EFFECTS OF REVENUE SHOCKS ON THE RELATIONSHIP BETWEEN GOVERNMENT REVENUE AND ECONOMIC GROWTH

KHADIJAH A. IDOWU

Department of Accounting, Lagos State University, Ojo, Nigeria
E-mail: Idowuadeola2@yahoo.com

Abstract - This study examines the long-run relationship between government revenue and economic growth in periods of structural breaks in government revenue in Nigeria from 1981 to 2015.Structural breaks were identified in the sources of government revenue; public debts (external debt stocks), oil revenue and non-oil revenue. Using the unit root breaking point, 2003, 2005 and 2006 were identified as the periods of revenue shocks in oil revenue, non-oil revenue and external debts respectively. Findings from the normalized cointegration coefficients established that despite the revenue shocks, there is a long run effects between government revenue and economic growth in Nigeria. Different effects on economic growth were found when revenue shocks or structural breaks are present. Structural break in oil revenue reduces GDP by 5.9%, external debts shock will negatively affect GDP by 14.86%. Interesting, it is found that different shocks have similar effects on economic growth when they have the same break date. Results on fiscal policy shows the use of expansive fiscal policy however the effects are very high when there is any form of economic shocks or structural breaks. 1% increase in fiscal policy leads to approximately 6% decrease in GDP in shock periods however leads to 0.1% increase in GDP in non-break date in the long run. This study has practical implication for a small tax base to cover minimum costs. This is in contrary to the revenue productivity theory, indicating the inefficient tax administration in the country in economic instability periods.

Keywords - Revenue, Public Debt, Growth, Structural Break.

I. INTRODUCTION

The importance of analyzing the relationship between government revenue and economic growth stemmed from the fact that government main source of revenue is from fiscal policy cutting across taxes, public debt and natural resources. Several economists and public finance analysts have examined government revenue, government expenditure, public debt, taxes and growth in different countries and periods (Rubinson, 1987; Odularu, 2008; Garkaz, Azma & Jafari, 2012; Rosoiu, 2015; Okwori & Sule, 2016). These studies have failed to consider the effects of policyshocks in government revenue leading to structural breaks. The central question is: does government revenue still predict growth in periods of revenue shocks? The motivating stand of this paper is to examine the long run effects of government revenue on economic growth insituations of policy shocks on sources of government revenue. Engle and Granger (1987) noted that co-integration is important to establish a long run relationship among variables. Rosoiu (2015) acknowledged that VAR model has become the most and main econometric tool in assessing fiscal policy and policy shocks on growth. Anzuini and Levy (2007) used the normalized co-integration and VAR to establish the effect of monetary policy shocks in the new EU members.

IMF as cited in Adekoya and Ogune (2018) advised that Nigeria must increase its revenue base as any shock to the revenue implies that Nigeria may be fragile to service its debt profile. Debt service is both a function of government revenue base and interest payments on borrowings. In addition, the revenue mobilization in the country is currently low at 6% while an appropriate 15% is needed. Lack of any shock to revenue and increased mobilization implies that there will be reduced interest payment to revenue and that Nigeria can have more resources available for priority spending. Oniha as cited Adekoya and Ogune (2018) added that in the first quarter of 2018, revenue is low when compared to the rate of growth in last quarter of 2017, good fiscal policy such as new debt management strategy, reduced cost of borrowings, and reduced refinancing risks of treasury bills are important for the revenue base of Nigeria towards sustaining growth. In addition, the Central Bank of Nigeria (CBN) efforts have been commended in stabilizing the economy through retaining the monetary policy rates, however analysts noted that for reduced unemployment, and increased investments, the government needs to implement key fiscal policies.

The significance of revenue shocks is important to various stakeholders and the economic growth of the country at large. Government must control cost of borrowings to increase revenue base and be able to increase spending on priority projects to ameliorate unemployment and increase growth. To investors, revenue shocks may trigger the increase of interest rate by relevant monetary policy authorities thus increasing investors' cost of borrowing. For international institutions like Africa development bank and the IMF, revenue shocks may trigger debts rescheduling bringing about changing economic policies low level of debt service. Revenue shocks may also be important to evaluate the extent of government capital expenditure on administration, economic services, social community services and transfer, and the implementation and completion of

on-going infrastructure across the country. For tax administrators, it is important to ensure an effective tax system that would increase tax collection and achieve the revenue productivity assumption in achieving economic growth.

The studyanalyzesrevenueshock effects on long run relationship between government revenue and economic growth in Nigeria using structural break dates. Government revenue was categorized as revenue from the Oil sector, Non-sector sectors and Public Debt. In addition, this study also analyzeswhich fiscal policy (expansive or restrictive) is important to enhance economic growth in revenue policy shocks.Rosoiu (2015) explained restrictive fiscal policy as a situation where government expenditures are decreased to increase government revenue and expansive fiscal policy where government expenditures are increased to reduce government revenue. Data showed that there were more years of restrictive fiscal policy, but findings reveals the contrary, stating that the country often use expansive fiscal policy.

This study presents some contributions. Firstly, it establishes a new ground in the public finance literature on the extent to which revenue shocks in government revenue could impact its long run relationship with economic growth. Findings reveal that revenue shocks could significantly distort economic growth in the long run in Nigeria as the coefficients of revenue sources become significantly low or negatively. Secondly, expansive fiscal policy adopted by Nigeria is not encouraging as with or without revenue shocks, expansive fiscal policy negatively affects long run economic growth. The use of tax cuts, rebates, transfer payments and increased government spending in Nigeria do not account for positive long run in economic growth. Government of Nigeria should increase taxes, lower inflationary pressure, reduce government spending by reducing the continuous re-awarding of capital projects and reducing government recurrent expenditures. Currently, in Nigeria, total capital spending is increasing due to abandoned projects in past administrations, however, revenues from federal inland revenue service, Nigeria port authority, Nigeria customs servicehave been on the increasing side since 2016. With the political will of the current government of President Muhammad Buhari, Nigeria could be identified to be in a restrictive fiscal policy regime in years to come. Thirdly, the study establishes that shocks in external debt stocks (public debts) may see Nigeria as a diversified economy as non-oil revenue and FX reserves positively and significantly have long run effect on GDP while oil revenue shocks will make oil revenue, FX reserve and fiscal policy to exhibit negative long run effects on economic growth with increased external debts. This practically tells that the mono-dependence of Nigeria on oil revenue cannot sustain the long run growth of the economy. A diversified Nigeria economy could benefit from increased non-oil revenue, drastic reduction in external debts and their service charges, increased FX reserves, and increased hedging against exchange rate risks.

Section 2 presents brief review on government revenue and growth. Section 3 describes the methodology and section 4 presents the analysis and discussions.

BRIEF LITERATURE REVIEW ON GOVERNMENTREVENUE AND ECONOMIC GROWTH

Government revenue is an important tool of fiscal policy describing the total amount of money received by a country's government. Studies have classified government revenue as important for economic growth. Public debt involves both external debts and domestic debts is documented as a source of economic output describing growth, a source which is line with the Keynesian theory (Okoro, 2013; Essien et al., 2016). The portion of total debt which has a direct charge on government revenues as well as the debt obtained from the IMF is defined as public debt.Oil and non-oil revenue are also sources of government revenue (Mottu & Ahmad, 2002; Ross, 2003). These sources have effects on economic growth and output of a country.

In the seminar work of Rubinson (1977), the author established the effects of both short and long-termgovernment dependence on revenue. He argued that government dependence on trade, external public debts and export partner concentration could have declining effect on economic growth of such nations that heavily depend on these sources. A test of the dependency theory by Rubinson shows that long-term dependence of revenue retards growth while short-term dependence increases growth. Contrarily, Gale and Samwick (2014) adopted the substitution and income effects theory to investigate the source of individual income tax as a revenue on growth. The authors argued that taxes, tax cuts, tax increase and marginal tax rates could affect growth. Although tax cuts were found to encourage savings in the economy, but the income effect is that productivity participation is reduced and thus having an indirect long-term effect on economic growth. In contrast, a non-linear relationship has been established in Eurozone area with the level of government debts, high or low responsible for this. Evidence showed that government revenue through high debts may have non-linear effect on GDP per capita (Checherita-Westphal & Rother, 2012). This situation seemed to be entirely different from studies in emerging and many poor countries especially Africa were negative impacts of public and external debts have been documented (Ajayi& Oke, 2012; Mhlaba & Phiri, 2017;). The effect of high debts is an

indication of low sovereign ranking which indirectly lower ranking of the players in the banking financial system, a banking system thatArestis et al.(2001) described as the key factor enhancing financial development for economic growth. Economy size, capital flight, and debt servicing are major factorsthat Africa leaders must consider as their negative impacts (such as depleting available income) on economic growth are even higher and worse than the principal external debts (Ajayi, 1991; Ejigayehu, 2013). Supporting the result from the Africa context, the neoclassical growth model seems to support negative effect of tax revenue. For instance, Macek (2014) studied the OECD countries and found that personal income tax, corporate income tax and social security contribution have negative effects on economic growth despite using the proxies of the neoclassical growth model i.e. Gross domestic product. Table 1 shows few studies and the theories they have used to explain growth through government revenue within the context been studied.Figure 1 shows the trend of public debts in Nigeria. Domestic debts grow gradually and increases over the years without declining. External debts rose in the first period (1999-2003) after democracy in Nigeria and declines in 2004. It went to its lowest in 2006 and rose again however not at the pace of the domestic debts.

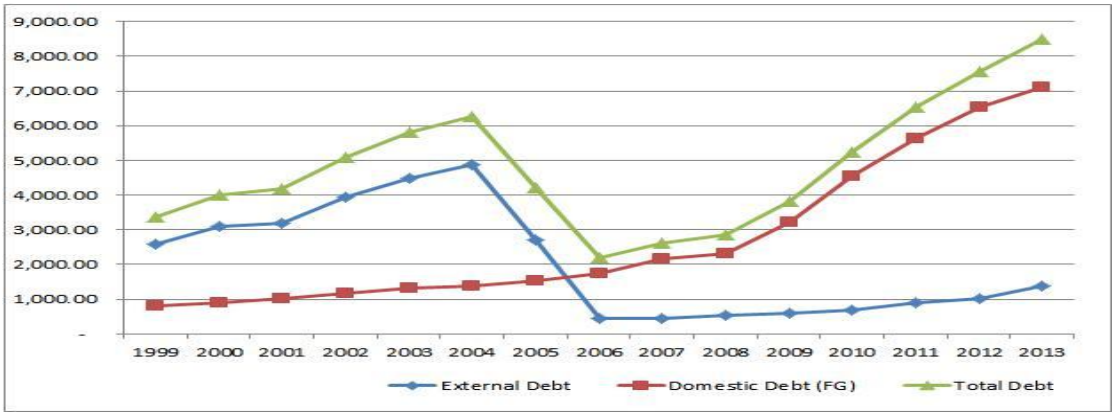


Figure 1: Public Debt Trends in Nigeria
Source: CBN, 2015.

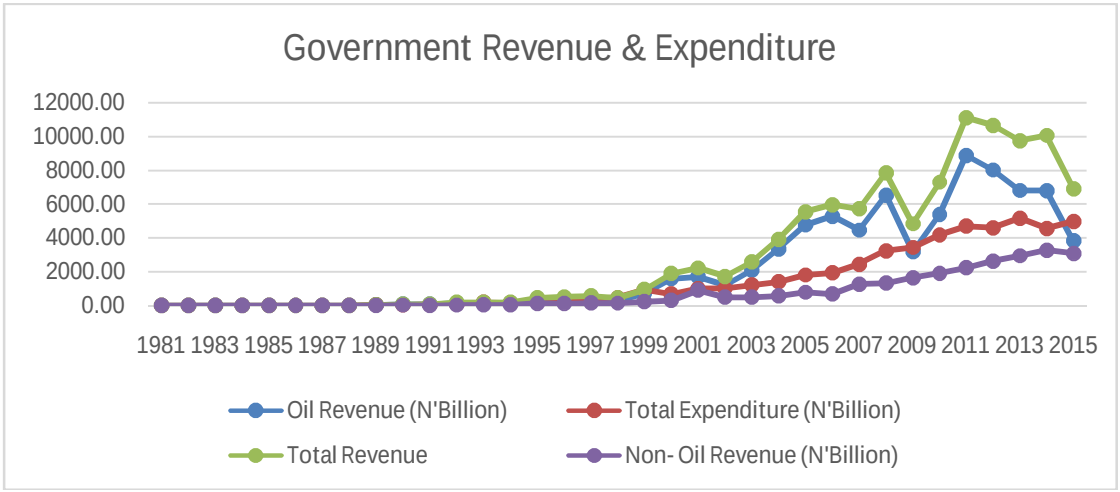


Figure 2. Trends of oil revenue and total expenditure in Nigeria
Source: Central Bank of Nigeria, (2015).

Figure 2 shows that the highest percentage of total revenue comes from oil revenue, with total expenditure been approximately half of oil revenue. Total expenditure is higher than non-oil revenue, an indication of shock vulnerability. This implies that any policy shock or structural break to oil revenue will have negative effect on economic growth in Nigeria. This was evident in year 2015.

Studies on Natural Resources and Economic Growth

Several works have documented the revenue from natural resources from countries with copper, gold, minerals and oil, iron ore and oil could impact on the growth of these countries (such as Nigeria, Mongolia, Lao PDR, Indonesia, Democratic republic of Congo and Mauritania). A survey by the WDI (2010) showed that Africa countries with Oil have over USD1,000 GNI per capita with Equatorial Guinea having the highest value of USD13720 GNI per capita. Furthermore, the institute equally evidenced that over 50% of the total fiscal revenue represents natural resources fiscal revenue between 2006 and 2010. Nigeria has 76% while Equatorial Guinea

recorded 91% of the total fiscal revenue within this period been called from Oil proceeds. This implies the for countries that are low, lower and middle-income countries, sizable percentage of their fiscal revenue are from their exports proceeds of their natural resources. Empirical evidences however have shown different results (Odularu, 2008; Nwoba & Abah, 2017). Arguments have been that growth has been declining in resource-rich developing countries when compared to countries without resources due to underperformance, lack of investment in assets and high pressure for current spending (IMF, 2012; Venables, 2016), resource curse was used to describe this ugly situation (Auty, 1993). Research found a significant positive nexus between oil dependency and economic growth (Aregbeyen & Kolawole, 2015; Nwoba & Abah, 2017). Contrarily, others found oil revenue having negative or insignificant effects on growth (Easterly & Kraay, 2000; Okonkwo& Madueke, 2016).

Table 1: Some review of literature in Government Revenue.

Author(s)	Research Settings	Theories/Models	Analysis	Key Findings
Rubinson (1977)	Latin America	Dependence Theory	Panel regression analysis	Economic dependence has a negative effect on economic growth which occurred through reduced state strength conditioned on whether the world economy is in a relative expansion or contraction period.
Fullerton (1982)	United States	General Equilibrium Taxation Model	Simulation and Econometric analysis	Labour tax rate maximizes total revenue. through. U.S. has a low labour supply elasticity and could not generate more revenue for growth.
Helms (1985)	48 States	McLure's Model of tax differentials	IVC and GLS estimations	States and local taxes retard growth when the revenue if used for fund transfer payments however improved growth when used for public services.
Easterly & Rebelo (1993)	OECD countries & Latin America	Growth Models	Basic regressions and correlation techniques	Fiscal policy strongly affect growth in poor countries when there is dependence on international trade taxes and for developed countries, income taxes are important all depending on economic size and investment in transport and communications.
Miller & Russek (1997)	Developing and developed countries	National economic growth model	Regression equations	Debt-financed retards growth and tax-financed improves growth in developing countries but vice versa for developed countries.
Elbadawi, Ndulu& Ndung'u (1997)	Sub-Saharan Africa, Latin America, Asia & Middle East	Debt overhang hypothesis	Cross-section regressions	Low level of debt induces growth while high level of debt overhang retards growth
Wong (2004)	105 communities or local governments in Kansas, U.S.	Tax capacity models	A pooled two-stage least squares (2SLS) including a serial correlation correction method	Differences in communities and local governments are reinforced by the local political boundaries. Tax capacity that imposes local government services have negative impact on growth and vice versa
Lee & Gordon (2005)	Cross-country from World Tax Database	Endogenous and transitory growth effects	Regression Analysis	Increases in corporate tax rates retards future economic growth rate and a decrease of 10 basis points in corporate tax could increase growth by 1 to 2 basis points.
Afonso &	OECD and EU	Model of growth	Combined cross-	Indirect taxes and social

Furceri (2010)	countries		section time-series regressions	contributions that constitute government revenue are detrimental to economic growth in OECD and EU countries both in terms of government size and volatility
Reinhart & Rogoff (2010)	44 countries, both emerging and advanced.	Debt intolerance effect	A new multi-country historical (200 years) analysis	Public debt and growth nexus is weak in a "normal" debt level and surprisingly the same for emerging and advanced countries. With most emerging countries' external debt threshold level than domestic debt.
Hatfield (2015)	Case study via political equilibrium and utility of agent	Endogenous growth model	Propositions analysis	Tax policy is chosen by a decentralized government to maximize growth as compared to a centralized government however the decentralized government will not perform by proving public goods thus influencing a retarding growth.
Sandford (2015)	Cross-country	Tax structure effect	Descriptive and review analysis	Tax structure characteristics is important for growth. Imposing 100% marginal income tax rates would reduce total income and a shift in wealth creation such as property, all having impacts on growth.
Ojong, Anthony & Arikpo (2016)	Nigeria	Socio-political theory of taxation	Ordinary Least Square (OLS) technique	Petroleum profit tax and non-oil revenue improve growth while corporate income tax is insignificant in explaining growth.
Chen et al. (2017)	Developed and developing economies	Non-linear economic growth model	Panel smoothing transitional regression	Public debts retard growth as expenditure level increases and public debt threshold is important to enhance growth
McNabb (2018)	100 countries	Economic theory	Pooled regression estimation	Revenue-neutral increases in income taxes are associated with lower long-run GDP growth and that revenue-neutral reductions in trade taxes have not always had positive effects.

Source: Compiled by the author

THEORETICAL FRAMEWORK ON THE REVENUE PRODUCTIVITY THEORY

The nexus between government revenue and economic growth has been extensively researched across the fields of accounting, finance and economics. A variety of theories and models have been used to address this nexus depending on the type and category of government revenue addressed in the study context. Despite the differences in findings, one important evidence is that each have contributed to using theories to explaining economic growth with respect to government revenue (see Table 1). One important flaw of these theories is their inability to use government revenue to explain economic growth in periods of financial crisis or fiscal shocks.

METHODS

Data for this study were sourced from the Central Bank of Nigeria and the World Development Indicators for periods 1981 to 2015.The Unit root (single and breaking points) and cointegration were adopted to establish the economic shocks in government revenue on the relationship between government revenue and real GDP.

Table 2: Measurement of Variables

Variable	Measurement	Source
Government Revenue	Oil revenue, non-oil revenue and public debt (using external debt stocks)	Essien et al. (2016), World Bank Debt Statistics (2018)
Economic Growth	real Gross domestic product	Nweze& Edame (2016), WDI
Foreign exchange reserves	total reserves (% of external debts)	(WBDI, 2018).
Expansive and Restrictive fiscal policy	Differences in government expenditures and government revenue. A negative value represents expansive fiscal policy while a positive denotes restrictive fiscal policy	Rosoiu (2015)

Source: Author's compilation.

This study controlled for foreign exchange reserves. It is argued that a country's external reserves level may impact indirectly on her country in terms of raising external borrowing and debts. Scholars argued that oil exporting countries increase their borrowing capacity in periods of oil boom (Pinto, 1987; Usui, 1997; Odularu, 2008). However, during periods of oil price downturns, these countries which are highly-indebted in the oil boom period find it to adjust fiscal policy and are in the presence of financial constraints which may lead to low or no additional external debts therefore undermining development programs.

In summary, the list of the methodology for the cointegration analysis of the variables in this study are in steps. Note that all the tests were carried out on yearly or annual data. The first step was to conduct the unit root test. The ADF was chosen because it is the most efficient. The next step was the Johansen's cointegration testing, with the trace test and Max Eigenvalue test. The last test was the normalization against the GDP, given it as the dependent variable. The normalization of the resulting cointegration relationship was on the log of the real GDP to allow the coefficient of GDP equal to 1. Several studies have used the normalization cointegration on stock market capitalization and FSTE100 (Kasibhatla et al, 2006; Juselius, 2006).

ANALYSIS AND RESULTS

This study starts by performing unit root tests which suggest that all the variables are I(1) series. Table 3 is the unit root testand summary of the structural breaks periods, thus representing the years of economic shocks. Thereafter, the cointegration test is presented. We estimated the cointegrating vector after allowing for structural breaks represented using dummies.

Table 3: Unit Root Test (ADF)

Unit Root Without Structural Breaks (ADF)							Summary		
	Level			Difference					
	Constant	Constant & Trend	None	Constant	Constant & Trend	None	Level	First Diff.	I(d)
GDP	6.443	-1.533	-1.187	-5.440*	-5.618*	-2.743*	-1.533	-5.618*	I(1)
OilR	-1.357	-2.629	-0.677	-5.769*	-5.615*	-5.790*	-2.629	-5.769*	I(1)
NOilR	1.583	-0.896	2.882	-5.405*	-6.949*	-2.096**	-0.896	-6.949*	I(1)
FExR	-1.485	-2.512	-1.113	-4.464*	-4.397**	-4.530*	-2.405	-5.385*	I(1)
ExDebt	-1.899	-2.843	0.357	-4.300*	-4.218**	-4.360*	-2.843	-4.360*	I(1)
FP	-6.468*	-7.634*	-5.744*	-13.051*	-12.882*	-13.208*	-7.634*	-13.208*	I(1)*
Unit Root with Structural Breaks (Perron, 2005)									
Variable	Level			Difference					
	Break Date	Coefficient	T. stat	Break Date	Coefficient	T. stat	Level	First Diff	I(d)
OilR	2004	-0.369	-6.991	2003	-9.829	-5.893	-	-5.893	I(1)
NOilR	2006	-0.803	-2.799	2006	-0.491	-8.289	-	-8.289	I(1)
ExDebt	2005	-0.920	-11.375	2006	-0.105	-10.442*	-	-10.442*	I(1)

Note: *, ** and * imply significance at 1%, 5% and 10% respectively.**

The focus of this paper is to look at the effects of structural breaks of government revenue. So, for the Unit root with structural breaks, only three varaibles were included as they are sources of government revenue. Table 3 shows the structural breaks or revenue break in oil revenue, non-oil revenue, and external debts (a measure of public debts). From the table, all the variables are I(1) series meaning the justification in the use of the Johansen's cointegration test. The revenue shock date for oil revenue is 2003 while revenue shocks for non-oil revenue and external debts have the same shocks date, 2006. Dummies were therefore created for each of the years to represent dummy_oilr, dummy_noilr, and dummy_exdebt.

Table 4: Cointegration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.886661	175.4795	125.6154	0.0000
At most 1 *	0.730440	110.1582	95.75366	0.0035
At most 2 *	0.624854	70.82931	69.81889	0.0415
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigen value)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.886661	65.32123	46.23142	0.0002
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				

Since the variables are I(1) series, the Johansen cointegration was applied. Emphasized is placed here on the Normalized cointegration coefficients. Table 4 also shows that there is cointegration in the variables, meaning there is long run relationship between government revenue and economic growth. Trace results shows that there are three cointegration equations while the Max Eigen test shows that there is one cointegrating equation. Both justified that there is cointegration in the series used in this study.

Table 5: Normalized Cointegrating Coefficients

(Without Economic Shocks in Government Revenue Sources)						
LOGGDP	LOGEXD	OILR	NOILR	FEXR	FP	
1.0000	-6.400699	-0.005427	0.010809	0.021445	0.095671	
	(2.06910)	(0.00095)	(0.00222)	(0.00966)	(2.50302)	
	[-3.09347]	[-5.71263]	[4.86891]	[2.21997]	[0.03822]	
(WITH Economic Shocks in Government Revenue Sources)						
LOGGDP	LOGEXD	OILR	NOILR	FEXR	FP	Dum_OilR
1.0000	-0.587678	0.005056	-0.003175	0.019255	5.730559	-18.58421
	(2.00205)	(0.00110)	(0.00223)	(0.00939)	(2.40992)	(2.81156)
						Dum_ExD
1.0000	14.86929	0.017630	-0.055524	-0.255926	5.614930	55.11366
	(3.88323)	(0.00197)	(0.00550)	(0.02833)	(4.31412)	(12.0648)
						Dum_NOilR
1.0000	14.86929	0.017630	-0.055524	-0.255926	5.614930	55.11366
	(3.88323)	(0.00197)	(0.00550)	(0.02833)	(4.31412)	(12.0648)

Source: EViews Output, 2018.

Table 5 shows the Normalized cointegrating coefficients on the Gross domestic products (LOGGDP). Since the results are normalized, the signs are reversed for interpretation. Without accounting for revenue shocks in government revenue in Nigeria, the results show that; 1% increase in external debts (LOGEXD) leads to 6.40% increase in the GDP in the long run, 1% increase in Oil Revenue leads to 0.005% increase in GDP in the long run while 1% increase in Non-oil revenue, foreign exchange rate and fiscal policy lead to 0.01%, 0.021% and 0.095% respective decrease in GDP the long run.

The effects of revenue shocks or structural breaks in government revenue sources were severe on economic growth. After accounting for the oil revenue shocks (represented as dum_OilR), the percentage increase in GDP through external debts drops to 0.58% from 6.40% when shocks were not

accounted for. Oil revenue has negative effect on GDP with 1% decrease in OilR results in 0.005% decrease in GDP. However, non-oil revenue becomes significant in this situation as it turns positive instead of negative when shocks is not accounted for. In period on oil revenue shock, 1% increase in Non-oil revenue implies 0.003% increase in GDP. Since Oil revenue drops, foreign exchange reserve and fiscal policy both have negative effects on economic growth. 1% increase in both FEXR and FP will result in 0.019% and 5.73% decrease respectively in GDP. This implies that government may resort to external debts and non-oil revenue in periods of oil revenue shocks to have a positive impact on long-run economic growth.

Structural break in external debts (represented as dum_ExD) has much more negative effects on economic growth in Nigeria. External debts, oil revenue and fiscal policy negatively affect long-run economic growth. 1% increase in external debts, oil revenue and fiscal policy in external debt shock period will result to 14.86%, 0.017% and 5.61% respective decrease in GDP. This finding supports Rubinson (1977) that a nation that depends heavily on public debts experience declining economic growth. This implies that government must increase foreign exchange reserve and non-oil revenue to have positive economic growth when external debts declines or when they are policy change in external debt structure and management.

CONCLUSION

This study examines the revenue shock effects on the relationship between government revenue and economic growth. Continuous decline in government revenue may affect economic growth and increase country's debt levels. Findings revealed that government revenue with or without revenue shocks has long run relationship with economic growth. However, the effects of oil revenue shocks decline growth, decreases foreign exchange reserves and increases external debts. Shocks in Non-oil revenue and external debts reduces public debts, increases foreign exchange reserves and non-oil revenue, thus supporting a diversified economy. This study recommends that:

1. Government of Nigeria should increase taxes, lower inflationary pressure, reduce government spending. Government spending could be reduced by ensuring that capital projects are completed timely and are not re-awarded by incoming governments. Government recurrent expenditures need to be reduced especially on transfer payments.
2. Establishment of a strong political will structure that will ensure increase in revenue collection and reduced corrupt practices. Increased revenues from revenue generating institutions and commissions coupled with a sound political will may see Nigeria in a restrictive fiscal policy regime in years to come.
3. Diversifying the economy will increase non-oil revenue, reduce public debts and their service charges and can increase government foreign external reserves by further hedging against exchange rate risks.

Further studies may consider the effects of different policies on government revenue sources on economic growth. Policies relating to tax revenue such as compliance tax policy, hard-to-tax policy, tax reforms, tax institutional and management policy may document more evidences on the long run economic growth in Nigeria and what tax revenue is fair and sustainable. Future studies may examine at a whole the effect of relevant economic shocks on economic growth. Such economic shocks as monetary policy shock, revenue shock, demand shock, supply shock will help to understand which and to what extent each economic shock contributes to long run economic growth and at what thresholds can be measure its positive or negative effects. Lastly, a mixed method approach can be used to establish the causes of revenue shocks in Nigeria and their impact on economic growth.

REFERENCES

[1] Adekoya, F., & Ogune, M. (May, 2018). GDP grows by 1.95% in Q1, non-oil sector accounts for 90.3%. The Guradian. Avaialable at: https://guardian.ng/news/gdp-grows-by-1-95-in-q1-non-oil-sector-accounts-for-90-3/ (Accessed: 25 May 2018).

[2] Afonso, A., & Furceri, D. (2010). Government size, composition, volatility and economic growth. European Journal of Political Economy, 26(4), 517-532.

[3] Ajayi, L. B., & Oke, M. O. (2012). Effect of external debt on economic growth and development of Nigeria. International Journal of Business and Social Science, 3(12), 297-304.

[4] Ajayi, S. I. (1991). Macroeconomic approach to external debt: The case of Nigeria.Research Paper Eight, AERC Research Papers Series, African Economic Research Consortium.

[5] Anzuini, A., & Levy, A. (2007). Monetary policy shocks in the new EU members: A VAR approach. Applied Economics, 39(9), 1147-1161.

[6] Aregbeyen, O., & Kolawole, B. O. (2015). Oil revenue, public spending and economic growth relationships in Nigeria. Journal of Sustainable Development, 8(3), 113-123.

[7] Auty, R. M. (1993). Sustaining development in mineral economies: The resource curse thesis. London and New York: Routledge.

[8] Checherita-Westphal, C., & Rother, P. (2012). The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area. European Economic Review, 56(7), 1392-1405.

[9] Chen, C., Yao, S., Hu, P., & Lin, Y. (2017). Optimal government investment and public debt in an economic growth model. China Economic Review, 45, 257-278.

[10] Easterly, W., & Kraay, A. (2000). Small states, small problems? Income, growth, and volatility in small states. World development, 28(11), 2013-2027.

[11] Easterly, W., & Rebelo, S. (1993). Fiscal policy and economic growth. Journal of monetary economics, 32(3), 417-458.
[12] Ejigayehu, D. A. (2013). The effect of external debt on economic growth: A panel data analysis on the relationship between external debt and economic growth. Department of Economics, Sodertorn University.
[13] Elbadawi, I., Ndulu, B. J., & Ndung'u, N. (1997). Debt overhang and economic growth in sub-Saharan Africa. External Finance for Low-Income Countries, 49-76.
[14] Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. Econometrica: journal of the Econometric Society, 251-276.
[15] Essien, S., Agboegbulem, N. T. I., Mba, M. K., & Onumonu, O. G. (2016). An empirical analysis of the macroeconomic impact of public debt in Nigeria. CBN Journal of Applied Statistics, 7(1), 125-145.
[16] Fullerton, D. (1982). On the possibility of an inverse relationship between tax rates and government revenues. Journal of Public Economics, 19(1), 3-22.
[17] Gale, W. G., Samwick, A. A. (2014). Effects of income tax changes on economic growth. Economic Studies, https://www. brookings. edu/wpcontent/uploads/2016/06/09_Effects_Income_Tax_ Changes_Economic_Growth_Gale_Sa mwick. pdf.
[18] Garkaz, M., Azma, F., & Jafari, R. (2012). Relationship between oil revenues and government using wavelet analysis method: Evidence from Iran. Economics and Finance Review, 2(5), 52-61.
[19] Hatfield, J. W. (2015). Federalism, taxation, and economic growth. Journal of Urban Economics, 87, 114-125.
[20] Helms, L. J. (1985). The Effect of state and local taxes on economic growth: A time series--cross section approach. The Review of Economics and Statistics, 574-582.
[21] International Monetary Fund (IMF) (2012). Macroeconomic policy frameworks for resource-rich developing countries—Background Paper 1—Supplement 1. Washington, DC.
[22] Juselius, K. (2006). The cointegrated VAR model. Oxford: Oxford University Press.
[23] Kasibhatla, K., Stewart, D., Sen, S., & Malindretos, J. (2006). Are daily stock price indices in the major European equity markets cointegrated? Tests and evidence. American Economist, 50(2), 47-57.
[24] Lee, Y., & Gordon, R. H. (2005). Tax structure and economic growth. Journal of Public Economics, 89(5-6), 1027-1043.
[25] Macek, R. (2014). The impact of taxation on economic growth: case study of OECD countries. Review of economic perspectives, 14(4), 309-328.
[26] McNabb, K. (2018). Tax structures and economic growth: New evidence from the Government Revenue Dataset. Journal of International Development, 30(2), 173-205.
[27] Mhlaba, N., & Phiri, A. (2017). Is public debt harmful towards economic growth? New evidence from South Africa.MPRA Paper No. 83157, Retrieved Online at: https://mpra.ub.uni-muenchen.de/83157/
[28] Miller, S. M., & Russek, F. S. (1997). Fiscal structures and economic growth: international evidence. Economic Inquiry, 35(3), 603-613.
[29] Mottu, M. E., & Ahmad, M. E. (2002). Oil revenue assignments: Country experiences and issues (No. 2-203). International Monetary Fund.
[30] Nweze, N. P., & Edame, G. E. (2016). An Empirical Investigation of Oil Revenue and Economic Growth in Nigeria. European Scientific Journal, ESJ, 12(25), 271-294.
[31] Nwoba, M. O. E, & Abah, E. O. (2017). Impact of crude oil revenue (COR) on economic growth in Nigeria (1960-2010). IOSR Journal of Humanities and Social Science, 22(7), 85-99.
[32] Odularu, G. O. (2008). Crude oil and the Nigerian economic performance. Oil and Gas business, 1-29.
[33] Ojong, C. M., Anthony, O., & Arikpo, O. F. (2016). The impact of tax revenue on economic growth: Evidence from Nigeria. IOSR Journal of Economics and Finance, 7(1), 32-38.
[34] Okonkwo, I. V., & Madueke, N. M. (2016). Petroleum revenue and economic development of Nigeria (1980 – 2013). IOSR Journal of Polymer and Textile Engineering, 3(2), 39-55.
[35] Okoro, A. (2013). Public debts. Understanding Monetary Policy Series, No 36, CBN
[36] Okwori, J., & Sule, A. (2016). Revenue sources and economic growth in Nigeria: An appraisal. Journal of Economics and Sustainable Development, 7(8), 118-123.
[37] Pinto, B. (1987). Nigeria during and after the oil boom: a policy comparison with Indonesia. The World Bank Economic Review, 1(3), 419-445.
[38] Reinhart, C. M., & Rogoff, K. S. (2010). Growth in a time of debt. American Economic Review, 100(2), 573-578.
[39] Rosoiu, I. (2015). The impact of the government revenue and expenditures on the economic growth. Procedia Economics and Finance, 32(2015), 526-533.
[40] Ross, M. (2003). Oil, drugs, and diamonds: How do natural resources vary in their impact on civil war. Beyond greed and grievance: The political economy of armed conflict, 47-70.
[41] Rubinson, R. (1977). Dependence, government revenue, and economic growth, 1955–1970. Studies in Comparative International Development, 12(2), 3-28.
[42] Sandford, C. T. (2015). Economics of public finance: An economic analysis of government expenditure and revenue in the United Kingdom (3rd ed.). England: Pergamon Press.
[43] Usui, N. (1997). Dutch disease and policy adjustments to the oil boom: a comparative study of Indonesia and Mexico. Resources policy, 23(4), 151-162.
[44] Venables, A. J. (2016). Using natural resources for development: why has it proven so difficult? Journal of Economic Perspectives, 30(1), 161-184.
[45] Wong, J. D. (2004). The fiscal impact of economic growth and development on local government revenue capacity. Journal of Public Budgeting, Accounting & Financial Management, 16(3), 413-423.
[46] World Development Indicator (WDI) (2010). Data on GNI per capita, Natural resource exports as % of total exports and natural resource fiscal revenue as % of fiscal revenue. World Bank.

★★

★★★