Government Policies and Economic Growth in Nigeria

By

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Abstract

The paper empirically examined the in-depth relationship existing among exchange rate, interest rate, balance of payment, inflation rate, money supply, taxation, gross capital formation and economic growth in Nigeria using the annual time series data spanning from 1981 to 2018 by employing the Vector Autoregressive (VAR) Model. Stationarity and causality tests were conducted on all the variables of interest in the study. The study finds that gross capital formation granger causes taxation in Nigeria. The study also reveals that inflation rate granger causes balance of payment as interest rate also granger causes balance of payment in Nigeria. The study also indicates that taxation granger causes money supply while money supply granger causes economic growth in Nigeria. In the same vein, the paper confirms that there is significant and dynamic relationship existing among exchange rate, interest rate, balance of payment, inflation rate, money supply, taxation, gross capital formation and economic growth in Nigeria suggesting that exchange rate, interest rate, balance of payment, inflation rate, money supply, taxation, gross capital formation have significant predictive power for economic growth in Nigeria. The policy implication of the findings of the paper is that it has become imperative that government through monetary authorities and policy makers should take into account the likely influence of selective government policies on economic growth while formulating amd implemnting economic policies in Nigeria.

Keywords: Exchange rate, Interest rate, Balance of payment, Inflation rate, Money supply, Taxation, Gross capital formation, Economic growth.

JEL Classification: E5, E52, E58, E62, E63

1. Introduction

Government uses policy to achieve certain outcomes. Sometimes the desired ends are worthwhile, as is the case when policy is targeted on removing market failures. (Rodrik, 2012). For a developing economy like Nigeria, one can observe the urgency with which the rejuvenation of the economy, requires policy formulation focus on and sometimes direct participation in the provision of critical infrastructure. The availability of efficient and functional infrastructure is a sine-qua-non for rapid economic growth. In this respect, the provision of adequate electricity, efficient transportation infrastructure (road, rail, water and air) etc., is fundamental for progress. In fact, economic history is replete with instances of government strategic interventions in critical infrastructure as precursor to the economic and industrial take-off of today's advanced economies. This in fact, is at the Centre of the growth miracle of the Asian-Tigers (Hong Kong, Taiwan, Singapore and South Korea) which resulted in their phenomenal transformation. It is also a recurring narrative in the history of the rapid economic progress being witnessed by China, India and Malaysia, among others(CBN,2015).

The classical economists insist that the economy should be left alone in the hands of the invisible market forces and that the efficient quantities of all the desired goods and services of the society will be produced, distributed and guided by the invisible hands at the long-run. In fact, Market failure which is predominant especially in the Less Developed Countries (LDCs) and in the developing and presently the emerging economies like Nigeria has lent supports to the rethink of the propositions of the classical economists on their assumption of Laissez-faire economy. The role of the public sector in the critical sectors of an economy has further been expanded with the advent of Keynesians and Welfare economists especially in the areas of regulations, infrastructural provision and public

entrepreneurships (Agbarakwe and Anowor, 2018). In the same vein, Agiobenebo (1998) justified government intervention in an economy with several reasons which include the existence of market failure by incentives and signal. Where price does not exist or the price is too low or uncertain, the signal is zero or low profit and therefore there is no incentive for the private sector to invest, hence the market mechanism will fail in allocating resources to that sector. A review of the formal economic literature suggests that the success of the dynamic Asian economies (DAEs) does not appear to be attributable to any significant degree to selective government interventions. Moreover, looking at the experience of other countries, the empirical evidence suggests that less intervention in the economic arena (i.e., more liberal trade and industrial policies) is strongly correlated with growth while in Hong Kong, the degree of government selective intervention in industry was virtually nonexistent. The government's role was restricted basically to the provision of social infrastructure. However, the case of Taiwan lies in between those of Hong Kong and Korea; while export incentives have been used, they have generally been fairly neutral among the various sectors. More importantly, Young (1992) carried out a comparison of the Singapore and Hong Kong economies by revealing that the "Singaporean government pursued an active policy of industrial targeting in order to bring about a rapid structural transformation of their economy" as well as a policy of "accumulation of physical capital via forced national saving." These policies have indeed been successful in raising Singapore's investment ratio and in allowing the economy to surpass Hong Kong's initial lead in manufacturing, they have also resulted in a situation in which the contribution to growth of total factor productivity is very small. According to Young (1992), this implies that government interventions were not strongly correlated with the superior performance of the DAEs. This evidence is not conclusive, however, because it does not control for the other factors that are known to be correlated with growth, such as investments in physical and human capital.

However, of recent, questions have been raised as to whether a more interventionist approach--such as that followed by some Asian countries--might be warranted in order to place the economy on a higher growth path. A review of the empirical literature dealing with the experience of the dynamic Asian economies (DAE's) does not suggest that their success can be attributed to any significant degree to selective government interventions. In contrast, Thomas and Wang (1992) have attempted a systematic analysis of the relationship between growth and government policies in 10 East Asian economies. The growth performance of these countries was outstanding in comparison with the average for the developing countries as a whole. They argued that this group of countries also had a superior policy framework, in the sense that government-induced price distortions were lower than elsewhere in the developing world. In order to measure the impact of government-induced distortions, they created an index that aggregates information on trade policies, inflation, agricultural protection, and other distortions. They found a robustly negative association between the distortions index and economic growth, with growth performance being attributed, to a significant degree, to a lower value of the distortions index. Moreover, the effect was large, with two fifths of the variation in income growth per capita and one fifth of the variation in total factor productivity growth among the countries in the sample being accounted for by variations in the distortions index. In addition to their cross-country comparisons, Thomas and Wang (1992) also undertook an examination of growth performance in a time-series context. They showed that, while growth was impressive in the 1960s and 1970s when relatively more interventionist policies were adopted, there was even faster growth once market reforms swept the region in the 1980s. The gap between average income growth in the Asian countries and other developing regions roughly tripled in size in the period after 1982 compared to the period before The Thomas-Wang study. In the same vein, Knight, Loayza, and Villanueva (1993) presented their results from panel data that show that more economic openness (defined as lower tariffs on

imports of intermediate and capital goods) stimulates productivity growth. They argue that, because the tradable sector in many countries serves as a vehicle for technology.

Lee (1993) examined the in depth relationship between selective government interventions and sectoral factor productivity growth in a large cross-section of Korean industries. He finds that government interventions, such as tariffs, import restrictions, and subsidized credits, decreased both labor productivity and total factor productivity in the favored sectors. In addition, Agbarakwe and Anowor (2018) set to assess the effect of government intervention on economic development adopting Songhai Development Initiative Farm in Rivers State of Nigeria as a case study. It adopted the survey design with the instruments of personal observations, interviews and questionnaires to collect the required data. The study concludes that there is a significant relationship between Songhai Development Initiative Farm (government intervention) and economic development.

Above is the econometric evidence from a variety of sources on how, controlling for other factors, government interventions affect growth as some results showed the significant relationship between selective government policies intervention and growth while some results did not indicate any significant relationship between selective government policies intervention and growth. These results are mixed, inconclusive and ambiguous. The question now is, is there any significant and dynamic relationship between selective government policies, interventions and economic growth in developing and emerging economies like Nigeria? This paper intends to assess the relationship between selective government policies and economic growth in Nigeria.

2. Theoretical Underpinning

Following Rodrik (2012), there is a voluminous empirical literature which attempts to estimate the effects of economic policy on growth. The typical cross-country growth regression takes the form:

$g_i = \alpha \ln y_{i0} + Z_i'\beta + \gamma s_i + \varepsilon_i$ ---------- (1)

where s_i is a policy variable for country i, y_{i0} is initial income and Z_i is a vector of other covariates. Such growth regressions are sometimes specified in panel form, with growth while economic growth, g_i is the most frequently used measure of economic performance, sometimes other performance indicators such as productivity and investment are used as the dependent variable. The objective of the exercise is to obtain an estimate of γ, the impact of policy intervention on growth. Regressions of this type are ubiquitous in academic research, as well as in policy work carried out by development agencies, where they are used to predict the effect of policy reforms (Rodrk, 2012),

3. Methodology

3.1 Model specification

With reference to Rodrik (2012), the modified version of the model of this study is specified as follows:

RGDP = f (GCFR, BOP, TAXR, EXCH, INTR, INFR, MS) ---------- (2)

The implicit function above can be re-written in an explicit form as follows:

$RGDP_t = \alpha + \beta GCFR_t + \text{◎}BOP_t + \text{◎}TAXR_t + \text{Ø}EXCH_t + \delta INTR_t + \text{¢}INFR_t + \text{ʊ}MS_t + \mu_i$ ----------(3)

where,

$RGDP_t$ = Gross domestic product which captures economic growth.

$GCFR_t$ = Gross capital formation

BOP_t = Balance of payment

$TAXR_t$ = Taxation

$EXCH_t$ = Exchange Rate

$INTR_t$ = Interest Rate

$INFR_t$ = Inflation Rate

MS_t = Money Supply

μ_t = Error term

3.2 A Priori Expectations

We expect the following relationship:

$\frac{\partial RGDPt}{\partial GCFRt} > 0$, $\frac{\partial RGDPt}{\partial BOPt} > 0$, $\frac{\partial RGDPt}{\partial TAXt} > 0$, $\frac{\partial RGDPt}{\partial EXCH} < 0$, $\frac{\partial RGDPt}{\partial INTRt} < 0$, $\frac{\partial RGDPt}{\partial INFRt} < 0$, $\frac{\partial RGDPt}{\partial MSt} > 0$.

3.3 Sources of Data

Secondary data were sourced from Central Bank of Nigeria (CBN) statistical bulletin of various issues covering the periods of 1981 to 2018.

3.4 Estimation Techniques

Most macroeconomic time series variables have unit roots and regressing non stationary variables in the model might lead to spurious regression results (Granger, 1986). The stochastic characteristics of each time series were tested at levels for stationary in this study by considering their order of integration by employing Augumented-Dickey Fuller unit root test.

The Johansen vector autoregressive (VAR) model allows the simultaneous evaluation of multiple relationship and imposes no prior restrictions on the co-integration space. Peseran *et al* (2001) reveals that VAR model allows a mixture of 1(1) and 1(0) variables are regressors, that is, the order of integration of relevant variables may not necessarily be the same.

Following Pesaran *et al* (2001), the VAR of order p, denoted by VAR [p] can be constructed thus;

$$Z_t = \mu + \sum_{t=1}^{p} \beta_t Z_{t-1} + \varepsilon_t \quad \text{---------- (4)}$$

Where Z_t = the vector of both X_t and Y_t where Y_t is the dependent variable and X_t = f(GCFR,BOP, TAXR, EXCH, INTR,INFR, MS) which is the vector matrix that represents a set of explanatory variables. In this model, economic growth, $RGDP_t$ is the dependent variable while gross capital formation, balance of payment, taxation, exchange rate, interest rate, inflation rate and money supply are the explanatory variables, X_t. $\mu = \{\mu y, \mu x\}$ which is the vector of constraints {drifts} and ε is the stochastic term, t is a time or trend variable, β is a matrix of VAR parameters for lag 1.

4. Results and Discussion

Testing the Correlation Among the Series using Correlation Matrix

Table 1: Correlation Matrix of the Selected Series

SERIES	RGDP	EXCH	INTR	BOP	INFR	MS	TAXR	GCFR
RGDP	0.010008	-0.079449	0.005384	-0.024536	-0.009375	-0.098008	-0.097190	-0.098898
EXCH	-0.079449	0.630673	-0.042736	0.194774	0.074417	0.778001	0.771505	0.785069
INTR	0.005384	-0.042736	0.002896	-0.013198	-0.005043	-0.052719	-0.052279	-0.053198
BOP	-0.024536	0.194774	-0.013198	0.060153	0.022983	0.240274	0.238268	0.242457

INFR	-0.009375	0.074417	-0.005043	0.022983	0.008781	0.091801	0.091034	0.092635
MS	-0.098008	0.778001	-0.052719	0.240274	0.091801	0.959744	0.951731	0.968463
TAXR	-0.097190	0.771505	-0.052279	0.238268	0.091034	0.951731	0.943784	0.960377
GCFR	-0.098898	0.785069	-0.053198	0.242457	0.092635	0.968463	0.960377	0.977262

Source: Author's computation (2020)

The result in Table 1 gives us a preliminary idea of the relationship existing among the series indicates that exchange rate, EXCH, inflation rate, INFR, balance of payment, BOP, money supply, MS, taxation, TAXR and gross capital formation, GCFR have negative correlation with economic growth, RGDP while interest rate, INTR shows sign of positive correlation with economic growth, RGDP. The result gives us a preliminary idea of the relationship between economic growth and each of the variables in the model. It is inconclusive in itself because It does not measure the cause – effect relationship among the variables

Testing the Stationarity of the Series using Augumented-Dickey Fuller (ADF) Unit Root Test

Table 2: Augumented-Dickey Fuller Stationarity Test

Series	At Levels		1st Difference		Level of Integration
	Statistics	Probability	Statistics	Probability	
RGDP	81.3339	0.8918	132.194	0.0002	1(1)

EXCH	81.3339	0.9610	132.194	0.0012	1(1)
INTR	81.3339	0.0001	-	-	1(0)
BOP	81.3339	0.0101	-	-	1(0)
INFR	81.3339	0.0018	-	-	1(0)
MS	81.3339	0.0000	-	-	1(0)
TAXR	81.3339	0.0020	-	-	1(0)
GCFR	81.3339	1.0000	132.194	0.0015	1(1)

Source: Author's computation (2020

The result in Table 2 confirms that interest rate, INTR, balance of payment, BOP, inflation rate, INFR, money supply, MS and taxation, TAXR are stationary at levels while economic growth, RGDP, exchange rate, EXCH and gross capital formation, GCFR are integrated of order one. The level of integration of the series ranges from order zero,1(0) to order one,1(1). Therefore, there is no long run relationship existing among all the variables of interest in the model. which indicates that the condition for Johansen cointegration is not met.

Testing for Causality Among the Series using Pairwise Granger Causality Test

Table 3: Pairwise Granger Causality Tests

Pairwise Granger Causality Tests
Date: 04/04/20 Time: 10:07
Sample: 7/01/1980 7/01/2018 IF 1981-2018
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
MS does not Granger Cause RGDP	36	3.66438	0.0373
RGDP does not Granger Cause MS		1.45754	0.2483
TAXR does not Granger Cause RGDP	36	6.01361	0.0062
RGDP does not Granger Cause TAXR		2.21381	0.1263

TAXR does not Granger Cause EXCH	27	0.16151	0.8519
EXCH does not Granger Cause TAXR		6.91669	0.0047
BOP does not Granger Cause INTR	26	0.60389	0.5559
INTR does not Granger Cause BOP		3.87706	0.0369
INFR does not Granger Cause BOP	26	3.66494	0.0431
BOP does not Granger Cause INFR		6.98745	0.0047
TAXR does not Granger Cause MS	36	10.3896	0.0004
MS does not Granger Cause TAXR		0.24382	0.7851
GCFR does not Granger Cause MS	35	0.61708	0.5462
MS does not Granger Cause GCFR		89.1745	2.E-13
GCFR does not Granger Cause TAXR	35	6.93661	0.0033
TAXR does not Granger Cause GCFR		15.7807	2.E-05

Source: Author's computation (2020)

Results in Table 3 above indicate that there is bi-directional causality running from gross capital formation, GCFR to taxation, TAXR confirming that gross capital formation granger causes taxation vice versa in Nigeria. There is also bi-directional causality running from inflation rate, INFR to balance of payment, BOP confirming that inflation rate granger causes balance of payment vice versa in Nigeria. There is unidirectional causality running from interest rate, INTR to balance of payment, BOP indicating that interest rate granger causes balance of payment in Nigeria. There is also unidirectional causality running from taxation, TAXR to money supply, MS indicating that taxation granger causes money supply in Nigeria. There is also unidirectional causality running from exchange rate, EXCR to taxation, TAXR. There is also unidirectional causality running from taxation, TAXR to economic growth, RGDP. There is also unidirectional causality running from money supply, MS to economic growth, RGDP indicating that money supply granger causes economic growth in Nigeria. Pairwise Granger

Causality Tests results range from bi-directional causality, unidirectional and no-causality among the series.

Testing the Dynamic and Significant Relationship Among the Series Using VAR Estimates

Table 4: Vector Autoregression Estimates

SERIES	RGDP	EXCH	INTR	BOP	INFR	MS	TAXR	GCFR
RGDP(-1)	0.705202 (0.33622) [2.09741]	-0.001599 (0.00123) [-1.29768]	-0.000292 (0.00035) [-0.84510]	0.359753 (1.52778) [0.23547]	-0.000465 (0.00149) [-0.31164]	-0.007228 (0.00910) [-0.79399]	-0.016042 (0.01083) [-1.48084]	-0.000456 (0.00353) [-0.12942]
RGDP(-2)	0.109890 (0.26476) [0.41505]	0.001150 (0.00097) [1.18509]	9.01E-05 (0.00027) [0.33145]	-0.125828 (1.20307) [-0.10459]	0.000477 (0.00118) [0.40587]	0.003477 (0.00717) [0.48499]	0.008891 (0.00853) [1.04229]	0.008995 (0.00278) [3.23941]
EXCH(-1)	-67.07040 (76.9227) [-0.87192]	1.126981 (0.28197) [3.99680]	0.102913 (0.07893) [1.30378]	262.7573 (349.531) [0.75174]	-0.441935 (0.34146) [-1.29424]	-1.072908 (2.08273) [-0.51514]	6.570779 (2.47838) [2.65124]	0.362429 (0.80671) [0.44927]

	68.08002	0.331092	-0.113522	39.63805	0.623199	-2.051567	-6.628701	-4.064076
	(114.093)	(0.41822)	(0.11708)	(518.431)	(0.50646)	(3.08915)	(3.67598)	(1.19653)
EXCH(-2)	[0.59670]	[0.79166]	[-0.96963]	[0.07646]	[1.23049]	[-0.66412]	[-1.80325]	[-3.39656]
	-217.3928	-0.285579	0.157357	46.95212	1.841531	6.420884	0.580271	3.332532
	(256.659)	(0.94082)	(0.26337)	(1166.24)	(1.13932)	(6.94922)	(8.26933)	(2.69165)
INTR(-1)	[-0.84701]	[-0.30354]	[0.59747]	[0.04026]	[1.61635]	[0.92397]	[0.07017]	[1.23810]
	367.8197	0.449790	0.331616	-2130.454	-1.860146	-7.478683	-5.089459	3.981424
	(280.390)	(1.02781)	(0.28772)	(1274.07)	(1.24466)	(7.59173)	(9.03390)	(2.94052)
INTR(-2)	[1.31182]	[0.43762]	[1.15255]	[-1.67216]	[-1.49450]	[-0.98511]	[-0.56337]	[1.35399]
	-0.092578	-0.000222	-1.45E-05	0.489314	1.28E-05	-0.000298	-0.001276	-0.001146
	(0.07279)	(0.00027)	(7.5E-05)	(0.33077)	(0.00032)	(0.00197)	(0.00235)	(0.00076)
BOP(-1)	[-1.27179]	[-0.83363]	[-0.19440]	[1.47933]	[0.03965]	[-0.15128]	[-0.54401]	[-1.50127]

	-0.067903	0.000106	-6.64E-06	-0.396535	-0.000973	-0.001271	-0.001720	-0.000801
	(0.06160)	(0.00023)	(6.3E-05)	(0.27989)	(0.00027)	(0.00167)	(0.00198)	(0.00065)
BOP(-2)	[-1.10237]	[0.46853]	[-0.10512]	[-1.41673]	[-3.55861]	[-0.76212]	[-0.86688]	[1.24032]
	69.24760	0.099523	-0.002947	-246.7102	-0.036398	0.140733	2.892106	-0.346353
	(57.5499)	(0.21096)	(0.05906)	(261.502)	(0.25547)	(1.55820)	(1.85420)	(0.60354)
INFR(-1)	[1.20326]	[0.47177]	[-0.04990]	[-0.94343]	[-0.14248]	[0.09032]	[1.55976]	[-0.57387]
	-21.74740	0.063036	0.084732	98.08969	0.044868	2.432257	1.696467	-1.035550
	(67.8262)	(0.24863)	(0.06960)	(308.197)	(0.30108)	(1.83644)	(2.18530)	(0.71131)
INFR(-2)	[-0.32063]	[0.25354]	[1.21740]	[0.31827]	[0.14902]	[1.32444]	[0.77631]	[-1.45583]
	24.61026	-0.054819	-0.013745	11.01879	0.089217	2.440798	-1.293763	0.407233
	(18.7171)	(0.06861)	(0.01921)	(85.0489)	(0.08309)	(0.50678)	(0.60305)	(0.19629)
MS(-1)	[1.31486]	[-0.79899]	[-0.71564]	[0.12956]	[1.07380]	[4.81632]	[-2.14538]	[2.07464]

	20.08566 (30.1905) [0.66530]	-0.097916 (0.11067) [-0.88477]	-0.006604 (0.03098) [-0.21316]	-49.70650 (137.183) [-0.36234]	-0.161556 (0.13402) [-1.20549]	-1.208767 (0.81743) [-1.47875]	3.829601 (0.97271) [3.93704]	1.584265 (0.31662) [5.00375]
MS(-2)								
	0.849948 (3.21559) [0.26432]	-0.012704 (0.01179) [-1.07775]	0.000463 (0.00330) [0.14032]	-6.988301 (14.6114) [-0.47828]	0.013264 (0.01427) [-0.92924]	-0.103499 (0.08706) [-1.18877]	0.806621 (0.10360) [7.78567]	0.138146 (0.03372) [4.09653]
TAXR(-1)								
	-14.61763 (7.81257) [-1.87104]	0.026742 (0.02864) [0.93378]	0.003200 (0.00802) [0.39920]	11.33160 (35.4997) [0.31920]	-0.009456 (0.03468) [-0.27265]	0.087883 (0.21153) [0.41546]	-0.847015 (0.25171) [-3.36499]	-0.114247 (0.08193) [-1.39440]
TAXR(-2)								
	-25.01672 (30.7409) [-0.81379]	0.126719 (0.11268) [1.12454]	0.026120 (0.03154) [0.82802]	-6.797200 (139.684) [-0.04866]	0.000585 (0.13646) [0.00428]	-1.182195 (0.83233) [-1.42035]	0.573562 (0.99044) [0.57910]	-1.096145 (0.32239) [-3.40009]
GCFR(-1)								

	-44.48029	0.168662	0.016111	57.33972	0.222685	1.830938	-0.378827	-2.370189
	(41.3529)	(0.15158)	(0.04243)	(187.904)	(0.18357)	(1.11966)	(1.33235)	(0.43368)
GCFR(-2)	[-1.07563]	[1.11266]	[0.37967]	[0.30515]	[1.21310]	[1.63527]	[-0.28433]	[-5.46531]
	-85.82916	-1.067206	11.77130	21078.27	34.04471	0.024091	29.59842	-202.2301
	(6386.59)	(23.4109)	(6.55364)	(29020.2)	(28.3502)	(172.921)	(205.770)	(66.9778)
C	[-0.01344]	[-0.04559]	[1.79615]	[0.72633]	[1.20086]	[0.00014]	[0.14384]	[-3.01936]
R-squared	0.929481	0.963433	0.548041	0.637687	0.831437	0.998359	0.998391	0.997459
Adj. R-squared	0.804115	0.898424	-0.255442	-0.006424	0.531770	0.995442	0.995530	0.992941
F-statistic	7.414126	14.82004	0.682082	0.990026	2.774532	342.2090	348.9699	220.7819
Log likelihood	-243.2005	-97.37295	-64.27023	-282.5591	-102.3502	-149.3634	-153.8854	-124.7031
Akaike AIC	20.01543	8.797919	6.251556	23.04301	9.180785	12.79718	13.14503	10.90024
Schwarz SC	20.83803	9.620521	7.074158	23.86561	10.00339	13.61979	13.96764	11.72284

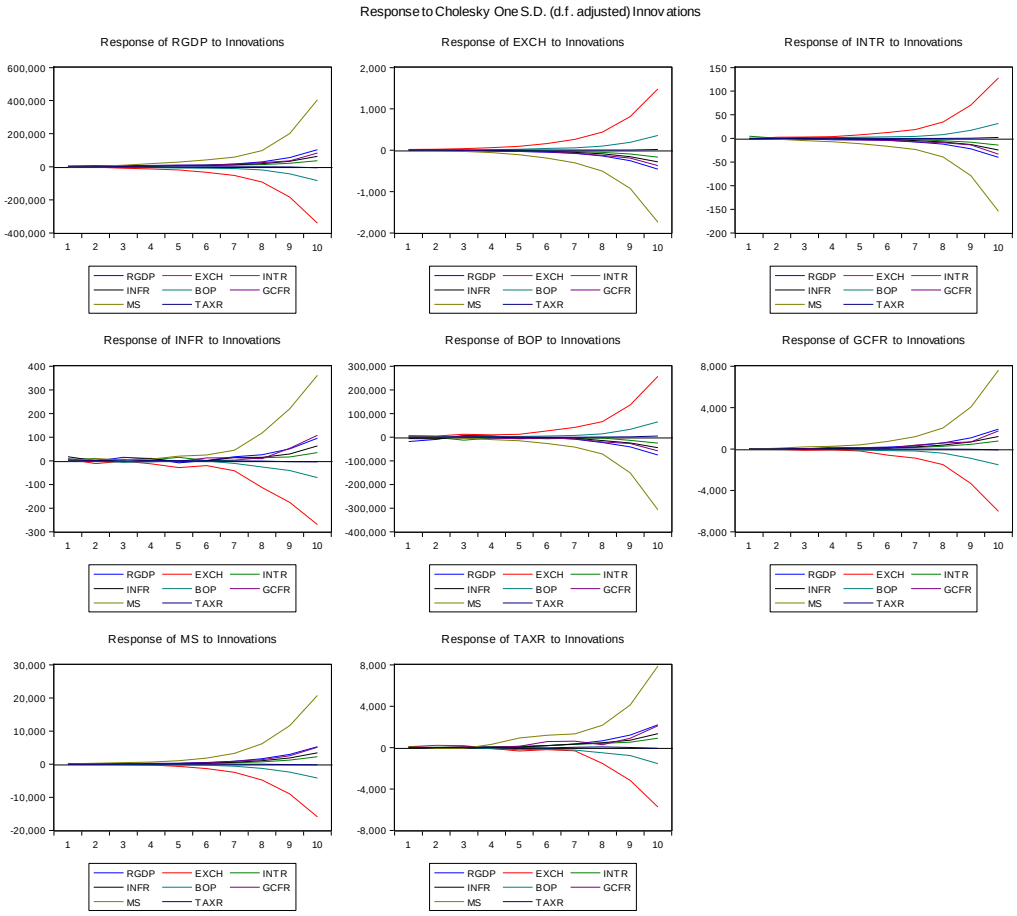
Number of coefficients	136

Source: Author's computation (2020)

Comparing the results of R^2 and F-values in Table 4 above, it is concluded that there is strong and significant relationship existing among economic growth, RGDP, exchange rate, EXCH, interest rate, INTR, balance of payment, BOP, inflation rate, INFR, money supply, MS, taxation, TAXR and gross capital formation, GCFR in Nigeria.

Impulse-Response Function results

The impulse-response function is used for predicting or forecasting the response of each variable in the series to a standard deviation change on all other variables. Impulse-response curves in figure I below indicates the following:



(I) A standard deviation in RGDP produced an unstable effect on other variables from 1st period to 2nd period and remained stable till the 10th period.

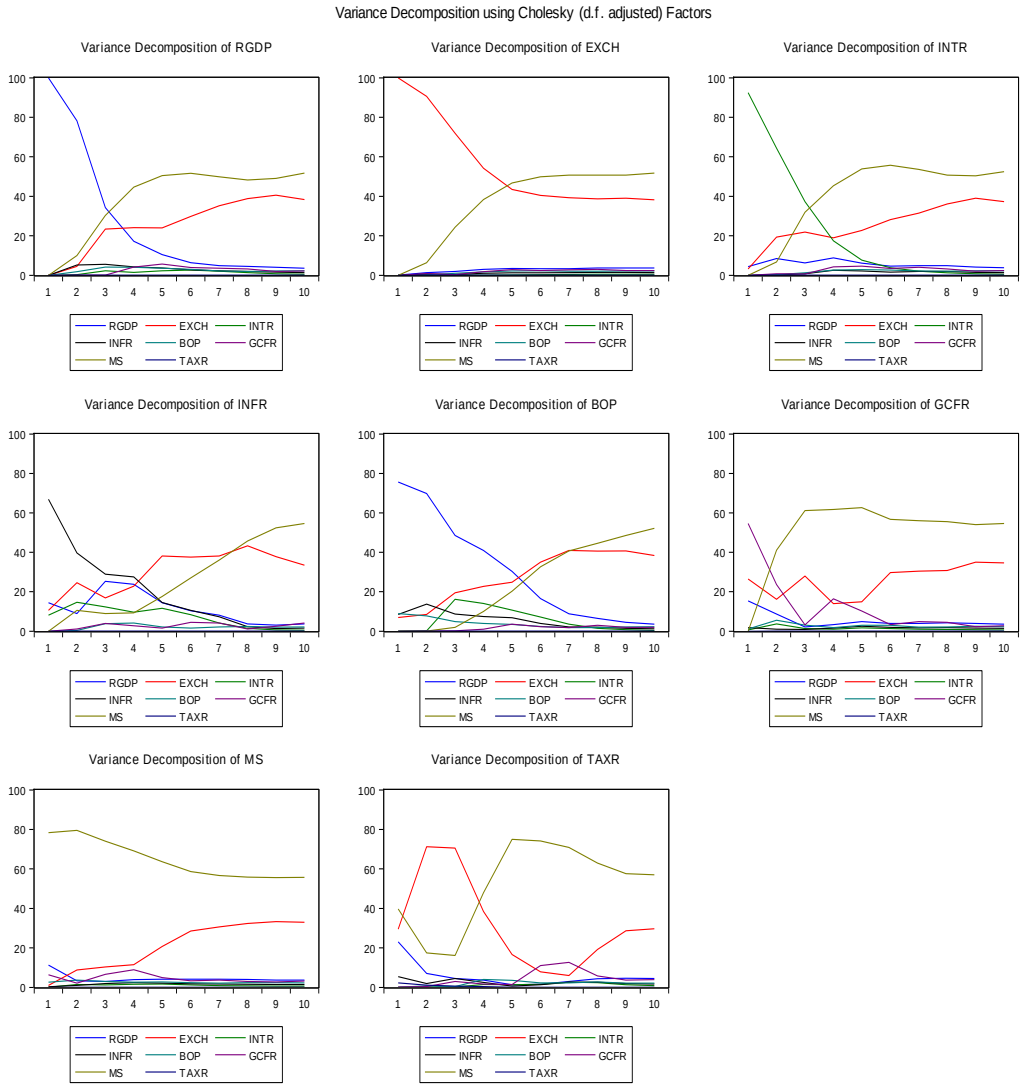
(II) A standard deviation in EXCH produced an unstable effect on other variables from 1st period to the 2nd period and remained stable till the 10th period.

(III) A standard deviation in INTR produced a stable effect on other variables from 1st period to the 10th period.

(IV) A standard deviation in BOP produced a stable effect on other variables from 1st period to the 10th period.
(V) A standard deviation in INFR produced a stable effect on other variables from 1st period to 2nd till the 10th period.
(VI) A standard deviation in MS produced a stable effect on other variables from 1st period to the 10th period.
(VII) A standard deviation in TAXR produced a stable effect on other variables from 1st period to the 10th period.
(VIII) A standard deviation in GCFR produced a stable effect on other variables from 1st period to the 10th period.

Variance Decomposition Function Results

Variance decomposition function gives information about the relative importance of each of the random innovation (shocks) to the variables in the series. Variance decomposition function curves in figure ii below confirms the following:



(i) The total variation in RGDP at the 1st period was 100% from its own lag and declined to about 20% at the 4th period and stable from 6th period to the 10th period.

(ii) The total variation in EXCR at the 1st period was about 100% from its own lag and declined to about 40% from the 4th period and remained to the 10th period.

(iii) The total variation in INTR from the 1st period was about 100% and declined sharply to about 0% the 6th period and remained unchanged till the 10th period.

(iv) The total variation in BOP at the 1st period was about 10% from its own lag and declined to 0% from the 6th period to the 10th the period.

(v) The total variation in INFR at the 1st period was about 0% from its own lag and remained at 0% till the 10th period.

(vi) The total variation in MS at the 1st period was 0% from its own lag and remained at 0% till the 10th period.

(vii) The total variation in TAXR at the 1st period was 0% from its own lag and remained at 0% till the 10th period

(viii) The total variation in GCFR at the 1st period was about 0% from its own lag and remained unchanged throughout the period.

5. Conclusion

The policy implication of the findings of the study is that it has become imperative that government through monetary authorities and policy makers should take into account the likely influence of selective government policies such as: exchange rate,interest rate,balance of payment, inflation rate,money supply,taxation and gross capital formation on economic growth in formulating amd implemnting economic policies in Nigeria.

6. Recommendations

1. To avoid conflict between macroeconomic objectives and policies that promote growth, interventions should be initiated under the larger framework that will accommodate various policies interventions that will enhance growth without any conflict. In the light of this, the design and implementation of a policy intervention strategy of economic policy makers and planners must begin with the recognition that tradeoffs often exist between policies and that these trade–offs

need to be understood so that they can be effectively managed. This is because some macroeconomic goals and objectives can be mutually inconsistent.

2. Government needs to adjust exchange rate policies with flexible and managed floating exchange rates, which can serve as shock absorbers most especially when there is external shock from decline in oil price in international market.
3. There is a need for government to broaden the tax base with special focus on Corporate Income Tax, Value Added Tax, and Personal Income Tax as the need arises. Without mincing words, value Added Tax (VAT) can be broadened by the government. Hence, this increment should be considered for more revenue available for financing infrastructure to stimulate economic growth in Nigeria.

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