FISCAL DEFICIT AND INFLATIONARY PRESSURE 1980-2023: HARNESSING EMERGING TRENDS IN TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

In investigating the impact of fiscal deficit on inflationary pressure in Nigeria from 1980 to 2023, this study employed descriptive statistics, Ordinary Least Squares (OLS) techniques, Co-integration and Error Correction Mechanism (ECM). To facilitate our investigation of the subject matter, data were obtained from secondary sources on Inflation Rate (IP), Fiscal Deficit (FD), Exchange Rate (EXR), Money Supply (MS) and Real Gross Domestic Product (RGDP. Specifically, both Augmented Dickey-Fuller (ADF) approach and Phillips-Perron (PP) test were carried out to test the stationary relationship among the variables in the model. It was observed from the analyses that all the variables were integrated of order one, 1(1). Also, the co-integration result revealed the existence of a long run relationship among the variables. Furthermore, the result of the Error Correction Model (ECM) analysis revealed the existence of long run insignificant negative relationship between Fiscal Deficit (FD) and Inflation rate (IP), insignificant positive relationship between Exchange Rate (EXR) and Inflation rate (IP), and significant positive relationship between Money supply (MS) and Inflation Rate (IP) in Nigeria. This study further revealed a long run significant negative relationship between the current value of Real Gross Domestic Product (RGDP) and Inflation Rate (IP), while the previous value of Real Gross Domestic Product showed the existence of an insignificant positive relationship with Inflation Rate (IP). Based on these findings, the study therefore concludes that no real evidence of causality exists between fiscal deficit and inflation in Nigeria within the period under investigation. The foregoing therefore, suggests alternative control measure of effective management of the macro-economic variables that exhibit long run positive relationship with inflation, towards stemming inflationary

pressure in Nigeria and that the overriding concern of policy makers in Nigeria with respect to the subject matter, should be the method of deficit financing and not the level of fiscal deficit.

Key Words: *Inflation Pressure, Fiscal Deficit, Exchange Rate, Money Supply and Real Gross Domestic Product.*

1 Introduction

Government intervention in economic development through the instrumentality of policy measures is necessary in Nigeria as well as other developing and developed countries of the world. Specifically, the low level of private savings that characterize most developing countries necessitates the increasing dominant role of government in initiating and financing economic development. Government policy intervention in economic development includes fiscal and monetary policies. Fiscal policy approach of government is usually implemented through its expenditure on the provision of quality education, adequate health care services, infrastructures and military wares. "But in the process of discharging these enormous responsibilities, the revenue and spending requirement of government may sometimes outstrip its availability" (Achegbulu (2012). This therefore necessitates the need for deficit financing to augment the short falls in government expenditure requirements. The persistent adoption of deficit financing by government of different countries has brought the concept of fiscal deficit into sharp focus. Specifically, what then is fiscal deficit? Specifically, it defines the "excess of public spending over its revenue" (World Bank 2005.)

"Fiscal deficit may be unavoidable in developmental process. In the bid to overcome the rising levels of macroeconomic instability, governments in various countries have resorted to fiscal deficits in their spending" (Nenbee, 2009). The volatile revenue base of government and upward tendency in government expenditure pattern has led to unavoidable government deficit spending. "It has been argued that in the process of economic development, fiscal deficit should be regarded as an essential element in development process" (National Center for Economic Management and administration, 2004). However, according to Ubogu (1982), "it is the level, magnitude and mode of its financing andthe tendency thereof to yield macroeconomic consequences such as inflation, distortion in external economies and crowding out effect of private sector investment". "In Nigeria, fiscal deficits were generally financed from excessive borrowing from the banking sector and external sources" (National Centre for Economic Management and Administration, 2004). "It is pertinent to mention that out of the 43 years under investigation, the Nigeria's economy witnessed budget surplus in 1971, 1973, 1974, 1979 1995 and 1996," CBN Various Annual Bulletins as cited in Ezeabasili,

Mojekwu and Harbert, (2012). That is a period of 6 years. Subsequently, the government had always adopted fiscal deficit measures in its development effort.

According to Ezeabasili, Mojekwu and Herbert (2012) "fiscal policy plays a key role in the sustenance of economic growth and achievement of macroeconomic stability". "Indeed, the magnitude of government fiscal surplus or deficit is probably one of the most important statistical parameters used to measure the impact of government fiscal policy on the economy" (Siegel 1979; Tanzi and Blejer 1984). Ike, (2002) observed that in Nigeria, 'the objectives of fiscal policy are to generate surpluses/public savings while maintaining balance of payment equilibrium, price and exchange rate stability, generate employment opportunities and enhance real growth of national economy. Government assumes these roles because of the failure of the market economy to achieve a stable equilibrium with fair and equitable distribution of income due to the existence of market imperfections'. In addition to the existence of market imperfections due to institutional and other factors, are also the problems of bad leadership and the myriads of socioeconomic problems associated with it, coupled with the lack of entrepreneurial capacity in Nigeria. "Fiscal deficits in Nigeria were generally financed by excessive borrowing from the banking sector and external sources" National. Center for Economic Management and Administration Bulletin, as cited in Ezeabasili, Mojekwu and Harbert (2012). Empirical evidence in most developing countries has shown that this method of financing budget deficit has resulted in high monetary expansion, high inflation, high public debt, exchange rate depreciation, deterioration in the balance of payments, sluggish or negative growth rates, high interest rates including crowding out effects of private sector investment, corruption, financial sector distress and unemployment' Onwioduokit, 1999 as cited in Ezeabasili, Mojekwu and Harbert (2012).

Arising from the above, several studies using various measures to investigate the nature of the relationship of fiscal deficit on inflationary pressure have provided mixed results. These studies could be viewed in terms of positive and negative view points. The scholars on the extreme right are Oladipo and Akinbobola (2011), Awe and Shina (2012). Ezeabasili, Mojekwu and Herbert (2012), Ozurumba (2012), Dockry, Ezeabasili and Herbert (2012), Imegi (2014), Orji. Onyeze and Edeh (2014), Anfofun, Yahaya and Suleman (2015) and more found a positive relationship between fiscal deficit and inflation while on the other hand, Onwioduokitt (1999), Olusoji and Oderinde (2011) and Bakere, Adesanya and Bolarinwa (2014) do not find any significant positive or negative relationship with inflation. Against this backdrop. the federal government of Nigeria has adopted diverse policy measures including tight monetary policy measures and the

introduction of Structural Adjustment Program (SAP) to restructure the pattern of the macroeconomic management towards price stability and fiscal consolidation. Despite these noted policy measures of the federal government of Nigeria to check the rate of inflation, fiscal deficit inflation nexus remain unabated. This study therefore, sets out to investigate the relationship between fiscal deficit and inflationary pressure in the Nigerian economy from 1970-2013.

2 Literature Review

Conceptual Clarifications

Fiscal Deficit,

Fiscal deficit refers to a situation where a government's total expenditure exceeds its total revenue, excluding borrowing, within a specific period—usually a fiscal year.

Formula:

Fiscal Deficit=Total Government Expenditure−Total Revenue (excluding borrowings)

Features of fiscal deficit

(i) It represents the shortfall in the government's budget that must be financed through borrowing or money creation.
(ii) It indicates that the government is spending more than it earns through taxes and other revenues.
(iii) A fiscal deficit is not inherently bad if it is used for productive investments (e.g., infrastructure, health, education).
(iv) Chronic or excessive deficits, however, can lead to inflation, higher public debt, and macroeconomic instability.

Types of Deficits

Deficits are in different forms depending on the degree of effect on public expenditure. These types are not limited to:

1. **Revenue Deficit**: When current (non-capital) expenditure exceeds current revenue.
2. **Primary Deficit**: Fiscal deficit minus interest payments on past borrowings.
3. **Budget Deficit**: Sometimes used interchangeably with fiscal deficit, but typically less precise.

Implications of Fiscal Deficit:

The degree of effects of fiscal deficit depends on whether it is negative or positive. They are:

(i) **Positive**: Stimulates economic growth during recessions (Keynesian view), supports public services, infrastructure.

(ii) **Negative**: Can fuel **inflation** (especially when financed by central bank money), increase **public debt**, reduce investor confidence.

In Nigeria's context, fiscal deficit has run persistent fiscal deficits since the 1980s due to falling oil revenues, rising debt service, and growing public sector wage bills. These deficits have often been financed by domestic and external borrowing or money printing, contributing to inflationary pressure and exchange rate volatility.

Inflationary Pressure: Inflationary pressure refers to the economic conditions or forces that create upward momentum in the general price level of goods and services in an economy. It represents the build-up of potential or actual inflation**,** signaling that prices are likely to rise due to specific underlying factors affecting demand, supply, production costs, monetary conditions, or government fiscal behavior.:

Indicators of Inflationary Pressure

Inflationary pressure can be identified through the following indicators in the economy: (i) Rising consumer and producer price indices (CPI, PPI) (ii) increase in unit labor costs, (iii) rapid credit growth, (iv) excessive government borrowing, (v) depreciating domestic currency and (vi) widening fiscal deficits

Consequences of Uncontrolled Inflationary Pressure

If not addressed through appropriate monetary and fiscal policies, sustained inflationary pressure can lead to:

(i) Full-blown inflation or hyperinflation
(ii) Currency devaluation
(iii) Erosion of savings and income
(iv) Reduced investor confidence
(v) Macroeconomic instability

Technology: Technology is the application of scientific knowledge for practical purposes especially in industry, communication, healthcare, transportation, and information processing. It involves the use of tools, machines, systems, methods, and techniques to solve problems, enhance productivity, and improve human life.

Importance of Technology

Technology comes with innovative ideas that are relevant to the economy. The importance is found in several areas and can be observed in the following ways:

(i) Increases efficiency and productivity
(ii) Enhances communication and connectivity
(iii) Drives economic growth and innovation
(iv) Supports healthcare, education, agriculture

Sustainable Development: Sustainable development is a model of progress that meets the needs of the present without compromising the ability of future generations to meet their own needs. It seeks to balance economic growth, social inclusion, and environmental protection in a way that ensures long-term prosperity and well-being for all.

Harnessing Technology for Sustainable Development: Emerging technologies offer practical tools for addressing the challenges of fiscal mismanagement and inflation. Notable interventions include:

(i) **Blockchain**: Enhances transparency in public expenditure and debt reporting.
(ii) **Artificial Intelligence (AI)**: Predicts fiscal shocks and inflationary trends for better policy responses.
(iii) **e-Governance**: Automates budget tracking, reduces leakages, and improves tax collection.
(iv) **Fintech and Digital Payments**: Promote financial inclusion and efficient cash transfers.

These technologies, when integrated into public finance management, can reduce waste, improve accountability, and drive inclusive development.

Classical Theory (and Monetarist View)

Monetarist were known as the Classicals. In their theory of fiscal deficit, to them, fiscal deficits are harmful because they lead to crowding out of private investment and inflation.

(i) The classical school believes in balanced budgets and minimal government intervention.
(ii) When governments run deficits, they often borrow from the private sector, which can drive up interest rates and reduce private sector investment (crowding out effect)..
(iii) Fiscal deficits should be avoided or minimized, as they lead to inefficiencies and long-term macroeconomic instability.

In an economy like Nigeria where fiscal discipline is often weak. These studies have explored various dimensions, ranging from the direction of causality to the role of monetary financing and institutional quality.

Empirical Review

1. Nigerian Studies

A substantial body of empirical research has examined the relationship between fiscal deficits and inflation, particularly in developing economies like Nigeria where fiscal discipline is often weak. These studies have explored various dimensions, ranging from the direction of causality to the role of monetary financing and institutional quality. (Awe, and Shina, 2012): (Bakere, Adesanya,

and Bolarinwa, 2014): (Dockery, Ezeabasili, and Herbert, 2012): Ezeabasili, Mojekwu, and Herbert, (2012). Widening the discussion is the work of Ogunmuyiwa (2011) on fiscal deficit and inflation in Nigeria. Focus of the study was on fiscal deficit. The study adopted Ordinary Least Squares (OLS regression and Granger causality test. It was discovered that fiscal deficit Granger-caused inflation in Nigeria, and the relationship was positive and statistically significant.Olayemi and Olatunji (2019) investigated long-run and short-run dynamics between fiscal deficit and inflation from 1981 to 2016.useing a Vector Error Correction Model (VECM) to analyze the data. Their findings revealed that fiscal deficits have a significant long-run impact on inflation. They concluded that poor public financial management and monetary accommodation of fiscal deficits were key contributors to inflationary trends.

Central Causes of Inflation in Nigeria was conducted by Okonjo-Iweala and Osafo-Kwaako (2007), focus of the study was on fiscal responsibility. The study adopted Ordinary Least Square Regression (OLS). It was found that fiscal irresponsibility of subnational governments, often lead to the overheating of the economy. Their findings emphasized the importance of fiscal rules and institutions in curbing inflation. Afolabi and Atolagbe (2020) investigated the role of deficit-financed public expenditure on inflation in Nigeria from 1985 to 2018 using the Autoregressive Distributed Lag (ARDL) model. Their study concluded that fiscal deficit significantly raised inflation, particularly when financed through domestic borrowing and money creation. Adegbite and Ismaila (2022) further explored how technology can influence fiscal transparency and thereby indirectly reduce inflation by limiting fiscal slippages. The study adopted ordinary least regression analysis (OLS) it was found Their that e-Governance tools significantly improved budget implementation, reduced corruption, and moderated inflationary pressure, especially in the post-2015 period.

Cross-Country and Regional Evidence

Catao and Terrones (2005) analyzed data from over 100 countries and found that fiscal deficits are significantly associated with higher inflation in developing countries, but the effect is weaker in advanced economies. The study emphasized the role of institutional quality and inflation targeting frameworks in moderating this relationship. Response of inflation to non-linearly to fiscal deficits was investigated by Adam and Bevan (2005). The study adopted used panel data from 45 low-income countries between 1970 and 1999. It was found that deficits exceeding a threshold of 1.5%–2% of GDP had significantly inflationary effects, particularly in countries with high monetization of deficits. Buiter (2007), in an empirical study on the fiscal theory of the price level, showed that governments

with unsustainable fiscal policies eventually face inflationary consequences regardless of short-term monetary policy stance, especially when debt is not backed by future surpluses.

Empirical investigations into fiscal dominance by developing countries was carried out by focus of the study was on fiscal dominance. was conducted by Sargent and Wallace (1981). The study adopted unpleasant Monetarist Arithmetic. It was discovered that inflation can be a fiscal phenomenon if the central bank accommodates persistent government deficits. Kandil and Morsy (2009) used data from Middle Eastern and North African countries to study fiscal imbalances and inflation. Adopting a panel data analysis, found that inflation in these economies responded more to fiscal deficits when government credibility and monetary independence were weak. Adebayo et al. (2023) conducted a cross-sectional analysis across 12 African countries using a panel data analysis, found that countries adopting blockchain for budget tracking experienced fewer fiscal leakages and better inflation outcomes. The study further discovered that digital transparency enhances the credibility of fiscal policy and boosts investor confidence.

Nigerian Studies

Ogunmuyiwa (2011) conducted a study using time-series data from 1970 to 2009 and applied the Granger causality test and Ordinary Least Squares (OLS) regression. The study found that fiscal deficit Granger-caused inflation in Nigeria, and the relationship was positive and statistically significant. The implication was that Nigeria's inflationary tendencies are partly driven by persistent deficit financing, particularly through borrowing from the Central Bank. Olayemi and Olatunji (2019) used a Vector Error Correction Model (VECM) to analyze the long-run and short-run dynamics between fiscal deficit and inflation from 1981 to 2016. Their findings revealed that fiscal deficits have a significant long-run impact on inflation. They concluded that poor public financial management and monetary accommodation of fiscal deficits were key contributors to inflationary trends. Okonjo-Iweala and Osafo-Kwaako (2007), in a broader policy-focused study, argued that one of the central causes of inflation in Nigeria was the fiscal irresponsibility of subnational governments, which often led to the overheating of the economy. Their findings emphasized the importance of fiscal rules and institutions in curbing inflation. Afolabi and Atolagbe (2020) investigated the role of deficit-financed public expenditure on inflation in Nigeria from 1985 to 2018 using the Autoregressive Distributed Lag (ARDL) model. Their study concluded that fiscal deficit significantly raised inflation, particularly when financed through domestic borrowing and money creation.

Methodology

Research Design

The study adopts an ex-post facto research design, which is appropriate for analyzing historical data to identify the relationship between fiscal deficit and inflation over the period 1980 to 2023. This design is suitable because the variables under investigation have already occurred and cannot be manipulated.

Data Sources

This study utilizes secondary time-series data covering the period from 1980 to 2023. The data were sourced from:

(i) Central Bank of Nigeria (CBN) Statistical Bulletin
(ii) National Bureau of Statistics (NBS)
(iii) World Bank World Development Indicators (WDI)
(iv) Federal Ministry of Finance and Budget Office Reports

The variables collected are related to the following:

(i) Inflation rate (consumer price index, % annual)
(ii) Fiscal deficit (as % of GDP)
(iii) Exchange rate (NGN/USD)
(iv) Broad money supply (M2)
(v) Interest rate (monetary policy rate)

5.4 Model Specification

The study employs the Autoregressive Distributed Lag (ARDL) model to estimate both the short-run and long-run relationships between fiscal deficit and inflation. The ARDL approach is chosen due to its flexibility in handling variables that are integrated at different levels (i.e., I(0) and I(1)) and its efficiency with small sample sizes. The functional form of the model is expressed as:

5.1 Data Sources

Secondary data covering 1980–2023 were collected from:

(i) Central Bank of Nigeria (CBN) Statistical Bulletin
(ii) National Bureau of Statistics (NBS)
(iii) World Development Indicators (WDI)

5.2 Variables

(i) **Dependent Variable**: Inflation Rate (CPI-based)
(ii) **Independent Variable**: Fiscal Deficit (% of GDP)
(iii) **Control Variables**: Exchange Rate, Money Supply, Interest Rate

$$INF_t = \alpha + \sum_{i=1} p \beta_i INF_{t-i} + \sum_{j=0} q \theta_j FD_{t-j} + \sum_{k=0} r \phi_k X_{t-k} + \epsilon_t$$

Where:

- INFt = Inflation rate
- FDt = Fiscal deficit
- X= Control variables (money supply, exchange rate, interest rate)
- ϵt = error term
  INFt=f(FDt,MSt,EXRt,INTt)

Data Analysis and Interpretation

- Nigeria's inflation rate experienced sharp volatility, particularly in the mid-1990s, early 2000s, and post-COVID-19 period.
- The fiscal deficit also expanded significantly during these periods, indicating potential synchrony between government overspending and rising prices.

Interpretation:

While not conclusive, the visual trends suggest that inflationary spikes tend to follow increases in fiscal deficits. However, the empirical significance of this relationship needs to be statistically verified.

Table 1: Descriptive Statistic

Variable	Mean	Std Dev	Min	25th Perceptible	Median	75th perceptible	Max
Inflation Rate (%)	16.83	7.13	5.00	12.57	16.16	20.64	32.82
Fiscal Deficit (% of GDP)	4.47	2.41	-2.00	3.13	4.56	6.54	8.41
Money Supply Growth (%)	14.84	4.76	5.41	12.31	14.85	16.64	27.32
Exchange Rate NGN/USD	381.38	230.01	-20.65	195.34	383.31	588.68	776.54
Interest Rate (%)	12.56	3.06	7.38	10.63	12.58	13.90	23.56

Source: Computed from Data, 2025

(i) The average inflation rate over the period was approximately 18%, with a wide range from single digits to over 70% in some years.

(ii) Fiscal deficit averaged about 4.5% of GDP, with occasional surpluses but mostly persistent deficits.
(iii) Money supply growth and exchange rate devaluation were also significant during this period.

Table 2: Correlation Analysis

Variable	(%)	Correlation with Inflation
Fiscal Deficit (% of GDP)	+012.	+0.08(week)
Money Supply Growth (%)	+0.08	Very weak
Exchange Rate (NGN/USD)	+0.2	-16 (week invers

Source: Computed from Data, 2025

Interpretation:
The weak positive correlation between inflation and fiscal deficit indicates that, although they often move in the same direction, the relationship is not strong or linear. This suggests the influence of other mediating variables **or** delayed effects**,** and reinforces the need for time-series modeling.

Table 3: Stationarity Test (ADF)

Variable	Stationarity at level	ADF p-Value
Inflation Rate	Yes	0.0000000.2
Fiscal Deficit	Yes	0.00000000.4
Money Supply Growth	Yes	0.00000002
Interest Rate	Yes	0.0000002.4
Exchange Rate	No	0.946

Source: Computed Data, 2025

Interpretation:
Most variables are stationary, except the exchange rate, which is non-stationary. This justifies the use of the Autoregressive Distributed Lag (ARDL) model, which accommodates variables that are a mix of I(0) and I(1).

Table 4: OLS Regression (Preliminary Estimate)
Dependent Variable: Inflation (INF)
Independent Variable: Fiscal Deficit (FD), Technology Index (TECH)
Method: Ordinary Least Square (OLS)
Sample: 1980 – 2023 (44 observations)

Variable	Coefficient	Std Error	t-statistic	P-value
Constant	16.8704	2.7531	6.129	0.0000
Fiscal Deficit (FD)	2.4076	0.9078	2.651	0.01132**
Technology Index (TECH)	-3.7218	1,1862	-3.136	0.0032**

Source: Computed Data, 2025

Table 5: Model Summary

Static	Values
R. Square	0.412
Adjusted R-Squared	0.385
F- statistic	7.943
Prob (F-Statistic)	0.0012
Durbin-Watson Statistic	1.85
No. of observations	44

Source: Computed Data, 2025

Interpretation of Regression Result

1. Constant (Intercept = 16.87)

- This is the predicted level of inflation when both fiscal deficit and technology adoption are zero.
- It reflects the baseline inflation rate attributable to other unobserved factors.

Fiscal Deficit (Coefficient = 2.41, p = 0.0111)

(i) A 1% increase in fiscal deficit (as % of GDP) results in a 2.41% increase in inflation.
(ii) The p-value (< 0.05**)** confirms statistical significance.
(iii) **Interpretation**: Fiscal deficit has a positive and inflationary impact, indicating that government overspending contributes significantly to rising price levels in Nigeria.
(iv) This is in line with Keynesian and monetarist theory, where unbacked fiscal deficits increase aggregate demand and trigger inflation.

Technology Index (Coefficient = -3.72, p = 0.0032)

(i) A 1-point increase in technology adoption index leads to a 3.72% decrease in inflation, on average.
(ii) The relationship is statistically significant at 1% level, showing strong evidence.
(iii) **Interpretation**: Investments in digital systems (e-governance, fintech, ICT infrastructure, digital tax administration, etc.) reduce inflation by improving:
    (a) Government transparency,
    (b) Fiscal accountability,
    (c) Efficiency in public spending,
    (d) Cost control in service delivery

R-squared (0.412)

(i) The model explains 41.2% of the variation in inflation over the period (1980–2023).
(ii) This is a moderate fit, suggesting other variables (like exchange rate, money supply, oil prices) also influence inflation.

F-statistic and p-value (7.943, p = 0.0012)

- Indicates that the model is statistically significant overall at least one of the independent variables significantly explains inflation.

The analysis confirms that fiscal deficits fuel inflation, but technological advancement can reduce it. The government must adopt a dual approach of fiscal reform and digital transformation to ensure sustainable economic development in Nigeria.

Table 6: Summary of Findings

Aspect	Result Summary
Inflation Trend	High and Persistent Peaked at 32.82%
Fiscal Deficit	Persistent across year average 4.47% of GDP
Exchange Rate	High Volatile: Trending upwards
Unit Root Result	All variables are stationary at levels except exchange rate
Technology implication	, Crucial for tracking, managing, reducing induced inflation.
Policy Implication	Fiscal prudence and technological innovations are key for sustainability

Source: Compiled from computed Data results, 2025

Overall Interpretation and Policy Insights

1. The weak statistical relationship at level suggests that inflation responds more to fiscal deficits in the long run than immediately.
2. This supports the theory that deficit-financed spending, especially when monetized, contributes to long-term inflationary trends rather than short-run shocks.
3. The volatility of Nigeria's inflation and fiscal indicators also reflects structural weaknesses such as corruption, policy inconsistency, and dependency on oil revenue.
4. Emerging trends in technology (e.g., blockchain for fiscal transparency, AI for predictive budgeting) can significantly improve fiscal outcomes and reduce inflationary risk.

Discussion of Findings

The present study assessed the dynamic relationship between fiscal deficit and inflationary pressure in Nigeria over the 43-year period spanning from 1980 to 2023. Using time series data, the study applied appropriate econometric tools such as unit root tests, co-integration analysis, and regression modeling to examine whether fiscal imbalances have significantly influenced inflationary trends in Nigeria. The findings revealed a strong, positive, and statistically significant relationship between fiscal deficit and inflation, particularly when deficits were persistently high and financed through monetary means.

Relationship Between Fiscal Deficit and Inflation

The empirical results of this work reveal that increasing fiscal deficits are a key driver of inflation in Nigeria. This supports the notion that government overspending, especially when it is not matched by revenue growth, puts upward pressure on prices in the economy. During the review period, several economic events such as the Structural Adjustment Programme (SAP) in the 1980s, the 2008 global financial crisis, the 2016 recession, and the 2020 COVID-19 pandemic witnessed escalated deficit financing followed by spikes in inflation.

This finding corroborates the monetarist argument that inflation is largely a monetary phenomenon, especially when deficits are monetized. It also aligns with the Keynesian framework, which posits that excessive government expenditure in an underperforming economy can overstimulate aggregate demand and lead to inflation.

Alignment with the Empirical Review

The findings of the study are consistent with the bulk of empirical literature reviewed as explained below:

Ajisafe and Folorunsho (2002) in their study found a long-run positive relationship between fiscal deficits and inflation in Nigeria. They argued that fiscal irresponsibility and Central Bank financing of deficits were the main causes of inflation. The present study builds on this investigation and provides updated evidence, showing that this relationship has persisted through 2023.

Umaru and Zubairu (2012) in their study emphasized that inflation in Nigeria is mainly driven by uncontrolled government spending and monetized fiscal deficits. The current work supports this by showing that inflation often spikes after major expansions in fiscal deficits, particularly when domestic borrowing or printing of money is used.

Bassey and Essien (2014) discovered that not only does fiscal deficit lead to inflation, but that the impact is intensified when deficits are financed through domestic borrowing or Central Bank advances. This corresponds with the present

study's findings that monetized deficits, especially during crises (e.g., COVID-19), have higher inflationary effects than externally financed deficits.

Ogunmuyiwa and Ekone (2010) found that fiscal deficits have a weak short-run but significant long-run relationship with inflation in Nigeria. The current study confirms this long- run relationship and further explores how technology and institutional quality can moderate this effect.

Ogundipe et al. (2022) in their recent study introduced the idea that institutional and technological reforms could help moderate the inflationary consequences of fiscal deficits. The current research expands on this by suggesting that emerging trends in digital technology such as e-governance, blockchain for public expenditure tracking, digital tax systems, and AI for predictive public budgeting can help reduce waste, improve efficiency, and thereby reduce inflationary pressures tied to fiscal imbalance.

Table 7: Summary of Discussion of Findings

Variable	Effect on Inflation	Comment
Fiscal Deficit	Positive and Significant	Persistent deficits fuel inflation through money supply and spending shocks
Money Supply	Positive relationship	Reflects monetization of fiscal deficit
Exchange Rate	Depreciation leads to inflation (imported inflation)	Shows vulnerability of naira and policy misalignment.
Interest Rate	Weak impact	Limited effects due to structural rigidities
Inflation Trend	Persistently high	Reflects systematic imbalances in fiscal and monetary framework..
Technology role	Moderates fiscal inflation links	Offers tools for efficiency, transparency and sustainable governance.

Source: Compiled from Result tables, 2025

5.0 Conclusion

The study empirically investigated "the effect of fiscal deficit on inflation in Nigeria" from 1980 to 2023 using data from secondary sources. The study employed the descriptive statistics, Ordinary Least Square (OLS) regression techniques and Co-integration/Error Correction. Mechanism for its investigations. The Error Correction Model analysis results indicated the existence of an insignificant negative relationship between fiscal deficit (FD) and inflation rate in Nigeria. Furthermore, the result of the Pair-wise Granger Causality test did not indicate any significant causal influence between fiscal deficit (FD) and inflation in Nigeria. This evidence shows that it is not the level of fiscal deficit (FD) that affects the rate of inflation but that adequate attention should be directed towards the effective implementation of tight monetary policy in Nigeria.

6.0 Recommendations

1. Based on our findings, this study recommends policy measures geared towards effective management of the macro economic variables that exhibit long run positive relationship with inflation. That the paramount concern of policy makers should not be the level of fiscal deficits, but rather it's method of financing, which should not be by monetization as this method has the tendency of crowding out effect on private sector investments.
2. It recommends policies towards the diversification of the economy to encourage the establishment and growth of import substitution industries. This will expand the revenue base of the economy and facilitate increase in the level of domestic production of goods and services and in the process will stem demand pull, imported, and structural inflation arising from increase in aggregate demand due to monetary expansion resulting from exchange rate depreciation on one hand and on the other hand will promote the export of domestic goods and services that will boost Nigeria's foreign reserve and reduce the nation's foreign debt burden towards the achievement of balance of payment stability.
3. That a policy mix of tight monetary policy measures and prudent fiscal management towards price stability and fiscal consolidation should be pursued especially when budget deficit is the instrument of fiscal policy.
4. That the Federal Government of Nigeria should be more pro-active in its anti-corruption policy measures particularly by adequately funding and granting autonomy to the operations of the anti-graft institutions such as the Economic and Financial Crime Commission (EFCC) and the Independent Corrupt Practices Commission (ICPC). This will facilitate effective operations of such institutions towards reduction in the level of corruption and in the process stem the rate of demand-pull inflation.

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