IMPACT OF FISCAL POLICY ON SELECTED MACRO ECONOMIC VARIABLES IN NIGERIA

OGBU PASCHALINE
Department of Economics Federal Polytechnic Nekede, Owerri Imo State
Nenejb880@gmail.com
+2348032622788

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OGU LUCY CHIKA
Department of Economics, Madonna University Okija Campus, Nigeria (MS.c Student),
ihelucy@gmail.com
+2348108979333

Abstract
This study examined “Impact of Fiscal Policy on selected Macro Economic Variables in Nigeria”. The study made use of Auto Regressive Distributed Lag (ARDL) Model which uses a bounds test approach based on unrestricted error correction model (UECM) to measure the impact of fiscal policy on selected macro economic variables. The data were obtained from the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics and the Federal Inland Revenue Services (FIRS) for the period of 1981-2016. The variables used in the analysis are Government Spending, Public Debt and tax, as independent variables for objective one and Gross Domestic product (GDP) was used as dependent variable, the objective two used Unemployment as the dependent variable, government spending, tax and borrowing as independent variable. The results show that government expenditure and government borrowing as instruments of fiscal policy have statistical significant effect on GDP in Nigeria while that of taxes as fiscal policy instrument has no statistical significant on GDP; and government expenditure as instrument of fiscal policy has statistical significant effect on unemployment level in Nigeria while government borrowing and tax as fiscal policy instruments have no statistical significance on unemployment level. It was recommended that the fiscal stance requires serious re-examination. It is therefore advisable to increase rather than to reduce public expenditure particularly in the area of infrastructure provision and employment generation.

Keywords: Fiscal Policy, Economic Growth, Unemployment, Government Spending, Public Debt.

1.1 Introduction
Throughout the most recent decade, the effect of fiscal policy has produced huge amount of both hypothetical and empirical literature. In any case, the greater part of these researches gave more consideration to developed economies and the incorporation of non-industrial or developing nations in cross-country researches were fundamentally to produce enough levels of opportunity and increase the observations in the statistical analysis (Aregbeyen, 2007). There is a well known attestation in the empirical literature that public expenditure is adversely connected with growth of the economy because of failure of the public sector
particularly in the developing nations where huge proportion of public spending is credited to non-development expenditure like defence and interest installments on debt obligations etc. (Husnain et al., 2011) and Nigeria is caught on this web as well. A few empirical works have upheld the presence of a connection between fiscal policy (FP) and economic growth in a few economies of the world after the Keynesian school of thought that helped pull depressed economies out of economic depression during the great depression era. Empirical examinations in some developing economies recount a similar story. Ekpo (1994) as cited in Adeoye (2006) asserted that in Nigeria, there was a positive relationship between public investment and economic growth as the former accommodated private investment. The work of Adeoye (2006) covered an alternate time period for the Nigerian economy and found a negative connection between public investment and economic growth (this time, public investment crowded-out private investment). From the study of a panel of 40 African countries, Aregbeyen (2007) found a positive and very significant relationship between government capital and public investment and economic growth, while he also found that current and consumption expenditures were inversely related to growth. Different investigations likewise affirm either a negative or a positive connection/relationship between FP (with government expenditure, public investment or related economic variables used as intermediaries) and economic growth.

Nonetheless, latest trends in fiscal administrations have acquainted different routes with the aim of decreasing such expenditure that contributes little to the growth objectives of national economy. Closest to this idea is the selection of MTEF (1998) as a component of budget reforms to encourage synergy across different government arms in planning and ways of decreasing inefficient and wasteful expenditure/spending.

The various studies were unable to say for certain, how and to what degree fiscal policy has been effective in growing the Nigerian economy. In addition to the above, the numerous findings of previous studies were unable to pin-point whether there is significant relationship between government expenditure, taxes, public debt and some other notable economic variables: unemployment and gross domestic product (GDP) which are mirror images of economic performance during the years under review. This, study seeks to establish a relationship amongst these variables so as to fill the existing gap in previous literature.

1.2 Objectives of the Study

The general objective of this study is to ascertain the effect of fiscal policy on selected macro economic variables in Nigeria during the period 1981-2016. In line with the research questions and as a measure to determining this general aim, the following form the specific objectives of the study:

i. To determine the effect of government spending on GDP in Nigeria.
ii. To determine the effect of taxes on Nigeria’s GDP.
iii. To investigate the effect of government borrowing on Nigeria’s GDP.
iv. To ascertain the effect of government spending on unemployment level in Nigeria.
v. To establish the effect of taxes on unemployment level in Nigeria.
vi. To analyze the effect of government borrowing on unemployment level in Nigeria.
2.1 Literature Review

2.1.1 Empirical Literature

The effect of fiscal policy on output growth has generated a very large array of empirical studies with contrasting findings and conclusions using cross-sectional, time series and panel data. Few of these researches are country-specific while several others are cross-country.

Penzin, and Adamgbe, (2019), examined, fiscal multipliers associated with government spending and tax-related revenue for Nigeria using quarterly data, spanning 1985: Q1 to 2015Q4. The structural vector autoregression (SVAR) methodology suggested by Blanchard and Perotti (2002) was utilised in the model. The SVAR framework applied followed the approach by Favero and Giavazzi (2007) to augment for a feedback mechanism, arising from the level of debt, especially given Nigeria’s rising debt level. The results showed that government spending multiplier for Nigeria was high, at 0.47 on impact and at 0.35 within a quarter. Similarly, the tax revenue multiplier was equally high at 0.67 on impact and 0.33 within a quarter. This result suggested that reform programmes, aimed at rejuvenating the economy should consider the impact of these multipliers in assessing expenditure requirements and tax plans that would achieve government objectives over the programme period.

Idris and Bakar (2017), analyzed the impact of fiscal policy operations on macroeconomic growth in Nigeria. Colossal literatures that were linked with fiscal activities in both developed and developing countries were examined in their study, and the patterns of fiscal variables were likewise analyzed. They adopted the descriptive technique and used both charts and tables to show the pattern of fiscal components with the objective of deciding the connection between the fiscal variables. Their study found that that fiscal operation was insufficient in providing the required macroeconomic climate for growth to take place. Subsequently, they recommended the need for government to lessen the size of its fiscal shortfalls, widen the income base by expanding the earnings from non-oil sources, and synchronize both monetary and fiscal policies to accomplish the ideal level of sustained growth.

Arin et al., (2015) using a regime-switching framework for the US and quarterly data from 1949 to 2006, found that the size of spending multipliers was larger during recession, but the size of tax multipliers was larger during the period of expansion. The size of the effect of fiscal shocks on investment and consumption was quite negligible.

Ambriško et al. (2015) employing a DSGE model, estimated the size of fiscal multipliers for the Czech Republic and found that government investment had the highest multiplier (with first-year multiplier 0.4), while spending had only 0.2. Furthermore, multipliers for the V4 countries were lower, probably due to the convergence process, as well as, the demand and supply shocks that increased the noise in the business cycle. Also, using the SVAR for India, Bose and Bhanumurthy (2015) found that capital expenditure, transfer payments and other revenue expenditure multipliers were 2.45, 0.98, and 0.99, respectively portraying a higher multiplier effect. However, the tax multipliers were negative at about -1.0.
In a closely related study, Onyemaechi (2014) studied the effect of fiscal policy components on economic growth in Nigeria from 1980 to 2010 utilizing a standard, log and slack regression models. The outcome showed that the impact of fiscal policy components (government spending) on economic growth at a specific level had all the earmarks of being statistically insignificant. However, public sector expenditures on administration, social and community services showed direct effects on output growth. In a related manner, Agu et al. (2014) evaluated the link between fiscal policy and economic growth in Nigeria from 1961 to 2010 utilizing ordinary least square (OLS) in multiple regression frameworks. Their study found the presence of a positive and significant relationship between economic growth and the components of fiscal policy. In spite of the fact that investment spending showed up to be very insignificant compared with recurrent spending, up to this point, total government spending somewhat increased as tax revenue increased; with spending increasing at a faster rate than the tax revenue.

2.1.2 Limitations of previous studies
A whole lot of studies have been done in this area, but, the limitations that are evident in the previous works reviewed are that no work has been done linking the transmission mechanisms of the economic growth such as unemployment generation in determining the effectiveness of fiscal policy on macro economic variables.

Again, no work known to this researcher has been modeled using a dynamic model (Autoregressive Distributed Lag (ARDL)) that will be used in this work. These are the gaps that this researcher intends to fill using unemployment and gross domestic product as the mirror-image of economic stabilization to measure the effectiveness of fiscal policy on economic growth.

3.0 Methodology
3.1 Research Design
The research design adopted for this work is the experimental research design. The choice of the experimental design is that this research design joins the hypothetical thought with empirical perceptions. It empowers an analyst along these lines to notice the effects of explanatory variables on the dependent variable and create a nexus between the two.

3.2 Unit Root Test
It is essential to check each time series variable for stationarity or unit root prior to directing the co-integration relationship amongst the variables of the model. The unit root test must be conducted first in light of the fact that without it, if the regression result is led in the conventional manner and time series variables are discovered to be non-stationary, the outcome is most likely to be spurious. Here we utilize the Augmented Dickey Fuller (ADF) for the unit root tests.

The ADF is unit root test for time series represented by the equation below:

\[ \Delta Y_t = \beta_0 + \beta_1 t + \delta Y_{t-1} + \sum_{i=1}^{n} \alpha_i \Delta Y_{t-i} + \epsilon_t \] .................................(3.1)

where \( Y_t \) is the variable being referred to, \( \epsilon_t \) is the white noise error term.
The equation (3.1) determines if the assessed δ is equivalent to zero or not. The number of lagged difference terms to incorporate in the equation is regularly decided empirically, the thought being to incorporate enough terms so the error term in is serially uncorrelated. Fuller (1976) has arranged cumulative distribution of the ADF statistics by demonstrating that if the estimation of the calculated ratio of the coefficient is less than the critical value of usually 5%, at that point, Y is said to be stationary.

3.3 Model Specification
Given that this study aims to find out the effectiveness of fiscal policy on macro economic variables in Nigeria with emphasis on fiscal policy instruments, multiple regression models shall be used. This is to effectively estimate the relationship between the fiscal instruments (as identified in this study and as will be detailed in the model) and certain economic variables acting as mirror image of economic performance.

Therefore, the multiple regression models are specified thus:

**Model 1**

\[ GDP = \beta_0 + \beta_1 \text{GvtEx} + \beta_2 \text{Taxes} + \beta_3 \text{GvtBr} + \mu \] 

Where,
- GDP = Gross Domestic Product (GDP)
- \( \beta_0 \) = Intercept
- \( \beta_1, \beta_2, \beta_3 \) = Coefficients (slope)
- GvtEx = Government Expenditure (capital and recurrent)
- Taxes = Taxes (petroleum profit tax, company income tax, custom & excise duties, personal income tax and other non-oil taxes)
- GvtBr = Government Borrowings (domestic and external)
- \( \mu \) = Error term or stochastic variable representing other variables left out.

### 3.3.1 A priori Expectation

**Dependent Variable: Economic Growth**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direction of Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Expenditure</td>
<td>Positive ( b_1 (&gt;0) )</td>
</tr>
<tr>
<td>Taxes</td>
<td>Positive ( b_2 (&gt;0) )</td>
</tr>
<tr>
<td>Government borrowing</td>
<td>Positive ( b_3 (&gt;0) )</td>
</tr>
</tbody>
</table>

**Model 2**

\[ UMP = \beta_0 + \beta_1 \text{GvtEx} + \beta_2 \text{Taxes} + \beta_3 \text{GvtBr} + \mu \] 

Where,
- UMP = Unemployment
- \( \beta_0 \) = Intercept
- \( \beta_1, \beta_2, \beta_3 \) = Coefficients (slope)
- GvtEx = Government Expenditure (capital and recurrent)
- Taxes = Taxes (petroleum profit tax, company income tax, custom & excise duties,
personal income tax and other non-oil taxes)

GvtBr = Government Borrowings (domestic and external)

μ = Error term or stochastic variable representing other variables left out.

3.3.2 A priori Expectation

**Dependent Variable: Unemployment**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direction of Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Expenditure</td>
<td>Positive b₁ (&lt;0)</td>
</tr>
<tr>
<td>Taxes</td>
<td>Positive b₂ (&lt;0)</td>
</tr>
<tr>
<td>Government borrowing</td>
<td>Positive b₃(&lt;0)</td>
</tr>
</tbody>
</table>

3.4 Method of Data Analysis

The Auto-Regressive Distributed Lag (ARDL) Model which uses the bounds test approach based on unrestricted error correction model (UECM) was employed here to measure the effectiveness of fiscal policy instruments on economic stabilization and to test for a long run relationship amongst the relevant variables. To illustrate the ARDL modeling approach, the unrestricted error correction model forms of equations (3.2 and 3.3) are re-specified respectively as:

\[
\Delta GDP_t = \beta_0 + \beta_1 GDP_{t-1} + \beta_2 GvtEx_{t-1} + \beta_3 \text{Taxes}_{t-1} + \beta_4 \text{GvtBr}_{t-1} + \sum_{i=0}^{p} \delta_i \Delta GDP_{t-i} + \\
\sum_{i=0}^{q} \gamma_i \Delta GvtEx_{t-i} + \sum_{i=0}^{q} \phi_i \Delta \text{Taxes}_{t-i} + \sum_{i=0}^{q} \alpha_i \Delta \text{GvtBr}_{t-i} + \mu
\]  

\[
\Delta UMP_t = \beta_0 + \beta_1 UMP_{t-1} + \beta_2 GvtEx_{t-1} + \beta_3 \text{Taxes}_{t-1} + \beta_4 \text{GvtBr}_{t-1} + \sum_{i=0}^{p} \delta_i \Delta UMP_{t-i} + \\
\sum_{i=0}^{q} \gamma_i \Delta GvtEx_{t-i} + \sum_{i=0}^{q} \phi_i \Delta \text{Taxes}_{t-i} + \sum_{i=0}^{q} \alpha_i \Delta \text{GvtBr}_{t-i} + \mu
\]

The terms with the summation signs in equations (3.4 and 3.5) represent the Error Correction Model (ECM) dynamics and the coefficients \( \beta \) are the long run multipliers corresponding to long run relationship (Poon, 2010). \( \beta \) and \( \mu \) represent the constant and the white noise respectively. \( \Delta \) is the first difference operator while \( p \) and \( q \) are the lag length for the UECM. We conduct the F-test for a joint significance by using ordinary least square (OLS) technique. As stated earlier, the ARDL-UECM process will indeed enable us test the existence of long run relationships for the model above.

4.0 Presentation of Result, Analysis and Interpretation

4.1 Data Presentation

The data on variables used in the study is detailed in Appendix 1, marked, “Dataset on Total government expenditure, Taxes, Government borrowings, unemployment and GDP”.

4.2 Data Analysis

The estimates from the analysis (ADF, regression, test of cointegration) carried out using E-views 9 software are presented thus:
4.2.1 Unit Root Test

The ADF unit root test determines whether the variables in the model are integrated or stationary and if so, at what level. This is necessary as it helps to avoid spurious regression results and directs the model estimation technique. The Table below summarizes the Unit Root Tests which was carried out using E-views v9 software:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Order of Integration</th>
<th>ADF Test Statistics</th>
<th>ADF Critical Value</th>
<th>Lag Length</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>I ~ (1)</td>
<td>-4.895663</td>
<td>-4.2846</td>
<td>-3.5629</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GvtBr</td>
<td>I ~ (0)</td>
<td>-3.752025</td>
<td>-4.3393</td>
<td>-3.5875</td>
<td>5</td>
</tr>
<tr>
<td>GvtEx</td>
<td>I ~ (1)</td>
<td>-8.942035</td>
<td>-4.2846</td>
<td>-3.5629</td>
<td>0</td>
</tr>
<tr>
<td>Taxes</td>
<td>I ~ (0)</td>
<td>-2.893080</td>
<td>-2.6649</td>
<td>-1.9557</td>
<td>8</td>
</tr>
<tr>
<td>Ump</td>
<td>I ~ (1)</td>
<td>-5.921721</td>
<td>-4.2846</td>
<td>-3.5629</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: researcher analysis (2020)

From table 4.1 above, observe that the variables GDP, GvtEx and Ump are not stationary at level form but became stationary after first differencing which implies that the variables (GDP, GvtEx and Ump) are integrated of order one (I ~ (1)) whereas the remaining variables – GvtBr and Taxes are integrated of order zero (I ~ (0)) as they are stationary at level form. This decision is based on the fact their ADF statistics are greater than the ADF critical values at 5% and 10% levels. Thus, we conclude that the variables are stationary.

Having established that the variables are integrated of mixed order i.e. at order one and zero, we therefore, employ the ARDL bounds test for cointegration. But prior to this, we shall determine the optimum lag length of the ARDL model using the Akaike Information Criterion (AIC). The results for both models are shown in figures 4.1 and 4.2 below:

Figure 4.1: ARDL Optimum Lag Length Selection for Model 1
After twenty (20) models automatically generated, the model selected lag lengths of ARDL (1,1,1,0) and ARDL (1,2,1,0) based on Akaike information criteria for the models one and two respectively.

4.2.2 ARDL Bounds Test for Cointegration

Pesaran, Shin and Smith (2001) posited that a necessary condition for testing the ARDL bounds co-integrating test is that each of the variables be integrated of either of order one or zero or both. Since all the variables are integrated of mixed order, we proceeded to estimate the ARDL bounds test. The null hypothesis is that the variables are not cointegrated as against the alternative that they are cointegrated. The decision rule is to reject the null hypothesis if the F-statistics is greater than the upper bound critical values at 5% level of significance. The results of the ARDL cointegration test for the first and second models are shown in Table 2 below:

<table>
<thead>
<tr>
<th>Model</th>
<th>F-Statistics</th>
<th>K</th>
<th>Significance level</th>
<th>Critical Bound Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 (Lower Bound)</td>
</tr>
<tr>
<td>1</td>
<td>144.94</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.23</td>
<td>4.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.29</td>
<td>5.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.86</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.23</td>
<td>4.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.29</td>
<td>5.61</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From table 4.2 the F-statistics for model 1 is 144.9 and is greater than the upper (II) bound of 5.61 at 1% level of significance. Thus, we reject the null hypothesis and conclude that there is cointegration in the model. This implies that there is a long run relationship between fiscal policy and economic growth in Nigeria. But in the case of second model, we cannot reject the null hypothesis since the F-statistics of 2.86 is less than the upper bound at both 1% and 5% significant level and conclude that there is no long run relationship between fiscal policy and unemployment level in Nigeria.
Since there is long run relationship between fiscal policy and economic growth, we therefore estimate the short run and long run ARDL regression models for model 1 and the results are presented in tables 4 and 5 below respectively:

**Table 4.2: Summary of Parsimonious Short Run Relationship between fiscal Policy and GDP Result**

<table>
<thead>
<tr>
<th>ARDL Model (1.2, 1, 0,)</th>
<th>Dependent Variable GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Constant</td>
<td>37317.08</td>
</tr>
<tr>
<td>GDP(-1)</td>
<td>0.772785***</td>
</tr>
<tr>
<td>GVTEX</td>
<td>3.841707***</td>
</tr>
<tr>
<td>GVTEX(-1)</td>
<td>2.474599***</td>
</tr>
<tr>
<td>GVTBR</td>
<td>-0.973823***</td>
</tr>
<tr>
<td>TAXES</td>
<td>-0.073189</td>
</tr>
<tr>
<td>ECM(-1)</td>
<td>-0.227215***</td>
</tr>
</tbody>
</table>

R-squared = 0.99618
Adj R-Squared = 0.99527
F-Statistics = 10911.59
F-prob = 0.0000

***[**] denotes significant of variable at 1% [5%] significance level respectively.
Variables were based on their order of integration

### 4.3 Interpretation of Short Run ARDL Result

From table 4.3 above, the constant value is 37317.08, meaning that when the variables (GvtEx, GvtBr and Taxes) are zero, the GDP will 37317.1. The coefficient of the previous value of GDP is positive and statistically significant implying that the present state of economic growth depends positively on its immediate past state. In other words, what drives the present growth of Nigerian economy is its past state. The coefficients of government expenditure up to one (1) are positive and statistically significant implying that government expenditure as instrument of fiscal policy has a positive and significant impact on economic growth in Nigeria. This further suggests specifically that a 1 naira increase in current year of government expenditure will increase GDP by N3.83m naira while government expenditure at lag will increase GDP by N2.24m respectively. This result is consistent with economic ‘a priori’ expectation.

The coefficient of government borrowing is negative and significant which implies that an increase in government borrowing reduces gross domestic product in Nigeria. Similarly, the coefficient of taxes has negative impact on GDP but not significant.

The coefficient of error correction model (ECM (-1)) is (-0.227) and is negative and significant as well. This speed of adjustment suggests that about 22.7% of the previous period’s disequilibrium in economic growth is corrected every year by government fiscal policy. The implication is that it will take more than four years for any disequilibrium in the growth process of Nigerian economy to be corrected by fiscal policy instruments.
The coefficients of multiple determinations and its adjusted are 0.996 and 0.995 respectively, suggesting that about 99.6% of the variations in GDP is explained by the variables included in the model which suggests that variations in fiscal policy instruments accounted for 99.5% of the variations in gross domestic product in Nigeria. This further shows a good explanatory power of the model. The result of F-statistics is 10911.6 which show that the overall regression is highly significant.

Table 4.3: Summary of Long Run Relationship between Fiscal Policy Instruments and Unemployment Level Result

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>164237.11</td>
<td>906557.35</td>
<td>-0.181166</td>
<td>0.8577</td>
</tr>
<tr>
<td>GVTEX</td>
<td>27.798844***</td>
<td>1.798672</td>
<td>15.455204</td>
<td>0.0000</td>
</tr>
<tr>
<td>GVTBR</td>
<td>-1.600860***</td>
<td>0.461950</td>
<td>-3.465438</td>
<td>0.0019</td>
</tr>
<tr>
<td>TAXES</td>
<td>-0.322114</td>
<td>1.986730</td>
<td>-0.162133</td>
<td>0.8725</td>
</tr>
</tbody>
</table>

***[**] denotes significant of variable at 1% [5%] significance level respectively.

4.4 Interpretation of Long Run ARDL Result

The long run coefficient from table 4.4 above shows that government expenditure is positively and statistically significant suggesting that increase in government expenditure will increase GDP by N27.8m in the long run. Clearly, the effect of government expenditure as a fiscal policy instrument is more expansionary in the long run than it is in the short run. Government borrowing and taxes as fiscal policy instruments have contractionary effects on GDP in the long run as their coefficients are negative but it is only government borrowing that is significant.

4.5: Objective two (2): Effect of Fiscal Policy on Unemployment Level.

Since the ARDL bound cointegration result shows no long run relationship between fiscal policy instruments and unemployment level, we therefore estimate the ARDL result at their order of integration and the summary of the result is presented in table below:

Table 4.4: Summary of ARDL (1,2,1,0) for Objective 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.176528</td>
<td>0.984866</td>
<td>1.194607</td>
<td>0.2444</td>
</tr>
<tr>
<td>UMP(-1)</td>
<td>0.530470***</td>
<td>0.173323</td>
<td>3.060584</td>
<td>0.0055</td>
</tr>
<tr>
<td>D(GVTEX)</td>
<td>6.11E-06***</td>
<td>2.01E-06</td>
<td>3.041940</td>
<td>0.0058</td>
</tr>
<tr>
<td>D(GVTEX(-2))</td>
<td>-3.57E-06</td>
<td>2.47E-06</td>
<td>-1.442030</td>
<td>0.1628</td>
</tr>
<tr>
<td>D(GVTBR(-1))</td>
<td>-1.40E-06</td>
<td>7.50E-07</td>
<td>-1.870010</td>
<td>0.0743</td>
</tr>
<tr>
<td>D(TAXES)</td>
<td>-3.72E-07</td>
<td>1.48E-06</td>
<td>-0.251935</td>
<td>0.8033</td>
</tr>
</tbody>
</table>

R-squared = 0.937761
Adj R-squared = 0.918819
F-Statistics = 49.50623
F-prob = 0.000000

***[**] denotes significant of variable at 1% [5%] significance level respectively. Variables were based on their order of integration.
Table 4.5 shows the ARDL result of the effect of fiscal policy instruments on unemployment in Nigeria. Expectedly, present unemployment situation depends positively on the past unemployment level suggesting that if there is no sound employment generation policy to reduce unemployment in a particular period, the unemployment situation will increase in the next period.

The coefficient of government expenditure at current period is positive and significant implying that increase in government expenditure increases unemployment in the country. This is contrary to the theoretical expectation. However, the coefficient of government expenditure at lag two is negative but insignificant. The implication of this result is that it takes up two years before government expenditure will begin to produce the desired result in terms of unemployment reduction. This corroborates the fact that fiscal policy is associated with some level of time lag.

The coefficient of government borrowing at lag one is negative suggesting that an increase in government borrowing will reduce unemployment in the country after one year. This is as expected, given that government borrowing itself will not reduce unemployment in a country but how it is being used in a productive way and thus it takes some time before it starts to yield the desired effects. Similarly taxes have negative but insignificant effect on unemployment level in Nigeria.

The coefficients of multiple determinations and its adjusted are 0.938 and 0.919 respectively. This suggests that about 93.8% of the variations in unemployment is explained by the fiscal policy instruments. This further shows a good explanatory power of the model. The result of F-statistics is 49.51 which shows that the overall regression is highly significant.

### 4.6: Test of Hypotheses

**Hypothesis 1**

**H_0: Government spending has no significant effect on GDP in Nigeria.**

From tables 3 and 4 above (Short run and long run ARDL result), the probability values for government expenditure (GVTEX) is less than 0.05, we reject Ho and conclude that government expenditure has statistical significant effect on **GDP** in Nigeria.

**Hypothesis 2**

**H_0: Taxes has no significant effect on GDP in Nigeria.**

From tables 3 and 4 above (Short run and long run ARDL result), the probability values for of taxes is greater 0.05, we accept Ho and conclude that that of taxes as fiscal policy instrument has no significant effect on **GDP** in Nigeria.

**Hypothesis 3**

**H_0: Government borrowing has no significant effect on GDP in Nigeria.**

From tables 3 and 4 above (Short run and long run ARDL result), the probability values for government borrowing (GVTBR) is less than 0.05, we reject Ho and conclude that government borrowing as instruments of fiscal policy has significant effect on **GDP** in Nigeria.
Hypothesis 4
Ho: Government spending has no significant effect on unemployment in Nigeria.
From table 5 above (ARDL result), the probability value for government expenditure (GVTEX) is less than 0.05. Thus we conclude that government expenditure as instrument of fiscal policy has significant effect on unemployment level in Nigeria.

Hypothesis 5
Ho: Taxes has no significant effect on unemployment in Nigeria.
From table 5 above (ARDL result), the probability value for taxes is greater 0.05. Thus we conclude that taxes as fiscal policy instruments have no significant effect on unemployment level in Nigeria.

Hypothesis 6
Ho: Government borrowing has no significant effect on unemployment in Nigeria.
From table 5 above (ARDL result), the probability value for Government borrowing is greater 0.05. Thus we conclude that Government borrowing as fiscal policy instruments have no significant effect on unemployment level in Nigeria.

5.0 Summary, Conclusion and Recommendations
5.1 Summary of findings
This research work has successfully examined the effect of fiscal policy on selected macro economic variables in Nigeria for the period of 1981 to 2016. The key findings from the analysis are summarized as follows:

1. Government expenditure has significant effect on GDP in Nigeria.
2. Taxes as fiscal policy instrument have no significant effect on GDP in Nigeria.
3. Government borrowing as instruments of fiscal policy has significant effect on GDP in Nigeria.
4. Government expenditure as instrument of fiscal policy has significant effect on unemployment level in Nigeria.
5. Taxes as fiscal policy instruments have no significant effect on unemployment level in Nigeria.
6. Government borrowing as fiscal policy instruments have no significant effect on unemployment level in Nigeria.

5.2 Conclusion
The researcher has been able to examine the impact of fiscal policy on selected macro economic variables in Nigeria's from the period (1981-2016). Fiscal policy through government expenditure has in recent years been a matter for discussion. It has remained a subject of controversy among economists, most especially, its roles and impact to developing economies. Nigeria's large population coupled with rapid population growth has had very tremendous impact on the demand and supply of social and economic infrastructure hence challenge for fiscal policy formulation and implementation. Targeting government expenditure through fiscal policy remains the most potent tool for effective poverty reduction and economic growth as public expenditure has the potentials to contribute significantly to economic growth particularly in developing countries where the private sector is not yet very
well equipped to take the initiative for growth and development and the government commands the greater part of national wealth. From the empirical results, there is joint significant relationship between government fiscal policy instrument used and both gross domestic product, and unemployment. Therefore, in order to make fiscal policies to have a long term effect on Nigeria’s economic performance, there has to be a well articulated public spending plan which should be directed toward increasing the stock of productive physical and human capital. It is therefore obvious that fiscal policy through fiscal instruments has been effective in the Nigeria economy in some sectors as there was increase in gross domestic product but has not been effective in some other areas like reduction in unemployment and by extension poverty reduction comparatively speaking. It is argued that the actual performance of the economy cannot be measured only from the gross domestic product but from the employment created.

5.3 Recommendations
Consequent upon the findings of this study, it was recommended that,

1. Though government expenditure in our findings has significant effect on GDP, however, there should be a deliberate move towards reducing funds misappropriation. In other words, fiscal indiscipline on the part of the government should be curbed while good, transparent and accountable expenditure system should be entrenched.

2. The second results showed that, Taxes as fiscal policy instrument have no significant effect on GDP in Nigeria which is not in line with our a-priori expectation. In any case, collection of taxes also requires serious re-examination. The corruption in collection of taxes especially tax evasion; need to be adequately addressed by apportioning stringent punishment to offenders

3. Government borrowing as instruments of fiscal policy has significant effect on GDP in Nigeria. However, government borrowing should also be designed in such a way that they are expended on projects that improve Nigeria’s earning capacity and increase the general well-being of poor households especially in key human capital development areas like education and medical facilities.

4. Though government expenditure has significant effect on unemployment, however, there should be re-allocation of capital expenditure so as to enhance employment opportunities for unemployed people, making provision for financial aid for the unemployed for their self-employment as this can be used to redistribute income so as to achieve equity and for the attainment of social and economic justice.

5. Though taxes have no significant effect on unemployment, however, tax incentives should be re-examined to encourage Foreign and domestic investors to invest in the key sectors of Agriculture and manufacturing industries of the economy outside petroleum. This is necessary to aid the government to diversify the economy and enhance investment and employment opportunities.

6. Though government borrowing has no significant effect on unemployment, however, there is need to direct government borrowing in investing on those sectors that have direct link to
unemployment especially in the industrial sector, in other to curb the high rate of unemployment in the country.

References