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# **Public Debt Management in Nigeria: the impacts of Institutional changes after exiting from the Paris Club in 2006**

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## **Abstract**

This study evaluated the role of institutions in the management of public debt in Nigeria after the exit from the Paris club in 2006. It utilized both the institutional and macroeconometric frameworks. The institutional framework was anchored on the Debt Management Office Act of 2003 and the Fiscal Responsibility Act 2007 in which the two Acts of Parliaments provided a rule-based management of the public debt. Thus, the institutional analysis determined if the transition from discretionary to a rule-based system had taken place while the macroeconometric framework account for the impacts of debt on the public sector financing of Nigeria. The study found that the country has not been able to transit from the discretionary to a rule-based fiscal system/operation since the exit from the Paris club. This is can be attributed to the non-strict adherence to the rules as contained in the Fiscal Responsibility Act of 2007. This constraints to institutional change may also be linked to the conflicting interests/asymmetrical relationship between the Debt Management office (DMO) and Fiscal Responsibility Commission (FRC) thereby limiting the abilities of the DMO to discharge their mandates. As a result, public debt stock and public debt service has grown significantly after the exit from the Paris Club. Therefore, this study recommends that the government should strictly comply with the provisions of Section 42 of the 1999 Constitution of the Federal Republic of Nigeria on borrowing as is contained in the guidelines of DMO Act and FRA.

**Keywords:** Public Debt Management; DMO; FRA; Debt Relief; Nigeria

## **1. Introduction**

Public borrowing has been an important source of funding Nigeria's national development plans. The federal government budget, the key driver of public spending, is often in deficit. The Federal deficit is financed through domestic and foreign borrowings. The size of the federal debt rose in the 1970s and in the 1980s to the point that Nigeria was unable to finance the servicing of its public debt. Thus, Nigeria's debt burden had serious consequences on the economy and the welfare of the citizens because external debt servicing crowds-out government expenditure on socio-economic development and poverty alleviation. It was in 2005 that the Federal Government exited the Paris Club through an agreement that hinged on Nigeria implementing an IMF monitored economic reform programme and a debt reduction under the Naples term and a debt buy-back at a market related discount on the remaining eligible debts after reduction. It was, thus, expected that the exit from the Paris Club would release revenue for socio-economic development and lead to poverty reduction.

Before the debt relief, Nigeria owed a total of US\$34 billion to its creditors. This amount accrued from penalties and interests during the 1980s and early 1990s when the military regime did not repay the debt. It was estimated that Nigeria was paying US\$1.7 billion in debt service annually, which was 3 times larger than the budget for health sector (Okonjo-Iweala, 2005). In the late 70s and early 80s, when oil prices fell at the same time interest rates rose, Nigeria faced the problem of debt overhang from 1982. By 1985, Nigeria's debt servicing arrears started to accumulate (DMO, 2011). As at 31<sup>st</sup> December, 2005, the total public debt outstanding for Nigeria (external and securitized domestic debt)

stood at US\$32 billion only to its creditors. The greater share of Nigeria's public debt over the whole period was external, with a gradual rise in the volume of external debt from 2001 to 2004. This was due to the accumulation of arrears, penalty charges and exchange rate movements, rather than new borrowings.

In order to address this debt crisis, the Nigerian government made some effort. For instance, under the Brady Plan in 1992, Nigeria was able to conclude at the London club, an exchange deal for a substantial part of its commercial debt allowing for a discount of about 60%. However, the Paris Club arrangement for debt relief in the same year failed because Nigeria failed to return to democratic rule. After the restoration of civilian rule in Nigeria in 1999, new economic policies were put in place and similar conditions were recommended again. By this time the total bilateral debt owed to Paris Club members had increased tremendously due to interest arrears and penalties. The civilian government therefore, called for substantial debt reduction arrangement with the Paris Club to improve economic planning and growth. In 2005, a significant decrease in the total debt stock was observed. This is due to a 43% reduction in the external debt stock, which occurred as a result of the implementation of the agreed Paris Club debt deal during the year. On October 20<sup>th</sup>, 2005, a historical deal was struck that allowed Nigeria to fully exit from all obligations to its Paris Club creditors. The agreement was reached after the International Monetary Fund (IMF) approved a Policy Support Instrument (PSI), which was implemented in two phases. "In the first phase, Nigeria agreed to pay arrears on all categories of debts and Paris Club of creditor's grant of a 33% cancellation of eligible debt. In the second phase, after the approval of the first review of the PSI by the Executive Board of the IMF, the Nigerian government was to pay amounts due under post-cutoff date debt. Thereafter, "Paris Club will grant a further tranche of cancellation of 34% on eligible debts, and Nigeria will buy back the remaining eligible debts." In real terms, the Paris Club will cancel US\$18 billion of Nigeria's debt, or about 60% per cent of the about US\$30 billion owed to the Club. But the Paris Club will be paid "an amount of US\$12.4 billion." Of this, US\$6.3 billion paid to regularize arrears owed and another US\$6.1 billion "to complete the exit strategy." At the end of negotiations and implementation of the exit agreement, Nigeria exited from the Paris Club in 2006.

The Nigeria's Debt Management Office Act of 2003 and Fiscal Responsibility Act of 2007 were enacted to provide institutional frameworks for more efficient and effective management of the public debt and the operations of the fiscal system. The Federal Government then began to accumulate new debt after the exit from the Paris Club. The structure of debt also shifted in favour of domestic debt while the external debt shifted in favour of multilateral agencies. High public debt stems from persistent fiscal deficit. A widening domestic saving-investment gap, persisting demand for public expenditure accompanied by a debt-revenue ratio have been pushing up the size of public debt in Nigeria. The growing debt led to high taxes and put upward pressure on real interest rates, which may crowd out private investment (Ajayi, 2003). When government is no longer able to finance its deficit, it is forced to cut spending or raise revenues.

In the wake of persistent saving-investment gap, export-import gap and fiscal deficit, a prudent public debt management is essential tools for sustainable macroeconomic stability of the Nigerian economy. Nigeria has run persistently large budget deficits in recent decades. These large and persistent budget deficits have generated considerable concern in Nigeria and there is a widespread perception that it will reduce growth, and could lead to a crisis if the deficit continues for long or become too large (Okonjo-Iweala, 2005).

Consequently, in line with the Debt Management Office Act (2003) which has the objective of more efficiently managing Nigeria's public debt; and Fiscal Responsibility Act (2007) Acts aimed at institutionalizing rule based fiscal federalism in Nigeria; available data from DMO (2013), however, reveal changes in the structure of public debt; high and sustained growth in government; and public debt which raises the danger of a return to the period of debt overhang which prevailed before the Paris Club exit in 2006. Thus this study evaluates the role of institutions in the management of public debt in Nigeria after the exit from the Paris club in 2006. Following the introduction, section two dwell on the conceptual, theoretical and empirical literature reviews; section three was the methodology of the study;

and section four presented, analyses and discussions of the empirical results. And finally, section five give conclusions and recommendations of the paper.

## 2. Literature Review

There is an extensive literature on external debts covering rationale for contracting foreign debts, implications for the macro-economy and sustainability concerns. Theoretically, the dual gap theory proposed by Hollis Chenery (1996) and debt over-hang theory developed by Paul Krugman (1988) explains the link between debt accumulation and economic growth. On one hand, the dual Gap theory opined that economic growth depends on investment- saving nexus. Chenery argued that most less developed nations do not have sufficient savings (due to low per capita income) to match up with the necessary investment to ensure economic growth, they therefore resort to external finance to fill the saving investment gap. On the other hand, the debt overhang theory postulates that huge borrowing leads to high indebtedness, debt traps and slows down economic growth. Krugman argued that hoarded foreign debt stock leads to higher tax (tax disincentive) on future output and thus discourage any genuine investor from investing in that country.

Public debt is an important means of bridging government financing gaps. Effective and efficient utilization of public debt can increase economic growth and help government achieve developmental and social objectives. However, public debt is also a doubled-edged sword. Excessive reliance on public debt and inappropriate public debt management raise enormous macroeconomic risks, impede economic growth, and hinders overall economic development. For example, high public debt demand can increase the domestic interest rate thereby crowding out private investment. For instance, empirically, Fosu (2007, 2008) applied a seemingly unrelated regression model to a panel of 35 African countries for the period 1975–94 and concludes that the debt constraint has a negative impact on education and health expenditures. However, he does not consider allocations to other functional sectors in this study. To fill this gap, he extends the analysis to a multi-sector model and estimates a system of expenditure-share equations simultaneously involving the functional sectors (agriculture, capital, economic services, public investment, education, and health). The study finds that the debt-servicing constraint is liable to shift public expenditure away from the social sectors (health and education) and possibly from public investment. Similarly, Fosu (2010) extends this analysis for sub-Saharan Africa, using a reduced-form simultaneous equations model. The study finds that debt servicing has a negative impact on social sector spending, particularly on education.

Sinha, Arora, and Bansal (2011) used panel data regression to investigate the determinants of public debt for middle and high income group countries for the periods 1993 to 2008 for high income group countries and 1980 to 2008 for middle income group countries. The results show that government expenditure and GDP growth are the only two variables that significantly affect total debt of the middle income group countries while for High income countries, GDP growth is only variable that significantly impacted on debt.

Mah, Mukkudem-Petersen, Miruka, and Petersen (2013) estimates the effect of government expenditure on debt in Greece using the vector error correction model framework and granger causality model with annual data from 1976 to 2011. The findings of their paper reveal a significant negative relationship between gross government debt and gross national income as well as gross government debt and net foreign direct investment. A significant positive relationship was also found between gross government debt and gross national expenditure and gross government debt and inflation. In addition, the results also show that past values of gross national expenditure and gross national income have the predictive ability to determine the present value of gross government debt.

Kgakge-Tabengwa (2014) investigates the implications of shocks to public debt and government expenditure on the development of human capital and growth within a model that explicitly recognizes the role of fiscal constraints through introducing the government budget constraint for a set of selected developing countries<sup>1</sup> from 1980-2013. The results reveal that high stocks of public debt, beyond the 30-40% debt/GDP threshold, depress the effect of human capital on output growth through limiting government expenditure resources available for developing human capital. The study conclude that developing countries which face fiscal challenges such as high public debt and poor revenue prospects to back government expenditure sustainably, cannot solely develop human capital based on the strength of their domestic resources, underscoring the need for specific supportive global fund for human capital development. The study recommends the setting up of public debt management strategies

and efficient government expenditure management frameworks supported by sustainable revenue prospects to provide fiscal sustenance impetus to enhance the growth process in developing countries.

Odo, Ogonna, and Anoke (2014) investigated the causal relationship between total public debt and public expenditure in Nigeria from 1980 to 2015 using Johansen co integration test and vector error correction model. The results of the study indicate that there is a long run relationship between government expenditure and public debt while the VECM result indicate that government capital and recurrent expenditure has significant positive relationship with public debt in the Nigerian economy implying that government borrowing in Nigeria is triggered by government deficit budgeting. The study recommends the re-examine of government budgeting process in order to ensure that allocative efficiency is achieved in our budgeting system and that borrowing to finance budget deficit must be done objectively and realistically.

Oladokun (2015) empirically examines the causal relationship between Public Expenditure and National Debt in Nigeria for the period spanning 1980 to 2012 using the ordinary least square estimation technique. The results of the study indicate that a causal relationship between public expenditure and domestic debt implying that government borrowed to finance their recurrent expenditure. The concludes that high level of corruption, misappropriation of public funds, and poor administration has impeded the growth of the public sector while inadequate investment has been to provide infrastructural facilities that can boost the revenue generating capacity of the country so the country can operate a balanced or surplus budget.

Shabbir and Yasin (2015) examines the impact of public external debt on social sector spending for seven developing Asian countries for the period 1980 and 2010. The panel dataset includes Pakistan, India, Bangladesh, Sri Lanka, Nepal, the Philippines, and Indonesia. Empirical analysis of the study was based on three interrelated equations for different spending categories, which are estimated using the general method of moments (GMM). The findings confirm the common wisdom that outstanding external debt and its servicing liability have an adverse impact on public spending, particularly on social sector spending. This study recommends that developing countries need to mobilize their own resources and minimize their dependence on external borrowing.

Uguru (2016) empirically investigates the relationship between public debt and government expenditure in Nigeria from 1980 to 2013 using the ordinary least square regression technique. The results revealed that there is a positive significant relationship between public debt and government expenditure in Nigeria. The study recommends that government should make haste to reduce its recurrent expenditure and embark more on capital expenditure so as to meet the Vision 20:2020. Also, the government should diversified the economy away from crude oil in order to reduce the tendency of the government accumulating public debt.

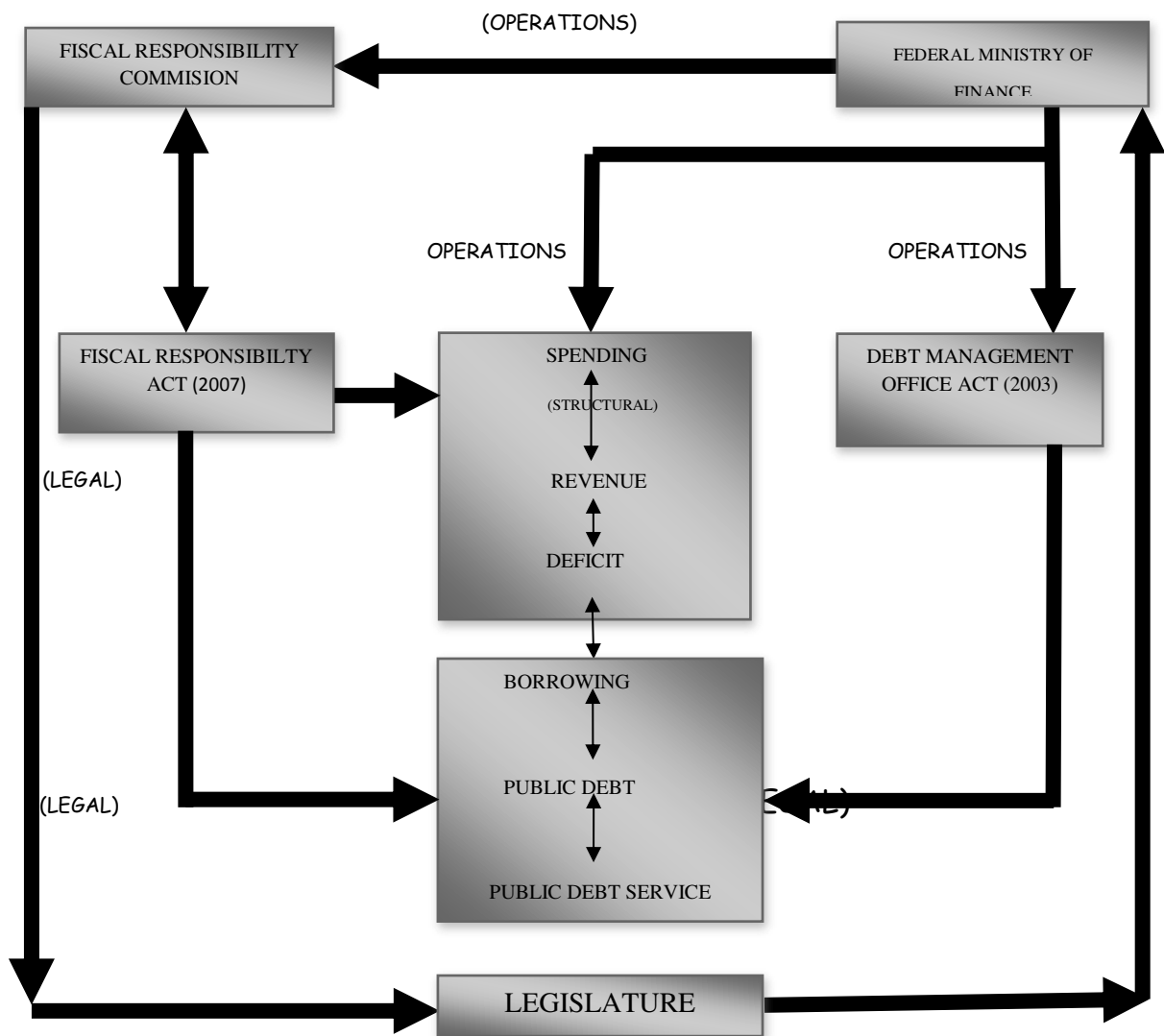
Šimović (2017) analyzed the impact of public debt level and (un)sustainability on fiscal spending effectiveness in Croatia for the period 2001 to 2015 using switching regression and SVAR approach. The results of the study show a negative impact of recession on public debt sustainability and confirm the main thesis that public debt level significantly affects and reduces the effectiveness of fiscal policy in Croatia.

Alawneh (2017) estimates the impact of capital expenditure, current expenditure and external and internal public debt on taxes in Jordan during the period 2001–2014 using the ordinary least square estimation technique. The statistical analysis showed a statistically significant, positive impact of both the capital expenditure and the current expenditure on taxes. The study also found a statistically significant, positive relationship between external and internal public debt on taxes in Jordan. The study recommends the need to use non-traditional alternatives to finance capital expenditures instead of external public debt. Thus, internal sources such as Sukuk Murabaha Islamic participation should be used to finance capital expenditure for the Government to build schools, hospitals and other government services.

### **3.1. Conceptual Framework**

This presents conceptual framework concerning the mode of structural, functional and legal operations between the Debt Management Office (Act), Fiscal Responsibility Commission (Act), Federal Ministry of Finance and the National Assembly on whether the transition from a discretionary to a rule-based fiscal system as implied by the Fiscal Responsibility Act of 2007 has taken place in

terms of public debt management in Nigeria. The strategies adopted and the institutional arrangements in place were inadequate to achieve a sustainable debt regime for Nigeria. This is because public debt management responsibilities were diffused across several agencies and operators, leading to ineffective and poor coordination of debt management functions. However, a clear legal framework is necessary for making appropriate institutional arrangements for public borrowings. This should cover legislation for borrowings by the government, for its own use or on-lending. The Central Bank of Nigeria (CBN) acts as an agent of government for external borrowing. The legislation has to be supported by regulations and procedures which defines the explicit roles of the different agencies: Debt Management Office and Federal Ministry of Finance (DMO and FRA) involved in loan operations at all stages of the “loan cycle” for each category of borrower. Legislation covering the issue of government guarantees by the Federal Ministry of Finance (MOF) on behalf of the government, and criteria and procedures for their approval and monitoring are also required. These functional, operational and structural relationships are explicitly explained with the aid of the following Figure 1 below:



**Figure 1: Institutional, Functional and Structural Relationships**

**Source: Extract by the Researcher (2018)**

The Debt Management Office (DMO) was established in October, 2000, with the mandate of managing the country’s external and domestic debt. Part III, Section 6 of the DMO Establishment Act, 2003 provided the legal framework for its operation. The Office has power to: Issue and manage Federal

Government loans publicly issued in Nigeria upon such terms and conditions as may be agreed between the Federal Government and the Office; Issue, from time to time, guidelines for the smooth operation of the debt conversion programmes of the Federal Government; the Act also empowers the office to issue periodic guidelines to regulate the conduct of external and domestic borrowing as approved by the Federal Executive Council (FEC) and the National Assembly (NASS).

The Fiscal Responsibility Commission (FRC) on the other hand, is charged with enthrone a regime of prudent, ethical and effective management of public monies and resources across all tiers of Government. Thus, the Fiscal Responsibility Act (FRA) on its part establishes the Fiscal Responsibility Commission. It provides that the federal Government shall set a limit on the consolidated debts of the Federal and State Governments. Any Government that exceeds such limit will be denied further borrowing until the excess is reduced. Conditions for borrowing under the Fiscal Responsibility Act include legislative approvals for the loans and their purposes, cost-benefit analysis and the application of loans. It is this obligation that is usually the pitfall of government in its debt management. The Nigerian public is also very skeptical about government's ability to meet with the very vital obligation in borrowing as several billions of borrowed monies have ended up being looted (This day, 2005).

### 3.2. Methodology

This study has situated within institutional and macroeconomic framework. The Debt Management Office Act of 2003 and the Fiscal Responsibility Act 2007 provided the context for the institutional analysis. The two Acts of Parliament provided the conditions for borrowing and for the utilization of borrowed funds as well as the incentive system for government agencies involved in procuring and managing public debt. The mini macroeconomic frame allows for analysis of the impact of public debt on public sector block in the economy (see for example Garba, 1995a).

According to Garba (1995b), the budget constraint function is important because it helps to show the linkages between fiscal policy, debt policy, domestic credit and money supply. Thus:

$$BD = GE - GRR \tag{1}$$

Where: BD is Budget deficit, GE is Government Expenditure, and GRR is Government Retained Revenue.

The budget deficit could be negative (Deficit), Zero (Balance) or positive (Surplus). And it could be financed by a combination of domestic borrowing (DB) or external borrowing (EB). Algebraically:

$$BD = DB + EB \tag{2}$$

Where: BD is Budget Deficit, DB is Domestic Borrowing, and EB is External Borrowing

Consequently, the functional equations in the public sector block are specified as follows:

$$GE = f(TDS, GRR) \tag{3}$$

$$GRR = f(FCR) \tag{4}$$

The total public debt in the economy, therefore, comprises of the domestic and external debt. And this can be expressed as:

$$TD = DD + ED \tag{5}$$

The above identity can be specified as the functional equations of the total debt, as follows:

$$DD = f(GE, M_2R) \tag{6}$$

$$ED = f(EXR, GE, DEXIT, DUMMYABACHA)$$

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The debt exit (Dexit) was introduced as an explanatory variable because this is considered as a resource to the economy that improves on its liquidity position and should therefore increase consumption as an injection to the economy, which leads to higher income and increases government expenditures. Furthermore, the total debt service (TDS) in the economy broke down into domestic debt service and external debt service. And its identity can be expressed as:

$$TDS = DDS + EDS \quad 8a$$

However, data on DDS and EDS are not available for the entire period. We, therefore, introduce equation 8b to relate debt service with debt shock. This can be expressed as:

$$TDS = f(DD, ED, DEXIT, EXR) \quad 8b$$

Equation 3, 4, 6, 7, and 8b can be expressed in log form as:

$$\log GE_t = \alpha_0 + \alpha_1 \log GR_t + \alpha_2 \log TDS_t + \mu_{1t} \quad 9$$

$$\log GRR_t = \beta_0 + \beta_1 \log FCR_t + \mu_{2t} \quad 10$$

$$\log DD_t = \phi_0 + \phi_1 \log GE_t + \phi_2 \log M_{2t} + \phi_3 R_t + \mu_{3t} \quad 11$$

$$\log ED_t = \delta_0 + \delta_1 \log GE_t + \delta_2 \log EXR_t + \delta_3 \log DEXIT_t + \delta_4 \log DUMMYABACHA_t + \mu_{4t} \quad 12$$

$$\log TDS_t = \gamma_0 + \gamma_1 \log DD_t + \gamma_2 \log ED_t + \gamma_3 \log DEXIT_t + \gamma_4 \log EXR_t + \mu_{5t} \quad 13$$

Where: LOGGE is Log of Government Expenditure, LOGRR is Log of Government Retained Revenue, LOGDPE is Log of Gross Domestic Product Expenditure, LOGDD is Log of Domestic Debt, LOGED is Log of External Debt, LOGTDS is Log of Total Debt Service, LOGEXR is Log of Exchange Rate, LR is Log of Interest rate, LOGM2 is Log of Money Supply, LOGFCR is Log of Federally Collected Revenue, LOGDexit is Log of dummy of Debt exit, and  $U_i$  is Error Term.

### 3.3. Data and Estimation Techniques

The data used in establishing a model in this research are annual time series for the period of 1970-2013. The main sources of data used in estimating this model are Central Bank of Nigeria statistical bulletins and annual reports, annual reports and statement of accounts of the Debt Management Office (DMO), National Bureau of Statistics (NBS) and cognate publications. The ordinary Least Square (OLS) augmented with the lag value of the dependent variable to account for first order serial correlation was adopted as the estimation technique for this study. Recall that, the main aim of the study is to examine the impact of Public Debt Management in Nigeria: the role of institutions after the exit from the Paris Club in 2006.

## 4. Presentation of Empirical Results

### 4.1. Analysis of Transition to Rule-Based Fiscal Operations

The Fiscal Responsibility Act 2007 set out a framework intended to improve fiscal discipline, allocative, efficiency, transparency, accountability, value for money principle as well as public participation in the management of federal resources. Therefore, the conceptual framework in Figure 1 as each shows the institutional, functional and structural relationships of the Fiscal Responsibility Act of 2007 in Nigeria. It is in an attempt to correct these fiscal system anomalies and level of compliance to the provisions of fiscal operations as indicated in the Fiscal Responsibility Act which further empowers the Fiscal Responsibility Commission to ensure the implementation of all the provisions in Section 41 and 42 which elaborately established the framework for debt management as shown in Table 1.



**Table 1: An Assessment on Compliance of Transition to Rule-Based Fiscal Operations**

ELEMENTS	PART	SECTION	HEADINGS	LEVEL OF COMPLIANCE		
				HIGH COMPLIANCE	MEDIUM COMPLIANCE	LOW COMPLIANCE
1. Establishment and Empowering of New Fiscal Organization	I	1 -10	Establishment,	✓		
			Functions and Fiscal Responsibility Council and			✓
			Governing Board	✓		
2. Fiscal Policy Framework and Fiscal Policy Instrument	II	11 – 17*	The Medium Term Expenditure Framework			✓
	III	18 - 24**	The Annual Budget			✓
3. Fiscal Rules	IV - XI	25 -27	1. Budgetary Planning of Corporations and Related Agencies			✓
		29 – 35*	2. Budget Executions and Achievement of Targets [Rules]			✓
		36 – 38	3. Public Revenue		✓	
		39 – 40**	4. Savings and Asset Management [Rules]			✓
		41 – 45*	5. Public Expenditures [Rules]			✓
		46 – 48	6. Debt and Indebtedness			✓
		49 -51	7. Borrowing			✓
		53 -55	8. Transparency and Accountability			✓
4. Offenses and Penalties	XII	56	Offenses and Penalties			✓

*Source: Extracted from the Fiscal Responsibility Bill, 2007*

Summarily, the assessment in Table 1 reveal that, there are four elements of the assessment of the transition to rule-based fiscal operations: the establishment and empowering of the Fiscal Responsibility Commission (FRC), fiscal policy framework and fiscal policy instruments, fiscal rules, offences and penalties.

The next portion of the Act and probably the most important aspect is the level of compliance with the provision. In this, it was categorically stated that there is high level of compliance in establishing the office, while the Functions of the Fiscal Responsibility Commission were low compliance and the governing board was very low.

Secondly, Medium Term Expenditure Framework (MTEF) serves as a mandatory basis for yearly budgets. It provides for the process of articulation and approval of both the MTEF and the annual budget and sets out rules and guidelines for borrowing, debt management, national savings and assets management, control of public expenditure and specific obligations that seek to improve public participation, transparency and accountability. However, compliance with the provisions of this law remains low. Thus, measures to be undertaken by the Budget Office of the Federation and the Ministry of Finance include early commencement of MTEF and Budget Processes, providing good lead time and adequate publicity for public consultations on budgets and MTEF.

On fiscal rule No. 8 as mentioned in Table 1, the levels of compliance are very low except in the case of public revenue, which has a medium level of compliance. This was due to the fact that there were revenues coming from sales of crude oil and little from non-oil sector. The level of compliance on Offences on non-adherence is very low and hence nobody was punished to serve as detriment to potential offenders and this were in spite of the clarity in the provision of Fiscal Responsibility Act (FRA) on offences and penalties.

#### 4.2. Regression Estimation Results and Analysis

**Table 2: Estimated Results for the Public Sector Block**

<b>EQUATIONS DEPENDENT VARIABLES</b>	<b>1 Log(GE)</b>	<b>2 Log(GRR)</b>	<b>3 Log(DD)</b>	<b>4 Log(ED)</b>	<b>5 Log(TDS)</b>
C	1.41*** (3.94)	1.64* (2.29)	-0.13 (-0.36)		-1.54 (-1.01)
Log(FCR)		0.82*** (16.20)			
Log(M2)			0.91*** (3.03)		
Log(DD)					0.69*** (3.01)
Log(ED)					0.20 (1.46)
Log(TDS)	0.20*** (4.98)				
R			1.89** (2.25)		
Log (EXR)				0.17 (0.50)	0.23 (0.92)
Dexit				-0.03 (-0.01)	0.52 (0.26)
Log (GE)			0.06 (0.19)	0.50 (1.28)	
Log (GR)	0.72*** (11.86)				
DUMMYABACHA				-0.02 (-0.001)	
DUMMYGFC					-0.34 (-0.96)

AR (1)	0.42** (2.66)	0.65*** (5.13)		0.96*** (12.04)	0.20 (1.27)
SIGMASQ	0.04*** (4.29)	0.03*** (3.76)		0.25*** (4.44)	0.24*** (4.76)
R <sup>2</sup>	0.99	0.99	0.98	0.97	0.97
Adjusted R <sup>2</sup>	0.99	0.99	0.97	0.94	0.97

*Source: Compiled by Researcher using E-views econometrics software Version 9.0*

**NOTE:** Values in parenthesis are t-values and \*\*\*, \*\* and \* denotes statistical significant at 1%, 5% and 10% Level respectively

Table 2 shows the estimated results for the public sector, which has five equations. The model is good fit of the data as adjusted (R<sup>2</sup>) ranges from 0.97 – 0.99 implying that, at least 97% of the variations in the endogenous variables are explained by the linear inferences of the explanatory variables.

Equation 1 is the model of government expenditure. The sign and magnitude of the coefficient are in accordance to apriori expectation. The R<sup>2</sup> of 0.97 indicates that the model is good fit. For instance, it implies that 97% of the variations in government expenditure is explained by the endogenous variables included in the model. It was further identified that government revenue and total debt service have a positive and significant impact on government expenditure; where autoregressive AR(1) were included in the equations to eliminate autocorrelations and heteroscedasticity.

Equation 2 is the model of government retained revenue. The sign and magnitude of the coefficient are in accordance to apriori expectation. The R<sup>2</sup> indicates that the model is good fit. For instance, the finding from the government retained revenues shows that, a one per cent increase in government retained revenue has a positive and significant impact on federally revenue collected; while autoregressive (AR(1)) and SIGMASQ are both positive and significant and were used to eliminate autocorrelation and heteroscedasticity.

Equation 3 is the model of domestic debt. The sign and magnitude of the coefficients are in accordance with apriori expectation. The R<sup>2</sup> indicates that the model is good fit. For instance, an examination of the regression result shows that the coefficients of money supply (M2) and government expenditure are 0.91 and 0.06 per cent respectively indicates a positive relationship with Domestic Debt. Interest rate shows a high magnitude (1.89), which implies that interest rate, has a strong positive influence on the domestic debt. This is plausible since the need for rollovers amidst high interest rate significantly raise the debt stock.

Equation 4 is the model of external debt. The sign and magnitude of the coefficient are in accordance to apriori expectation. The R<sup>2</sup> indicates that the model is good fit. However, the result revealed that, there were positive relationship between government expenditure and exchange rate, i.e. higher external debt means more government expenditure and exchange rate depreciation. Looking at the regression results, it shows that, the coefficients of government expenditure are 0.17 and 0.50 per cent respectively indicates a positive relation with external debt. In addition, the Dummy's coefficients of Dexit and Abacha decreased by about 0.03 and 0.02 per cent respectively indicate that on the average, external debt was significantly lower during these period .

Equation 5 is the model of total debt service. The sign and magnitude of the coefficient are in accordance to apriori expectation. The R<sup>2</sup> indicates that the model is good fit. For example, a one per cent decrease in total debt service led to 0.69, 0.20, 0.23 and 0.52 per cent in domestic debt, external debt, exchange rate and Dexit respectively. This result shows that, domestic debt, external debt, exchange rate and Dexit has a positive relationship with total debt service. This means that, the more we service our debt the more our exchange rate depreciated. The Coefficient on **DUMMYGFC** indicates that TDS was on the average lower during the global financial crisis between 1998 and 2004. AR (1) and SIGMASQ were included in the model to eliminate problem of serial correlation and heteroscedasticity.

## 5. Conclusions Remarks

Based on the findings, it is concluded that, the transition from the discretionary to a rule-based fiscal system/operation has not effectively taken place. This is largely because the rules and provisions provided in the Fiscal Responsibility Act of 2007 did not translate to strict compliance with the provisions. Secondly, efficient and effective of public debt management from the work has not been achieved. This was because of conflicting interests between the Debt Management Office (DMO), Fiscal Responsibility Commission (FRC) and the Federal Ministry of Finance (FMF). The asymmetrical relationship with the Federal Ministry of Finance (FMF) as superior to the heads of the Debt Management office (DMO) and Fiscal Responsibility Act (FRA) limits their ability to efficiently discharge their mandates. As a result, Nigeria's public debt has not been given proper scrutiny from 2007 - 2013. Thus, based on the research findings, this study recommends that the government should strictly comply with the provisions of Section 42 of the 1999 Constitution of the Federal Republic of Nigeria on borrowing as is contained in the guidelines of DMO Act and FRA.

## References

- Ajayi, R. (2003). On the Simultaneous Interactions of External Debt, Exchange Rates, and Other Macroeconomic Variables: The Case of Nigeria. *Centre for Economic Research on Africa Research Series, No. 23*.
- Alawneh, A. (2017). The Impact of Public Expenditure and Public Debt on Taxes: A Case Study of Jordan. *Accounting and Finance Research, 6*(3), 10-23.
- Chenery, H. (1996). *Economic growth in an open developing economy: The Role of structure and demand*, Cheltenham: Edward Elgar.
- Debt Management Office (2005). *Debt Management Office Annual Report*. Abuja: Federal Government of Nigeria Available on-line at [www.dmo.gov.ng](http://www.dmo.gov.ng)
- Debt Management Office (2013). *Debt Management Office Annual Report*. Abuja: Federal Government of Nigeria Available on-line at [www.dmo.gov.ng](http://www.dmo.gov.ng)
- Eaton, J. (1993). Sovereign Debt: A Primer. *World Bank Economic Review, 7*(2), 137-172.
- Fosu, A. K. (2007). Fiscal allocation for education in sub-Saharan Africa: Implications of the external debt service constraint. *World Development, 35*(4), 702-713.
- Fosu, A. K. (2008). Implications of the external debt-servicing constraint for public health expenditure in sub-Saharan Africa. *Oxford Development Studies, 36*(4), 363-377.
- Fosu, A. K. (2010). The external debt-servicing constraint and public expenditure composition in sub-Saharan Africa. *African Development Review, 22*(3), 378-393.
- Garba, A.G. (1995a). Political Change, External Shocks and Federal Fiscal Policy Operations in Nigeria 1975-1993.
- Garba, A.G. (1995b). The Determinants of Nigerian Federal Government Expenditure 1970-1993. A final report submitted to the African Economic Research Consortium (AERC), Nairobi, Kenya.
- International Monetary Fund (2009a). Nigeria: 2009 Article IV consultation, IMF Country Report No. 09/315, Washington, DC: IMF.
- International Monetary Fund (2009b), International financial statistics, online, <http://www.imfstatistics.org/imf/>
- Kgakge-Tabengwa, G. G (2014). Impact of Shocks to Public Debt and Government Expenditure on Human Capital and Growth in Developing Countries. *Journal of Economics and Behavioral Studies, 6*(1), 44-67.
- Krugman Paul. (1988). Financing vs. Forgiving a debt overhang: Some Analytic notes. *Journal of Development Economics, 29*, 253-268.
- Mah, G., Mukkudem-Petersen, J., Miruka, C., and Petersen, M.A. (2013). The Impact of Government Expenditure on the Greek Government Debt: An Econometric Analysis. *Mediterranean Journal of Social Sciences, 4*(3), 323-330.
- Odo, S. I., Ogonna, I. C., and Anoke, C. I. (2014). Public Debt and Public Expenditure in Nigeria: A Causality Analysis. *Research Journal of Finance and Accounting, 7*(10), 27-38.
- Oladokun, O. O. (2015). Causal Relationship between Public Debts and Public Expenditure in Nigeria. *International Journal of Management and Applied Science, 1*(8), 68-79.
- Okonjo-Iweala, N. (2005). Why Nigeria Deserves Debt Relief' Abuja: Federal Government of Nigeria Presidency of Nigeria 2007a 'M&E for Accountability: The Case of Nigeria's VPF. Paper Presented at the African Evaluation Association conference on 18th January 2007 in Niamey, Niger Available on-line at: [www.newscentre.bham.ac.uk/debtrelief/index.shtml](http://www.newscentre.bham.ac.uk/debtrelief/index.shtml)
- Shabbir, S. and Yasin, H. M. (2015). Implications of Public External Debt for Social Spending: A Case Study of Selected Asian Developing Countries. *The Lahore Journal of Economics, 20*(1), 71-103.
- Sinha P., Arora V., and Bansal V. (2011) Determinant of public debt for middle income and high income group countries [muenchen.de/32079/1/MPRA\\_paper\\_32079.pdf](http://muenchen.de/32079/1/MPRA_paper_32079.pdf). Data access on 14 June 2018.
- Šimović, H. (2017). Impact of public debt (un)sustainability on fiscal policy effectiveness in Croatia. *E F Z G Working paper Series, No. 17- 05*, 1-17.
- This Day newspaper November 5th 2005 debt relief: House Raises Questions Over US\$12.4b 9(3859), 1-17.
- Uguru, L. C. (2015). The Link between Public Debt and Government Expenditure Pattern: The Nigeria Experience. *IOSR Journal of Business and Management, 18*(1), 37-41.