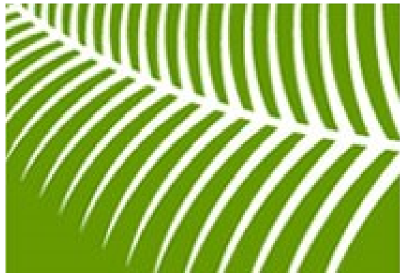

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Cyclicality of Fiscal Policy in Nigeria (1999 – 2017)

Kazeem Fasoye[†]

Abstract
The study investigated the responses of State governments to change in fiscal policy between 1999 and 2017. The methodology employed in the study involves the use of Generalized Method of Moments (GMM) to estimate the cyclical fiscal policy which is a reflection of the systematic response of the fiscal balance of state governments to the regulatory quality of the institution of States. The results show that the fiscal institutions are rather weak and may actually also form part of the rent-seeking agents in the fiscal space as it engenders procylical fiscal policy at the second tier of government in Nigeria. The empirical findings of this study conclude that fiscal policy of State governments in Nigeria is highly procyclical. The study recommends active government intervention in the economy through the use of appropriate macroeconomic policies such as expansionary fiscal policy during the period of fiscal crunch and contractionary fiscal policy during the period of boom.

Key world: Cyclicality, Procyclicality, Fiscal Policy, Revenue, Expenditure.

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1.0 INTRODUCTION

Fiscal policy is without doubt one of the most important tools used by government to achieve macroeconomic stability in the developing countries, Nigeria inclusive. Nigeria is an oil-rich nation whose economy is more vulnerable to the commodity price shocks and the effects of which are bound to have a procyclical stance. Procyclicality of fiscal policy implies that the fiscal stance exacerbates the business cycle thereby increasing the vulnerability of the economy to external shocks especially oil price shock. This policy connotes that more is spent when there is more money and expenditure crashes when revenue falls. To achieve an important objective of fiscal policy; it requires an expansionary fiscal policy which is complementary to counter cyclical discretionary fiscal policy measures. A Counter-cyclical fiscal policy therefore, refers to government strategy to increase spending and reduce taxes during an economic boom, but reduce expenditure and increase taxes during a recession.

The procyclicality of fiscal policy which describes the fiscal behaviour and action that coincide with the state of the economy is not only more pronounced but also becoming topical in liteature in the developing or emerging economies of the world (Frankel, Vegh and Vuletin, 2013). In the developed world, the issue of procyclical fiscal policy is seen to be most relevant in the economy, especially for government spending at the sub-national level. Similar to the case of developing countries, procyclical fiscal policy at the sub-national level is often explained by limited access of local governments to the credit market. It is also explained by institutional restrictions such as balanced budget requirements or insufficient counter-cyclical intergovernmental transfers (Abbott and Jones, 2012; Clemens and Miran, 2012; and Rodden and Wibbels, 2010). Rodden and Wibbels (2010) also argue that Subnational finance in the world's most decentralized federations is overwhelmingly procyclical.

In the same vein, the Sovereign Wealth Fund (SWF) and the Excess Crude Account (ECA) were created but implemented in 2005 and 2009 respectively as avenues to save oil revenue in booms so as to serve as stabilization funds in busts (NBS, 2010). It was reported that Nigeria government was unable to smoothen its expenditure as a result of depletion of the reserves, leaving the economy without buffers during the 2016 slump in oil prices (NBS, 2017). This culminated in the recession experienced from the second quarter of 2016 to the first quarter of 2017 from the economy came with a 0.55 percent growth (CBN, 2017). In the same vein, the policy thrust of the current government, owing to revenue shortfalls in the preceding due to dwindling oil revenue necessitated by fluctuations in the global oil market, is geared towards promoting greater budgetary discipline.

Nigeria is characterised by a decentralized federal structure; hence its fiscal operations also adhere to the same principle. The government's fiscal power is based on a three-tiered tax structure divided among the federal, state and local governments, each of which has different tax jurisdictions. The most veritable tax handles are under the control of the federal government while the lower tiers are responsible for the less buoyant ones. Odusola (2006) submitted that over the past two decades oil has accounted for at least 70 per cent of the revenue, thus indicating that traditional tax revenue has never assumed a strong role in the country's management of fiscal policy. Instead of diversifying the existing revenue base, fiscal management has merely transited from one primary product-based revenue to another, making the economy prone to fluctuations of the international oil market. The need to address this problem led to several tax policy reforms.

In other words, fiscal policy is a major economic stabilisation weapon that involves measure taken to regulate and control the volume, cost and availability as well as direction of money in an economy to achieve certain specified macroeconomic policy objective. Therefore, they cannot be left to the market forces of demand and supply as well as other instruments of stabilization such as monetary and exchange rate policies among others.

Many States of the federation are technically insolvent, owing their workers several months' salaries. Consequently, economic activities have collapsed in many states as the multiplier effects of non-payment of workers' salaries spells doom on the economies of the affected states. When the revenue is inadequate to finance government expenditure, government resorts to borrowing to finance its budget, thereby crowding out private sector borrowing.

Net foreign capital inflows have slowed down, including remittances that few years ago were a major source of foreign capital inflow into Nigeria. All of these are compounded by inherited economic and political governance problems. Nigeria retains low ranking on competitiveness index, the doing business index, economic freedom index, governance index, and major other global ranking indices.

Frankel et al. (2013) find that about a third of the developing world has been able to 'graduate' from procyclical fiscal policies since the 1960s. These authors emphasize the role of institutions, such as the depth of financial integration and political checks and balances, in reducing the procyclicality of fiscal policies in developing countries. The study will provide new perspectives on how developing countries in Africa, Nigeria in particular could graduate from procyclical fiscal policies. This will be done by highlighting the important role of the fiscal relations between the central and state governments in affecting the cyclicality of fiscal policies in any fiscal federation. To achieve anti-cyclical fiscal policies in fiscal federations, it is therefore crucial to take into account the incentives for different levels of governments and the behaviour interactions between them.

The full effect of procyclical state spending depends on the fiscal policy multiplier associated with the expenditures. More specifically, it depends on the multiplier associated with smoothing the timing of these expenditures. The implications for aggregate volatility could be substantial if the relevant multiplier is slightly larger; then, state governments would be responsible for nearly one-fifth of all business-cycle volatility (Shoag, 2010). On the other hand, if shifts in government expenditures displace contemporaneous private activity state governments may cause a relatively small portion of volatility. In a similar study, Clemens and

The paper is motivated by the recent fiscal crisis that has eaten deed into the fabric of Nigerian states. Nigeria slid into economic recession between the first quarter of 2016 and the first quarter of 2017. The fiscal atmosphere of states during the period was alarming. The study, therefore, investigated the role of institutional quality on the reactions of State governments to change in fiscal policy over the period of study.

The rest of the paper is divided into four sections. Section two deals with literature review and section three contains the research methodology, Section four contains data presentation, analysis

and discussion while the policy implications of the results as well as recommendations and conclusion are discussed in section five.

2.0 EMPIRICAL REVIEW OF LITERATURE

Fuest and Xing (2015) analysed the cyclicality of fiscal policies in China between 1978 and 2013. The study found that the cyclicality of local government spending in China significantly affects the cyclicality of total government spending. It was also shown that local budgetary government spending was strongly procyclical in the 1980s, but it became counter-cyclical with respect to nationwide output fluctuations and acyclical with respect to region-specific output shocks from the mid-1990s. In line with the above, the analysis of the Chinese experiences highlights the role of intergovernmental transfers in changing the cyclicality of local government spending in fiscal federations. It was found out that intergovernmental transfers are often pro-cyclical so that they aggravate the pro-cyclicality of local government spending (Abbott and Jones, 2012; Blöchliger and Égert, 2013). Similarly, Mihaela and Ozay (2014) empirically carried study on fiscal policy during the period of economic crisis in Romania and Turkey, and the study found that procyclical fiscal policy growth in Nigeria from 1970 to 2005. Also, Clemens and Miran (2012) examined the behaviour of state governments over the course of the business cycle. And a prominent feature of this behaviour is the pro-cyclicality of expenditures on capital infrastructure and service provision which has significant bearing on the state's economy.

Osuala and Jone (2014) in their study found that there is evidence of long run equilibrium relationship between fiscal policy and economic growth in Nigeria. The authors also opined that specific fiscal policy variables that have significant impact on economic growth in Nigeria are government recurrent and capital expenditures while non-oil taxes and government total debts have no significant relationship. Contrary to the study above, Ogbole, Amadi and Essi (2011) comparatively analysed the impact of fiscal policy on economic growth in Nigeria during regulation and deregulation periods. Results obtained showed that there is a difference in the effectiveness of fiscal policy in stimulating economic growth during and after regulation periods. The impact was marginally higher during deregulation than in the regulation period. The marginal and insignificant difference in efficiency of fiscal policy in both regulation and deregulation periods is instructive. It shows that both economic periods are good, and none is bad per se. But the specific needs or peculiarities of a given country and its specific economic circumstances and objectives are probably the basic factors that inform the choice of an economic policy regime to adopt.

Nathan (2012) examined the impact of fiscal policy on the Nigerian economy. The findings of the study indicated that significant causal relationship exists between exports and gross domestic product and hence fiscal policies. Atuma and Eze (2017) investigated the impact of fiscal policy instruments on economic growth in Nigeria between 1970 and 2015. The results revealed that government capital expenditure, tax revenue and domestic debt have negative and significant impact on economic growth in Nigeria while government recurrent expenditure and total export have positive and significant impact on economic growth in the economy. Similarly, Agu, Okwo and Ugwunta (2015) investigated the impact of various components of fiscal policy on the Nigerian economy. From the findings of the study, it was revealed that total government expenditures have the tendency to increase as government revenue rises, with expenditures outpacing the conventional revenue. Investment expenditures were found to be much lower than

recurrent expenditures indicating the poor growth in the country's economy. Hence, there is some evidence of positive correlation between government expenditure on economic services and economic growth. Therefore, in public spending, it is important to note that the effectiveness of the private sector depends on the stability and predictability of the public incentive framework, which promotes or crowds out private investment. Thus, it could be noticed that the results from the above three related studies are completely at loggerheads.

Though, there is plethora of empirical studies on fiscal policy both in developed and developing nations of the world, but the role of institutional quality on the responses of State governments to change in fiscal policy in Nigeria has not been given adequate attention in recent literature, hence the need for this study.

3.0 METHODOLOGY

This study adopted the model of Keynesian theory of fiscal policy. The theory portends fiscal policy as a tool for overcoming fluctuations in the economy as it postulates a positive relationship between deficit financing and investment, and consequently, on the economic growth.. Consequently, Keynes proposed the concept of government intervention in the economy through the use of macroeconomic policies such as fiscal policies. Fiscal policy deals with government deliberate actions in spending money and levying taxes with a view to influencing macroeconomic variables in a desired direction in order to achieve sustainable economic growth, stabilizing the economy. Increase in government or a reduction in taxes, tend to pull the economy out of recession while reduced spending or increased taxes slow down a boom.

3.1 Model Specification

Following the study of Adegboye (2014), a measure of cyclicality of fiscal policy is a function of fiscal dependence ratio. Thus, the basic model specification for this study is as follows:

$$\Delta FP_t = \alpha + \beta FDR_t + \varepsilon_t ------ (1)$$

Also, the impact of the current policy thrust of government depends entirely on the fiscal policy of the past; to this end fiscal policy of the preceding year (FP_{t-1}) will be incorporated a deterministic variable. A control variable of interest is the regulatory quality (REG), which may be an indication of the role of institution on the reactions of State governments to change in fiscal policy.

Then, equation (1) above becomes

$$\Delta FP_t = \alpha + \beta FDR_t + \delta \text{REG}_t + \gamma FP_{t-1} + \varepsilon_t ------ (2)$$

Where,

FP = fiscal policy (measured as overall fiscal balance of states to GDP ratio);

REG = regulatory quality (captured perceptions of the ability of the government to formulate and implement sound policies and regulations);

FDR = Fiscal dependency ratio (measured as federal allocated revenue as a percentage of total expenditure of states;

FP_{t-1} = lagged fiscal policy;

ε_t is stochastic error terms; and t subscripts denote years.

3.2 Technique of Analysis

The methodology employed in the study involves the use of Generalized Method of Moments (GMM) to estimate the cyclical fiscal policy which is a reflection of the systematic response of the fiscal balance of state governments to the regulatory quality of the institution of States. Procyclicality of fiscal policy is considered as an indicator of poor fiscal policy while countercyclical fiscal policy indicates better fiscal management.

3.3 Data source

The data set used in this empirical analysis is annual time series data covering the period 1999 to 2017. The choice of the data period is informed by the Nigeria transition to civil rule in 1999. Since then, the policy thrust of government at all levels of administration has not only attracted public attention but has also a topical issue in recent literature. The data are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2018) and World Governance Indicator (WGI, 2018) data base.

4.0 EMPIRICAL RESULTS

4.1 Descriptive Statistics

The trend and pattern of changes occurred fiscal policy of State governments in Nigeria between 1999 and 2017 is depicted by the use chart.

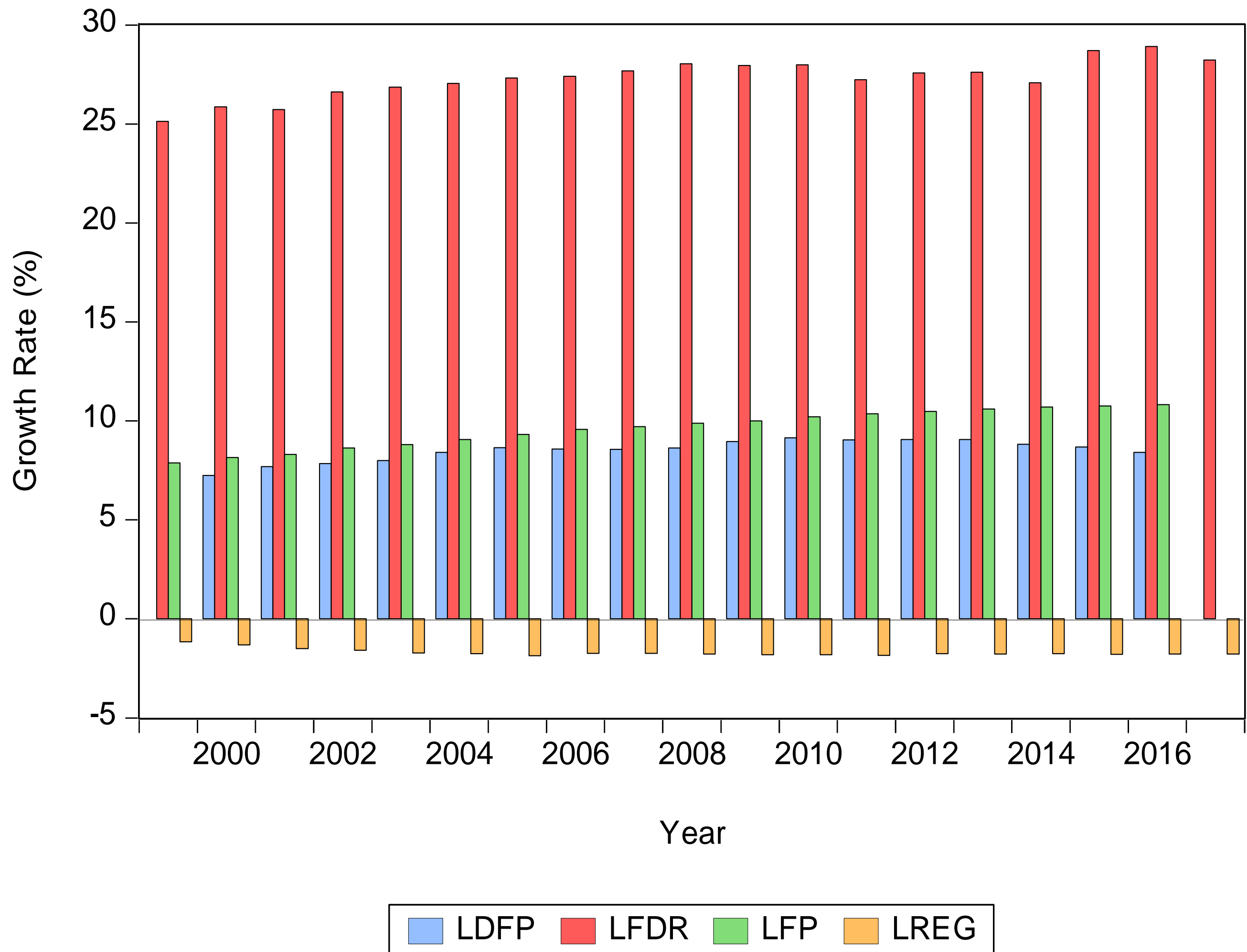

Figure 1 above indicates that fiscal dependency ratio (FDR) of States in Nigeria continues to rise to an unimaginably level. This implies that this level of government depends on the revenue share from Federation Accounts for their fiscal survival. Though, change in fiscal policies of States (DFP) and the fiscal policy of the preceding year (FP) are on the increase, but their growth rates are being hindered by poor regulatory quality (REG) of the institution. Thus, growth rate of regulatory quality (REG) remains negative during the study period as against the positive growth rates of other variables.

4.2 Correlation Analysis

The correlation analysis coefficient measures the strength of the linear relationship between variables and is bounded between -1 and +1 inclusive. Thus, correlations close to zero indicate no linear association between the variables, whereas correlations close to -1 or +1 indicate strong negative or positive relationship respectively between the variables. For a perfect negative correlation, the coefficient is -1 while for perfect positive correlation, the coefficient is +1.

Table 1: Correlation matrix of the log of the variables in the model of the equation ( )

Variables	LDFP	LFDR	LFP	LREG
LDFP	1.000000			
LFDR	0.675800	1.000000		
LFP	0.842372	0.822224	1.000000	
LREG	-0.880416	-0.740479	-0.732511	1.000000

Source: Author's E-views computation results (2019)

From Table 1, the variables (LDFP, LFDR and LFP) have negative relationship with LREG while the variables LDFP, LFDR and LFP maintain positive relationship with one another. The results above indicate a strong positive relationship between change in fiscal policy and fiscal dependency ratio; change in fiscal policy and the fiscal policy of the preceding year as well. Also, the 0.822 correlation coefficient between fiscal dependency ratio and the fiscal policy of the preceding year implies that State governments in Nigeria depend entirely on the statutory allocation to effectively discharge their civic obligations. Therefore, the results of the correlation analysis imply that there is no multicollinearity among the variables so, the research can proceed with the estimations of the equation.

Table 2: Dependent Variable: LDFP

Method: Generalized Method of Moments (GMM)				
Variables	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
LFDR	-11.03909	4.624256	-2.387215	0.0031
LFP(-1)	-0.213800	0.223501	-0.956594	0.0035
LREG	-0.487982	0.682443	-0.715052	0.0048
R^2 = 0. 68843		DW = 1.761514	Adjusted R^2 = 0. 659440	

Source: Author's E-views computation results (2019)

From the results of the GMM estimation above, the coefficients of all the explanatory variables (fiscal dependency ratio, fiscal policy of the preceding year and regulatory quality) are all negative and significant at 5 percent levels. Similarly the Durbin-Watson statistics of the test (i.e. DW = 1.76) indicates that there is no problem of autocorrelation. Also, the variation of the dependent variable {Fiscal Policy (LDFP)} is explained by 68 percent of the variations of the independent variables. Then, the model fits the data well.

The results imply that the impact of institutional quality in this study on the fiscal stance of State governments in Nigeria cannot be over-emphasised. It shows that the fiscal institutions are rather weak and may actually also form part of the rent-seeking agents in the fiscal space as it engenders procylical fiscal policy at the second tier of government in Nigeria.

Also the coefficient of fiscal dependence ratio is negative and also significant during the study period. This implies that fiscal dependence of states on revenue share from the Federaton Account tends to intensify procyclicality of fiscal policy. Thus, fiscal dependence worsened fiscal deficits since the nation's return to democratic rule. This is because the ugly fiscal atmosphere continues to exacerbate since then. This ugly situation rears its ugly head into the fiscal stance of States when the oil revenue falls significantly in the global world market and the revenue share to this tier of government drops sharply.

5.0 CONCLUSION

The study investigated the responses of State governments to change in fiscal policy between 1999 and 2017. The empirical findings of this study imply that fiscal policy of State governments in Nigeria is highly procyclical. This is partly in line with the study of Fuest and Xing (2015) which found that the cyclicality of local government spending did not only affect the cyclicality of total government spending but was also strongly procyclical and later became counter-cyclical with due to nationwide output fluctuations.

This increases the vulnerability of the economy of this tier of government to external shocks especially oil price shock. This policy signifies that more is spent when there are more money and expenditure crashes when revenue falls. Also, fiscal dependence of State governments appeared to be the key institutional factor promoting fiscal procyclicality in Nigeria.

To ensure improved countercyclical fiscal performance, the State government should broaden their independent internal revenue sources in order to drastically reduce the high fiscal dependence of this level of government on statutory allocation. This will enhance their fiscal stimuli in discharging their fiscal responsibilities effectively. In line with the Keynesian theory of fiscal policy, this study, therefore, recommends active government intervention in the economy through the use of appropriate macroeconomic policies such as expansionary fiscal policy during the period of fiscal crunch and contractionary fiscal policy during the period of boom.

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