

The Nexus between Tax Revenue and Government Expenditure in Nigeria; Evidence from Toda -Yamamoto Causality Test

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This paper investigates the causal relationship between three types of tax revenue and government expenditure in Nigeria. Infrastructural decay and the government's inability to meet its responsibilities has raised concern about the relationship between tax revenues and government expenditure in Nigeria. The study employed the Toda-Yamamoto causality test for its ability to clearly show the causal relationship between variables. Empirical evidence shows a unidirectional causality from the three types of tax revenue and government expenditure in Nigeria. The study concludes that government expenditure is not yielding the desired objective of increasing tax broad. Therefore, the paper recommends that long term government expenditure and economic policies that will increase tax revenues are given more emphasis.

Key words: *Tax revenue, government, expenditure, causality, infrastructure.*

Introduction

The primary function of every Government is to provide security and property for its citizens while the secondary responsibility is to provide essential social amenities, : healthcare, education, sanitation, water, transportation, electricity etc. (Narayan & Narayan 2006). According to some studies, government expenditure is based on either capital or recurrent

expenditure (Nurudeen & Usman 2010; Osundina, Ebere, & Osundina, 2014). Capital expenditure includes the provision of capital projects such as building schools, hospitals and road constructions among others, whereas recurrent expenditure encompasses frequent expenses, such as payment of wages and salaries, maintenance costs and loan interest. The ability of government to provide adequate capital and recurrent expenditure relies on available funds, which largely depends on multiple sources of government revenue. The major source of revenue to most countries especially developed nations is taxation (Bahl & Bird, 2008). Similarly, the amount of revenue generated by government determines the structure and size of government expenditure and in turn, the level of economic growth and development. According to studies, the effect of tax revenue on government expenditure is still a topic of discussion both theoretically and empirically. According to the theoretical position, tax revenue is the major determinant of government expenditure as well as economic growth and development.

In Nigeria, the structure of government expenditure is broadly divided into capital and recurrent expenditure, in a ratio of 25:75 i.e., 25% goes to capital expenditure and 75% to recurrent expenditure. Also, the major source of financing these projects is revenue from oil which is subject to serious volatility (Nurudeen & Usman, 2010). Therefore, the recent drops in oil prices from \$105 per barrel in 2014 to \$53 per barrel in 2019 had a negative and serious effect on Nigerian government expenditure, which became a topic of discussion within and outside Nigeria, particularly in relation to the government meeting its responsibilities regarding tax revenues. Therefore, this clearly indicates the need for Nigeria to restructure its tax system toward generating adequate revenue.

Taxation is an instrument used by government to generate revenue (Christian & Nkoro, 2012). A tax system does not only aim at generating necessary funds for government expenditure and supporting economic growth and development, but also ensures equality in resource allocation, economic stabilisation and income redistribution. An effective tax system plays a vital role in creating fiscal consolidation as well as economic growth and development. According to conventional economic theory, taxation creates distortion and has a negative impact on economic growth. It is obvious that taxation affects growth through its impact on human and physical capital, as well as its effect on the overall production factors. Research indicates that Personal Income Tax (PIT) and Company Income Tax (CIT) are the most harmful types of taxes to economic growth, while Petroleum Profit Tax (PPT), property, environmental and consumption taxes are less detrimental (Stoilova, 2017).

Consequently, the paper aims to explore the causal effect of tax revenue on government expenditure. The direction of causality among tax revenue and government expenditure is one a controversial issue among researchers. Few studies have established causality between tax revenue and government expenditure using correlation, cointegration and covariance,

therefore the issue of causality has not been examined despite its practical and theoretical importance.

The motivation for this paper originates from the fact that the methods used by most empirical literature is criticised. For instance, the majority of previous studies used the traditional Granger causality test (1969) which is criticised for its inability to address a number of issues which include nuisance parameter estimations, rank deficiency and nonstandard asymptotic distribution, which results in size distortion of the null hypothesis. In addition, the present paper employs recent methodology by Toda and Yamamoto (1993 & 1995) who address previous criticism of Granger causality test (1969). Toda and Yamamoto (1995) is considered to be a superior method for its augmented VAR modelling which uses Modified Wald (MWALD) test statistics while the estimation does not require the preliminary estimation of unit-root and cointegration. Therefore, it evades spurious regression and the potential bias associated with them. The next section will provide an extensive review of empirical evidence that shows a mixed finding between tax revenue and government expenditure.

Literature Review

Government Expenditure

The Government performs various functions which include the provision of security, public goods namely power, education, health and roads. The importance of government expenditure cannot be overlooked, for instance according to the Keynesian model an increase in government expenditure brings about higher economic growth and development while on the other hand, neo-classical models which submit to government fiscal policy have no effect on the national output of growth and development.

Empirical evidence shows that government expenditure on physical and socio-economic infrastructure promotes economic growth and development. Studies by Al-Yousif, (2000) and Cooray (2009) argue that government expenditure on education and health increases the productivity of labour and in turn, raises the growth of national productivity. In the same way, government spending on infrastructure such as power, roads and communication decreases the cost of production and increases the profitability of companies, thereby fostering a nation's economic growth and development. Studies by Abdullah (2000) and Al-Yousif, (2000) further supports the view that government expenditure has a significant positive relationship with a country's economic growth and development.

On the other hand, scholars like Ogundipe and Oluwatobi, (2013); Olulu, Erhieyovwe, and Andrew, (2014); as well as Sharma, (2012) claim that higher government expenditure slows down the overall economic growth and development of countries. According to these

scholars, any attempt to finance government expenditure requires raising funds including increasing taxes and tariff. Hence, higher tax rates discourage individual contribution to the economy and therefore bring about a decrease in income and aggregate demand. Similarly, if a government decides to raise funds through an increase in tax profit tax, it will bring about an increase in the cost of production which in turn affects firm profitability. Nurudeen and Usman (2010) support the argument that higher government expenditure has a significant negative relationship with a country's economic growth and development.

Annual government expenditure in Nigeria presented in a yearly budget allocation continues to rise annually. Researchers such as Ighodaro and Oriakhi, (2010) as well as Nwosu and Okafor (2014) argue that the rise in expenditure has not transformed the country's economy to meaningful growth and development. Nurudeen and Usman, (2010) further states that Nigeria is ranked among the poorest countries in the world and 50% of its citizens live on less than \$2 per day. As of today, the level of unemployment rate in Nigeria is high, mainly due to the fact that industries are collapsing as a result of the government's inability to provide infrastructure such as power supply and roads.

Petroleum Profit Tax

Petroleum Profit Tax (PPT) is a tax imposed on companies that are engaged in oil exploration and operation, that is, companies in the upstream sector. It is specifically akin to profit sharing elements related to exploration, royalties, rent etc. It is the most significant tax in Nigeria in term of revenue contribution to government. More specifically, the sector contributes 70% and 95% to government revenue and foreign exchange earnings respectively. The petroleum profit tax in Nigeria involves oil and gas taxation. The study by Abdul-Rahamoh, Taiwo, and Adejare, (2013) point out that PPT covers imposition of tax on the revenues derived from petroleum operation. The study further stresses that the significance of this sector to the Nigerian economy has resulted in the enactment of various tax laws, especially laws related to petroleum operation.

Therefore, PPT is unequivocally the most significant sector in Nigeria as it contributes the most revenue to the nation. Previous researchers including Ebimobowei and Ebiringa (2012) and Adegbie and Fakile, (2011) stated that the petroleum sector in Nigeria is the main source of revenue and occupies a strategic position in the country's economic growth and development. The view that the petroleum sector is the major provider of foreign income and most strategic industry in Nigeria is also stated in No.14 of the Statement of Accounting Standard (SAS) No. 14. It plays a significant role in promoting Nigerian economic growth and development. Azaiki and Shagari (2007) further state that during the past four decades, the Nigerian petroleum sector has had dominant role in the economic growth and

development of the nation. Ebimobowei and Ebiringa (2012) further state that Nigeria is generating 90 % of its revenue from the petroleum sector.

However, (Odusola, 2006) maintains that despite the contribution of PPT to Nigerian revenue, the level of government expenditure on capital projects has not met Nigerian expectations, particularly, the aspiration of the Niger Delta areas. There have been debates between oil companies and the government on the subject . The former claim that the Nigerian government is supposed to use the proceeds from PPT to provide required amenities while the government is requesting oil companies to provide corporate social responsibilities to host communities and Nigerians as a whole, thereby creating a conducive environment for them to operate in. Therefore, it is important to understand the impact of petroleum profit tax on government expenditure during the period between 1988 and 2018.

Company Income Tax

Company Income Tax (CIT) is tax payable by companies upon profits accruing from the company's operations (Adegbie & Fakile 2011b). In Nigeria, the provision of section 8 (1) of the CIT act 1990 requires companies to pay tax from profits accrued in, received or brought into Nigeria regarding any business trade, for any period of time the business or trade may have been carried out. The current rate of CIT is 30% of assessable income. The provision of section 57 CITA (1990) further mandates companies operating within any territory of Nigeria and listed in the Nigerian Stock exchange (NSE) to file monthly returns with the Federal Board of Inland Revenue, no later than 7 days after the end of each calendar month.

Empirical literature shows that CIT as a source of financing government expenditure in Nigeria has been a problematic issue due to a number of reasons. Some of these reasons include tax avoidance and evasion. These forms of tax resistance are considered to sabotage government expenditure, and a cause for the underdevelopment of the nation. Adegbie and Fakile's study (2011b) focuses on the relationship between CIT and Nigerian economic development. The study uses data from primary and secondary sources to establish a significant positive relationship between variables. It concludes that tax avoidance and evasion are the main hindrances to revenue generation and in turn, affect the level of government expenditure.

In another development, Lee and Gordon (2004) examine how tax structure affects a country's economic growth and development. Using cross-country data from 1970 – 1977, the study reveals a significant negative relationship between statutory corporate tax rates and average economic growth rates. The study further uses fixed-effect regression and reveals that increases in corporate tax rates bring about lower future economic growth.

The Government is expected to collect taxes from all available economic resources and use the tax revenue to finance infrastructures. Therefore, tax resistance causes the provision of social amenities to be unattainable. In Nigeria, tax revenue, particularly CIT has not met government expectations. Consequently, the government has been expressing its disappointment at the CIT's inability to contribute to the government revenue (Micah, Ebere, & Umobong, 2012). Therefore, it is important to understand the exact contribution of CIT to government expenditure in Nigeria for the period between 1988 and 2018.

Empirical Literature

Kizito's study (2014) maintains that tax revenue has a significant positive contribution to the development of Nigeria. Therefore, it recommends the need for the country to restructure its tax system to ensuring optimal realisation of tax revenue. This could be achieved through fair and equitable distribution of tax liability. Kizito (2014) further stresses that the challenges faced by developing economies are due to the close to annual budget deficit. This is the result of the government's inability to raise extra tax revenue, due to non-compliance, tax avoidance and poor record keeping. In a similar study, Jelilov, Abdulrahman, and Isik (2015) have studied the impact of tax reforms and economic growth in Nigeria. The study used various statistical methods and concludes that tax reform and economic growth are significantly and positively related and tax reforms granger cause economic growth. Jelilov, Abdulrahman and Isik's study (2015) further argues that tax enhances or increases the government's revenue generating mechanism to provide basic infrastructure, thereby transforming economic growth in per capita and real output.

On the other hand, a few studies have found a negative relationship between tax revenue and government expenditure. Among these, the study of Mansour and Keen's study (2009) which analysed the revenue mobilisation of African countries establishes that tax revenue in sub Saharan African countries does not play an important role in financing government projects. In the same instance, Desai, Foley and Hines (2004) posit that the government has a range of tax instruments (capital gain tax, value added tax, sales tax, corporate income tax, personal income tax etc.) at their disposal that can be utilised for financing developmental projects. Unfortunately, it becomes practically impossible for a country to apply these taxes simultaneously, thus, bringing about a decrease in potential Government revenue that could have been used to finance development projects.

According to a study by Lim (1983) using time series data of less developed countries between 1965 and 1973, tax revenue instability is the main cause of expenditure instability. Additionally, Bleaney, Gummel and Greenaway's study (1995) as well as Ehrhart and Ebeke (2010) use data from sub-Saharan African countries and found that the major cause for

instability in government expenditure is the inability of the government to generate adequate revenue from tax sources. Bird and Zolt's research, (2004) further points to the inability of developing countries to generate adequate tax revenue from personal income tax.

Furthermore, several empirical studies have found mixed findings about the causality between tax revenue and government expenditures, which includes a study by Von Furstenberg, Green, & Jeong, (1986). It establishes that government expenditure causes Granger revenue in the US. Manage and Marlow (1986) further found a causality between revenue and government expenditure.

Baghestani and McNown's (1994) research applies time series techniques and establishes a bidirectional causality. For instance, a bidirectional causality between government revenue and expenditure in Argentina and Mexico has been found. In the same vein, it records a unidirectional causality between government revenue and expenditure in Brazil. In a similar study, Fasano and Wang (2002) have studied the relationship between government revenue and expenditure in Gulf countries. The study found bidirectional causality in Saudi Arabia, Qatar and Kuwait. Unidirectional causality is also found in Oman, United Arab Emirates and Bahrain.

Given the above inconsistency in findings on the relationship and causality between government revenue and government expenditure, we are inclined to use Toda and Yamamoto (1995) to establish the exact causality between tax revenue and government expenditure. This becomes necessary because the majority of previous studies applied time series and fixed-effect techniques in their analysis, more than likely arriving at unrealistic conclusion and estimates. As a result, these techniques have been criticised by a number of scholars including Mavrotas and Kelly, (2001), Pittis (1999) and Wolde-Rufael (2005). The present study is geared toward making a consistent enquiry in order to arrive at a more reliable and solid formation of causality between tax revenue and government expenditure.

Methodology

In order to test the causal relationship between tax revenue and government expenditure, the current study uses the Toda and Yamamoto (1995) causality test, which addresses criticisms related to traditional causality used by previous studies. Some of the criticisms of traditional Granger point to the fact that it uses conventional F-statistics which may not be realistic. This is due to the fact that the technique does not have standard distribution when the series is cointegrated or integrated. Thus, the need to utilise the of modified Wald test (MWALD) to overcome the said criticism has led to the establishment of Toda and Yamamoto's (1995) test in order to overcome the lapses of the traditional Granger causality test. According to Mavrotas and Kelly, (2001) the prerequisite test for cointegration is not required, this will

help in avoiding potential bias related to unit roots and cointegration tests, as it can be used regardless of whether the series is; I(0), I(1) or I(2), non-cointegrated or cointegrated in any arbitrary order.

Pittis' (1999) and Wolde-Rufael' (2005) research state that Toda-Yamamoto procedures are augmented Vector Autoregression (VAR) tests which artificially augment the correct VAR order k by the optimal order of integration $dmax$. As soon as k and $dmax$ are estimated, a $(k+dmax)$, the order of VAR is determined and the coefficients of last lagged $dmax$ vector are overlooked.

In order to test the causal relationship between tax revenues and government expenditure, the present study uses the Toda and Yamamoto (1995) model of causality test as shown in the VAR equation below. The variables in the present study will follow a level VAR specification even though the series is assumed to be integrated.

$$\begin{aligned}
 y_t &= \alpha_{10} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + \alpha_1 z_{t-1} + \dots + \alpha_n x_{t-q} + k_1 w_{t-1} + \dots + k_c w_{t-c} + e_t \\
 x_t &= \alpha_{20} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \alpha_1 z_{t-1} + \dots + \alpha_n x_{t-q} + k_1 j_{t-1} + \dots + k_c j_{t-c} + e_t \\
 z_t &= \alpha_{30} + \alpha_1 z_{t-1} + \dots + \alpha_n x_{t-q} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + k_1 j_{t-1} + \dots + k_c j_{t-c} + e_t
 \end{aligned}$$

$$j_t = \alpha_{40} + k_1 j_{t-1} + \dots + k_c j_{t-c} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + \alpha_1 z_{t-1} + \dots + \alpha_n x_{t-q} + e_t$$

Where y_t , x_t , z_t and J_t are GEXP, PPT, CIT and PPT respectively. The Toda-Yamamoto procedure fits a standard VAR model in the levels of variables rather than the first differences, as is the case with Granger causality tests. The number of optimal lags is determined by a selection criterion such as the Akaike Information criterion (AIC), Bayesian and Schwarz Info Criterion (SIC). The exogenous variable that will take into consideration the integration aspect in the markets is specified as;

$$\begin{aligned}
 y_t &= \alpha_{10} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + \alpha_1 z_{t-1} + \dots + \alpha_s x_{t-s} + \lambda_k y_{t-k} + \theta_w x_{t-w} + \phi_l z_{t-l} \\
 &\quad + \delta_c j_{t-c} + e_t \\
 x_t &= \alpha_{20} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \alpha_1 z_{t-1} + \dots + \alpha_s x_{t-s} + \theta_w x_{t-w} + \lambda_k y_{t-k} + \phi_l z_{t-l} \\
 &\quad + \delta_c j_{t-c} + e_t \\
 z_t &= \alpha_{30} + \alpha_1 z_{t-1} + \dots + \alpha_s x_{t-s} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + \phi_l z_{t-l} + \lambda_k y_{t-k} + \theta_w x_{t-w} \\
 &\quad + \delta_c j_{t-c} + e_t \\
 j_t &= \alpha_{40} + k_1 j_{t-1} + \dots + k_c j_{t-c} + A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta_1 x_{t-1} + \dots + \beta_q x_{t-q} + \phi_l z_{t-l} + \lambda_k y_{t-k} + \theta_w x_{t-w} \\
 &\quad + \delta_c j_{t-c} + e_t
 \end{aligned}$$

In order to estimate the causality effect between tax revenues and government expenditure, the present study examines tax revenue collected by the Nigerian government and government expenditure, during a period of 30 years, more precisely between 1988 and 2018, broken down quarterly.

Table 1 shows the descriptive statistics of the quarterly Government Expenditure (GEXP) and revenues for PIT, CIT, and PPT. For instance, the average quarterly government expenditure during the period being examined stands at 10.97 billion with a median of 11.97 billion and 12.15 billion as well as 9.37 billion for maximum and minimum spending respectively. It also shows a standard deviation of 0.91 and the evidence of negative skewness of the distribution for all the variables during the period of study. The result further shows a statistical kurtosis which suggests that some of the series are leptokurtic with a flatter tail and a high peak. The kurtosis implies that a shock of either sign is more often to be present. The null hypothesis of normality is rejected for each variable at five % level of significance, which implies that the data is not normally distributed.

Additionally, Table 1 shows the minimum tax collection for PIT, CIT, and PPT stood at 5.75 billion, 5.81 billion, and 5.08 billion respectively. The average tax collection during the periods under study stood at 7.62b, 9.34b and 10.09b for PIT, CIT, and PPT respectively. The maximum tax collection for the variables being examined are 8.62 billion, 10.63 billion and 11.55 billion for PIT, CIT and PPT respectively. This shows that PPT is the highest contributor to tax revenue in Nigeria. Standard deviation, skewness and kurtosis for PIT are 0.83, -0.73 and 2.00 respectively. In the same vein, CIT stands at 1.03, -1.39, 4.73 and PPT at 1.17, -1.83 and 6.83 respectively.

Table 1: Descriptive Statistic of the Series

	GEXP	PIT	CIT	PPT
Minimum	9.369	5.751	5.814	5.077
Mean	10.972	7.621	9.347	10.090
Maximum	12.152	8.616	10.632	11.546
Std Deviation	-0.412	-0.726	-1.381	-1.826
Kurtosis	1.818	2.000	4.734	6.833
Jarque-Bera	12.046**	17.996**	62.133**	162.310**

Note (**) Statistical significance at 5% Critical

Toda-Yamamoto procedure requires the determination of the maximum order of integration (d_{max}) of the series involved. To meet this requirement, the Augmented Dickey-Fuller (ADF) and Philips-Peron (PP) test is employed. The result is presented in Table 2. It is evident from the result that the variables are $I(0)$ at the level and become $I(1)$ after the

first difference. This result is supported by both tests (ADF and PP) at one % level of significance. The result provides empirical evidence for d_{max} of series 1 in this study. The study determined that three is the appropriate lag length in the VAR using the usual methods. Specifically, we employed the Akaike information criterion (AIC). This gives $(k+d_{max})$ optimal VAR order lag in level as four.

Table 2: Unit Root Test

Variables	Level		First Difference	
	ADF	PP	ADF	PP
GEXP	2.240	0.385	-5.828*	-8.949*
PIT	-0.232	-0.624	-3.471**	-10.653*
CIT	0.330	-0.253	-7.283*	-14.520*
PPT	-0.169	-0.066	-4.504*	-12.308*

Note: (*) and (**) indicates statistical significance at 1% and 5%, respectively.

The result of the Toda-Yamamoto causality procedure guarantees that the test statistics for the Granger test has the standard asymptotic distribution. This ensures that valid inferences can be made from the estimation. Table 3 presents the result of the causality between different types of tax revenue and government expenditure in Nigeria. According to these results, empirical evidence shows a unidirectional causality between GEXP and PIT. The direction of causality is from PIT to GEXP. Similarly, there is evidence of unidirectional causality between GEXP and CIT and the direction of causality is from CIT to GEXP. Also, the result shows evidence of unidirectional causality from PPT to GEXP. This result shows that all 3 types of tax revenues used in this study have a causal effect on the GEXP but GEXP does not have a causal effect on tax revenue in Nigeria. The result supports the studies of Azaiki and Shagari (2007), Ogbonna and Ebimibowei (2012) and Adegbeie and Fakile (2011a). These studies all proved a significant effect of tax revenue on government expenditure. However, the result from this study further indicates that the effect is one way. The inability of the GEXP to affect tax revenue can be attributed to a lack of long time government expenditure and economic policies, an imbalance between current and recurrent expenditure, corruption, lack of adherence to tax laws and structural issues in the Nigerian economy. Furthermore, the result indicates a unidirectional causality between all 3 types of tax revenue in the study.

Table 3. Toda-Yamamoto Causality (modified WALD) Test Result

Null Hypothesis	Chi-Sq	Probability	Causality
GEXP does not cause granger PIT	5.781	0.761	No Causality
PIT does not cause granger GEXP	24.832	0.003	Causality
GEXP does not cause granger CIT	14.135	0.117	No Causality

CIT does not cause granger GEXP	66.942	0.000	Causality
GEXP does not cause granger PPT	14.974	0.091	No Causality
PPT does not cause granger GEXP	25.184	0.002	Causality
PIT does not cause granger CIT	229.284	0.000	Causality
CIT does not cause granger PIT	7.265	0.609	No Causality
PPT does not cause granger PIT	3.724	0.928	No Causality
PIT does not cause granger PPT	223.520	0.000	Causality
CIT does not cause granger PPT	26.555	0.001	Causality
PPT does not cause granger CIT	10.112	0.341	No causality

Conclusion

To sum up, the present empirical findings have theoretical and policy implications. The theoretical implication is that tax revenues cause more government spending as advocated in Friedman's tax and spend hypothesis (1978). Similarly, government expenditure causes higher tax revenue as stated in the spend and tax hypothesis advocated by Peacock and Wiseman (1961). It maintains that higher levels of government expenditure toward providing capital expenditure has the potential to change public attitudes towards tax avoidance and evasion. The supposition that the fiscal synchronisation hypothesis requires the government to change taxes and expenditure concurrently has been described by Musgrave, (1966), Meltzer and Richard, (1981). As such, any increase in tax revenue should result in increasing government expenditure and vice versa.

According to policy implication, the relationship between tax revenue and government expenditure is essential for three key reasons. Firstly, if tax revenue causes government expenditure, the Nigerian deficit in yearly budget can be eliminated by policies aimed at stimulating government revenue. Secondly, where fiscal synchronisation hypothesis does not hold, it signifies that government expenditure decisions are ended in isolation from revenue decisions which can bring about serious budget deficits, should the government expenditure increase more rapidly than tax revenue (Narayan, 2005). Finally, if government expenditure causes tax revenue, it signifies that it is caused by the Government spending first and citizens to pay in return. Such a situation raises taxes and induces capital outflow due to potential panic of paying higher taxes in the future. Overall, it is recommended that the Nigerian government provide infrastructural amenities to Nigeria and in return ask citizens to pay via tax. This is due to the fact that Nigeria is characterised by corruption. More specifically, in 2018 Nigeria ranked 144 out of 175 countries regarding corruption.



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