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Impact of fiscal policy measures on inflation and unemployment in Nigeria

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Abstract
This study investigated the relative impact of fiscal policy measures on inflation and unemployment in Nigeria. Data for the study were obtained from Central Bank of Nigeria (CBN) statistical Bulletin and World Banks World Development indicators spanning from 1981 to 2021. The formulated model were subjected to unit root test using both Augmented Dickey Fuller (ADF) and Philip-perron (PP) approach. The outcome of the unit root shows that, model one have mixed order of integration I(1) & I(0) while model two showed that the variables were not stationary at level but became stationary after first difference. Both the Auto-regressive Distributive Lag (ARDL) bound test and Johansen approach to co-integration indicates that there is a long-run relationship between fiscal policy measures and inflation and unemployment. Further findings on the relationship between fiscal policy measure and inflation showed that public expenditure is significant and slow down inflation rate in the long-run and the most current period of the short-run while debt service ratio to export had a negative and significant relationship with inflation in the previous and second year period. Public revenue reported a positive and significant relationship with inflation in the long-run while public debt revealed a positive but insignificant relationship with inflation both in the short-run and long-run. Equally, the relationship between fiscal policy measures and unemployment indicated that public revenue and debt service ratio is statistically significant and reduce unemployment in the long-run and short-run. Public debt is significant and positively related with unemployment in the long and short-run while public expenditure reported negative and insignificant relationship with unemployment in the short-run. It was recommended amongst others that the federal government should increase their revenue base, lock-up leakages to enable them match the projected expenditure. This will reduce public borrowing and debt servicing.

Keywords: Inflation rate, unemployment, public debt, public expenditure, public revenue, debt service ratio to export

Introduction

Some of the challenge of developing countries today includes rising inflation and unemployment rate particularly countries that consume more than they produce. In this situation fewer goods will be produced domestically to meet the needs of the vast population of the country. Consequently, in this scenario demand will be more than available goods and services as well as supply which will result to increase in prices otherwise called inflation. Inflation is defined as a sustained rise in the overall level of prices of goods and services throughout a whole nation, as opposed to a particular sector or area of that nation. Inflation, as defined by Kanu (2002), occurs when there is a considerable and continuous rise in the price of goods and services. According to Masha (1995), the demand and supply sides are equally responsible for driving inflation. The pressures on the supply side of the economy emerge from the economy's quiet structural features, while the pressures on the demand side of the economy are caused by charges in monetary aggregates. Researchers such as Kanu (2002) and Masha (1995) came to the conclusion that rises in the pricing of goods and services, levels of income, capital inflow, continuous deficit budgeting, and increases in money supply are some of the factors that contribute to inflation in Nigeria. It is imperative to note that, high rinsing inflation rate has grossly affected sales turnover and purchasing power of citizens and have depleted capital of investors. As a response to this ugly scenario, most companies and organisations wind-up business as a result of low capital to meet up both short and long term obligations. The economic consequences of this unpleasant development result to increase unemployment rate in the country. It is important to keep in mind that a constant increase in the costs of products and services will put pressure on business organizations and firms, causing them to either lay off the majority of their staff, lower the salaries and wages they pay their employees, or go out of business altogether. Either one of these circumstances will result in an increase in the rate of unemployment in the overall economy. Therefore, the term "unemployment" refers to a scenario in which persons who are able to work and are actively looking for work but are unsuccessful in their efforts to do so, as well as those who are actively participating in the labor force but do not have jobs that are suitable for them.

According to the International Labour Organization (ILO, 2016) [13], the definition of unemployment is the percentage of the economically active population that does not have work but is available for and looking for work. This definition includes those who have willingly quit their occupations as well as those who have lost their positions. As was indicated, unemployment has an impact not only on individuals but also on the economy. It is essential to note that when unemployment rates are high or remain high for an extended length of time, demand for products and services, consumption, and purchasing power all fall. This suggest a failure on the part of the government to design feasible measures, such as the fiscal policy, that would slow down the growing inflation and unemployment rate, both of which have impeded the growth and development of the Nigerian economy, is regarded to be the cause of this

unpleasant scenario. As a result, the notion of fiscal policy was conceived of in this study article as the process of influencing the expansion of an economy via the manipulation of government income and spending. In support of this viewpoint, Agu (2014) [1] pointed out that fiscal policy is the method by which a government may modify its level of expenditure in order to monitor and impact the economy of a country.

In support of this view Boyle (2021) submit that the use of government spending and tax policies to impact economic circumstances, particularly macroeconomic variables, such as aggregate demand for goods and services, employment, inflation, and economic growth, is what constitutes fiscal policy. According to Badreldin (2013) [6], the word "fiscal policy" refers to "the set of principles and decisions of government in setting the level of public expenditure and how the expenditure is funded. Fiscal policy is a potent weapon for affecting the economy since it allows governments to change expenditure levels. It is crucial to highlight that the significance of the role that fiscal policy measures play in economic growth and development in the form of full employment, consumption, and savings cannot be exaggerated. It is exhilarating to acknowledge that the insinuation of scholars such as Boyle (2021); Debrun and Kapoor, (2012); Blinder and Solow, (1973); Amadi *et al* (2011) [3]; Agu, (2014) [1]; and Badreldin (2013) [6] that an increase in fiscal policy creates jobs, thereby reducing the unemployment rate in the country is in accordance with the theoretical postulation of Keynes (1936) [14]. Keynes (1936) [14] argued that increasing the public expenditure and lowering the taxation rates is an essential approach to stimulate aggregate demand, while decreasing expenditure and increasing tax rate is the opposite of this approach. Keynes proposed that this strategy be used during a time of recession as an essential condition for formulating sound economic policy in order to construct a stable framework that would lead to optimal macroeconomic performance and full employment. This means that if the government, particularly the government of Nigeria, continues to increase their spending, revenue, and debt (borrowing), then the inflation rate will drastically decrease, making it possible for various sectors of the economy to create jobs, improve on the standard of living of the people, and ultimately lead to a reduced unemployment rate in the country.

However, available statistical data in the past eleven years contradict this theory and assumptions by scholars like Boyle (2021; Agu (2014) [1]; and Badreldin (2013) [6]. Take for instance, in 2012, the Nigerian government spend a total of #4605.3 billion on capital expenditure, recurrent expenditure and transfers. This value increased to #5185.3 billion in 2013 but declined marginally to #4587.4 billion in 2014. However, government total expenditure immediately increased to #4988.9 billion in 2015. Total spending of government upsurge to #5858.6 billion; #6456.7 billion; #7813.7 billion; and #9714.6 billion between 2016 to 2019. The total spending further increased to #10231.7 billion and #12164 billion in 2020 and 2021 (CBN, 2021). It is therefore expected that when government spend in this manner, more funds will be available in circulation which will send signal to the financial institution particularly the deposit money bank to reduce their interest rate. This situation will enable investors to access cheap loanable funds for investment purposes thereby reducing the prices of goods and services (inflation) which will in turn save cost, create jobs and reduce unemployment rare. however, while government continue to increase their spending, monetary policy rate, interest rate and inflation rate keep on rising resulting to increase in unemployment. Take for instance, while government increase their spending, the monetary rate increased from 11.5% to 13% and further moved-up to 14%. Correspondingly according to NBS, 2022, inflation rate equally increased from 15.6% to 15.7%, 15.92 and 16.82% between January to April, 2022.

Further statistical report indicated that, as government spend more, the inflation rate increased to 17.71%, 18.8%, 19.64%, and 20.52% between May through to August 2022. It is worrisome to note that the inflation continue to increase uncontrollable to 20.77%, 21.09% and 21.47% within September to November 2022 (NBS, 2022). As a consequence, this research discourse evaluated several studies bordering on fiscal policy measures with respect to inflation and unemployment were reviewed and the results posted were contradictory. For instance, Micheal *et al*. (2022); Bredino *et al*. (2022) [7]; It was discovered by Usman and Abdullahi (2019) [22] and Attahir (2016) [5] that public spending has a considerable and positively impactful influence on unemployment. Ozoh *et al*. (2016) [20]; found that federal government capital spending and revenue do not decrease unemployment rate in Nigeria, but Onwuka (2021) [18]; and Muhammad (2015) [17] stated that government expenditure had a negative influence on unemployment. In contrast, Ozoh *et al*. (2016) [20]; indicated that federal government capital expenditure and revenue do not reduce unemployment rate in Nigeria. In a similar vein, Egbulonu and Wobilor (2016) [9, 10]; and Otto and Ukpere (2015) [19] showed that fiscal policy increases inflation, but that such an increase is not significant. On the other hand, Alrawashdeh *et al*. (2022) [2] discovered that fiscal policy measures cut inflation rate, and that this reduction is statistically significant. It was also discovered that relatively few research evaluated the influence of fiscal policy measures on unemployment and inflation in a comprehensive manner. This was another finding. On the other hand, these research reach different conclusions about the impact of different fiscal policy initiatives on both inflation and unemployment. Consider the findings of Anaele and Nyenke (2021) [4], who, in the course of their investigation into the influence of fiscal policy on the misery index, found that a rise in government capital and recurrent spending results in a decrease in both inflation and the unemployment rate. In a research that was quite similar to this one, Ozoh *et al*. (2016) [20] found that government spending on capital expenditures does not lower the unemployment rate. To this purpose, this article expanded the scope beyond what has been done in the past by empirically investigating the relative effect of fiscal policy measures on inflation and unemployment in Nigeria. Additionally, this paper made a contribution to the existing body of knowledge by conducting these investigations**.**

Literature Review

Theoretical Literature

Classical/Traditional Theory of Public Debt

The classical/traditional theory of public debt was pioneered by *et al* (1790). According to this hypothesis, if the current generation is relieved of the burden of the cost of government expenditures by financing those expenditures via public borrowing, then the responsibility will be moved to the generation that comes after them. When the current generation cuts their savings in order to pay the obligations associated with debt service, it leaves a reduced quantity of capital resources for the future generation, which causes the future generation to suffer. If the current generation saves

less money, the generation that comes after them will have less inherited wealth and less ability for productive endeavors. This puts the future generation in jeopardy. The theory is based on three main assumptions, which are as follows: (i) That the use of public debt to finance public expenditures is a more expensive way than the use of taxes (ii) That the burden of public debt may be passed on to the following generation if the current generation does not cut its consumption and increase its savings, and (iii) That excessive borrowing and mounting public debt by government may undermine the very credit worthiness of a nation, and as a result, debt should be kept to the barest minimum and repaid as quickly as possible. Because one of the theory's key assumptions is that more savings and decreased consumption are necessary for economic expansion, it has a lot of bearing on this line of inquiry, which is why it is extremely important to the discussion. Consumption, particularly of imported goods and services, is one of the many factors contributing to Nigeria's ever-increasing public debt. This tendency is counterproductive to saving and investment, and it slows economic progress**.**

Empirical Literature

Michael *et al*. (2022) [16] investigated how different fiscal policies influenced the rate of unemployment in Nigeria. The primary purpose of the research is to determine the nature of the connection that exists between aspects of fiscal policy, such as recurrent spending, capital expenditure, and debt servicing, and other aspects of the economy, such as the rate of inflation, the interest rate spread, and gross fixed capital creation in relation to unemployment. The findings showed that the factors having a considerable influence on unemployment were debt servicing, gross fixed capital creation, and government capital spending, whereas the factors having a minor impact on unemployment were inflation rate, interest rate, and recurrent government expenditure. Similarly Bredino *et al*. (2022) [7] looked at the effect that Nigeria's fiscal policies had on the country's unemployment rate. The research made use of secondary data about the unemployment rate, inflation rate, rate of government income, and rate of government spending. The findings of the research indicate that a positive relationship exists between unemployment and both the level of government spending and the rate of inflation, despite the fact that the latter is not statistically significant. In addition, there is a correlation that is both inverse and statistically significant between the unemployment rate and the amount of income the government receives.

Alrawashdeh *et al*. (2022) [2] investigated the effect that Jordan's fiscal policies had on the country's inflation rate. The following are some of the variables that are included in the model: 1) The index of consumer prices, which serves as the dependent variable. 2) Direct taxes, indirect taxes, the import price index, and real GDP are the factors that are considered to be independent. The findings of the study led the researchers to the conclusion that direct taxes had a considerable and negative influence on the consumer price index. Additionally, Ejemezu *et al*. (2021) [11] investigate the effect of fiscal policy instrument on unemployment in Nigeria by using time series yearly data from 1990-2020, which includes 30 years of observations. This research looks at the influence of fiscal policy instrument on unemployment in Nigeria. The CBN annual statistics bulletin was the source for the secondary data that was utilised in this investigation. The fiscal policy instruments that were used were taxation, government borrowing, and proxy government spending. The ARDL Model, the ADF unit root test, and the co-integration test were used in the analysis of the data. According to the findings of the research, taxation has a positive and no significant influence on unemployment in Nigeria, government expenditure has a positive and no significant impact on unemployment in Nigeria, and government borrowing has a positive and no significant impact on unemployment in Nigeria.

In their study, Anaele and Nyenke (2021) [4] looked at the impact of Nigeria's fiscal policies on the misery index from 1981 to 2018. The variables of fiscal policy that were employed include things like government capital expenditure (GCEX), government recurrent expenditure (GREX), and government external debt (GEDT). It was determined by the findings of the study that the Keynesian theory of government spending is accurate in describing government capital expenditure (GCEX), government recurrent expenditure (GREX), and government external debt (GEDT). That is, a rise in both government capital spending and government recurrent expenditure led to a decrease in the misery index in Nigeria during the period under consideration. Also, Onwuka (2021) [18] used data spanning from 1981 to 2020 to investigate the influence of fiscal and monetary policies on the unemployment rate. According to the results, both the level of government spending and the interest rate have a large and adverse impact on the unemployment rate at the lag period 2 point in time. At the lag period 2 point in time, it was discovered that the government tax was both negative and negligible. It was discovered that there was a positive and substantial relationship between money supply and lag time 1. Based on Lerner's framework, Usman and Abdullahi (2019) [22] investigated the influence of fiscal policy shocks on unemployment in Nigeria. They used the Structural Vector Autoregression (SVAR) approach to conduct an analysis of yearly time series data on the relevant variables from 1985-2018. The results of the SVAR model indicate that fluctuations in public capital spending are associated with a steady negative influence on unemployment. It was shown that an increase in public recurrent spending had a beneficial effect on unemployment in Nigeria, but shocks in the money supply were found to have no meaningful influence on the country's unemployment rate.

Attahir (2016) [5] uses the Structural Vector Autoregression (SVAR) approach to explore the influence of fiscal policy shocks on output and unemployment in Nigeria within the context of the Keynesian framework. He does this by analyzing yearly data on the relevant variables over the period 1981-2015. The results of the SVAR model indicate that a sudden increase in public spending has a beneficial impact that is long-lasting on production. On production, it was discovered that a shock to revenues had a beneficial impact, although one that was less significant than a shock to public expenditures. However, it was shown that the impact of a revenue shock on unemployment was not only detrimental but also temporary. Again, Ozoh *et al*. (2016) [20] investigate the impact that Nigeria's fiscal policy has had on the country's efforts to reduce unemployment and inflation. The unemployment rate and the inflation rate served as the dependent factors in this study, while the federal government capital expenditure, petroleum profit tax, firm income tax, and custom and excise duty served as the independent variables. In addition to other things, the research indicated the following: When seen as an instrument of fiscal policy, federal government capital spending in the first and second years has little effect on the unemployment rate; but, in the third year, it has a considerable impact. The taxes on profits from petroleum

and income from companies do not considerably cut inflation, but only the taxes on customs and excise did so. When considered together, all of the tax factors have a considerable impact on the level of inflation control. In their study, Egbulonu and Wobilor (2016) [9, 10] investigate the link between Nigeria's fiscal policies and the country's inflation rate from 1970 to 2013. The National Bureau of Statistics (NBS) and the Central Bank of Nigeria (CBN) Statistical Bulletin (different issues) were the sources for the data on government spending, government debt stock (as a proxy for government borrowing), government tax income, and the inflation rate. According to the findings, a statistically insignificant positive association exists between government spending, government tax income, and inflation in Nigeria, however a positive and statistically significant relationship exists between government debt stock and inflation. The findings also indicate that there is a link of long-run equilibrium between inflation and fiscal policy in Nigeria.

Otto and Ukpere (2015) [19] investigated the impact that Nigeria's fiscal policy had on the country's inflation rate. An ordinary least squares regression analysis was employed in the research, and the results showed that fiscal policy does have an influence on inflation, although that impact is not substantial. The data for the study came from the Central Bank of Nigeria and covered a period of 32 years. Therefore, the government could execute the agreement it had with the Academic Staff Union of Universities based on the findings of this research without the need to worry about inflation. The research conducted by Gbadebo and Mohammed (2015) [12] investigates the efficiency of monetary policy in Nigeria as an anti-inflationary instrument. The study covered a period of time from 1980Q1 to 2012Q4. According to the results that were calculated, the primary contributors to inflation in Nigeria are the country's interest rate, currency rate, money supply, and oil price throughout the time period that was analyzed. It was also discovered that although while a gain in income contributes to an increase in inflation in the short-run, good use of the growth would result in a reduction in inflation. Both in the short run and the long run, the variable measuring money supply has been shown to have a large and beneficial influence on inflation. This indicates that monetary impulses are the primary driver of Nigeria's current inflationary condition. As a result, anti-inflationary monetary policy measures, supported by certain required fiscal policies, are obligatory for the structural and economic stability of the economy. In Muhammad (2015) [17], the author explores how Nigeria's fiscal policy affects the country's overall economic development. The time series data that were utilized cover the period from 1980 to 2012. The results of the vector error correction model indicate that Nigeria's deficit finance, domestic debt, and government consumption spending are all major and negative predictors of the country's gross domestic product. Also, both foreign debt and government income are factors that have a positive impact and are statistically significant. According to the results of the Granger causality test, some of the variables have bi-directional causation, while others only have uni-directional causality, and still others have no kind of causality at all. The impulse response function demonstrates that the variables are subject to varying degrees of shocks and innovations, both on themselves and on others around them. In the most recent years, in an effort to promote macroeconomic stability and sustainable development, there has been an excessive dependence on public spending at all levels of government (federal, state, and municipal), which has mostly resulted in borrowing to finance fiscal deficits or augment domestic resources. This has been the case across all three levels of government**.**

Methodology

This article made use of secondary data gathered from the statistics bulletin published by the Central Bank of Nigeria (CBN) and from the world bank's global development indicators. The variables involved are Inflation rate (INFR) and unemployment (UEM), proxy inflation and unemployment while public debt (PDT), public expenditure (PXE), public revenue (PREV), and debt service ratio to Export (DSR) are proxy for fiscal policy measure covering 1981 to 2021.

Model Specification

The classical or traditional theory of public debt is the broad basis for model formulation. This theory postulates that if government spending is paid by public borrowing, then the current generation is freed from the expense, and the load is moved to the future generation. When the current generation cuts their savings in order to pay the obligations associated with debt service, it leaves a reduced quantity of capital resources for the future generation, which causes the future generation to suffer. This suggests that the public debt way of funding public expenditures is a more expensive technique than the taxes method. Therefore, the burden of public debt may be passed on to the subsequent generation if the current generation does not make efforts to lower its consumption and raise the amount of money it saves. As a result, the model for this research was constructed using a modified version of the models that Anaele and Nyenke (2021) [4] used to investigate the impact of fiscal policy on the misery index in Nigeria. The following is how their model is specified**:**

MDX= f (GCEX, GREX, GEDT, DMV)

Where; MDX = Misery Index GCEX = Government Capital Expenditure, GREX= Government Recurrent Expenditure, GEDT = Government External Debt, DMV =Dummy Variable. The model defines the endogenous variables inflation and unemployment as functions of the exogenous variables public debt, public expenditure, public revenue, and the debt service ratio to export respectively. The model is described in more detail below:

Model One: Fiscal Policy Measures and Inflation Rate Model

$$INFR = f(PDT, PXE, PREV, DSR) \quad 1$$

The mathematical model could be symbolically expressed as;

$$INFR = \alpha_0 + \alpha_1 PDT + \alpha_2 PXE + \alpha_3 PREV + \alpha_4 DSR \quad .2$$

Equation (3.2) above is transformed into an econometric model by incorporating the disturbance term (ε) as follows;

$$INFR = \alpha_0 + \alpha_1 PDT + \alpha_2 PXE + \alpha_3 PREV + \alpha_4 DSR + e \; 3$$

Model Two: Fiscal Policy Measures and Unemployment Model

$$UEM = f(PDT, PXE, PREV, DSR) \; 4$$

The mathematical model could be symbolically expressed as;

$UEM = \theta_0 + \theta_1 PDT + \theta_2 PXE + \theta_3 PREV + \theta_4 DSR \quad 5$

Equation (3.2) above is transformed into an econometric model by incorporating the disturbance term (ε) as follows;

$UEM = \theta_0 + \theta_1 PDT + \theta_2 PXE + \theta_3 PREV + \theta_4 DSR + e \quad 6$

A severely skewed variable may be easily transformed into one that is closer to normal by making use of logarithmic transformations, as stated by Kenneth (2011). The revised version of the model that was selected for use in this investigation has been given the form of

$LINFR = \alpha_0 + \alpha_1 LPDT + \alpha_2 LPXE + \alpha_3 LPREV + \alpha_{4L} LDSR + e \; 7$

$LUEM = \theta_0 + \theta_1 LPDT + \theta_2 LPXE + \theta_3 LPREV + \theta_4 LDSR + e \; 8$

Where;

INFR = Inflation UEM = Unemployment, PDT= Public Debt, PXE = Public Expenditure, *PREV* = Public Revenue, DSR = Debt Service Ratio to Export f = functional relationship

α_0 = Intercept of relationship in the model/constant 1 – 4, 0 = Intercept of relationship in the model/constant 1 – 4 = Coefficients of each independent or explanatory variable Intercept of relationship in the model/constant 1 – 4, 0 = Intercept of relationship in the model/constant 1 – 4 e is short for the stochastic or error term

Empirical Data Analysis

Table 1a: Unit root test using augmented dickey fuller (adf)

Variables	Levels		First Difference		Order of Integration	P-value
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value		
LINFR	-3.489705	-2.936942			I(0)	0.0134
LUEM	-1.458510	-2.936942	-6.184930	-2.938987	I(1)	0.0000
LPDT	-2.466967	-2.936942	-4.875836	-2.938987	I(1)	0.0003
LPXE	-1.166670	-2.936942	-10.03463	-2.938987	I(1)	0.0000
LPREV	-2.706775	-2.936942	-9.455435	-2.938987	I(1)	0.0000
LDSR	-2.049931	-2.936942	-8.326198	-2.938987	I(1)	0.0000

Source: Extracts from E-view 10. * Level of significance at 5%

The variables included in the study were put through Augmented Dickey Fuller (ADF) Tests to assess if they are stationary series or non-stationary series, according to the results from table 1a above. The stationarity test results show that LUEM, LPDT, LPXE, LPREV and LDSR were stationary at initial difference 1, whereas LINFR is stationary at level I(0). (1).The variables exhibit mixed order of integration or stationarity of level and first differences, according to assessments of the variables' stationarity in model one. While all the variables in model two were stationary after first difference I (1).

Table 1b: Unit root test using philip-perron (pp)

Variables	Levels		First Difference		Order of Integration	P-value
	T. Statistics	5% Critical Value	T. Statistics	5% Critical Value		
LINFR	-3.369113	-2.936942			I(0)	0.0182
LUEM	-1.495041	-2.936942	-6.185392	-2.938987	I(1)	0.0000
LPDT	-2.331579	-2.936942	-4.855377	-2.938987	I(1)	0.0003
LPXE	-1.148639	-2.936942	-14.62509	-2.938987	I(1)	0.0000
LPREV	-1.427006	-2.936942	-10.46223	-2.938987	I(1)	0.0000
LDSR	-1.973050	-2.936942	-8.645752	-2.938987	I(1)	0.0000

Source: Extracts from E-view 10. * Level of significance at 5%

The variables included in the study were put through Philip-perron (PP) Tests to assess if they are stationary series or non-stationary series, according to the results from table 1b above. The stationarity test results show that LUEM, LPDT, LPXE, LPREV and LDSR were stationary at initial difference 1, whereas LINFR is stationary at level 1(0). (1). The variables exhibit mixed order of integration or stationarity of level and first differences, according to assessments of the variables' stationarity. The Autoregressive Distributive Lag (ARDL) approach was used for the analysis of the data. This method is able to handle both stationary data at level I(0) and first difference data at level I(1). The ARDL test is the most suitable method of analysis since it examines the relationship between the dependent and independent variables by taking into consideration both short-term and long-term trends simultaneously**.**

Model one Co-integration Result

Table 2: ARDL Bound Test

Test Statistics	Value	K
F-statistics	5.207224	4
Significance	I (0)	I(1)
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source*:* Authors computation from E-view 10 Output

The results of the bound test are shown in Table 2, which makes a comparison between the F-statistics and the critical bound value. 5.207224 is the value that the F-statistic has been given. The results showed that the F-statistic is larger than both the lower and upper bounds of the critical values, which are 2.86 and 4.01, respectively, when the significance level was set at 0.05. This was shown by the fact that the significance level was used. As a result, one may deduce that there is some degree of co-integration between different aspects of fiscal policy and inflation in Nigeria. As a direct result of this, the anticipated outcomes of the long-run and short-run auto-regressive distributive lag (ARDL)**.**

Table 3: ARDL Long-run Result

Variable	Coefficient	Std. Error	t-statistics	Prob
LPDT	0.364531	0.894496	0.407526	0.6880
LPXE	-0.289796	0.096342	-3.007993	0.0255
LPREV	0.922311	0.373875	2.466898	0.0456
LDSR	0.111113	0.663540	0.167455	0.0715
EC = LINFR - (0.3645*LPDT -0.2898*LPXE + 0.9223*LPREV + 0.1111*LDSR **)**				

Source: Authors computation from E-view 10 Output

Table 3 of the Autoregressive Distributive Lag (ARDL) long-run result suggest a positive +0.364531 relationship between the log value of public debt (LPDT) and the log value of inflation rate (LINFR). On average, a 5 percent point increase in LPDT is associated with a surge in annual LINFR of 0.36 percent point per yearly. However, the p-value indicate that there is no statistical significant relationship between LPDT and LINFR. Analysis of the component of LPDT and LINFR submit that the positive impact largely reflects consistent increase of domestic and external borrowings by public official's to carry out critical investment this implies that public debt does not have any impact on inflation rate in Nigeria.. However, this result does agree with study done by Anaele and Nyenke, (2021) [4]. Investigation of the log value of public expenditure (LPXE) advocates a negative -0.289796 relationship with the log value of inflation rate (LINFR). The result denotes that a 5 percent rise in LPXE is related to an increase in annual LINFR of 0.29 percent point increase per year. The negative effect of LPXE on LINFR is largely associated to miss-management of funds meant for critical investment. Also most of the expenditures are channeled to payments of salaries and wages, overheads, stationaries etc instead of spending on capital projects like building and renovation of educational facilities, hospitals, roads, bridges, power etc. The result do not conforms to apriori expectation however the p-value shows that there is statistical significant relationship between LPXE and LINFR. The findings is in line with earlier studies by Anaele and Nyenke, (2021) [4]. Similarly, the log value of public revenue (LPREV) insinuate a positive +0.922311 relationship with the log value of inflation rate (LINFR). The result denotes that a 5 percent rise in LPREV is connected to an increase in annual LINFR of 0.92 percent point increase per year. To a great extent, the good influence that LPREV has had on LINFR may be attributed to the fact that the monetary policy authority (CBN) and the federal ministry of finance have not been working together effectively to control the incoming and outgoing flow of money and to distribute public income among the many economic subsectors. However, the p-value demonstrates that there is a statistically significant association between LPREV and LINFR. The results do not correspond with economic theory; however, this relationship does exist. The results are consistent with those of previous investigations conducted by Attahir (2016) [5]. In conclusion, the findings point to a possible positive correlation of +0.111113 between the log value of the debt service ratio (LDSR); financial deepening (LDSR) and the log of the inflation rate (LINFR). An rise in both the LDSR and the LINFR of five percentage points is related with an increase in the annual inflation rate (LINFR) of eleven percentage points each year, on average. The favorable effect is consistent with a priori expectations and demonstrates statistical significance. This indicates that there is a meaningful connection between LDSR and LINFR.

Table 4: ARDL Short-run Result

Variables	Coefficient	Std. Error	t-Statistics	Prob
C	0.732467	0.283508	2.583590	0.0177
D(LPDT)	0.139678	0.405351	0.344586	0.7340
D(LPDT(-1)	0.260777	0.394024	0.661831	0.5156
D(LPDT(-2)	0.917373	0.499402	1.836943	0.0811
D(LPXE)	-0.279188	0.134832	-2.070638	0.0515
D(LPXE(-1)	0.150059	0.158499	0.946751	0.3551
D(LPXE(-2)	0.157517	0.120972	1.302095	O.2077
D(LPREV)	-0.109774	0.178694	-0.614315	0.5459
D(LPREV(-1)	-0.331933	0.199358	-1.665013	0.1115
D(LPREV(-2)	-0.164956	0.186678	-0.883639	0.3874
D(LDSR)	0.018939	0.183869	0.103009	0.9190
D(LDSR(-1)	-0.481061	0.169562	-2.837074	0.0186
D(LDSR(-2)	-0.397040	0.155017	-2.561272	0.0186
ECM(-1)	-0.456026	0.125311	-3.639141	0.0016
Adj R^2 =0.290904, F-statistics = 2.167625 (0.048724), DW =1.988134				

Source: Authors computation from E-view 10 Output

The conclusion that can be drawn from the findings shown in Table 4 about the Auto-regressive Distributive Lag (ARDL) model is that the coefficient of the error correction component is significant and has a negative value. In other words, the relevance of the negative sign is justified by its presence. That is to argue that the ECM will be successful in restoring the long-run equilibrium and correcting any deviations from it that may occur. The speed of adjustment to long run equilibrium is shown to be 46% by the coefficient of the ECM, which is set at -0.456026. This is the case where any historical deviation will be adjusted in the current period. This indicates that the present value of INFR responds in a measured manner to shifts in PDT, PXE, PREV, and DSR. The positive value of the constant parameter (Bo) at +0.732467 is readily apparent from the findings of the ARDL short-run simulation. This indicates

that if all of the independent variables are maintained at their current levels, the INFR will increase by 0.73 percent on an annual-wide basis as a dependent variable. The coefficients are +0.139678, +0.260777, and +0.917373 when applied to the log value of the public debt (LPDT). This indicates that LPDT has a positive relationship with LINFR in the present year, as well as in the previous year and the second year. This result does not fit within the apriori category. The positive findings indicate that a rise of one unit in public debt would, as a direct consequence, result in an increase of 0.13, 0.26, and 0.92 percent in INFR respectively. In contrast, the findings of an investigation carried out by Anaele and Nyenke (2021) [4] contradict these findings. In addition, the log value of public expenditure (LPXE) was found to be negative in the most recent year period, with a value of -0.279188. This suggests that there is a connection, albeit an opposite one, between LPXE and LINFR. In the near term, there is a direct correlation between a unit rise in LPXE and a 0.28 percentage point drop in LINFR**.** This result agree with apriori and is significant. The negative effect was corroborated in the study done by Anaele and Nyenke, (2021) [4].

The log value of public revenue (LPREV) indicates that the impact on inflation rate is negative. This may be miss-match of allocation of public revenue. This means that majority of the public revenue are allocated to unproductive sectors or projects. However, Egbulonu and Wobilor (2016) [9, 10]; Attahir (2016) [5] and Gbadebo and Mohammed (2015) [12] disagrees with this findings and assert that public revenue encourages inflation. Finally, the log value of debt service ratio (LDSR) has a negative impact on inflation rate support a'priori expectation. This might be ascribed to the large amount from the budget that is used to service borrowed funds. this situation deplete the external reserve and expose it to external shocks which in turn increase the exchange rate and pressure the prices of goods and service (inflation). Additional results about the coefficient of adjusted R2 validated the degree of the link by recording 29% variance in the dependent variable. This finding suggests that there is a genuine relationship between the variables since it shows that there is a correlation between them. The significance of the complete model demonstrated, among other things, that the model is important; more specifically, the model has a probability value that corresponds to it of 0.048724, which shows that the whole model is extremely significant. The results obtained by Durbin Watson of 1.988134 demonstrated that there is no longer a difficulty with the auto correction. The overall findings indicated to the fact that there is a considerable influence of fiscal policy measures on the inflation rate in Nigeria. This was the conclusion that could be drawn from the findings**.**

Model Two Co-integration Results

In light of the fact that the outcomes of the model two unit-root tests seem to indicate that all of the variables are stationary of the order I(1), we take the next logical step and apply the Johansen (1991) and Johansen and Juselius (1990) methods to investigate whether or not the variables are cointegrated with one another. The Dickey-Fuller test has been generalized into what is known as the Johansen approach. The assumptions about the amount of cointegrating vectors were put to the test via the use of two likelihood ratio tests: the trace test and the maximum eigenvalue test. As can be seen in the tables that follow, the findings of several tests for cointegration among the variables of the fiscal policy and unemployment estimation equation have been given. If you want to have a long-run cointegrating vector, you need to make sure that the trace statistics, also known as the likelihood ratio, are higher than the 5% crucial number**.**

Table 5a: Test for Johansen Co-Integration Using Trace Statistic

Hypothesized no. of CE(s)	Eigen value	Trace statistic	0.05 critical value	Prob
None*	0.663140	82.73091	69.81889	0.0033
At most 1	0.457609	40.29547	47.85613	0.2121
At most 2	0.172322	16.43648	29.79707	0.6813
At most 3	0.133848	9.060355	15.49471	0.3598
At most 4	0.084808	3.456240	0.841466	0.0630
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level				

Source: Author's computation from E-views 10

Table 5b: Test for Johansen Co-Integration Using Max Eigen Statistic

Hypothesized no. of CE(s)	Eigen value	Max-eigen statistic	0.05 critical value	Prob
None*	0.663140	42.43544	33.87687	0.0038
At most 1	0.457609	23.85899	27.58434	0.1397
At most 2	0.172322	7.376123	21.13162	0.9376
At most 3	0.133848	5.604114	14.26460	0.6644
At most 4	0.084808	3.456240	3.841466	0.0630
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level				

Source: Author's computation from E-views 10

Tables 5a and 5b analyze the existence or absence of co-integration among the variables, also known as a long-run relationship among the variables. This is done after it has been shown that the variables are in a state of stationarity. The Johansen method was used in order to carry out the co-integration test, which ultimately led to the discovery of the data shown in Tables 46a and 6b. The inference here is that there is a connection, at least in the long term, between changes to Nigeria's fiscal policies and the country's high unemployment rate. The relative connection that exists throughout the course of time between UEM, PDT, PXE, PREV, and DSR. The long-run cointegrating equation is shown below in table 6c, and it illustrates both the nature and the size of the observed connection. The equation has been transformed such that it is normalized for UEM, which is the dependent variable.

Table 5c: Normalise Co-integration Result

Variables	Coefficient	Std. Error	t-Statistics
LPDT	9.030144	1.31710	6.856081
LPXE	-1.957641	1.02417	-1.911415
LPREV	-8.343882	1.47982	-5.638443
LDSR	-6.951667	0.96000	-7.241319

Source: Author's computation from E-views 10

The normalized beta coefficient, which represents the long-run relative statistical connection between UEM and PDT, has been proven to be 9.030144, and with a standard error value of 1.31710, this suggests a t-statistics of 6.856081. Additionally, the standard error value has been shown to support a t-statistics of 6.856081. At a level of 5%, this is a noteworthy finding. The existence of a statistically significant link between UEM and PDT may be deduced from the inference that such a relationship exists. The connotation of the sign points to a healthy connection, which is in line with what was anticipated in advance. On the other hand, the normalized beta coefficient that represents the long-run relative statistical connection between UEM and PXE is determined to be -1.957641, and the standard error value that corresponds to it is 1.02417, which results in a t-statistics value of -1.911415. This value was obtained by multiplying the beta coefficient by the corresponding standard error value. The estimated t-statistics do not meet the criteria for statistical significance at the 5% level. As a result, the link between UEM and PXE is unfavorable; yet, this finding is consistent with economic theory. With a standard error of 1.47982 and a calculation yielding a t-statistics value of -5.638443, the normalized beta coefficient, which represents the long-run relative statistical connection between UEM and PREV, was found to be -8.343882. This resulted in a t-statistics value of -5.638443. The t-statistics that were calculated show that there is a significant difference at the 5% level and that the difference is negative. This finding is consistent with the apriori assumption. In conclusion, the normalized beta coefficient that represents the long-run relative statistical link between UEM and DSR is determined to be -7.241319, with a standard error of 0.96000 adding up to a total of -7.241319. This is based on the fact that the coefficient was calculated to be -6.951667. The calculated t-statistics shows a significant difference at the 5% level, but it shows a negative value, which goes against what was expected a priori**.**

Table 6: Parsimonious Error Correction Model

Variables	Coefficient	Std. Error	t-Statistics	Prob
C	0.211328	0.069580	3.037191	0.0074
D(LPDT)	0.488845	0.216342	2.259593	0.0308
D(LPXE)	0.037666	0.060937	0.618110	0.5409
D(LPREV)	0.012002	0.093404	0.128493	0.8986
D(LDSR)	-0.242104	0.079304	-3.052855	0.0153
ECM(-1)	-0.186398	0.085701	-2.174983	0.0222
Adj R^2 =0.267686, F-statistics = 1.537242 (0.006182), DW =1.771587				

Source: Author's computation from E-views 10

Cointegration of the series was a need for the error correction process used in estimating. This is evidence from the Johansen co-integration test, which established the presence of a long-run link between the various fiscal policy measures and unemployment. The conclusion that can be drawn from this is that the result of the ECM, which is reported in Table 7, showed that the error correction mechanism of -0.19% is correctly signed and highly significant, given that the p-value of 0.0222 is lower than the 5% threshold of significance. In light of this, we may deduce that the rate of adjustment will be 19% every year. In addition, the variables of fiscal policy that have a favorable influence on unemployment include LPDT with a value of 0.488845, LPXE with a value of 0.037666, and LPREV with a value of 0.012002. On the other hand, LDSR has a value that has a negative impact on unemployment. When the significance of each of the factors affecting unemployment was examined, it was discovered that the log value of public debt and the debt service ratio were significant at a level of 5%, however the log value of public income and spending were determined to be unimportant at the same level of significance. It follows from this that a unit rise in LPXE and LPREV would result in a lower rate of unemployment, but a unit increase in LPDT and LDSR would result in a higher rate of unemployment. This is the consequence of the information presented here. Additional research about the coefficient of adjusted R^2 revealed that only 27% of the variance in unemployment is explained by the combined effects of explanatory factors, while 73% of the variation in unemployment may be explained by other variables that were not included in the model. The significance of the whole model demonstrated, among other things, that the model is important, and the model's associated probability value is 0.006182, which suggests that the significance of the entire model is rather high. It was shown by Durbin Watson's score of 1.771587 that the series do not have a difficulty with auto correction. All of the findings pointed to the notion that there is a major influence of fiscal policy measures on unemployment in Nigeria. This was the conclusion drawn from all of the findings

Conclusion and Recommendation

Conclusion

On the basis of the data, the conclusion that can be drawn is that Nigeria's inflation and unemployment rates can be dramatically lowered by the manipulation of fiscal policy measures. As a result, the following conclusion was reached: public expenditures are important, and they reduce the rate of inflation both in the long run and in the most recent era of the short run; nevertheless, the ratio of debt service had a negative and significant link with inflation in the prior and second year periods. In the long-run, the correlation between public income and inflation was found to be positive and statistically significant, but the correlation between public debt and inflation was found to be positive but statistically insignificant in both the short-run and the long-run. Equally, the link between fiscal policy measures and unemployment demonstrated that public revenue and debt service ratio is statistically significant and reduces unemployment both in the long-run and in the short-run. This was evidenced by the fact that both of these ratios reduced unemployment. In both the long and short term, there is a strong and positive correlation between public debt and unemployment. On the other hand, research has shown that public spending has a significant negative correlation with unemployment in the short term.

Recommendations

Based on the findings, the following recommendation were made below;

1. The federal government should increase their revenue base, lock-up leakages to enable them match the

projected expenditure. this will reduce public borrowing and debt.
2. Also, the federal government should increase their expenditure and direct more of their resources to critical capital projects. This will enable the government reduce the unemployment rate and improve the living standard of the citizens.
3. Finally, government should equally direct some of their revenue to external reserve so as to increase the external reserve. This will help the domestic currency in periods of shocks and stabilize the inflation rate.

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