The Nexus between Taxation, Government Expenditure and Economic Growth in Nigeria (1981 to 2016)

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Abstract
This paper examines the relationship between taxation, government expenditure, and economic growth in Nigeria. The study used linear regression model in which economic growth is a function of taxation, government expenditure, investment, and export, following descriptive research design and using the national income accounting framework. The time series data used in the study was sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, and the analysis was conducted using Fully Modified Ordinary Least Squares (FM-LS) estimation technique. It was discovered that investment and export had a significant positive impact on economic growth, however government expenditure exerts a negative impact on growth in Nigeria. Meanwhile, taxation has no effect on economic growth in Nigeria, according to the estimate. As a policy tool, far-reaching effective internal control measures are needed to establish fiscal discipline in government expenditure. In addition, all non-productive activity and expenditures in government agencies and machinery must be discouraged.

Keywords: Taxation, Expenditure, Economic growth, Investment, FM-LS
JEL Classification: H50, H20, 040, C22

1. Introduction
The world is in a period of global rivalry, in which every country strives for growth and survival in order to maintain a competitive position in the global market. Economic growth is critical since it is a requirement for long-term development without which people's living standards will not increase. A high rate of economic growth not only attracts international attention, but it also prepares the route for development (Udoffia & Godson, 2016). Economic growth is described as a gradual rise in the economy's productive capacity through time, resulting in an increase in national output (Todara & Smith, 2006). The quantity of revenue earned for infrastructure provision determines a country's political, economic, and social progress. A well-structured tax system, on the other hand, is one way of producing

cash to fund needed infrastructure (Edame & Okoi, 2014). Without a feasible method of revenue to support the national expenditure that will achieve the desired aim, the goal of having a vibrant economy may be unreachable.

Taxes are a major source of revenue for the federal government (Nzontta, 2007). The government uses tax revenue to carry out its traditional functions, which include providing public goods, defending against external attack, and maintaining law and order. Taxation aids in resource mobilization, income inequality reduction, social welfare improvement, foreign exchange, regional development, and inflation management, among other things. One of the primary goals of taxing, according to traditional economists, was to increase government revenue (Edame & Okoi, 2014). Apart from the goal of producing money, the level of taxes has an impact on consumption, production, distribution, and, consequently, economic progress of a country (Edame & Okoi, 2014).

Taxation and government borrowing, according to the literature, distort economic activities because greater taxation in an attempt to support government expenditure reduces consumer income and aggregate demand, and so the economy's overall performance deteriorates. According to the Wagnerian school of thought, increased national output stimulates government spending (Udoka & Anyingang 2015). This shows that taxation and growth have a bi-causality relationship. Expansion of government spending leads to an increase in economic growth, which leads to an expansion of government spending via the multiplier effect, which was suggested by Keynes. As a result, allocating government spending into non-essential economic sectors results in a state budget imbalance and an increased risk of economic recession (Al-Fawwaz., 2016). The economic impacts of taxes, according to Musgrave and Musgrave (2004), include micro effects such as income distribution and resource efficiency, as well as macro effects such as capacity production, employment, pricing, and growth.

Government spending has grown in scope, scale, and magnitude over the years, thanks to changes in its size, structure, and growth. However, this increase has not resulted in significant economic progress, as many Nigerians continue to live in poverty (Udoffia & Godson, 2016). It appears that either these monies are not issued, or that they are released to fund an improper spending item, or that the funds have been misused, wasted, diverted, or are not completely utilized (Udoka & Anyingang 2015). The Nigerian government spends a significant amount of money that is mismanaged, misappropriated, misplaced, or even wasted, resulting in unsuccessful and unfinished government project execution. Despite the fact that the economy is expected to develop, the wealth gap between the rich and the poor continues to deepen (Udoffia & Godson, 2016). This was exacerbated by the issue of tax avoidance and evasion, as some Nigerians avoid and evade tax because they do not perceive the impact of paying tax and are unsure of how the funds will be used to help the economy improve (Abata, 2014). Table 1 shows that when the economic growth rate is 9.6, the growth rates of expenditure and taxation are 2.2 and 1.7, respectively, but when the economic growth rate is 9.9 in 1990, the growth rates of expenditure and taxation are 2.6 and 2.7, respectively, according to data from the Central Bank of Nigeria Statistical Bulletin. When the economy grew at a

faster rate in 2015, taxation and spending increased to 6.4 and 8.5 percent, respectively. This implies that if Nigeria's economic growth rate rises, so will its tax and expenditure rates.

Table 1: Growth of Economic Growth, Taxation and Government Expenditure 1985 to 2015

Year	Economic growth	Taxation	Government expenditure
1985	9.612728	1.76815	2.236445
1990	9.868152	2.65886	2.637628
1995	9.920993	4.334542	5.491991
2000	10.07274	4.919178	5.975208
2005	10.53143	5.133914	6.91085
2010	10.90801	5.691271	8.483047
2015	11.14221	6.443893	8.483047

Source: Central Bank of Nigeria Statistical Bulletin

Current study on this topic (Iyidogan & Turan, 2017; Adejare & Akande, 2017; Udoffia & Godson, 2016; Saidin, Basit & Hamza, 2016) focuses on how the composition of public expenditure influences a country's growth rate, as well as the distinction between productive and wasteful expenditures. The research is based on the idea that a distinction between productive and unproductive expenditures is especially important today as governments around the world scramble to get their fiscal systems in order by cutting parts of government spending that are deemed inefficient, unsustainable, or simply less likely to help them achieve their goals (Bojanic, 2013). It is worth noting, however, that no empirical effort has been made in Nigeria to analyze the influence of taxation and government spending on economic growth in one research while also accounting for the causal relationship between the variables.

The broad objective of this research is to look into the relationship between taxation, government spending, and economic growth in Nigeria. The study's specific goals are to examine the trend of taxation, government spending, and economic growth in Nigeria; investigate the impact of taxation on economic growth in Nigeria; and examine the impact of government spending on economic growth in Nigeria.

The report will be extremely useful to the government, the monetary authority, and policymakers in their efforts to develop solid and effective policies to address the country's inefficient government spending problem. From 1981 through 2016, the study looks at taxation, government spending, and economic growth in Nigeria. The choice of this time period was motivated by the need to cover the period during which several tax laws were enacted, including the petroleum profit tax law (later changed to Petroleum Profits Tax Act (PPTA), Value Added Tax decree 102, and Nigerian National Petroleum Corporations (Projects), among others, all of which have an impact on the country's overall tax revenue.

2. Review of Literature

The expenses incurred by the government in the provision of public goods and services (its maintenance and provision of public goods, services, and works required to boost or support economic growth and increase the welfare of people in society) are referred to as government expenditure (Udoffia & Godson, 2016). Government expenditures, according to Okoh (2008), are the costs incurred by the government in carrying out its programes. Anyafo (1996) divided government revenue into twelve broad categories: customs and excise tariffs; licenses and internal revenue; direct taxes; fees; mining royalties; earnings and sales; armed forces revenue; general interest and repayment; states interest repayment; reimbursements; rent on government property; statutory and non-statutory financial transfers; statutory and non-statutory financial transfers; statutory and non-statutory financial transfers; statutory and non-statutory financial transfers; statutory and non-statutory financial transfers. Tax, on the other hand, is a mandatory levy imposed by the government on a subject or his property in order to provide security, social amenities, and establish circumstances for the society's economic well-being (Appah & Oyandonghan, 2011). According to Bhatia (2003), a tax is a mandatory levy paid by an economic unit to the government in exchange for a defined and direct 'quid pro quo' from the government. Furthermore, economic growth as a term is seen differently by different scholars in the literature, depending on the situation at the time of these authors. The majority of people define economic growth as an increase in a country's national income and output. Economic growth, according to Dewett (2005), is defined as a rise in the net national product over time. Todaro and Smith (2006) defined economic growth as a gradual rise in the economy's productive capacity through time, resulting in rising levels of national production and income.

According to Wagner's Expenditure Led Growth Theory, when the economy develops, as demonstrated by a high rate of industrialization and rising per capita income, the share of government expenditure in the gross national product tends to climb in lockstep. The increase in government spending is attributed to economic growth and development in this case. Peacock and Wiseman, on the other hand, believe that government spending evolves in a step-like pattern as a result of differences in government spending patterns during periods of upheaval and periods of relative calm. According to Keynesian theory, government spending, particularly deficit financing, can provide short-term stimulus to assist prevent a recession or depression. The Keynesians, on the other hand, recommended policymakers to be ready to cut government spending once the economy rebounds in order to avoid inflation (Mitchell, 2005). On the other hand, according to Bhatia (2009), there are two theories that explain the relationship between taxes paid and benefits gained from government activities: socio-political theory and expediency theory. According to the sociopolitical theory of taxation, the primary considerations in deciding on taxes should be social and political goals. The notion proposed that a tax system should not be designed to benefit individuals, but rather to address the problems that plague society as a whole. According to expediency theory, any tax plan must satisfy a practicality test. It must be the only factor weighing on the authorities' minds when deciding on a tax plan. The state's

economic and social goals, as well as the repercussions of a tax system, should be ignored (Bhartia, 2009).

There are numerous empirical studies that link growth to taxation and spending. Razzaq, Ahmed, and Razzaq (2015), for example, looked at household and government consumption with income in the short and long run individually. The study's findings show that in the short run, household consumption exceeds income, but in the long run, with a 7% adjustment rate, consumption falls short of income. In the long run, however, the government's expenditures and consumption exceed its revenue, and vice versa. Because of the debt financing, there will be greater spending in the long run. Abbas, Yuansheng, Abdul, and Luan (2016) look at the impact of government spending on Pakistan's agriculture sector and economic growth. Agricultural outputs and government spending have a major impact on economic growth in Pakistan, according to empirical findings. It was also discovered that the agriculture industry continues to face issues such as insufficient finance, underdeveloped agriculture marketing, bad infrastructure, and irrigation shortages, among others. In addition, Saidin, Basit, and Hamza (2016) examine the role and impact of taxes on economic growth in 27 Asian nations over a five-year period (panel data) (2011-2015). Although empirical studies imply that a ranking of different types of taxes in terms of their long-term effects on the level of per capita income, the findings cast doubt on the robustness of this empirical result. Udoffia and Godson (2016) explored the impact of federal government spending on Nigerian economic growth in a similar vein. The regression analysis reveals that capital and recurrent expenditures by the federal government have a favorable impact on real GDP. The regression analysis reveals that capital and recurrent expenditures by the federal government have a favorable impact on real GDP. Adejare and Akande (2017) looked at the influence of personal income tax on government spending in Oyo State from 1990 to 2015. Pay As You Earn (PAYE) has a positive significant influence on government expenditure in Oyo state, according to the findings. In Oyo State, the road charge has a negligible impact on government spending. Finally, personal income tax has a statistically significant positive impact on government spending in Oyo State. Iyidogan and Turan (2017) used the Threshold regression model and quarterly data to evaluate the association between government size and economic development in Turkey from 1998 to 2015. The findings support the presence of a non-linear relationship. When the government size is below (above) the threshold level, we observe that an increase in government size leads to a large rise (drop) in economic growth rate, validating the Armey curve predictions.

3. Methodology

Because descriptive survey research does not include experimental manipulation in groups, as does in experimental research, this study uses a descriptive survey research design. To examine the impact of taxation and government spending on economic growth, a growth model was developed by modifying a Keynesian national income accounting model based on evidence from Venkatraja's (2015), which assumes that economic growth is determined by the demand side of the economy. As a result, the total demand for national goods is recast as follows:

Dd=C+I+G+X …………………………………………………………….. 1

Where, Dd= domestic demand for national goods, C= household consumption expenditure, I=private investment expenditure and G=Government spending; while, export represents the export demand for national goods.

Ed=X ………………………………………………………………………… 2

Where, Ed= export demand for national goods, X= exports of national goods. Aggregation of equation (1) and equation (2) indicates that economic growth (GDP) can be represented as:

GDP= Dd + Ed …………………………………………………………….… 3

Therefore, from this it can be derived that domestic economic growth is the function of rise or fall in domestic and export demand for national goods.

The model specify for this study can be re-written as:

GDP = $\beta_0 + \beta_1$TAX+β_2GOV +β_3INVST +β_4EX + μ_i …………………………..… 4

The log-linear transformation of the model is presented below:

LOG(GDP) = $\beta_0 + \beta_1$ LOG(TAX) + β_2 LOG(GOV) +β_3 LOG(INVST) +β_4 LOG(EX) + μ_i …………………………………………………………………..… 5

β_0= the interception of the model, β_1…. β_4 = the coefficient of the independent variables, and μ_i = Error term (stochastic term) assumption to be normally distributed in zero and constant variance.

The a priori expectations of the variables are summarized below: Taxation (TAX) is expected to have a Negative impact on economic growth in Nigeria i.e $\partial GDP/\partial TAX > 0$, government expenditure (GOV) is expected to have a positive impact on economic growth in Nigeria i.e $\partial GDP/\partial GOV > 0$,, investment (INVST) is expected to have a positive impact on economic growth in Nigeria i.e $\partial GDP/\partial INVST > 0$, and export (EX) in line with economic theory is expected to have a positive impact on economic growth in Nigeria i.e $\partial GDP/\partial EX > 0$.

The annual time series data was taken from the publication of the Central Bank of Nigeria Statistical Bulletin and covered the years 1981 to 2016. The study used real gross domestic product at 1990 constant prices as a surrogate for gross domestic product. The overall tax revenue was used to assess taxation. The gross fixed capital creation was used as a proxy for investment in the model. The net export of goods and services will be used to calculate export. All of the figures were in million Naira.

In the analysis, the fully modified OLS approach (FMOLS) was applied. The fully modified OLS technique (FMOLS) adjusts least squares to account for serial correlation effects and endogeneity in repressors due to the presence of a cointegrating link/

4. Results

Pre-Estimation Tests

Table 1: Descriptive statistics

Statistics	RGDP	TAX	GOV	INVST
Mean	31757.15	187.0581	1359.446	2246.903
Median	22391.14	114.6200	385.6650	242.5800
Maximum	69023.93	688.1300	4987.160	10571.74
Minimum	13779.26	4.300000	7.580000	8.800000
Std. Dev.	18151.71	199.8926	1900.843	3730.563
Skewness	0.874864	1.002080	1.127501	1.472268
Kurtosis	2.318378	2.934773	2.518149	3.367802
Jarque-Bera	5.289230	6.031365	7.975816	13.20836
Probability	0.071033	0.049012	0.018538	0.001355
Sum	1143257.	6734.090	48940.07	80888.49
Sum Sq. Dev.	1.15E+10	1398496.	1.26E+08	4.87E+08
Observations	36	36	36	36

Source: Author, 2019

As it can be seen from Table 1 above, the mean for economic growth, taxation, government expenditure and investment respectively are within their minimum and maximum. The standard deviation of economic growth, taxation, government expenditure and investment are very high which indicates that most of the observations on each of these variables do not concentrate around the mean value which indicates high degree of dispersion. The Jarque-Bera P-value for taxation, government expenditure and investment respectively are statistically significant since they are greater than 0.05 as such the variables are normally distributed around the mean except for economic growth which was 0.071033.

Table 2: Correlation Analysis Matrix

	RGDP	TAX	GOV	INVST
RGDP	1			
TAX	0.858140	1		
GOV	0.868960	0.503007	1	
INVST	0.830959	0.860092	0.767699	1

Source: Author, 2019

Table 2, illustrates the correlation of the variable used in the empirical analysis in order to determine the direction of relationship among different variables and for the presence or otherwise of collinearity between variables. Correlation coefficient ranges from -1 to +1, indicating perfect negative correlation and a perfect positive correlation respectively. Also when the correlation coefficient between two variables is low it suggest low chances of multicollinearity while high correlations between two variables indicate high chances of multicollinearity. In the study the correlation coefficient ranges from ±0.5 to ± 0.86 indicating the absence of perfect positive or perfect negative association between any two variables in the study implying low possibility of multicollinearity problem in the model.

The trend of economic growth in Nigeria is presented using the line graph as follows:

Figure 1: Trend of Economic Growth, government expenditure and Taxation in Nigeria 1981-2016
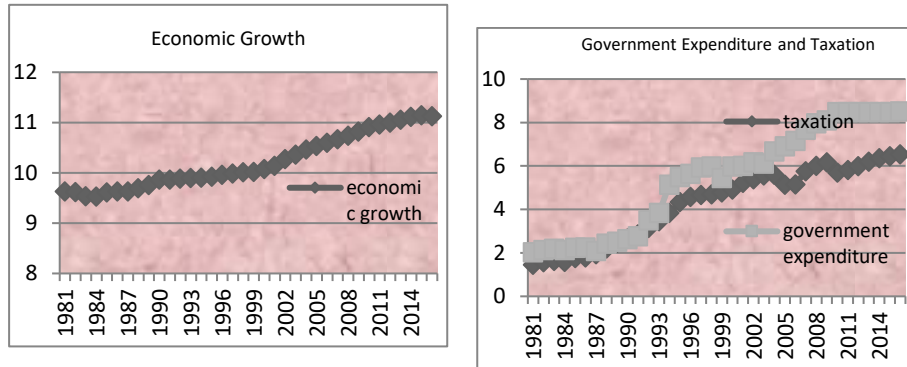
Source: Author, 2019

Figure 1 showed that between 1981 and 1999, the level of economic growth has been relatively low but relatively stable. From this period to 2014 there was a sharp rise in the level of economic growth in Nigeria. However, between 2015 and thereafter, there was a sharp fall in economic growth in Nigeria. Figure 2 showed that between 1981 and 1987 both taxation and government expenditure were at their minimum level but government expenditure was above taxation. However, from 1988 to 2016 both government expenditure and taxation rose rapidly in an unstable manner but government expenditure still rose above the tax level. Worth to be noted is the fact that in 1987 and between 1989 and 1992 there was an equilibrium level of government budget as there was equality between government expenditure and taxation in Nigeria which can be attributed to rise in government revenue as a result of the boom in the international oil market.

Empirical Results

In line with the result of the descriptive analysis of the data, the trend and correlation analysis conducted earlier in this chapter, the estimation of the model is based on the Fully Modified Ordinary Least Squares (FMOLS) estimation technique.

The result of the Fully Modified Ordinary Least Squares (FMOLS) estimates presented in Table 4 showed that government expenditure (β= -0.107284, t = -2.055999, p<.05), investment (β =0.232251, t = 4.453699, p<.05) and export (β =3.30E-05, t = 2.891477, p<.05) have a significant effect on economic growth in Nigeria. While the influence of government expenditure on economic growth was negative, the effect of investment and export on economic growth in Nigeria is positive. The estimations also shows that taxation (β =0.042153, t=0.578179, p>.05) does not have a significant effect on economic growth in Nigeria. The implication of this study is that, while taxes does not exhibit any effect on economic growth, government expenditure demonstrated a positive effect on

economic growth in Nigeria. The result of the Adjusted R-squared demonstrated that there is good correlations between dependent and independent factors, where all independent variables can explain around 98 percent of the changes in the pace of economic growth. The remaining 2 percent of the fluctuations in the pace of economic growth in Nigeria is explained by other factors that are not included in to the regression model.

Table 4: Result of FMOLS Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TAX	0.042153	0.072907	0.578179	0.5675
GOV	-0.107284	0.052181	-2.055999	0.0486
INVST	0.232251	0.052148	4.453699	0.0001
EX	3.30E-05	1.14E-05	2.891477	0.0071
R-squared	0.979595			
Adjusted R-squared	0.976875			
Long-run variance	0.009423			

Source: Author, 2019

The implication of this study is that, taxation does not have any effect on economic growth, while government expenditure demonstrated a negative effect on economic growth in Nigeria. This result is in contrast to the findings of Agbonkhese and Asekome (2014) on the impact of public expenditure on the growth of the Nigerian economy. Their study suggests that there is a positive association between the government expenditure and economic growth or gross domestic product. It also disapprove the findings of Udoffia and Godson (2016) on the influence of federal government expenditure on the Nigerian economic growth where it was observed that federal government capital and recurrent expenditures have a favorable effect on real GDP. However, the outcome was in line with the findings of Abdulrahman (2016) on the impact of government expenditure on economic growth in Nigeria where the study found that government expenditure had a negative and small impact on the economic growth of a country.

5. Conclusion and Recommendations

This study indicated that taxation does not exhibit any effect on economic growth but government expenditure had an unfavorable effect on economic growth in Nigeria. This result suggests that government expenditure has been unproductive in Nigeria which can be attributed the rise in corrupt practices among public office holders and in the award of government projects.

Following the empirical findings, the following recommendations are offered for effective policy formulations. It is critical to inculcate fiscal discipline in government spending by implementing broad-based effective internal control mechanisms as well as more aggressive economic management coordination and implementation. All non-productive activities and expenditures in all levels of government must be discouraged immediately. In order to fulfill Nigeria's macroeconomic goals, both the federal government and the Central Bank of Nigeria

(CBN) need be more articulate in managing the country's exports. To make taxes successful as a tool for rapid economic growth, the government must ensure that tax avoidance and evasion are avoided, and tax collection costs are kept to a minimum.

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