RESEARCH ARTICLE

Fiscal Policy and Inflation in Nigeria

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ABSTRACT

This paper empirically examined the impact of fiscal policy on inflation in Nigeria. Time series data on inflation, government revenue, government expenditure, and gross domestic product were sourced from the Central Bank of Nigeria (CBN). The aforementioned secondary data cover the period from 1981 to 2021. The Augmented Dickey Fuller (ADF) unit root test and Johansen co-integration test were used to testing for data stationarity and the existence or otherwise of co-integrating equations respectively. Thereafter, data were analyzed using Ordinary Least Square and Parsimonious Error Correction techniques. Findings from the study show that government expenditure and revenue both have a positive relationship with the rate of inflation, though the latter is not statistically significant. Also, there is a positive but insignificant relationship between inflation and gross domestic product. In line with the above findings, we, therefore, recommend that the Nigerian government at all levels (local, state, and federal) should be tactful in the use of fiscal policy tools to avoid triggering inflationary pressure and its negative multiplier effects on the welfare of its citizenry.

Keywords: Inflation; Fiscal policy; Gross domestic product; Government expenditure; Government revenue

1. Introduction

Price volatility is a ubiquitous phenomenon in both developed and developing countries. For instance, the rate of inflation in the United States reached an all-time high of 8.5% in 2022 following the COVID-19 pandemic, this happen to be the highest the country had experienced since 1982. In

light of the social and economic costs of inflation, policy-makers have continuously designed strategies aimed at ameliorating the rate of price volatility [1].

Price volatility has an undesirable impact on economic growth due to the high level of uncertainty it creates among economic actors (consumers and producers) and the multiplier effects of the aforementioned exact on other economic variables [2]. Some of the negative effects of inflation on the economy include, but are not limited to a fall in the level of confidence in the country's currency, distributive injustice, balance of payment effect, and distortion of government development plan [3]. It has been argued that though inflation exacts negative effects on the economy, there are instances where it is a prerequisite for economic growth [4]. For instance, in consonance with the Philips curve theory, there is an inverse relationship between inflation and unemployment. In order words, an increase in inflation tends to boost the level of employment in an economy. Thus, one could conclude that whether inflation is adjudged to be good or bad at any given time depends on the targeted macroeconomic objective.

The monetary and Keynesian schools are the two major schools of thought on inflation. While the former believes that inflation is a monetary phenomenon and as such can be controlled using monetary apparatuses, the latter postulates that the deficiencies in the real economy are the cause of inflation. Accordingly, several researches on the above phenomenon have been guided by the aforementioned schools of thought. The high inflation rate in Nigeria has been linked to the pursuit of expansionary monetary policy and unregulated public expenditure by the government [5,6]. This study adopts the Keynesian framework in ascertaining the impact or otherwise of fiscal policy on inflation in Nigeria.

2. Review of literature

2.1 Theoretical review

Definition of inflation

Inflation like other economic variables has been defined in various ways by different scholars. For instance, the concept was first defined by neo-classical economists as a galloping rise in prices of goods and services as a result of an excessive increase in the quantity of money in circulation [7]. The above definition of inflation has sprouted debate among economist scholars for two reasons: First, the use of the word "galloping" in the description of inflation, and the second is the conclusion that increases in the quantity of money are the main cause of inflation. In an attempt to demystify the degree and measure of price changes, Gbanador, C. A. [8] asserted that a slow price rise is called creeping inflation while an extreme or rapid rise in prices is called hyperinflation. According to him, galloping inflation lies in the middle of both. The second misconception of the neoclassical economists is their assumption that the economy is always at full employment, thus, any increase in the quantity of money is likely to stipulate inflation. Although there are empirical evidence in support of the view that increases in money supply will most likely result in inflation. Note, however, that the above suffices only when you are dealing with a reduced form equation where there is a direct one-to-one relationship between money supply and a rise in the price level [1]. Thus, inflation can be defined as a persistent rise in prices irrespective of its causative factors.

Views of inflation

The two main views or theories of inflation in economic literature are the Keynesian and monetary views. Each of the aforementioned views shall be treated in turn in the following section.

Monetarist view of inflation

Milton Friedman is the proponent of the monetarist view or theory of inflation. According to the monetarist school of thought, growth in the money supply is the root cause of inflation in an economy. Put differently, an increase in the money supply will bring about an increase in the general price level of goods and services. The German Hyperinflation of (1921-1923) is a classic example of the inflation and money supply nexus. At the end of the First World

War, the German government began the arduous task of resuscitating the economy. However, its expenditure was more than proportionate to available government revenue. The government could not raise funds by increasing taxes for two main reasons: First, it was an unpopular idea at the time; secondly, the process was adjudged to be too slow. Borrowing from the public was also not an option because the funds required were more than its capacity to borrow. The only option left to the government to offset its bills was the printing of money thereby increasing the supply of money. In 1921, the German government increased the money supply by printing more money to finance its expenditure, consequently, the price level also increased. The French invasion occasioned by the inability of the German printing government to make timely payments to its workers as well as the strike actions in the region at the time further propelled the government to print more money and increase the money supply at a faster rate. The Implication of the German action resulted in an unprecedentedly high rate of inflation of over 1 million percent in 1923 [9]. Thus, the above stance supports Friedman's postulates that there is a direct and positive relationship between the money supply and inflation. **Figure 1** below is a graphical illustration of the monetarist view of inflation.
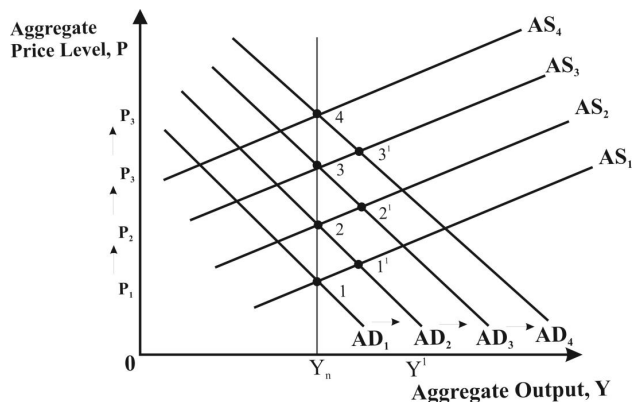

Figure 1. Response to a continually rising money supply.

Source: Cited in Frederick & Apostolos, 2005.

Figure 1 above is a graphical illustration of the monetarist postulate of the relationship between money supply and inflation. At point 1, the initial price level in P_1 at the point of intersection of aggre-

gate demand and aggregate supply (AD$_1$) and (AS$_1$) respectively. An increase in money supply will bring about a rightward shift of the aggregate demand curve indicating an increase in demand. Consequently, the price levels will continually increase with the resultant increase in aggregate demand.

Keynesian view of inflation

Unlike the monetarists that see inflation as a monetary phenomenon, Keynes postulates that inflation is dependent on the stance of aggregate demand of the economy [10]. Put differently, inflation ensues whenever the level of aggregate demand for goods and services is less than proportionate to aggregate supply at any given time. Keynes is the first economist to carry out a holistic analysis of the economy and the imperative of the role of government to stimulate the economy. He dichotomized the economy into four (4) distinct sectors namely household, firms, government, and foreign or external sectors. Each of the aforementioned sectors plays the role of demander's or suppliers depending on the markets (labour or product market) in which they find themselves. The crust of Keynes' theory of inflation is that if at any point in time, the aggregate goods and services produced are insufficient to meet the demand requirement of the aforementioned sectors, it will cause prices to rise. It is the backdrop of the above logic that Keynesian inflation is sometimes referred to as the Keynesian excess demand theory. An increase in government expenditure boosts aggregate demand thereby increasing both output and prices in the process [6]. A policy framework that encourages or gives room for fiscal indiscipline has a high propensity of increasing the rate of inflation [11].

Fiscal policy is the attainment of specified macroeconomic objectives through the manipulation of the government's financial operations [12]. By government financial operations, we mean government expenditure and taxation. Government expenditure can be dichotomized into capital expenditure and recurrent expenditure. Capital expenditure has to do with major expenditures on new infrastructure such as the construction of roads, bridges, schools, etc. On the other hand, recurrent expenditure refers to ex-

penditures incurred regularly such as salaries of staff working in government ministries, agencies, and departments. Fiscal policy has also been defined as the adjustment of government expenditure and revenue aimed at positively influencing the economy [13]. The pattern of government expenditure in Nigeria is inimical to economic development as over 85% of government expenditure is expended on recurrent items [14].

Can fiscal policy resolve inflation?

There are mixed opinions concerning the efficacy of fiscal policy in achieving the macroeconomic objective of price stabilization. Fiscal policy plays only a passive role, and is thus, ineffective in stimulating economic growth especially when the interest rate approaches zero [15]. The above stance has been collaborated by Petr [16]. According to them, fiscal policy instrument (especially public expenditure) has been ineffective in tackling inflation and unemployment in Nigeria. Some of the reasons why fiscal policy has been weak in Nigeria include but are not limited to fiscal indiscipline, corruption in the public sector, poor governance, and over-dependence on revenue generated from the oil sector. It has been argued that the extent to which fiscal policy can tame inflation depends on the policy regime in place [17]. Put differently, the strength of the macroeconomic effects of fiscal policy in achieving set targets depends on the source through which fiscal deficits are financed and the prevailing monetary policy stance. It is based on the aforementioned that Bredino, Fiderikumo, & Adedoyin [18] reiterated the need for a total overhaul of Nigeria's MDAs by scraping those that perform duplicated or unproductive functions.

2.2 Review of the empirical literature

The economic literature is replete with several empirical studies on fiscal policy and inflation. In this section, we shall review a few of such studies that are relevant to our work with the view of sharpening this work by identifying literature gaps.

Egbulonu & Amadi [19] studied the impact of fiscal policy on inflation in Nigeria. Time series data on government expenditure, tax revenue, government debt stock, and inflation covering the period 1970-2013 were used for the study. The aforementioned data were sourced from the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS). The Augmented Dickey Fuller (ADF) test was used to test the stationarity or otherwise of the selected variables. The test for the existence of a long-run relationship between variables was conducted using the Johansen co-integration test. Also, the Error Correction Model was finally used to test the rate of long-run adjustments to the short-run disequilibria among the variables. The findings of the study show that there exists a positive but insignificant relationship between government expenditure, government tax, and inflation in Nigeria, while government debt stock is positively and statistically significant. In line with the findings of the study, they made the following recommendation: Government should ameliorate its level of borrowing (domestic and foreign), a reduction of tax avoidance and evasion through an improvement in its tax administration systems, and proper monetary and fiscal policy mix in tackling inflation.

Godly & Wilfred [20] carried out an empirical analysis of the impact of fiscal policy on the inflation rate in Nigeria. The main thrust of their research was to empirically verify whether or not the envisaged increase in the salaries of academic staff in Nigerian Universities will result in inflationary pressure in the Nigerian Economy. To achieve the aforementioned, time series data on inflate rate, government expenditure, government revenue, and gross domestic product collected from the Central Bank of Nigeria (CBN) were used for the study. The secondary covered the period (1980-2011). Various statistical tests such as the Augmented Dickey Fuller (ADF) test, Johansen Co-integrated test, and Granger causality test were carried out. Findings from the study show that fiscal policy (especially government expenditure) spurs inflationary pressure in the country. They concluded that though an increase in government expenditure has the propensity to increase the rate of inflation in Nigeria, this increase is highly insignificant. They

asserted that the main causes of inflation in Nigeria are food scarcity, corruption, multiple taxation, infrastructural deficit, etc. They stressed the need for the government to encourage private investors through robust capital spending in the provision of good roads, health facilities, education, etc. to cover the existing infrastructural deficit.

The study examined the impact of fiscal policy on inflation and output in Indonesia [21]. Secondary time series data on government expenditure, government real tax revenue, real gross domestic product, consumer price index, and 3 months deposit rate were the preferred variables for the study. The aforementioned data were collected from the Bank of Indonesia and the Central Bureau of Statistics. The Augmented Dickey Fuller Unit Root Test and the Johansen test for co-integration preceded the Vector Error Correction test. The outcome of the ADF test shows that all the variables were stationary at levels i.e. all variables were stationary at levels. The Johansen co-integration test (Trace and Max Eigen) revealed the existence of one (1) co-integrating equation. Findings from the study show that there exists a positive and significant relationship between government expenditure and gross domestic product (used as a proxy for economic growth). On the other hand, the positive shock of government expenditure results in a decrease in the rate of inflation. According to them, the inverse relationship between government expenditure and the inflation rate is partly due to the positive multiplier effects of government expenditure on infrastructure that makes the production and distribution of goods and services less expensive, thus, reducing the cost of goods. They concluded that government spending is more potent in boosting economic growth in times of recession compared to taxation. Also, there is a positive and significant relationship between taxation and inflation in Indonesia.

The research was aimed at ascertaining the impact of an absolute change in fiscal policy stance and output on the volatility of inflation in 15 industrialized countries [22]. The variables included in the specified equation include a change in fiscal policy stance, change in the output gap, change in volatility of inflation, the share of government expenditure in GDP, the ratio of broad money to GDP, volatility of nominal exchange rate, and the share of import relative to GDP. The generalized least square estimation technique was used in analyzing the specified equation. The findings of the study show that there is a positive relationship between fiscal volatility and inflation volatility ceteris paribus (holding other variables included in the specification constant). On the other hand, there is a positive and significant relationship between the exchange rate and inflation volatility. The study concluded that a discretionary fiscal stance has a destabilizing effect on the economy.

A cursory view of the above empirical literature on the subject matter shows that the method of ordinary least square, augmented dickey fuller unit root test, and co-integration test were predominantly employed by previous researchers. Thus, the justification for the adoption of the aforementioned method for this study.

3. Study method

3.1 Data collection & sources

Secondary data on the rate of inflation, government expenditure, government revenue, and gross domestic product were used for this study. The aforementioned data were sourced from the Central Bank of Nigeria [23].

3.2 Research design & data analysis technique

The ex-post factor or casual comparative research design approach was adopted for this study. Ex-post factor design involves collecting and analyzing data about some variables retrospectively or about variables that are already in place without manipulating any of them [24]. The above research design was selected because the type of data required for the study (secondary data) are already in situ i.e. data have not been created or manipulated by the researcher, they already exist. Furthermore, ex-post factor design is

also referred to as casual comparative design because it entails finding out the relationship, effects, or impact of the independent variable on a dependent variable.

Accordingly, the Ordinary Least Square (Mulitple regression) and Parsimonious Error Correction data analysis techniques were used for this study. The justification for this data technique is predicated on the fact that we have four (4) variables (one dependent and three independent) being investigated in this study. See Section 3.3 below for the detailed breakdown of the mathematical statement of hypothesized relationship.

3.3 Model specification

The preferred model employed to empirically investigate the relationship between fiscal policy and inflation [19], however, with slight modification. We, however, included gross domestic product (GDP) as a check variable in the inflation reaction function written hereunder.

The mathematical statement of the hypothesized relationship:

$$Inf = GExp + GRE + GDP \qquad (1)$$

where,

Inf = Inflation;

GExp = Government Expenditure;

GRE = Government Revenue;

GDP = Gross Domestic Product.

The mathematical model in Equation (1) can be restated in its econometric or stochastic form thus,

$$Inf = \gamma_0 + \gamma_1 GExp + \gamma_2 GRE + \gamma_3 GDP + \mu_t \qquad (2)$$

From Equation (2) above,

γ_0 = Intercept parameter;

$\gamma_1, \gamma_2,$ and $\gamma_3 =$ Slope parameters of the respective explanatory variables;

μ_t = Error term or stochastic disturbance.

3.4 Data analysis tools

As stated earlier, the Ordinary Least Square, as well as the Parsimonious Error correction data analysis techniques were employed for the study. However, some econometric diagnostic tests such as the unit root test and co-integration analysis test must be carried out to ascertain data integrity and preferred estimation methodology.

Unit root test

Most time series data used in the econometric analysis are non-stationary. By non-stationary we mean they are trended and highly correlated [25]. The implication of using non-stationary data is that it yields what is called "spurious or non-regression". Inferences made from spurious regression are invalid and unreliable [26]. Thus, it is pertinent for us to run diagnostic tests on the data before we can use them for our analysis. One such test is the Augmented Dickey Fuller Unit Root (ADF) Test. The aforementioned test shall be used to test whether or not the data are stationary.

Co-integration and error correction model

The Johansen co-integration test shall be performed to ascertain whether or not there is any long-run association between the variables used for the study. It is also referred to as non-stationary time series modeling. We shall perform the error correction modeling if the test shows that there is a long-run relationship between the variables.

4. Results and discussion

In this section, the outcome of the respective analytical techniques used in analyzing the data is presented and discussed hereunder.

4.1 Stationarity tests

To ascertain the impact of fiscal policy on inflation, time series data on government expenditure, government revenue, inflation, and gross domestic product for the period (1981-2021) were used for this study. Non-stationarity or the presence of unit root is a major feature of time series data which if not properly diagnosed and treated will lead to spurious regression.

Therefore, in the following section, the selected variables for this study have been graphed against the respective periods (years). This will enable us

pictorially examine whether or not the data are stationary, and to establish whether or not we should include trend and or constant as part of our underlying assumption in carrying out the ADF test.

Graphical inspection of stationarity

The respective data used for this study have been graphed against the period 1981-2020 with a view of pictorially analyzing the presence or otherwise of a unit root. See **Figure 2** below.

As seen in **Figure 2**, all the variables used for the study have non-stationary mean and non-stationary variance. Again, it is pertinent for the statistics of any time series to be stationary or constant over time. This will ensure that the inference drawn there from is consistent. However, the most important statistics are the mean and variance which as seen are non-constant in all the variables selected for the study. Also, there is an upward trend in government expenditure and government revenue, however, without constant and intercept. Inflation and gross domestic product both have positive intercepts, though the former is not trended. The trajectory of GDP data displays a random walk process i.e. it does not have a specific pattern. Thus, it is non-stationary.

Augmented dickey fuller (ADF) unit root test

The ADF test is one of the most popularly used scientific means of testing the presence or otherwise of a unit root in time series data. The results of the ADF test of all the variables are presented in **Table 1** below.

As seen in **Table 1**, besides the inflation rate that is stationary at both levels and the first difference, every other variable (GExp, Grev, & GDP) was stationary at the first difference. Though the graphical method of detecting unit root as depicted in **Figure 2** is still relevant, the ADF test is mostly used by statisticians.

4.2 Co-integration test result

The Johansen co-integration test was carried out on the selected data set used for this study to ascertain whether or not the variables are co-integrated. The results of the trace and max-eigen statistic are shown in **Table 2** below.

The result of the co-integration test as shown in **Table 2** indicates that there exists a long-run association between the variables of the study. We
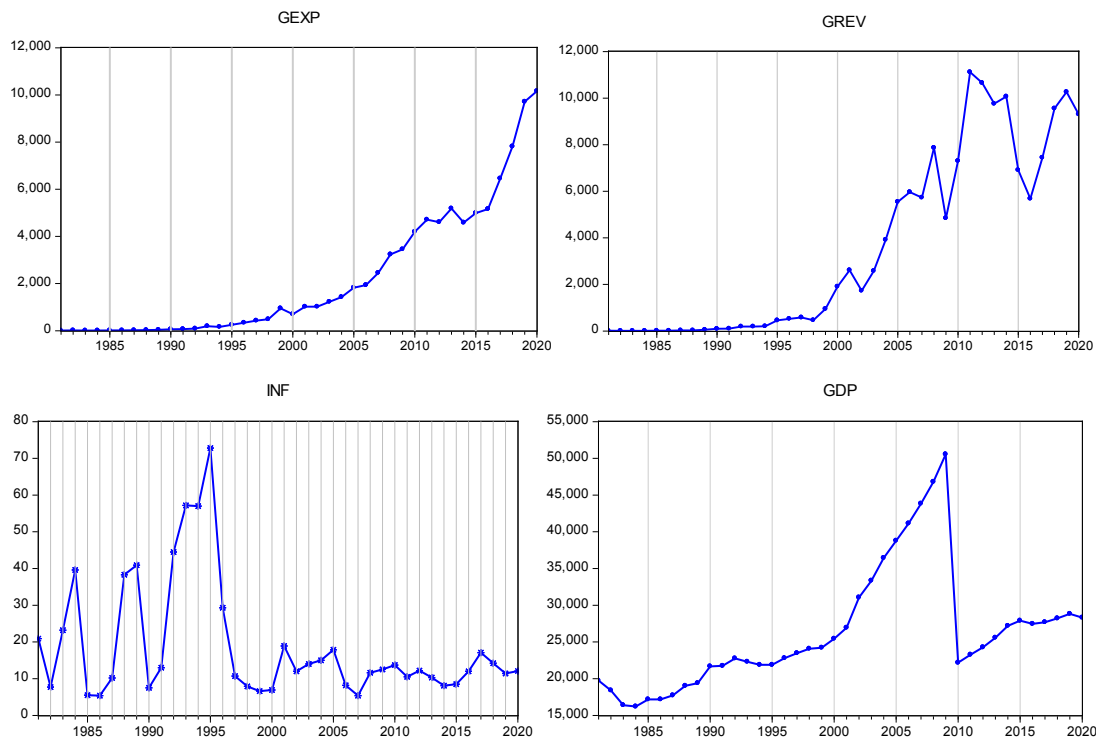

Figure 2. Graphical view of government expenditure, government revenue, rate of inflation & gross domestic product.

Table 1. ADF test result.

Variables	Levels		1st difference		Order of integration
	ADF Test Statistics	Test Critical Value @ 5%	ADF Test Statistics	Test Critical Value @ 5%	
INF	–2.9655	**–2.938987	–6.006965	**–2.941145	I(1)
GEXP	1.253822	–3.54849	–7.382108	**–3.54849	I(1)
GREV	–2.625344	–3.529758	–5.892663	**–3.533083	I(1)
GDP	–1.930331	–2.938987	–6.458342	**–2.941145	I(1)
ECM	–4.128042	**–2.941145			I(0)

** Denotes that the variables are stationary.

Source: Authors computation.

Table 2. Johanson co-integration test result.

Hypothesized No. of CE(s)	Trace statistic	Prob.**	Max-Eigen statistic	Prob.**
None*	64.65481	0.0006	37.07798	0.0023
At most 1*	27.57684	0.0883	16.19413	0.2137
At most 2	11.38271	0.189	10.65185	0.1725
At most 3	0.730856	0.3926	0.730856	0.3926

Source: Authors computation.

rejected the null hypothesis that states that there is no co-integrating equation at a 5% (0.005) level of significance. Both the trace and max-eigen statistics indicate that there is a co-integrating equation at a 5% level of significance. The above result thus, justifies the use of the Parsimonious Error Correction Model.

4.3 Parsimonious error correction

The result of the parsimonious error correction model is shown in **Table 3** below.

Table 3. Vector error correction model.

Variables	Coefficients	T-statistics
ECM	–0.03024	–2.31735
D(INF(–1))	0.015509	0.08938
D(GEXP(–1))	0.08132	3.67915
D(GREV(–1))	0.042106	0.14883
D(GDP(–1))	0.062705	–1.07519
C	2.14457	0.57889

Source: Authors computation.

From **Table 3**, the coefficient of the ECM which is estimated to be –0.03024 indicates that the deviation from the long-run equilibrium in previous periods or years will be corrected at a speed of 3%.

GExp has a positive and statistically significant relationship with the rate of inflation. Specifically, the coefficient of GExp of 0.08132 indicates that a 1% increase in government expenditure will cause the inflation rate to increase by an average of 8% ceteris paribus. The positive coefficient of Government revenue aligns with apriori expectations. Specifically, the rate of inflation will increase by an average of 4% with every 1% increase in government expenditure. Also, the output shows that there is a positive but insignificant relationship between inflation and gross domestic product which is in line with apriori expectations, and the work of Jeremiah & Emmanuel [27].

5. Conclusions

The adverse impact of the sporadic rise of prices in Nigeria and its effect on the standard of living demands that the phenomenon be given special attention. It is on the backdrop of the aforementioned that this study was conducted. This paper sought to empirically ascertain whether or not fiscal policy is a veritable tool to tackle inflation in Nigeria. In the estimated model used for this study, the rate of inflation was the dependent variable, while government expenditure and government revenue constituted the

independent or explanatory variables. Gross domestic product was, however, introduced in the model as a check variable. The Augmented Dickey-Fuller (ADF), and Johansen co-integration tests were conducted. Thereafter, data were analyzed using Ordinary Least Square and Parsimonious Error Correction techniques.

Using the Augmented Dickey-Fuller (ADF) test, the null hypotheses of the presence (or otherwise) of a unit root in the time series were tested at a 5% level of significance at both level and first difference. All variables were non-stationary at level except inflation rate. However, at the first difference, all variables were seen to be stationary, thus, justifying the use of the Johansen co-integration test to investigate whether or not there is any co-integrated equation. The trace and max-eigen statistics show that there is one (1) co-integrated equation among the variables. The existence of a co-integrating equation precipitated the need to carry out a Vector Error Correction Model (VECM). The output of the VECM test shows that both government expenditure and government revenue have a positive impact on the inflation rate, though, the latter is not statistically significant. Gross domestic product has a positive but statistically insignificant impact on the inflation rate.

In conclusion, given the positive impact of fiscal policy on the inflation rate in Nigeria, the government (local, state, and federal) should be tactful in the use of fiscal policy apparatuses to avoid triggering inflationary pressure and its negative multiplier effects on the welfare of its citizenry. Put differently, the intended and desired effects, as well as the unintended and undesired effects of the deployment of fiscal policy on the people, must be carefully considered.

Conflict of Interest

There is no conflict of interest.

References

[1] Frederick, M.S., Apostolos, S., 2005. The economics of money, banking, and financial markets. Pearson: London.

[2] Fischer, S., 1993. The role of macroeconomic factors in growth. Journal of Monetary Economics. 32(3), 485-512.

[3] Ajie, H.A., Jonah, A., Denis, B.E., 2007. Issues in macroeconomic. Pearl Publishers: Port Harcourt.

[4] Onwubuariri, S.E., Oladeji, S.I., Bank-Ola, R.F., 2021. Inflation and economic growth in Nigeria: An ARDL bound testing approach. Sapientia Foundation Journal of Education, Sciences and Gender Studies. 3(1).

[5] Bredino, S., Fiderikumo, P., & Henry, A., 2022. Public Expenditure and Economic Growth in Nigeria: An Empirical Analysis. International Journal of Advanced Academic Research. 8(11), 180-187.

[6] Alexander, S. W.,2022. Fiscal Policy and Inflation [Internet]. American Institute for Economic Research. Available from: https://www.aier.org/article/fiscal-policy-and-inflation/

[7] Jhingan, M.L., 2004. Monetary economics. Vrinda Publications Ltd.: Delhi.

[8] Gbanador, C. A., 2007. Modern Macroeconomics. Pearl Publisher: Port Harcourt.

[9] Laidler, D.E., Stadler, G.W., 1998. Monetary explanations of the Weimar Republic's hyperinflation: Some neglected contributions in contemporary German literature. Journal of Money, Credit and Banking. 3(4), 816-831.

[10] Keynes, J., 1936. General theory of employment, interest and money. Harcourt: London.

[11] Ryan, B., Valerie, B., Aaron, M., et al., 2022. Fiscal Deficits and Inflation Risks: The Role of Fiscal and Monetary Regimes [Internet]. Bank for International Settlements. No. 1028. Available from: https://www.suerf.org/suer-policy-brief/55051/fiscal-deficits-and-inflation-risks-the-role-of-fiscal-and-monetary-policy-regimes

[12] Babalola, A.I., 2015. Fiscal policy and economic development in Nigeria. Journal of Economics and Sustainable Development. 6(7), 150-159.

[13] Agu, S.U., Okwo, I.M., Ugwunta, O.D., et al.,

2015. Fiscal policy and economic growth in Nigeria: Emphasis on various components of public expenditure. Sage Open. 5(4).
DOI: https://doi.org/10.1177/2158244015610171

[14] Nye, T.E., 2013. Macroeconomics. Dominus Printing Co: Port Harccourt.

[15] Bredino, S., Dikeogu, C., Fiderikumo, P., 2022. Fiscal policy and unemployment in Nigeria: A structural analysis. African Journal of Business and Economic Development. 2(12), 117-126.

[16] Peter, T., 2014. Fiscal policy and the inflation target. International Journal of Central Banking. 10(2), 63-96.

[17] Leeper, E.M., 1991. Equilibria under 'active' and 'passive' monetary and fiscal policies. Journal of monetary Economics. 27(1), 129-147.

[18] Bredino, S., Fiderikumo, P., Adedoyin, A., 2022. Fiscal policy implementation in Nigeria: Issues and challenges. International Journal of Economics and Management Studies. 9(5), 32-36.

[19] Egbulonu, K.G., Amadi, K.W., 2016. Impact of fiscal policy on inflation in Nigerian economy. International Journal of Innovative Development & Policy Studies. 4(3), 53-60.

[20] Otto, G., Ukpere, W.I., 2015. The impact of fiscal policy on inflation in Nigeria. Risk Governance & Control: Financial Markets & Institutions. 5(1), 123-132.

[21] Surjaningsih, N., Utari, G. D., Trisnanto, B., 2012. The Impact of Fiscal Policy on the Output and Inflation. Buletin Ekonomi Moneter dan Perbankan, 14(4), 367-396.

[22] Philip, R. C., 2004. Fiscal Policy and Inflation Volatility [Internet]. Available from: https://ssrn.com/abstract=515081

[23] Data & Statistics [Internet]. Central Bank of Nigeria; 2021. Available from: https://www.cbn.gov.ng/rates/

[24] Nwankwo, O.C., 2013. A practical guide to research writing for students of research enterprise. University of Port Harcourt Press: Port Harcourt.

[25] Dickey, D.A., Fuller, W.A., 1979. Distribution of the estimators for autoregressive time series with a unit root. Journal of the American Statistical Association. 74(1), 427-431.

[26] Iyeli, I.I., 2010. Empirical econometrics. Pearl Publishers: Port Harcourt.

[27] Olu, J.F., Idih, E.O., 2015. Inflation and economic growth in Nigeria. Journal of Economics and International Business Management. 3(1), 20-30.

Appendix

Table A1. Data presentation.

YEAR	(N' Billions) Government Expenditure (*GExp*)	(N' Billions) Government Revenue (*GRE*)	Inflation (*Inf*)	(N' Billions) Gross Domestic Product (*GDP*)
1981	11.41	13.29	20.9	19748.53
1982	11.92	11.43	7.7	18404.96
1983	9.64	10.51	23.2	16394.39
1984	9.93	11.25	39.6	16211.49
1985	13.04	15.05	5.5	17170.08
1986	16.22	12.60	5.4	17180.55
1987	22.02	25.38	10.2	17730.34
1988	27.75	27.60	38.3	19030.69
1989	41.03	53.87	40.9	19395.96
1990	60.27	98.10	7.5	21680.2
1991	66.58	100.99	13	21757.9

Table A1 continued

YEAR	(N' Billions) Government Expenditure (*GExp*)	(N' Billions) Government Revenue (*GRE*)	Inflation (*Inf*)	(N' Billions) Gross Domestic Product (*GDP*)
1992	92.80	190.45	44.5	22765.55
1993	191.23	192.77	57.2	22302.24
1994	160.89	201.91	57	21897.47
1995	248.77	459.99	72.81	21881.56
1996	337.22	523.60	29.3	22799.69
1997	428.22	582.81	10.7	23469.34
1998	487.11	463.61	7.9	24075.15
1999	947.69	949.19	6.6	24215.78
2000	701.05	1,906.16	6.9	25430.42
2001	1,018.00	2,611.03	18.9	26935.32
2002	1,018.18	1,731.84	12	31064.27
2003	1,225.99	2,575.10	14	33346.62
2004	1,426.20	3,920.50	15	36431.37
2005	1,822.10	5,547.50	17.9	38777.01
2006	1,938.00	5,965.10	8.2	41126.68
2007	2,450.90	5,727.51	5.4	43837.39
2008	3,240.82	7,866.60	11.6	46802.76
2009	3,452.99	4,844.59	12.5	50564.26
2010	4,194.58	7,303.67	13.7	22187.74
2011	4,712.06	11,116.85	10.5	23272.14
2012	4,605.39	10,654.75	12.2	24268.02
2013	5,185.32	9,759.79	10.3	25577.14
2014	4,587.39	10,068.85	8.1	27190.984
2015	4,988.86	6,912.50	8.5	27912.276
2016	5,160.74	5,679.03	12.0	27460.972
2017	6,456.7	7,445.0	17.1	27682.276
2018	7,813.7	9,551.8	14.2	28214.54
2019	9,714.6	10,262.3	11.4	28837.634
2020	10,164.6	9,303.2	12.1	28320.216

Source: Central Bank of Nigeria statistical bulletin, 2021.