

## Rising Unemployment in Nigeria: Public Debt to the Rescue?

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### Abstract

Among the macroeconomic challenges facing Nigeria as a country are weak growth of the economy, ever increasing unemployment rate, and increasing inequality occasioned by increasing poverty. In trying to mitigate these challenges, the Nigeria government usually run aborrowing. In all these, the unemployment rate keep rising year-on-year. In this study, we tried to find out whether borrowing will come to the rescue in reducing unemployment in Nigeria, using time series data from 1981 - 2019. Employing the VECM model, we carried out the stationarity and cointegration tests respectively. While the stationarity test confirmed all variables being stationary at I(1), existence of cointegration was also confirmed indicating a relationship between public debt and unemployment which turned out to be an inverse relationship. A high value of ECM was recorded. It was found that unemployment granger causes government debt and debt servicing. The overall result shows that public debt have rendered little or no assistance in combating unemployment in Nigeria. While we do not discourage government from borrowing for the provision of critical infrastructures, corruption should be put in check so as to allow the amount of borrowing be reflected on the infrastructures available, as public debt also have some adverse effects on the economy.



### Article History

Received: 19 September 2020  
Accepted: 19 October 2020

### Keywords

External Debt;  
Government Expenditure;  
Public Debt;  
Unemployment;  
Vector Error Correction.

### Introduction

The sustained debate on the issue of economic growth as a panacea for the reduction of unemployment has been resolved by the Keynesians view of fiscal policy. In their view, government's intervention is necessary to enable market economies stabilize by generating high aggregate demand that will be enough in advancing full employment levels. This is


on the assumptions by the Keynesians in the 1930's that as long as there is unemployment, public debt will not have a crowding out effect on the private sector (Meedee & Nenbee, 2011; Fideli & Forte, 2012; Egbulonu & Amadi, 2016).<sup>1,2,3</sup>

The macroeconomic challenges facing Nigeria as a country includes ever increasing unemployment

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Doi: <http://dx.doi.org/10.12944/CRJSSH.3.2.14>

level, increasing economic, health and social inequality occasioned by high level of poverty and weak growth of the economy (Igberi, Odo, Anoke & Nwachukwu, 2016)<sup>4</sup> for which government usually intervenes to stabilize its economy. In trying to boost the economy, one of the strategies used by governments is debt accumulation by way of borrowing. This is done to increase the activities in the country's economy (Hoag & Hoag, 2006; Ncanywa & Masoga, 2018).<sup>5,6</sup> Government can owe money either offshore or onshore (domestic) and in most cases causes deficit financing of the economy (Bonga, Chirowa, & Nyamapfeni, 2015; Jaejoon & Manmohan, 2014; Ncanywa & Masoga, 2018).<sup>7,8,6</sup> Accordingly public debt assist governments to invest in critical areas of the economy especially in cases that tax revenues cannot cover such investments. However, government expenditures financed using public debt has its detriments (Tsoulfidis, 2007).<sup>9</sup>

In Nigeria today, the debate has been on and is centered on merits, demerits and sustainability of the debts being accrued amid the incessant tax increments. According to Fideli & Forte (2012),<sup>2</sup> amid the sustained increase in government taxes and deficit budget financing, resources from taxpayers is often shifted to bond holders even with a positive increase in the wealth of taxpayers occasioned by the uninterrupted of the intergenerational equities. Accordingly, Obayori (2016)<sup>10</sup> saw fiscal policy as a tool used in mitigating the intricate economic problem of unemployment and persistent fiscal deficit. Since fiscal policy is a tool used by governments to effectively control the economy, it can be said that the primary goal of fiscal policy is to address the high rate of unemployment.

Fiscal policy is a tool used in redistribution of income and welfare. As such, government has been defending the huge debts accruing to the country with this. Public spending remains a tool used in Nigeria to influence growth and development. These expenditures take either the form of capital expenditure, which includes public works and goods or recurrent expenditure, which includes salaries and allowances (Igwe, Edeh & Ukpere, 2015).<sup>11</sup> According to Keynesian economics, increased public spending invigorates the economy by way of increased investment, income, growth and consequently improved economic well-being.

However, in the case of Nigeria, the annual budgets have been increasing year-on-year, yet the economy is characterized by high unemployment, hunger, poor investments and poor infrastructural development.

In trying to finance the budget deficits in Nigeria, various governments embark on a borrowing spree. Therefore this paper investigated whether increased borrowing will come to the rescue in reducing the macroeconomic challenge of increasing unemployment in Nigeria. This is to test the impact of fiscal policy used by government in trying to stem the ever rising unemployment rate in Nigeria, hence attempt to decipher the causes of the ever increasing unemployment and lack of provision of infrastructure in Nigeria that has become the government's justification for accumulation of huge debts. This study makes contribution to knowledge by looking at the implications of increasing public debt as a fiscal policy tool on reduction of unemployment in Nigeria. We briefly discussed relevant literatures in section 2, presented and explained methodological issues in section 3, outlined, interpreted and discussed our empirical findings in section 4, while concluding the paper in section 5.

## Review of Literature

### Theoretical Review

#### Classical Theory of Unemployment

According to the classicals, the only unemployment is the number of persons wishing not to work at the prevailing wage rate and is determined as the difference between total working population (N) and the equilibrium labour ( $L_E$ ). The classicals saw total unemployment, U, as the sum of voluntary unemployment,  $U_v$  and frictional unemployment,  $U_f$ .

$$\text{Thus } U = U_v + U_f \quad \dots(1)$$

The classical school treats labour market as any other market in which labour demand and supply is a function of prices. In a nut shell,  $L^S = f(w/p)$  ... (2)

$$\text{Also, } L^D = f(w/p) \quad \dots(3)$$

Where  $w/p$  is the real wage rate, on the assumption that (a) producers who hire labour services are profit maximizers, and workers are utility maximizers and (b) wages and prices are flexible, (c) equilibrium

labour and supply are independently determined in the labour market.

### **Keynesian Theory of Unemployment**

In contrast to the Classical position, Keynes distinguished unemployment into either voluntary or involuntary. While he literally agreed with the classicals on the definition of voluntary unemployment, he defined involuntary unemployment as the difference between labour demand and what labour demand would have been all things being equal. According to Keynes, labour demand is influenced by money wage rate, and labour supply is influenced by expected real wage rate. He went further to argue that for the fact that employees can predict their expected price, actual price therefore equals expected price.

### **The Keynesian Theory of Fiscal Policy**

Keynesian fiscal policy is the management of government spending and taxation with the objective of maintaining full employment. According to Keynes, economies could languish indefinitely with high unemployment if aggregate demand is inadequate. He opined that increased government spending would not only boost demand directly but would also set off a chain reaction of increased demand, same way tax cuts would put more disposable income in the wallets of consumers. Keynes contended that increased government spending, on the other hand, would not only boost demand directly but would also set off a chain reaction of increased demand from workers and suppliers whose incomes had been increased by the government's expenditure. Similarly, a tax cut would put more disposable income in the wallets of consumers, and that too would boost demand. Keynes contended, then, that the appropriate fiscal policy during periods of high unemployment was to run a budget deficit. These ideas flew in the face of the conventional wisdom that budget deficits were always bad (David, Stanley & Rudiger, 2000).<sup>12</sup>

However, it should be of note that the effects of fiscal policy are not the same for everyone. Depending on the political orientations and goals of the policymakers, a tax cut could affect only the middle class, which is typically the largest economic group. In times of economic decline and rising taxation, it is this same group that may have to pay more taxes than the wealthier upper class. Similarly, when a

government decides to adjust its spending, its policy may affect only a specific group of people.

### **Empirical Review**

From the early 1930's, there has been discussions, theories and literatures that support the use of fiscal policy in advancing economic growth and development. Keynesian economics proposes for the manipulation of receipts and expenditures side of the budget by government if it must achieve national objectives which is ultimately to stimulate growth. According to him, one of the permanent problems of capitalist economy is demand deficiency and as such he made maintenance of full employment by enlarging the public sector and its associated expenditure the focus of his general theory (Dwyer, 2011; Abubakar, 2016; Aspromourgos, 2018).<sup>13,14,15</sup> In the wake of the dwindling economic activity and revenue generation, governments face the challenge of reducing unemployment. However, the possibility of achieving full employment cannot be met without government intervening by way of increasing budget deficits and rising public debt. Hence deficit financing yields positive result in the economy (Ogiogio, 2005; Appah, 2010; Egbulonu & Amadi 2016)<sup>16,17,3</sup> though there are dissenting voices to this (Omitogun & Ayinla, 2007).<sup>18</sup>

While Ricardian economics opined that public debt arises from the ordinary and extraordinary expenditures of the state on mostly unproductive labourers. Their position is that any savings from government should form part of contributors' capital or otherwise it becomes income addition. He concluded that wasteful nature of public expenditure actually gives rise to the primary burden. The burden could not have arisen from the method of financing the public expenditure meaning that whether it is from loans or taxes makes no difference (Churchman, 2001).<sup>19</sup> Buchanian economics on the other hand is more concerned with who bears the burden of public debt against the Keynesians position that receivers of interest payments and borrowers are same country. His argument being that the issue of government debt is centered on the real cost of government spending that sacrifices private production and that except for transfer costs, debt financing is not futuristic. The classical economists viewed capital formation as sacrifice for government expenditure costs though its unquestionability is

never in doubt. It is obvious that the Buchanan's view is applicable whether under full employment or not (Tsoulfidis, 2007; Wagner, 2013).<sup>9, 20</sup>

The studies by Gregoriou & Ghosh (2007),<sup>21</sup> Ranjin & Sharma (2008),<sup>22</sup> Lui, Hsu & Younis (2008)<sup>23</sup> all agree that irrespective of the degree of variation among countries, those that budget huge expenditures often experiences a higher growth level. In Obayori's study (2016)<sup>10</sup> looking at the impact of fiscal policy on unemployment in Nigeria, he agreed that fiscal policy is effective in reducing unemployment in Nigeria with its attendant adverse effects on inflation thereby supporting expansionary policies corroborating the studies by Egbulonu & Amadi (2016),<sup>3</sup> Nwosa (2014)<sup>24</sup> in the case of Nigeria and Athanasius (2013)<sup>25</sup> in the case of Greece, Shadi (2014)<sup>26</sup> in the case of Jordan. However some researchers found a negative relationship between fiscal policy and unemployment (Auerbach & Gorodnichwenko, 2012; Mehmood & Sadiq, 2010),<sup>27,28</sup> while Holden & Sparrman (2011)<sup>29</sup> found no effect of fiscal policy on unemployment in 20 Organisation for Economic Co-operation and Development, (OECD) countries studied.

**Methodology**

We specify the distributed lag model, showing the effect of rising debt on the macroeconomic variable, unemployment using time series data from 1981-2019. We adopted total external debt, debt servicing, government total debt – summation of domestic and external debts, and government expenditure - that is summation of recurrent and capital expenditure.

**Sources of Data and Description**

All macroeconomic and fiscal policy variables data employed in this study were extracted from various editions of National Bureau of Statistics (NBS)<sup>30</sup> in addition to 2019 edition of Central Bank of Nigeria (CBN)<sup>31</sup> publications. While time series data of the total external debt, debt servicing, government total debt and government expenditure are sourced from CBN statistical bulletin, 2019, unemployment rate was sourced from NBS annual report, 2017 and 2019.

**Theoretical Framework**

John Maynard Keynes theory of fiscal policy forms the theoretical underpinning of this study. According

to the Keynesian theory, to spur aggregate demand, governments usually uses appropriate policy mix involving taxation and expenditure, but however the totality of aggregate demand is determined by level of employment. Keynes model expresses output (Y) in an open economy, such as Nigeria's, as a positive function of consumption (C), investment (I), government expenditure (G) and trade balance or balance of payment (X-M). This is mathematically expressed as;

$$Y=C+I+G+ (X-M) \quad \dots(4)$$

Given that, C + I + G = Aggregate demand (A) which implies that a positive change in government expenditure increases aggregate demand and vice versa. We therefore modified equation (1) to a functional format relevant to the study, taking into consideration key macroeconomic variables, such as real gross domestic growth rate, unemployment and inflation, as the dependent variables and fiscal policy variables, such as government expenditure, government debt stock and government revenue, as the independent variables.

**Model Specification and Justification**

This study focuses on macroeconomic variable, unemployment. Taking into account the rising debt profile of the country, consequently, the predictors are made to capture the components of government debt and the burden of debt servicing in Nigeria – country's external debt outstanding, country's summation of government debts, amount used in servicing debts and government expenditure as a control variable. This will be used to test the following hypothesis:

The model specified for the study is as follows:

$$\Delta\text{LogUEMP}_t = \rho_0 + \rho_1\Delta\text{LogTEDO}_{t-i} + \rho_2\Delta\text{LogGTDS}_{t-i} + \rho_3\Delta\text{LogTDS}_{t-i} + \rho_4\Delta\text{LogGEXP}_{t-i} + \rho_5\text{ect} + \epsilon_t \quad \dots(5)$$

UEMP represent unemployment rate; TEDO represents external debt outstanding; GTDS represents summation of Government debts – by this we mean the sum of domestic and offshore debts; TDS represents total debt servicing; summation of government expenditure is represented by GEXP – meaning sum of capital and recurrent expenditures;

while 'ect' and 'ε' are error correction term and stochastic error term respectively.

**Estimation and Discussion of Results**

**Descriptive Statistics Test Results**

Statistical properties of the time series variables from 1981-2019 as used in the model is as shown in table 1. The highest and lowest values of unemployment (UNEMP) were 23.9 and 7.2 respectively. The value of external debt outstanding (TEDO), Government total debt stock (GTDS),

total debt servicing (TDS) and government total expenditure (GEXP) peaked at 4,890.27, 25,712.45, 2,454.07 and 9,714.84 Billion naira respectively. The standard deviation of all the independent variables are high indicating that the data points are well spread out around the mean. This is supported by the substantial value of the difference between the maximum and minimum values of the independent variables showing the existence of large variance in all the variables.

**Table 1: Descriptive statistic**

Variable	UNEMP	TEDO	GTDS	TDS	GEXP
Mean	9.582051	1205.042	4771.112	397.5644	2064.192
Median	7.200000	633.1444	2608.530	131.0500	947.6900
Maximum	23.90000	4890.270	25712.45	2454.070	9714.840
Minimum	2.300000	2.331200	13.52000	1.010000	4.100000
Std. Dev.	6.353817	1303.502	6441.305	614.3064	2555.425
Skewness	1.083865	1.335349	1.942559	2.033373	1.211891
Kurtosis	2.853768	3.866697	6.135702	6.356718	3.611431
Jarque-Bera	7.670704	12.81116	40.50600	45.18472	10.15392
Probability	0.021594	0.001652	0.000000	0.000000	0.006239
Sum	373.7000	46996.64	186073.4	15505.01	80503.48
Sum Sq.Dev.	1534.097	64566496	1.58E+09	14340148	2.48E+08
Observation	39	39	39	39	39

Source: Authors computation using e-view 9

**Unit Root Test Results**

Unit root tests were conducted using Augmented Dickney-Fuller (ADF) and Phillip-Perron (PP) based

on Akaike Information Criterion (AIC) which resulted in all the variables being stationary at I(1). The result is presented in table 2.

**Table 2: Unit root test**

Variable	Unit root test statistic				5% Critical value				Integration order	
	ADF		PP		ADF		PP		ADF	PP
TEDO	-2.453241	0.1349	-2.108993	0.4983	-1.549109	0.0021	-3.825493	0.0059	I(1)	I(1)
GTDS	4.074071	1.0000	3.830128	1.0000	-4.256957	0.0093	-4.256826	0.0002	I(1)	I(1)
TDS	6.939715	1.0000	8.913718	1.0000	-3.981472	0.0003	-4.063408	0.0003	I(1)	I(1)
GEXP	4.642623	1.0000	4.231209	1.0000	-4.237467	0.0003	-3.937429	0.0044	I(1)	I(1)
UNEMP	1.062495	0.9963	-2.108993	0.2424	-6.106581	0.0000	-10.96373	0.0000	I(1)	I(1)

Source: Authors computation using e-view 9

**Result of Lag Order Selection Criteria**

As presented in table 3, the Akaike information criterion (AIC) recommends optimal lag length of

lag 3. Based on the outcome, we therefore adopted lag 3 for our estimations.

**Table 3: Lag Order Selection Criteria**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1274.013	NA	4.98e+24	71.05626	71.27620	71.13302
1	-1120.450	255.9376	4.00e+21	63.91390	65.23350	64.37447
2	-1085.898	47.98842	2.56e+21	63.38325	65.80251	64.22764
3	-1019.794	73.44943*	3.29e+20*	61.09967*	64.61860*	62.32787*

\* indicates lag order selected by the criterion; LR: sequential modified LR test statistic; FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion  
Source: Authors computation using e-view 9

Table 4 is the outcome of the cointegration test. Using 5% level of significance, the result confirms existence of a cointegrating relationship between the variables and this corresponds to the point at

which the values of the trace statistic and Max-Eigen statistic is greater than their critical values at the 5% level of significance.

**Table 4: Johansen cointegration test**

Hypothesized No of CE(s)	Trace Statistic	0.05 Critical Value	Max-Eigen Statistics	0.05 Critical Value
None *	167.9177	69.81889	73.66623	33.87687
At most 1 *	94.25143	47.85613	44.04910	27.58434
At most 2 *	50.20232	29.79707	27.98175	21.13162
At most 3 *	22.22057	15.49471	21.80836	14.26460
At most 4 *	0.412211	3.841466	0.412211	3.841466

Source: Authors computation using e-view 9

**Long Run Output**

Presented in table 5 is the long-run result of the estimated VECM with UNEMP as the dependent variable. The coefficient of GTDS, TDS and GEXP are all insignificant and negatively signed, indicating an inverse relationship, while the coefficient of TEDO is positive and significant. This result shows that in the long run government total debt (GTDS), total debt servicing (TDS) and government expenditure reduces unemployment (UNEMP) in the long

run while total external debt outstanding (TEDO) increases unemployment. Thus, a unit positive increase in GTDS, TDS and GEXP reduces UNEMP by 49.75%, 4.47% and 33.67% respectively while a 1% increase in TEDO increases unemployment by 11.19% in the long run. This supports the findings of Fideli & Forte (2012)<sup>2</sup> that government expenditure and deficit financing in the long run negatively impacts on unemployment.

**Table 5: Long-run VECM cointegrating result with UNEMPdep variable)**

Variable	Coefficient	Std. error	t-Statistic
TEDO	11.19173	21.8308	0.51266
GTDS	-49.75320	44.1737	-1.12631
TDS	-4.467274	2.45823	-1.81727
GEXP	-33.67393	7.92067	-4.2514

Source: Authors computation using e-view 9

**Table 6:VECM short-run dynamics; UNEMP = Dep. Var.**

Variables	Coefficient	T-Statistics	Probability
LOG(TEDO(-1))	0.00000	0.00000	0.00000
LOG(GTDS(-1))	0.00000	0.00000	0.00000
LOG(TDS(-1))	0.00000	0.00000	0.00000
LOG(GEXP(-1))	-0.804688	0.25889	-3.10821
ECT <sub>t-1</sub>	-1.120212	0.45676	-2.452531
C	0.181319	0.22234	0.81552

R<sup>2</sup>= 0.777252 ;Adj R<sup>2</sup>= 0.495103 ;F-Statistic = 2.754765

Source: Authors computation using e-view 9

### VECM Short Run Output

From the short-run VECM output of model as shown in table 6, error correction term (ECT) has a negative value and is less than one (1) with a significant coefficient indicating a high speed of adjustment of 112%. The value of R<sup>2</sup> is 0.777252 indicating that about 77.73% of the changes in the level of unemployment in Nigeria within this time period is explained by these variables. The most striking observation here is that the values of TEDO, GTDS and TDS are all zero (0) meaning that in the short run all these variables do not have any impact on unemployment. However, government expenditure is -0.804688 meaning that for a 1% increase in government expenditure there is a corresponding 0.81% decrease in unemployment. The value of the F-statistic is significant at 2.75. The sign and direction of government expenditure lays credence to the findings of Egbulonu and Amadi (2016)<sup>3</sup> that government expenditure reduces unemployment in

Nigeria marginally in the short-run.

### Granger Causality Test Output

Granger Causality Test Conducted on the Variables employing F-statistics constructed under the null hypothesis of no causality to measure the causality direction among variables is presented in table 7. From the output, summation of government debt outstanding granger causes unemployment in Nigeria during the period under review, this is same for debt servicing and summation of government budgetary expenditure as they both granger causes unemployment in Nigeria. However, within the study period, outstanding external debts (TEDO) granger causes outstanding summation of government debt while TEDO and GTDS granger causes TDS. GTDS granger causes TDS and GEXP. In same vein, GEXP and TDS granger causes each other. In all these cases the probability values is less than the 5% level.

**Table 7: Granger causality**

Null Hypothesis	F-Statistic	Prob %
GTDS Granger Causes UNEMP	3.37389	0.0317
TDS Granger Causes UNEMP	3.78762	0.0209
GEXP Granger Causes UNEMP	8.80819	0.0003
TEDO Granger Causes GTDS	3.73367	0.0220
TEDO Granger Causes TDS	5.41342	0.0044
GTDS Granger Causes TDS	8.38891	0.0004
GTDS Granger Causes GEXP	4.53139	0.0101
GEXP Granger Causes TDS	3.81473	0.0203
TDS Granger Causes GEXP	9.00214	0.0002

Source: Authors computation using e-view 9

#### Variance Decomposition of the Model Test Output

From the variance decomposition output in 8, the variable unemployment, in forecast year 1 accounted for 100%. During the same forecasting period, shocks to total external debt servicing outstanding (TEDO) accounted for 0% of the variations in unemployment (UNEMP). Similar explanations hold for the variations in the total debt outstanding (TEDO)

in the other forecast periods. The same applies for the other variables. Also while some variables like GTDS on TDS were increasing, UNEMP on TDS was decreasing. This is in line with what Ncanywa & Masoga (2018)<sup>6</sup> who found that debt servicing imposes liquidity constraint, hence large payments of debt service deprives a country of needed funds thus becoming the opportunity cost by inducing low economic growth.

**Table 8: Results of Decomposition of Variance for Model**

Forecast Year	Relative Variance In:	Percentage of Forecast Variance Explained by innovations in					
		SE	LOG (UNEMP)	LOG (TEDO)	LOG (GTDS)	LOG (TDS)	LOG (GEXP)
1	Log(UNEMP)	0.443824	100.0000	0.000000	0.000000	0.000000	0.000000
2		0.472545	88.92672	8.295604	1.770603	0.753514	0.253561
3		0.506865	77.67559	8.741129	10.27975	2.742834	0.560697
4		0.569976	64.38691	6.981245	9.247697	18.36686	1.017286
5		0.595787	62.28299	10.99168	8.492601	17.13611	1.096623
6		0.639121	58.12374	10.08872	11.82022	16.91140	3.055922
7		0.662446	54.55690	11.79237	12.49285	16.25378	4.904107
8		0.716817	50.09132	10.71825	16.02663	17.19898	5.964811
9		0.730804	49.81008	10.69269	15.98213	17.01009	6.505008
10		0.750594	48.45536	10.29061	18.35394	16.64741	6.252686
1	Log(TEDO)	0.394633	46.85814	53.14186	0.000000	0.000000	0.000000
2		0.623569	43.22127	46.95719	3.916403	0.032973	5.872158
3		0.793011	30.82601	42.16489	16.77627	0.777966	9.454860
4		0.936047	32.17222	38.49796	14.73069	1.021535	13.57759
5		1.024433	35.99455	35.40027	12.98473	1.104674	14.51578
6		1.062030	37.98644	34.29068	12.31131	1.080055	14.33151



7		1.081125	37.90055	34.04195	11.93031	1.868217	14.25897
8		1.092322	37.26695	33.62951	11.73410	3.073818	14.29562
9		1.101182	36.68993	33.18868	11.58676	4.051197	14.48343
10		1.102247	36.65015	33.12713	11.57743	4.139419	14.50587
1	Log(GTDS)	0.254085	36.58567	39.85867	23.55567	0.000000	0.000000
2		0.396910	26.25250	38.08912	31.03740	0.087489	4.533495
3		0.525521	16.53437	32.08961	40.76707	2.548324	8.060627
4		0.594346	17.30547	31.29378	38.08062	1.994778	11.32534
5		0.625500	17.92606	29.85710	37.81575	1.827646	12.57344
6		0.634579	18.31663	29.62840	37.73042	1.831748	12.49281
7		0.644211	17.80747	29.12780	38.30408	2.515444	12.24521
8		0.657312	17.29755	28.10182	39.08336	3.695055	11.82222
9		0.671080	17.17263	27.03276	40.05253	4.248386	11.49370
10		0.681295	17.27179	26.22910	41.11858	4.218447	11.16209
1	Log(TDS)	0.330652	24.17763	3.393065	0.250998	72.17830	0.000000
2		0.432342	16.26000	16.78485	23.00296	43.49975	0.452441
3		0.504969	13.09935	15.46186	36.48913	33.40678	1.542889
4		0.608784	9.119723	13.09170	49.77635	25.77601	2.236215
5		0.660161	9.740529	13.71944	51.15473	22.54268	2.842613
6		0.696788	8.838857	12.59145	54.77920	21.13182	2.658667
7		0.709793	9.189594	12.84637	55.01083	20.38342	2.569787
8		0.724328	8.890317	12.52340	55.90266	19.99751	2.686120
9		0.738418	8.894177	12.05257	56.97115	19.49712	2.584979
10		0.749082	9.077099	11.71408	57.64062	18.99723	2.570974
1	Log(GEXP)	0.306539	1.079955	24.76122	7.088294	3.053940	64.01659
2		0.347297	0.861544	20.90294	10.82610	3.312423	64.09700
3		0.406586	7.094500	16.89057	17.60272	9.465819	48.94639
4		0.470685	5.673547	16.05022	22.60328	14.23468	41.43827
5		0.537653	5.778121	16.52838	29.38058	13.57913	34.73378
6		0.572689	5.897803	16.72711	31.66144	12.53917	33.17447
7		0.616156	5.130890	17.01475	36.91554	10.98619	29.95263
8		0.648294	4.725483	17.06098	40.17424	9.962376	28.07692
9		0.689351	4.510697	17.47937	43.52570	8.817983	25.66625
10		0.715952	5.218909	18.27445	43.60087	8.190642	24.71512

Source: Authors computation using e-view 9

### Conclusion and Recommendations

In investigating whether increased borrowing will assist in ameliorating the macroeconomic challenge of increasing unemployment in Nigeria in order to test the impact of fiscal policy used by government in trying to stem the ever rising unemployment rate in Nigeria, in an attempt to decipher the causes of the ever increasing unemployment and lack of provision of infrastructure in Nigeria that has become the government's justification for accumulation of huge debts. The cointegration, VECM, Granger causality and variance decomposition functions have been employed in analysing time series data sourced from

the National Bureau of Statistics (NBS)<sup>30</sup> and the Central Bank of Nigeria (CBN)<sup>31</sup> for the period from 1981 to 2019. A high value of ECM was confirmed at 112%. While GEXP and TDS granger causes each other, it is evident from the result output that GTDS, TDS and GEXP all granger causes UNEMP (Unemployment). The overall result is indicative that public debt have not in any way helped in reducing unemployment in Nigeria. In trying to solve the problem of unemployment using public debt, job creation, stronger growth of the economy and transparency should be the guiding principles in managing borrowed funds. Nigeria been naturally

endowed with both human and material resources, it should however vigorously pursue the diversification of the economy so as to explore other avenues of revenue generation rather than depending largely on borrowing. A situation where servicing of borrowed funds takes a greater percentage of the country's revenue is not healthy enough especially in the face of the ever increasing unemployment rate in Nigeria. While we do not totally toe the line of discouraging government from borrowing for the provision of critical infrastructures, corruption should be put in check so as to allow the amount of borrowing be reflected by the availability of infrastructures having in mind the negative implications of huge borrowing on the economy. Borrowing for consumption should

be discouraged at all cost. Thus, further studies should be on the effects of corruption on massive borrowing in Nigeria.

#### Acknowledgement

I/We acknowledge all the authors whose works were sighted here.

#### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

#### Conflict of Interest

The authors do not have any conflict of interest.

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