

External Debt, Inflation and the Public sector in Nigeria: A Structural Analysis

By

Momodu Ayodele A and Monogbe Tunde G.

¹Department of Banking and Finance, Rivers State University of Science and Technology, Nkporlu, Port Harcourt, Rivers State Nigeria

²Department of Finance and Banking, Faculty of Management Sciences University of Port Harcourt Rivers State, Nigeria

Olatundebusayo19@gmail.com

(corresponding Author)

Abstract

The rationale behind this study is to ascertain the behaviour of inflation to rise in government debt and how this affect the public sector in Nigeria between the periods 1981 to 2016. In actualising the crux objective of the study, a disaggregate analysis was introduced where multilateral loan and bilateral loan which constitute the Nigeria external debt was considered separately. In the short run, findings shows that multilateral loan has significantly contributed to the public sector advancement while bilateral loan exhibit a negative contribution to economic advancement in Nigeria. The impulse response report which is our major focus clarifies the behaviour of each of the explanatory variables to own shock and to the economy at large. More credence was given to multilateral debt as it behave in a positive manner to the public sector in Nigeria in the long period, thereby suggesting that multilateral loan could be use in forecasting improvement in the public sector in Nigeria. This study hereby recommended that all forms of leakages must be blocked and the managers of the Nigeria fund must hedge against pleased effect which has been the order of the day in our political platform and in the country at large if the economy must experience benefit of foreign borrowing.

Keywords: External Debt, Impulse Response, inflation, Public Sector.

1.0 Introduction

The accumulation of external debt is a common phenomenon of developing countries at the stages of economic growth where the supply of domestic savings are relatively low, current account payment deficit are high and import of capital are needed to augment domestic resources (Todaro and Smith 2002). Prior to the early 70s, the external debt of developing countries was relatively small and primarily an official phenomenon to the majority of creditors being foreign governments and international financial institution such as IMF, the World Bank, and the regional development banks. Most loan were on concessional (low-interest) term and were extended for purposes of implementing development projects and

expanding import of capital goods. However during the late 1970 and 1980s, commercial banks began playing a large role in international lending by recycling surplus OPEC “petrodollar” and issuing general purpose loan to LCDs to provide balance of payment support and expansion of export sectors.

In the Nigerian context however, the quantum of external debt inflow to the economy was minute between the periods 1950 to 1960 because of her massive investment in agriculture which was the major source of revenue in the nation (Monogbe, 2016). Hence the nation enjoyed a reasonable measure of growth with the domestic generated revenue and absence of external debt. The consideration for borrowing arises in the early 1980s when the generated revenue was no longer sufficient to foot the public bills of the government in supplying basic needs and coupled with the fall in oil export earnings. This vacuum has made external debt an essential complement in ensuring that the basic necessities of the nation is been met and thus enhance a sustainable level of public sector growth in Nigeria.

Although foreign borrowing can be highly beneficial, it provides the resources necessary to promote economic growth and development though it goes for a cost. In recent time, this cost have greatly outweighed the benefit for many developing nations. The main cost associated with the accumulation of a large external debt is debt servicing. Debt servicing is the payment of amortization (liquidation of the principal) and accumulated interest, it is a contractual fixed charge on domestic real income and savings. As the size of the debt grows or has the income rises, debt servicing charges increases. Debt service payment must be made with foreign exchange. Under normal circumstances, most of the country’s debt servicing obligations are met by its export earnings. However, should the composition of imports change or should interest rate rises significantly, the cost of debt servicing payment increases, or should export earning diminishes, debt services difficulties are likely to arise. This has been the experience of most heavily indebted LCDs including Nigeria.

Despite the sizable increase in debt-services obligations, the ability of the Nigerian government to meet their debt servicing payments during the late 1990s till date remained largely unimpaired. This was primarily a function of the international economics climate that prevailed during this period. Specifically, a combination of declining real oil prices as a result of inflation, low or negative interest rate, and increased export earning narrowed current account deficit toward the end of the decade and enabling Nigeria to sustain relatively high growth rate through massive borrowing.

Facing this critical situation, countries in such financial mess (shortage of adequate revenue) has two policy options. There could either curtail import and impose restrictive fiscal policy and monetary policy measures, thus impeding growth and development objectives, or they could finance their widening current account deficit through more external borrowing. Most time unwilling to them, there adopt the first option as a means of solving the balance of

payment crisis, many countries were forced in the 1980s to rely on the second option borrowing even more heavily.

The interplay between rise in external debt and inflation regarding its behavioural effect on the public sector is dynamic. Theoretically, the responsiveness of economic output to inflation varies. Although the aggregate demand and aggregate supply framework suggest the existence of direct relationship between inflation and the public sector. That is, rise in the public sector goes along side increase in inflation. Meanwhile, the monetarism suggest that if the growth of money supply is higher than the economic growth rate, inflation will emanate. Inflation could result into uncertainty in the profitability returns of a firm investment project due to instability in its rate and price variability. Furthermore, when inflation liaises with the tax system, lending and borrowing decision may be distorted. Having showcase the theoretical ground, what percentage of inflation is then adequate in maintaining public sector advancement? It is based on this disparities that this study seek to examine the consociation between external debt, inflation and how it affect public sector in Nigeria between the period 1981-2016.

2.0 Theoretical Framework

Pre – Keynesian Debt Theory and Neoclassical Public Sector Theory

An offshoot of new classical theory formulated by Harvard's Robert Barro is the idea of debt. Barro argues that inflation, unemployment, real GNP, and real national saving should not be affected by whether the government finances its spending with high taxes and low deficits or with low taxes and high deficits. Because people are rational, he argues, they will correctly perceive that low taxes and high deficits today must mean higher future taxes for them and their heirs. Barro argues that, cut consumption and increase their saving by one dollar for each dollar increase in future tax liabilities. Thus, a rise in private saving should offset any increase in the government's deficit. Naïve Keynesian analysis, by contrast, sees an increased deficit, with government spending held constant, as an increase in aggregate demand, the stimulus to demand is nullified by contractionary monetary policy, and real interest rates should rise strongly. There is no reason, in the Keynesian view, to expect the private saving rate to rise. David Richardo argues that a related issue is the desirability of deliberately using deficits to influence the path of the economy. Under full equivalence of deficit and tax finance, no such thing can be done, of course, because deficits do not affect anything important. Under incomplete equivalence, though, deficits do have effects, as we have just seen. Therefore, it might seem desirable to run up deficits in recessions to encourage people to spend more and to run up surpluses in booms to restrain spending. One problem is that

these seemingly desirable effects arise only because people fail to perceive the future taxes implied by deficits; that is, deficits have effects only when they fool people thinks they suddenly have become wealthier (and conversely for surpluses). Is it desirable to influence the path of the economy by using a policy that is effective only because it deliberately misleads the public? Such a proposition seems difficult to justify.

Lerner's View

Lerner connotation is lingering on the fact that government borrowing to finance the economy could be beneficial and at the same time could be detrimental to the oncoming generation. He further explains that injecting of borrowed fund in a self-liquidating investment will help the economy to generate more fund through which the borrowed fund will be off set. Conversely, if the borrowed fund is injected into recurrent expenditure, the probability of generating returns from such is zero hence this could result into intergenerational effect of debt servicing on the unborn generation. Meanwhile in defying the Barro's provocative argument of borrowing been detrimental to the future generation, the researcher hereby makes some argument thus; the irrelevance of government fiscal policy as opted by Barro's provocative hypothesis is not justifiable enough. Whether or not the debt burden will be transfer to the future generation is a function of expected returns on the investment in which the fund (borrowed fund) is lunch into. If the borrowed fund is injected into an income yielding investment whose returns is higher than the cost of borrowing, such debt will be easily serviced and the burden on the unborn generation will be ephemeral.

Review of Related Literature

Nguyen (2015) examined the responsiveness between government debt and inflation among some developing countries. About 60 developing countries were considered in this research work. The study scope covers between the periods 1990 to 2014 using generalise movement method. The study develop three model and from the report of the study, we found that there exist a direct and positive nexus between public debt and inflation amongst the developing countries under investigation. Study further suggest that public debt excavate inflation and that inflation can erode the real value of public debt hence, the study recommended that government in developing countries should run the economy based on inflation threshold target. The study propose a threshold target of 3 to 5% as been an appropriate percentage of inflation level where a nation can operate.

Vikesh and Subrina (2004) empirically investigated the relationship between inflation and economic growth. The study area of interest was to identify the response of inflation rate to growth of output. Some related theories were also considered. More specifically, the Keynesian aggregate demand (AD) and aggregate supply (AS) framework was considered

alongside the neoclassical theory and economic growth theory. The final result shows the existence of an inverse relationship between inflation rate and economic growth rate while the causality movement show a unidirectional link with causality flowing from gross domestic product to inflation.

Bhattarai, et al (2012) examined the inflation dynamics in respect to its influence on public debt. The various regimes of the stabilization policy was considered in the study. More Credence was given to monetary and the fiscal policy. Findings shows that during the active regime of monetary policy and a passive era of fiscal policy, inflation follows the targeted rate of inflation and thus maintain the threshold of the targeted trend. Less intervention of fiscal policy to public debt resulted into less inflation behaviour and non-policy shock. Finally, the study thus shows that the behavioural effect of inflation dynamics to economic growth depend on both the monetary and fiscal policy regime though fiscal policy is passive.

Karakaplan (2009) examined the conditional effect of external debt on inflation. In the process of actualising the objective of this study, two different hypothesis were tested. The first hypothesis opines that development of the capital market determines the inflationary progression of external debt. Hence, the hypothesis tested that if the capital market is well developed, then external debt is less inflationary. On the other hand, the second hypothesis tested the heterogeneity across the countries under investigation. On this premises, study therefore suggested that the effect of determinant of inflation on the economic is not homogenous.

Monogbe (2016) empirically examine the Ricardian hypothesis of intergenerational effect of external debt on oncoming generation. The objective of the study was to identify the aftermath effect of debt on the economy. Study employed multiple regression, granger causality test and series of diagnostic test. Findings reveals that if the borrowed fund are efficiently utilised toward the capital sector of the nation, the investment will have yielded adequate returns which will be used in offsetting the borrowed debt and as such the debt might not have the cause to be transfer to the unborn generation.

Tajudeen (2012) using the multiple regression of the ordinary least square investigated the contribution of external borrowed fund on the Nigeria economy. Findings shows that domestic and external debt significantly promote economic growth in Nigeria while the servicing capacity of the Nigerian government on their borrowed fund is insignificant. The reasons behind this abnormalities could be attributed to the fact that those borrowed fund are not rightly channelled productively. On this discovery, the study advises that the authority should streamline her spending and thus checkmate her loan allocation to the sectors of the economy.

Mbanasor and Okere (2012) empirically test the effect of external debt on the Nigerian economy either been a threat or a tool for advancement. The study employed ordinary least square on the secondary Nigerian data sourced from the statistical bulletin. Findings reveals that external debt slimly promote economic growth in Nigeria. The study further projected

into the future and thus suggest that it is possible that external debt stimulate growth in the future if the government could inject the borrowed fund in a self-liquid investment project.

Suna (2015) empirically investigated the turkey economy using a time series data between the periods 2003 to 2014. The objective of the study was to investigate the relationship between the external debt and economic growth in turkey. Study employed vector auto regression model. In identifying the direction of causality between the external debt and economic growth in turkey granger causality test was employed. From the result, it was discovered that there exist a causal relationship between external debt and economic growth with causality flowing from external debt to economic growth in turkey.

In a Tanzania study, Faraji and Makame (2013) examine the effect of external debt on economic growth in Tanzania. Study employ time series data between the periods 1990-2010. In the whole of the study, two instances were identified. Firstly, it was discovered that external debt is a tools for development for the developing nation and that the more a country amount to development level, the further financial responsible the country his.

Sulaiman and Azeez (2012) empirically examine the contribution of external debt to economic output in Nigeria using the Nigerian data which covers from 1970 to 2010 where johansen co-integration test was employed to attest to the long run consociation that must have exist between the time series under investigation. Findings reveals that the lagged effect of external borrowing on the Nigerian economy is positive even till date. The study further recommended that the authority in charge of debt management shouldensure that the borrowed fund are used for economic reasons rather than political and self-embezzlement.

Ibi and Aganyi (2014) using vector auto regression statistically examined the impact of external debt on the Nigerian economy. The rationale behind the introduction of vector auto regression tool was anchored on the absence of co-integrating equation among the time series under investigation. Other estimating tools considered in the process of research includes structural analysis and granger causality test. The result shows something different from was has been previously recorded. The report of the causality test reveals a weak causation between external debt and economic growth while the structural analysis suggest that the introduction of external debt could not forecastadvancement in the Nigerian context. Study thus conclude that if external borrowing would stimulate economic growth in Nigeria, the Nigerian leader would be self-disciplined to effectively utilise and manage public fund for the purpose of ascertaining economic advancement and not for personal project like we use to have.

Empirical Critiquesand Gap Identification

Series of study has been conducted in the Nigerian context and across the globe on this subject matter and quite a number of result emerged. Meanwhile, a whole lot of misconception, model inadequacy and model misspecifications were discovered from the

previous work reviewed hence, this study tend to checkmate the previous studies and developed on their inconsistencies. For instance, Sulaiman and Azeez (2012) examined the effect of external debt on economic growth in Nigeria using multiple regression of the ordinary least square and error correction model to measure effect. It must be clearly stated that multiple regression of the ordinary least square does not test for effect of one variable on the order but it rather examine the relationship between variables and also, error correction model does not test for effect but rather ascertain the speed at which the disequilibrium in the short run can be corrected in the long run. The two major tool used by this authors are inadequate and not sufficient enough to test for effect. Rather, the appropriate tool for an effect study is granger causality test and structural analysis. But, all of this were found wanting in their study. This therefore makes the study watery. Furthermore, Ajayi and Oke (2012) empirically examine the effect of external debt on economic growth and development in Nigeria. The major coerce with this paper is that economic development and growth were proxy with national income which is theoretically wrong. Furthermore, the study also employed ordinary least square as a tool for examine the effect of external debt on economic development and growth in Nigeria which is also derisory. Rather, the study would have simply differential between economic growth and development which are two different parameter though similar or better still human development index has been reported according to Todaro (2012) as one of the best measure for economic development. This problem of model misspecification and estimation tool meagreness is also peculiar with the work of Mbanasor and Okere (2012), Ejigayehu and Persson (2013). Having considered the following deficiency, this study tend to capture the response of external debt and inflation to the public sector in Nigeria using structural analysis between the periods 1981 to 2016.

3.0 Methodology

This study employs econometrics research design also known as ex poste factor research design while the time series under investigation were sourced from the central bank of Nigeria statistical bulletin between the periods 1981 to 2016. Since inflation is measure in rate, all-time series under investigation were converted to percentage change to ensure uniformity in measurement.

Model Specification

The rationale behind this study is to ascertain the interplay between the external debt and inflation and how there contribute to the public sector in Nigeria. From the central bank statistical bulletin, external debt is a composite statistics of multilateral debt and bilateral debt. Hence, this study captures external debt in a disaggregate manner. Following the classical linear regression model assumption, we formulate our model in the functional form thus;

$$RGDP = F(BLTD, MLTD, INFLR) \text{ ----- (1)}$$

The above functional equation is transform into a mathematical form thus;

$$RGDP = \beta_0 + \beta_1BLTD_t + \beta_2MLTD_t + \beta_3INFL_t \dots\dots\dots (2)$$

The above model is transform into econometrics form by introducing error term thus;

$$RGDP = \beta_0 + \beta_1BLTD_t + \beta_2MLTD_t + \beta_3INFL_t + \epsilon_t \dots\dots\dots (3)$$

Where;

RGDP = Real Gross Domestic Product

BLTD = Bilateral Debt

MLTD = Multilateral Debt

INFL = Inflation

β_0 = Constant

β_1 - β_3 = Slope

ϵ = Error Term

On a priori, we expect the external debt component to stimulate the public sector in Nigeria while inflation is expected to respond in an inverse progression.

$$\beta_1, \beta_2, > 0 \text{ and } \beta_3 < 0$$

Operational Measures of Variables

Real Gross Domestic Product: percentage changes in Real Gross domestic product (RGDP) was adopted as a proxy for public sector in Nigeria.

Multilateral Debt: This are loan from the international institution which constitute part of the external debt accommodated by the Nigerian government. The international institutions that issue multilateral loan includes African development bank, International Bank of Reconstruction and Development, International Finance Corporation, International development Association and European Union. Operationally, multilateral debt is captured as stated in the statistical bulletin various issues 2016.

Bilateral Debt: This are loan granted by foreign private sector creditors for the purpose of economic development. Private sector creditors in this category are European Union, United States, East European Countries and Japan. This variable is operationally captured as stated in the CBN statistical bulletin.

Inflation: This is the continuous rise in the general price level of commodity and services in a nation. The study tend to ascertain the respond of inflation to rise in government external

and how it affect prices of commodity in Nigeria. Operationally, all variables in this study are convert to percentage change to ensure uniformity in measurement.

4.0 Presentation of Result and Interpretation

4.1 Unit Root Test

We start the estimation by introducing stationarity test to ascertain the reliability of the data set under study.

Table 1 Stationarity Test

Variables	ADF Stat	5%critical value	Order	Remark
D(RGDP)	-3.74675	-2.9511	1(1)	Stationary
D(MLTD)	-3.11118	-2.9511	1(1)	stationary
D(BLTD)	-3.42013	-2.9511	1(1)	Stationary
D(INFL)	-6.76876	-2.9511	1(1)	stationary

Source: Extraction from E-view

The report above validate the Augmented Dickey Fuller criterion. The ADF statistics is found to be greater than the trace statistic thereby showing absence of unit root. This therefore implies that all-time series under investigation exhibit no unit root and thus became stationary in the order of 1(1) integration. Hence, we proceed to co-integration test with the intention of identifying if there exist any long run association among the time series Johansen co-integration estimate. Result of the co-integration test shows absence of long run coalition amongst the variable. This thus lead us to the structural analysis haven conducted the unrestricted VAR. The result of the VAR will not be stated in the body of the work since its coefficient is of a great importance but of little significant in interpretation (Ibi and Aganyi 2015). Hence we proceed to our structural analysis proper.

4.2 Short Run Influx Report

In order to ascertain the short run influx amongst employed variable, we subject our data to multiple regression of the OLS thus;

Table 2 Presentation of Multiple Regression Result

Dependent Variable: RGDP				
Method: Least Squares				
Date: 06/11/17 Time: 18:33				
Sample: 1981 2016				
Included observations: 36				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-272811.8	2418902.	-0.112783	0.9109
MLTD	72765.56	3063.540	23.75211	0.0000
BLTD	-5474.466	985.2266	-5.556555	0.0000
INFL	-17853.03	69625.06	-0.256417	0.7993
R-squared	0.953418	Mean dependent var		19964063
Adjusted R-squared	0.949051	S.D. dependent var		31885826
S.E. of regression	7197210.	Akaike info criterion		34.52072
Sum squared resid	1.66E+15	Schwarz criterion		34.69667
Log likelihood	-617.3730	Hannan-Quinn criter.		34.58213
F-statistic	218.3219	Durbin-Watson stat		1.747654
Prob(F-statistic)	0.000000			

Source: Extraction from E-view

This tool tend to estimate the short run dynamism amongstemployed variables under study. The report above shows that the constant c exhibit a negative coefficient of -272811.8 giving a signal of danger. This suggest that all things been kept constant, rise in external debt will jointly account for about 272811.8 unit decrease in the Nigeria economy thus implies that doom looms. The two variable considered as proxies for external debt exhibit a significant P-value of 0.0000 and 0.0000 respectively. The different here occurs when the bilateral debt report a negative coefficient of -5474.466. This therefore show the extent to which bilateral loan has been harmful to the nation. The multilateral loan seem to contribute more to the Nigerian economic advancement as it report a high coefficient of 72765.56. Meanwhile, Monogbe (2016) suggest that the negative contribution of bilateral debt to the public sector could be attributed to financial indiscipline, moral hazard, fund diversion and so forth from the managers of government fund. Inflation however show a negative coefficient of -17853.03 as expected. This shows that as the public sector grows, inflation rate in the system could probably be reduced to the tune of 17853.03 unitall things been equal.

The global statistics report a high coefficient of (0.949051) for the adjusted R². This therefore showcases the extent to which external debt indices and inflation jointly account for about 95% variation in theNigerian public sectors proxies by RGDP. The Durbin Watson statistics shows a coefficient of 1.74765 which is within the acceptable range and thus suggest absence of autocorrelation. To this end, the short run association among the variable has been analyse

using the ordinary least square as reported in table 2 above. Having justifies these, we proceed to test the effect of one variable on the order using granger causality test thus;

Table 3 Presentation of Causality Test Report

Pairwise Granger Causality Tests			
Date: 06/11/17 Time: 19:10			
Sample: 1981 2016			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
MLTD does not Granger Cause RGDP	35	1.26856	0.2684
RGDP does not Granger Cause MLTD		6.91319	0.0130
BLTD does not Granger Cause RGDP	35	5.3E-05	0.9943
RGDP does not Granger Cause BLTD		0.06476	0.8008
INFL does not Granger Cause RGDP	35	0.04137	0.8401
RGDP does not Granger Cause INFL		1.30404	0.2620

The report of the causality test judging by 5% alpha level is analyse thus, from Table 3 above, there exist no Causal relationship between bilateral loan, inflation and the public sector (RGDP). Meanwhile we found a causal association between multilateral debt and gross domestic product real with causality flowing from RGDP to MLTD. Here, a supply leading relationship is identified. The result further suggest that it is the speed at which the economic grows that determine the volume of financial assistant the nation consumes. This report therefore synergize the empirical result of Momodu and Monogbe (2017) whose study report that one of those structural factors that deepens the government budget deficit and gives room for accommodation of more loan in Nigeria is the speed of economic development. Hence, neither bilateral nor multilateral debt seems to promote public sector in Nigeria in the longrun.

4.3 Structural Analysis

The rationale behind this is to ascertain the response of external debt and inflation to the Nigerianeconomy using the impulse response and variance decomposition techniques thus;

Table 4: Presentation of Impulse Response Report

Respo nse of RGDP: Period	RGDP	MLTD	BLTD	INFL

1	4706701.	0.000000	0.000000	0.000000
2	4112133.	-531623.9	-469917.0	-313732.4
3	3448725.	1134425.	-1862969.	-304190.0
4	2826540.	1957383.	-3047354.	-241384.2
5	3025484.	2630207.	-3840018.	-219411.4
6	3639831.	3000587.	-4245891.	-240448.0
7	4453113.	3474867.	-4546206.	-273193.6
8	5259682.	4124252.	-4962374.	-321813.6
9	6066108.	4986054.	-5623507.	-402336.8
10	6950800.	6004485.	-6550627.	-521710.0

Source: Extraction from E-views

The result above slightly validate the dynamics of the ordinary least square. In the short period of 2, the response of RGDP to own shock is 4112133 while the response of RGDP to shock that emanate from other explanatory variables are MLTD (-531623.9), BLTD (-469917.0) and INFL (-313732.4) respectively. This thus suggest that in the short period of 2, external debt and inflation could not forecast advancement in the Nigerian public sector. However, In the long period of 9, the response of RGDP to own shock increase with about 50% and thus amount to 6066108 while the response of RGDP to shock emanating from other variables under investigation report a varying behaviour. The response of MLTD to the economic shock appear to be positive suggesting that multilateral debt could thus be use in forecasting public sector growth in Nigeria while the response of bilateral debt did not seem to have contributed positively to public sector advancement in Nigeria in the long run. The behaviour of inflation is negative as expected. To a large extent, credence is given to multilateral loan which has significantly contribute positively to economic growth in Nigeria as its statistical behaviour could be use in forecasting improvement in the public sector in Nigeria.

Table 5 Presentation of Variance Decomposition Report.

Period	S.E.	RGDP	MLTD	BLTD	INFL
1	4706701.	100.0000	0.000000	0.000000	0.000000
2	6297979.	98.48259	0.712536	0.556724	0.248151

3	7510550.	90.33480	2.782466	6.544203	0.338531
4	8807591.	75.98675	6.962277	16.72970	0.321276
5	10413409	62.79955	11.36019	25.56604	0.274225
6	12197393	54.67778	14.33185	30.75163	0.238736
7	14192390	50.23129	16.58051	32.97481	0.213389
8	16456802	47.57370	18.61213	33.61723	0.196946
9	19085871	45.47164	20.66248	33.67502	0.190863
10	22177033	43.50230	22.63449	33.66650	0.196705

Source: Extraction from E-views

The presented result in table 5 above report the three explanatory variables and its corresponding explained variable for 10 periods forecasting into the future. As reported by (Ogbulu, 2012 as cited in Ogbulu, et al 2015), variance decomposition estimate is capable of forecasting the proportion of error apportion to own shock and to shock ascribing to other explanatory variables in the designed model.

In this report, own shock simply mean a prevailing route of clustering in the forecast error. The result shows that the variance decomposition of RGDP in the first period reveals that own shock constituted about 100% while the variation of other explanatory variables to own shock is zero. The rate of reduction in own shock to RGDP begins to diminish from period to till the end of the 10th period while the other variables account for about 22.63%, 33.66% and 0.1967% variation in RGDP shock respectively.

5.0 Conclusion and Recommendations

The rationale behind this study is to ascertain the behaviour of inflation to rise in government debt and how this affect the public sector in Nigeria. In actualising the objective of the study, a disaggregate analysis was introduced where multilateral loan and bilateral loan which constitute the Nigeria external debt was considered separately. In the short run, findings shows that multilateral loan has significantly contributed to the public sector advancement while bilateral loan exhibit a negative contribution to economic advancement in Nigeria.

The report in the Causality test gave credence to the fact that development of the economy calls for consumption of more fund as the supply leading relationship was identified between multilateral debt and the economy with causality flowing from gross domestic product to multilateral debt while their exist no causal association between bilateral debt, inflation and public sector in Nigeria.

The impulse response report which is our major focus clarifies the behaviour of each of the explanatory variables to own shock and to the economy at large. More credence was given to multilateral debt as it behave in a positive manner to the public sector in Nigeria in the long period thereby suggesting that multilateral loan could be use in forecasting improvement in the public sector in Nigeria. Bilateral debt react to economic growth in a negative manner such that its shock to economic growth were negative from the first period to the last period. This therefore gives a notion of doom as earlier stated and thus calls for reappraisal. Inflation also report a negative response to the public sector. The negative behaviour of bilateral loan to the public sector calls for readjustment. The economic implication of this is that the negative behaviour of bilateral debt to public sector might transpire into intergeneration debt servicing cost for the unborn generation as argues in David Richadian Hypothesis. To avoid this abnormalities, all forms of leakages must be blocked and the managers of the Nigeria fund must hedge against pleased effect which has been the order of the day in our political platform and in the country at large. Finally, to hedge against inflationary pressure, the quantum of fund injected into the economy such be synchronise such that it must be equal to the percentage growth rate of the nation as this will help in hedging against inflationary pressure.

References

- Barro, R. J. (1974). Are Government Bonds Net Wealth?, *Journal of Political Economy*, 82, 1095-1117.
- Bhattarai, S., Lee, J. W & Park, Y. W (2012). Inflation Dynamics: the role of public debt and policy regimes. Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Paper No. 124
<http://www.dallasfed.org/assets/documents/institute/wpapers/2012/0124.pdf>
- Ejigayehu, D. A and Persson, J (2013). Effect of external debt on economic growth. Södertörns högskola | Department of economics Magisteruppsats 30 hp | Vårterminen 2013
- Faraji and Makame (2013). Impact of external debt on economic growth in Tanzania. *Advances in Management & Applied Economics*, 3(4) 2013, 59-82 ISSN: 1792-7544 (print version), 1792-7552(online) Scienpress Ltd, 2013
- Ibi, E. E & Aganyi, A. (2014). Impact of external debt on economic growth in Nigeria: VAR estimate. *Journal of Business Management and Administration*. 3(1):1-5, March, 2015
<http://www.peakjournals.org/sub-journals-JBMA.html> ISSN: 2329-2954 ©2015 Peak Journals

- Karakaplan, M. u (2009). The conditional effects of external debt on inflation. *Journal of social and economic research*. 9-17.
- Monogbe, T. G (2016) Intergenerational causal effect of external debt on performance of the Nigerian economy. *IIARD International Journal of Banking and Finance Research* ISSN 2406-8634. 2(1) 2016 www.iiardonline.org
- Mbanasor, C. O & Okere, P. A (2012). External debt: a tool or a threat to the economic growth in Nigeria: *International Journal of Science and Research (IJSR)* ISSN (Online): 2319-7064 Impact Factor (2012): 3.358
- Momodu, A. A & Monogbe, T. G (2017) Structural factors and budget deficit in Nigeria: *European Journal of Economic and Business*. *Europ. J. Econ. Bus.* □ DOI: <http://dx.doi.org/10.20936/EJEB/160202>
- Nguyen, V. B (2015). The relationship between public debt and inflation in developing: evidence based on different panel GMM. *Asian Economic and Social Society*. ISSN (P): 2306-983X, ISSN (E): 2224-4425 5(9). 102-116
- Ogbulu, O., & Torbira, L. L. (2012). Monetary policy and the transmission mechanism: evidence from Nigeria. *International Journal of Economics and Finance*, 4(11), 122-133. <http://dx.doi.org/10.5539/ijef.v4n11p122>
- Ogbulu, M. O., Tobira, L. L & Chizoba, L. U (2015) Assessment of the impact of fiscal policy operations on stock price performance: Empirical evidence from Nigeria. <http://ijfr.sciedupress.com> *International Journal of Financial Research* Vol. 6(2); 2015
- Suna, K (2015). The relationship between external debt and economic growth in turkey. *Proceedings of the Second European Academic Research Conference on Global Business, Economics, Finance and Banking (EAR15Swiss Conference)* ISBN: 978-1-63415-477-2 Zurich-Switzerland, 3-5 July, 2015 Paper ID: Z581
- Sulaiman, L. A & Azeez, B. A (2012). Effect of External Debt on Economic Growth of Nigeria: *Journal of Economics and Sustainable Development* www.iiste.org ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) 3(8), 2012
- Tajudeen, E (2012). External borrowing and economic growth in Nigeria: A Publication of College of Management and Social Sciences, Fountain University, Osogbo. *Journal homepage: www.fountainjournals.com* ISSN: 2315 – 6325 ISSN: 2408-6959 (Online)
- Vikesk, G & Subrina, H (2004). Relationship between inflation and economic growth. Working Paper 2004/04, December 2004 Economics Department Reserve Bank of Fiji Suva Fiji