Effect of Indirect Tax Revenue on Government Expenditure in Nigeria

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Abstract

Government expenditure has continued to grow in a stepwise direction without a proportionate increase in revenue generation. The Nigeria economyhas witnessed spiral fall in oil revenue which accounts for its major source of income with less emphasis on indirect taxation. The objective of the study is to determine the effect of indirect taxation on government recurrent expenditure and capital expenditure in Nigeria. Ex post facto research design was adopted to test the cointegration between indirect taxation (independent variable) and government recurrent and capital expenditure (dependent variable). Time series data are used in this study.For this study secondary data was collected from the Central Bank of Nigeria Statistical Bulletin and Organization for Economic Cooperation and Development (OECD) for the period 1995 to 2018. The data were analysed using the Ordinary Least Squares (OLS) regression technique. The analyses revealed that indirect tax revenue has a positive and significant effect on both government recurrent and capital expenditure. The result also revealed that indirect tax revenue is contributing to government recurrent expenditure than government capital expenditure in Nigeria. Therefore, the Government needs to consider merging its Agencies and Parastatal to reduce the high personnel and administrative cost. Reduce borrowing to curb the high debt servicing which accounts for the huge recurrent expenditure. Increase and diversify its revenue base to indirect taxation considering the dwindling oil revenue, while similar studies have proven that taxation remains the most sustainable means of government revenue. Development of an automated tax collection system should be deployed across the Federation for seamless tax administration.

Keywords: Recurrent Expenditure, Capital Expenditure, Indirect Tax Revenue

INTRODUCTION

Taxation accounts for the major source of revenue to the government. Government expenditures on recurrent and capital projects are driven by the revenue generated through direct and indirect taxation.Indirect tax is taxes levied on the consumption of goods and services. However, tax is broadly categorized into direct tax and indirect tax. Direct tax is levied on the income of individual and corporate bodies while indirect tax is imposed on goods and services consumed for a specified time. According to Anyanwu (1993), Government Expenditure can be described as expenses which any government incurs for its maintenance, for the good of society and the economy, and assistance to external bodies and other countries. Globally, governments are saddled with theresponsibility of providing some basic infrastructures for their citizens. Functionsor obligations the government may owe her citizens include but are not restrictedto stabilization of the economy, redistribution of income and provision ofservices in the form of public goods (Abiola & Asiweh, 2012).

Government expenditure has significantly decreased overtime without a corresponding increase in revenue.Theserious decline in the prices of oil in recent times has led to a decrease in thefunds available for distribution to the federal, state, and local governments(Afuberoh& Okoye, 2014). Similarly, the recent Coronavirus (COVID-19) pandemic has further decreased oil revenue, hence the need to navigate the revenue base of the nationto sustain recurrent expenditure and execute capital projects. It is on this backdrop that the research seeks to determine the effect of indirect tax revenue on both government recurrent and capital expenditure in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Taxation is an instrument employed by the government for generating public funds (Anyaduba, 2004). It is a required payment imposed by the government on the income, profit or wealth of individuals, group of persons, and corporate organisations. Piana (2003) opines that it is a result of the application of tax rate to a tax base. According to Brautigam (2008), a well-designed tax system can help governments in developing countries prioritize their spending, build stable institutions, and improve democratic accountability. The main purpose of a tax is to enable the public sector to finance its activities to achieve some nation's economic and social goals. It can also be for redistribution of wealth to ensure social justice (Ola, 2001). Therefore, taxes can be used as an instrument for achieving both micro and macroeconomic objectives especially in developing countries such as Nigeria. However, Musgrave and Musgrave (2004) comment that the dwindling level of tax revenue generation in the developing countries makes it difficult to use tax as an instrument of fiscal policy for the achievement of economic development.

Revenue generation for the government to settle its expenditures as well as providing socialamenities and welfare for the populace is the primary purpose of taxation (Ihenyen & Mieseigha, 2014). Taxation is seen as a burden which every citizen must bear to sustain his or her government because the government has certain functions to perform for the benefits ofthose it governs (Afuberoh& Okoye, 2014). According to Ogbonna and Appah (2012), theimposition of taxes for financing state activities and for the provision of a basis forapportioning the tax burden between members of the society was justified to enablegovernment generates revenue to finance its expenditure. Omesi and Nzor (2015) stated thattaxation is the life wire of every country and its level of development at times depends on theincome generated from the tax. Taxation is one of how revenue is generated bythe government to meet the desire of both government and citizens. Anyafo (1996) describes expenditure as an actual payment or the creation of an obligation to make a future payment for some benefit, items or service received. Hales (1994) defines expenditure as payment, or promise of future payment and the obligation incurred thereunder, for goods and services delivered.Attamah (1999) writes that the traditional function of government expenditure is the maintenance of the bureaucratic structure (i.e. the civil service) and defence.

Empirical Review

Emelogu and Uche (2010) studied the relationship between government revenue and government expenditure in Nigeria using time series data from 1970 to 2007. They utilized the Engel-Granger two-step co-integration technique, the Johansen co-integration method and the Granger causality test within the Error Correction Modeling (ECM) framework and found a long-run relationship between the two variables and a unidirectional causality running from government revenue to government in Nigeria. Saeed and Somaye (2012) investigated the causality and the long-run relationships between government expenditure and government revenue in oil-exporting countries during 2000-2009 using P-VAR framework. Using oil revenue as a proxy for total revenue, their result revealed that there is a positive unidirectional long-run relationship between oil revenue and government expenditures. Ogujiuba and Abraham (2012) also examined the revenue-spending hypothesis for Nigeria using macro data from 1970 to 2011. Applying correlation analysis, Granger causality test, regression analysis, lag regression model, vector error correction model and impulse response analysis, they report that revenue and expenditure are highly correlated and that causality runs from revenue to expenditure in Nigeria. The vector error correction model also proves that there is a significant long-run relationship between revenue and expenditure.

However, Nazim (2016) examined the relationship between government revenue and government expenditure. The study sought to find out the theoretical relationship between the revenue and the

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expenditure inMalaysia using the four hypotheses from the literature study. The study findsout that although the majority of the government revenue is from direct tax, government spending only varies due to change in indirect tax revenue andnon-tax revenue. The study is analytical and based ondata collected from published sources focusing on the impact of therevenue and the expenditure on the continuous development of Malaysia. Finally, we try to suggest to the authority to follow the properrules and guidelines at the time policy-making whereby they will be able tocoup up with the optimum revenue and relevant expenditure in the state. Furthermore, Tracy and Kester (2009) investigated the interrelationship between total government expenditure and total tax revenue in Barbados applying Granger Causality on both bivariate and multivariate co-integrating models. The result of the multivariate error correction model suggests that a unidirectional causality exists from tax revenue to government expenditure. It is very clear from the reviewed literature that numerous studies have queried about whatinfluence public expenditure, mostly from the developed economies to emerging anddeveloping countries' counterpart.In this study, we want to find the relationship between government indirect revenue and government recurrent and capital expenditure.

Theoretical Framework

Wagners Law of Increasing State Activity

The Law of increasing State activity was propounded by Adolf Wagner a nineteen-century German economist to explain the growth of the share of public expenditure in GNP. He divided government expenditures into three categories, namely, administration and defence; cultural and welfare, and provision of direct services by the government in case of market failure. It is well known that rather than allow for a monopoly to emerge, the government usually creates Statutory Corporations such as NITEL, Post Office, Water Boards, PHCN to cater for the welfare of the people. Wagner's Law states that as per-capita income increases, the relative size of the public sector will grow. According to Wagner as the economy becomes industrialized, the population tends toconcentrate in the urban areas. This, in turn, leads to externalities (market failure) and congestion which require government intervention and regulations. Legal authorities and the police emerge to address problems of law and order, peace and security.

Banking services by the State arise to link surplus funds with those who have investment opportunities. The increase of public expenditures on education, recreation, health, and welfare services is explained in terms of the high population in the urban centres. Wagner argued that as real income increase, public expenditure on education, health etc would increase more than the increase in real income. This explains the increasing ratio of government expenditure to gross national product. Wagner's theory of increasing State activity has many defects. First, it is not a well-articulated theory of public wants; rather it is an organic theory of the State where the State behaves as if it were an individual and takes decisions independent of members of the society. Secondly, the predictive power of the theory is very much in doubt. It is not always true that as par-capita income grows, the share of public expenditure in GNP increases. The share of public expenditure may decrease as the economy grows particularly when the private sector is strong and dynamic.

Peacock and Wiseman Theory of Public Expenditure

Allan Peacock and Jack Wiseman theory, otherwise known as PWT, was based on the political theory of public expenditure determination which states that government likes to spend more money, that citizens do not like to pay more taxes, and that government needs to pay some attention to the aspiration and wishes of their people. PWT attempted to explain the circular trend or time pattern of change in government expenditure in response to the development in the political economy while the taxable capacity of the electorate acts as a constraint. Their theory is known as Displacement Hypothesis and is based on the experience of Great Britain. The Displacement hypothesis states that government expenditure grows in a stepwise fashion. During periods of catastrophe or wars, government expenditure

grew rapidly in Great Britain and remain constant during the war, famine, or disaster otherwise catastrophe period. They argued that government expenditures are largely determined by government revenue or taxation, PWT maintains that as the economy and income grew, tax revenue would rise thereby enabling government expenditures to rise in line with GNP.

The acceptance of the existence of a tolerable level of taxation which acts as a constraint on government behaviour is consistent with Clark's "Catastrophe School" of taxation. PW make a destination in government expenditure growth between normal or peak time and war, crisis or social upheaval period. According to PW, during peak, public expenditures would tend to experience an upward trend, even though there may be some discrepancy between a desirable level of government expenditure and a desirable level of taxation. During war, famine or social upheaval this normal and steady growth in government expenditures would be disturbed. This was as a result of the displacement hypothesis as unproductive government spending during social upheavals displaced productive government expenditure leading to a rapid increase in public expenditure. The government imposes higher taxes which are regarded as acceptable during the period of crisis. During this period, public expenditure is displaced upward (i.e. displacement effect). War-related expenditure displaces private and other government expenditure. However, after the war or crisis, aggregate public expenditures does not fall back to its original level since war is not fully paid for from taxation alone. Inspection effect may also occur as government attempts to increase expenditures to improve social conditions which have deteriorated during the period of the crisis. Government finances the high expenditure from the increase and tolerable level of taxation that does not return to its former level. There are two possible scenarios which may occur after the war or social upheaval. First, total private expenditures may return to its original growth path and second, government expenditures experienced during the war may continue in the post-war period along with an increase in civilian government expenditures until the desired growth is reached.

Ability to Pay Theory

The cannons of taxation give credence to this theory and stress thecapacity of the contributor to the common pulse of the State to make suchcontribution at a time and in a manner that it is most convenient. Taxes to the Stateare made without quid pro quo benefits (Chigbu et al, 2012). To this extent, thetheory holds that persons should pay taxes in proportion to their capacity. This means that people with higher income should pay more thanpeople with lower income. In the context of this study one's ability to pay maysuggest that as more and more expenditures are incurred by a person the sameshould pay more tax and vice versa. The ability-to-pay theory is also termed the equality of sacrifice theory(Adam, 1776 in Adam Smith Institute, n.d.) which has gained popularity on thegrounds of the true meaning of 'ability' of the individual. This appears to be ajust and fair means of taxing citizens. This is the reason why most economies ofthe world today accept income as the best measurement of one's ability to pay.

Expediency Theory

According to Adam (1776) cited in Adam Smith Institute (n.d.), everytax proposal must pass the test of practicality and that must be the onlyconsideration government authority should consider in choosing a tax policy.This theory which is embedded in the cannon of economy explains the economy,effectiveness and efficiency of tax collection instrument. Taxation is seen toprovide a powerful set of policy tools to the authorities and such tools should beeffectively used for remedying economic and social ills of the society such asincome inequalities, regional disparities, and unemployment and so on. (Chigbu,Eze &Ebimobowei, 2011)

METHODOLOGY

The *Ex post facto* research design was adopted for this study. The justification for the use is that the required data are not manipulatable.Time series data are used in this study.For this study secondary data was collected from the Central Bank of Nigeria Statistical Bulletinand Organisation for Economic Cooperation and Development (OECD) for the period 1995 to 2018. The data were analysed using the

Ordinary Least Squares (OLS) regression technique. The research technique has been employed and found to be suitable in similar researches, such as those of Ihenya and Mieseigha (2014); Grace, David and Oliver (2016). An econometric model was developed to examine the nexus or linkage between indirect revenue and expenditure.

$$GREXP_{it} = \beta 0_{it} + \beta_1 (INDREV)_{it} + e_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where:

GREXP = Government Recurrent Expenditure (dependent variable)
INDREV = Indirect Revenue (independent variable)
$\beta 0$= Constant term
$\beta 1$ = Coefficient of the parameter estimates
e = Error Term

The emphasis of the study is to test whether indirect tax revenue (INDREV) has a significant and positive effect on Government Recurrent Expenditure (GREX) to agree or disagree indirect revenue is a driver for government expenditure in Nigeria.

$$GCEXP_{it} = \beta 0_{it} + \beta_1 (INDREV)_{it} + e_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$
Where:
GCEXP = Government Capital Expenditure (dependent variable)
INDREV = Indirect Revenue (independent variable)
$\beta 0$= Constant term
$\beta 1$ = Coefficient of the parameter estimates
e = Error Term
The emphasis of the study is to test whether indirect tax revenue (INDREV) has a significant and positive effect on Government Recurrent Expenditure (GREXP) and on Government Capital Expenditure (GCEXP).

RESULT AND DISCUSSION

Hypothesis One

A summary of the results of the Ordinary Least Square (OLS) regression is presented in table 1 below:

Dependent Variable: GREXP
Method: Least Squares
Date: 06/05/20   Time: 12:58
Sample (adjusted): 1998 2018
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	306.8420	77.07165	3.981256	0.0008
INDREV	9.156040	0.386897	23.66529	0.0000
R-squared	0.967187	Mean dependent var		1611.353
Adjusted R-squared	0.965460	S.D. dependent var		1328.186
S.E. of regression	246.8410	Akaike info criterion		13.94576
Sum squared resid	1157680.	Schwarz criterion		14.04524
Log likelihood	-144.4305	Hannan-Quinn criter.		13.96735
F-statistic	560.0458	Durbin-Watson stat		0.670241
Prob(F-statistic)	0.000000			

Source: Author's computation using E-views 10

The analyses revealed that indirect tax revenue has a positive and significant effect on government recurrent expenditure. The coefficient of determination R^2 is 0.967, meaning that 96.7% of the variation in GREXP (dependent variable) was influenced by the INDREV (independent variable). Hence, 3.3% variability in GREXP was explained by other factors outside INDREV. The F-statistics of 560.0458 shows the overall significance of the regression model. F-sig. level 0.0000 is less than 0.05 which suggest that the Ho is not true. Therefore, indirect revenue has significant and positive influence on government recurrent expenditure in Nigeria

Hypothesis 2

Dependent Variable: GCEXP
Method: Least Squares
Date: 06/05/20   Time: 13:05
Sample: 1995 2018
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	334.0055	63.36874	5.270825	0.0000
INDREV	1.691048	0.232011	7.288642	0.0000
R-squared	0.707152	Mean dependent var		663.0543
Adjusted R-squared	0.693841	S.D. dependent var		393.7212
S.E. of regression	217.8525	Akaike info criterion		13.68517
Sum squared resid	1044113.	Schwarz criterion		13.78334
Log likelihood	-162.2220	Hannan-Quinn criter.		13.71121
F-statistic	53.12430	Durbin-Watson stat		0.916353
Prob(F-statistic)	0.000000			

Source: Author's computation using E-views 10

The analyses revealed that indirect tax revenue has a positive and significant effect on government capital expenditure. The coefficient of determination R^2 is 0.707, meaning that 70.7% of the variation in GCEXP (dependent variable) was influenced by the INDREV (independent variable). Hence, 29.3% variability in GCEXP was explained by other factors outside INDREV. The F-statistics of 53.12430 shows the overall significance of the regression model. F-sig. level 0.0000 is less than 0.05 which suggest that the Ho is not true. Therefore, indirect revenue has significant and positive influence on government capital expenditure in Nigeria

5.   CONCLUSION AND RECOMMENDATIONS

This study examined the effect of indirect tax revenue on both government recurrent and capital expenditure in Nigeria. The result indicated that indirect tax revenue has a positive and significant effect on government recurrent expenditure. The regressing gave R-squared results of 96.7% and adjusted R-square of 96.5%. the result is different when indirect tax revenue is regressed against government capital expenditure. Regressing INDREV against GCEXP presented an R-square result of 70.7% and adjusted R-square of 69.3% that is lower than that of GREXP. The implication is that indirect tax revenue is contributing togovernment recurrent expenditure than government capital expenditure in Nigeria. The increasing tax revenue should have been channelled into the provision infrastructural amenities that would, in turn, create a productive economic thereby increasing the revenue baseof government.Therefore, the Government needs to consider merging its Agencies and Parastatal to reduce the high personnel and administrative cost. Reduce borrowing to curb the high debt servicing which

accounts for the huge recurrent expenditure. Increase and diversify the revenue base to indirect taxation considering the dwindling oil revenue, while similar studies have proven that taxation remains the most sustainable means of government revenue.Development of an automated tax collection system should be deployed across the Federationforseamless tax administration.

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