Development in Nigeria. The study is also in tandem with Ofoegbu, Akwu and Oliver (2016) which show a positively and significantly relationship between tax revenue and economic development. The finding also supports that of Doki and Abubakar (2015) which results show that increasing the contribution of CIT by one per cent increase revenue generation by 0.42%. Also, the study finding is in line

with Adegbie and Fakile (2011) that concluded that there is a significant relationship between company income tax and Nigerian economic development and finally, the study is also in tandem with Worlu and Emeka (2012) which reported that tax revenue has direct and indirect relationships with the infrastructural development.

7. CONCLUSION AND RECOMMENDATION

The focus of the study is to examine the impact of company's income tax on infrastructural development in Nigeria. The stability of income taxes revenue for Nigeria and the potential for its expansion suggest that it holds enormous prospects for impacting positively on infrastructural development in Nigeria if properly utilized.. The conintegration results also shows that the variables have a long run relationship. The model estimation shows that theR^2 of the regression stood at 0.905 which suggest that the model explains about 90.5 of systematic variations in the dependent variables and the result reveals the structural coefficients of the variables and their relationship with Infrastructural development. The coefficient and p-values for CIT; 0.0007 {0.0366}, reveals that CIT has a positive and statistically significant impact on at 5% level. The result suggests that an increase in CIT has a positive impact on Infrastructural development. The post estimation diagnostics suggest that the estimation results are valid and satisfies the necessary statistical conditions. The study recommends stimulation of increased revenue from Company Income tax which can be achieved through expansion of tax base and minimisation tax leakages. This has become necessary as increase in company income tax has a significant impact on infrastructural development..

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APPENDIX

Appendix 1: DATA

	CIT	DEBT	CAPEX	FDDI
1981	550	13.5238	6.567	334.7
1982	562	23.827	6.4172	290
1983	787	32.7991	4.8857	264.3
1984	1004	40.4808	4.1001	360.4
1985	1101	45.2497	5.4647	434.1
1986	1235	69.8911	8.5268	735.8
1987	1551	137.5782	6.3725	2452.8
1988	1914	180.9859	8.3401	17182
1989	2997	287.4433	15.0341	13877.4
1990	3828	382.7075	24.0486	4686
1991	517	444.6525	28.3409	6916.1
1992	9554	722.2258	39.7633	14463.1
1993	12275	906.9808	54.5018	29660.3
1994	21878	1056.396	70.9183	22.2292
1995	22000	1194.6	121.1383	75.9406
1996	26000	1037.296	212.9263	111.2909
1997	33300	1097.683	269.6517	110.4527
1998	46200	1193.847	309.0156	80.749
1999	51100	3372.181	498.0276	92.79247
2000	68700	3995.634	239.4509	115.9522
2001	89100	4193.271	438.6965	132.4337
2002	114800	5098.886	321.3781	225.2248
2003	113000	5808.009	241.6883	258.3886
2004	140300	6260.595	351.3	248.2246
2005	244900	4220.979	519.5	654.1932
2006	275300	2204.721	552.3858	624.5207

2007	420600	2608.519	759.323	759.3804
2008	600600	2843.564	960.8901	971.5438
2009	666060	3818.467	1152.797	1273.816
2010	659595.9	5241.657	883.8745	905.7308
2011	816519.1	6519.69	918.5489	1360.308
2012	963550.6	7564.431	874.834	1113.511
2013	1180407	8506.311	1108.386	875.1025
2014	1229017	9535.542	783.1224	738.1972
2015	2999006	10948.53	818.365	602.0678
2016	5516900	14537.12	634.8036	1124.149
2017	68309293	18366.31	979.5	1069.417

Dependent Variable: CAPEX

Method: Dynamic Least Squares (DOLS)

Date: 04/12/19 Time: 14:20

Sample (adjusted): 1981 2017

Included observations: 33 after adjustments

Cointegrating equation deterministics: C

Fixed leads and lags specification (lead=1, lag=1)

Long-run variance estimate (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CIT	0.000727	0.000325	2.240020	0.0366
DEBT	0.037796	0.029525	1.280151	0.2151
FDDI	-0.012273	0.009291	-1.320986	0.2014
C	146.1351	78.80701	1.854341	0.0785

R-squared	0.904697	Mean dependent var	381.9878
Adjusted R-squared	0.847516	S.D. dependent var	375.5437
S.E. of regression	146.6469	Sum squared resid	430106.1
Long-run variance	38065.08		

Variance Inflation Factors

Date: 04/12/19 Time: 14:21

Sample: 1981 2017

Included observations: 32

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CIT	1.05E-07	1.387415	1.376822
DEBT	0.000872	2.674629	1.674738
FDDI	8.63E-05	2.080699	1.256150
C	6210.545	3.501054	NA

	CIT	CAPEX	FDDI	DEBT
Mean	453797.5	368.1496	2892.589	3226.285
Median	48650	255.67	639.3569	1699.66
Maximum	5516900	1152.797	29660.3	14537.12
Minimum	517	4.1001	22.2292	13.5238
Std. Dev.	1043809	372.3315	6241.569	3589.829
Skewness	3.706296	0.654023	2.934042	1.307164
Kurtosis	17.34544	2.05888	11.40356	4.261853
Jarque-Bera	391.1073	3.895033	157.5812	12.64047
Probability	0	0.142628	0	0.0018
Sum	16336709	13253.38	104133.2	116146.3
Sum Sq. Dev.	3.81E+13	4852075	1.36E+09	4.51E+08

Null Hypothesis: CIT has a unit root
Exogenous: Constant
Lag Length: 9 (Automatic - based on AIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		4.483737	1.0000
Test critical values:	1% level	-3.699871	
	5% level	-2.976263	
	10% level	-2.627420	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CIT)
Method: Least Squares
Date: 04/12/19 Time: 14:44
Sample (adjusted): 1990 2016
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CIT(-1)	11.90671	2.655532	4.483737	0.0004

D(CIT(-1))	-12.27743	2.709596	-4.531093	0.0003
D(CIT(-2))	-13.69553	2.765007	-4.953161	0.0001
D(CIT(-3))	-13.03972	3.296819	-3.955243	0.0011
D(CIT(-4))	-12.71029	3.151031	-4.033693	0.0010
D(CIT(-5))	-14.99565	2.799992	-5.355605	0.0001
D(CIT(-6))	-15.48620	2.866478	-5.402518	0.0001
D(CIT(-7))	-16.60734	3.753066	-4.425006	0.0004
D(CIT(-8))	-8.451272	4.527538	-1.866638	0.0804
D(CIT(-9))	-8.641483	3.825560	-2.258880	0.0382
C	7104.629	15832.82	0.448728	0.6596

R-squared	0.993187	Mean dependent var	204218.6
Adjusted R-squared	0.988929	S.D. dependent var	572260.5
S.E. of regression	60213.93	Akaike info criterion	25.14076
Sum squared resid	5.80E+10	Schwarz criterion	25.66870
Log likelihood	-328.4003	Hannan-Quinn criter.	25.29774
F-statistic	233.2373	Durbin-Watson stat	2.269812
Prob(F-statistic)	0.000000		

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

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		4.189997	1.0000
Test critical values:	1% level	-3.711457	
	5% level	-2.981038	
	10% level	-2.629906	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CIT,2)
Method: Least Squares
Date: 04/12/19 Time: 14:43
Sample (adjusted): 1991 2016
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CIT(-1))	15.18484	3.624069	4.189997	0.0008
D(CIT(-1),2)	-16.04201	3.788419	-4.234487	0.0007
D(CIT(-2),2)	-17.46927	4.128281	-4.231610	0.0007
D(CIT(-3),2)	-17.13000	4.624889	-3.703874	0.0021
D(CIT(-4),2)	-16.04642	4.421516	-3.629167	0.0025
D(CIT(-5),2)	-17.99983	3.948283	-4.558900	0.0004
D(CIT(-6),2)	-19.88063	4.205480	-4.727315	0.0003
D(CIT(-7),2)	-21.81837	5.266592	-4.142787	0.0009
D(CIT(-8),2)	-13.06874	5.830279	-2.241530	0.0405
D(CIT(-9),2)	-8.462619	4.762931	-1.776767	0.0959
C	125.3486	23042.51	0.005440	0.9957

R-squared	0.968055	Mean dependent var	96810.12
Adjusted R-squared	0.946758	S.D. dependent var	367981.2
S.E. of regression	84908.88	Akaike info criterion	25.83265
Sum squared resid	1.08E+11	Schwarz criterion	26.36492
Log likelihood	-324.8245	Hannan-Quinn criter.	25.98593
F-statistic	45.45534	Durbin-Watson stat	2.613086
Prob(F-statistic)	0.000000		

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

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.497969	0.8799
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CAPEX)
Method: Least Squares
Date: 04/12/19 Time: 14:45
Sample (adjusted): 1983 2017
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPEX(-1)	-0.031900	0.064060	-0.497969	0.6219
D(CAPEX(-1))	-0.383021	0.179628	-2.132303	0.0408
C	46.75099	33.34931	1.401858	0.1706

R-squared	0.141394	Mean dependent var	27.80237
Adjusted R-squared	0.087731	S.D. dependent var	143.7974
S.E. of regression	137.3449	Akaike info criterion	12.76468
Sum squared resid	603635.6	Schwarz criterion	12.89800
Log likelihood	-220.3820	Hannan-Quinn criter.	12.81070
F-statistic	2.634849	Durbin-Watson stat	1.770626
Prob(F-statistic)	0.087238		

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

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.972088	0.0000
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CAPEX,2)
Method: Least Squares
Date: 04/12/19 Time: 14:46
Sample (adjusted): 1983 2017
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CAPEX(-1))	-1.397340	0.175279	-7.972088	0.0000

C	34.93447	23.16412	1.508128	0.1410

R-squared	0.658223	Mean dependent var	9.852749
Adjusted R-squared	0.647866	S.D. dependent var	228.7983
S.E. of regression	135.7709	Akaike info criterion	12.71526
Sum squared resid	608313.2	Schwarz criterion	12.80414
Log likelihood	-220.5170	Hannan-Quinn criter.	12.74594
F-statistic	63.55419	Durbin-Watson stat	1.784613
Prob(F-statistic)	0.000000		