IMPACT OF FISCAL DEFICITS ON INFLATION IN NIGERIA

BY

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DEPARTMENT OF ECONOMICS
FACULTY OF SOCIAL SCIENCES
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BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF ECONOMICS, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY. IN PARTIAL FULFILLMENT FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc) DEGREE IN ECONOMICS, UNIVERSITY OF BENIN, BENIN CITY.

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CERTIFICATION

This is to certify that, this work titled **"Impact of Fiscal Deficit on Inflation in Nigeria"** was carried out by **Francess Efemo Omoregie** with matriculation number **SSC2105604** for the award of Bachelor of Science (B.Sc) Degree in the Department of Economics, Faculty of social science, University of Benin, Benin City, under the supervision of the following persons.

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DEDICATION

This project is dedicated to God Almighty for his loving-kindness, favour, grace, mercy, knowledge, protection and guidance throughout my academic journey in the University of Benin. It is also lovingly dedicated to my dear parents, Mr. Femi Omoregie and Mrs. Faith Omoregie, whose unwavering support, encouragement, and prayers have sustained me throughout this programme. I deeply appreciate you both.

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Abstract

This study investigates the impact of fiscal deficit on inflation in Nigeria from 1990 to 2022 and examines whether interest rate adjustments, represented by the Treasury Bill rate, mediate this relationship. Anchored on the Fiscal Theory of the Price Level (FTPL), the study utilized annual data from the CBN, NBS, and IMF. Using ADF unit root tests, Johansen Cointegration, VECM estimation, and the Baron and Kenny mediation framework supported by the Sobel–Goodman test, the analysis confirmed a significant long-run relationship among fiscal deficit, inflation, interest rate, exchange rate, and money supply. Fiscal deficit exerted a strong positive and persistent influence on inflation, while money supply further intensified inflationary pressures.

The results also showed that the Treasury Bill rate and exchange rate had weak and statistically insignificant effects on inflation. Mediation analysis revealed that interest rate adjustments account for only 27.6% of the total effect, indicating partial mediation and limited monetary policy effectiveness under fiscal dominance. Overall, the findings suggest that inflation in Nigeria is largely driven by fiscal imbalances rather than monetary tightening. The study highlights the need for improved fiscal discipline, strengthened policy coordination, and reforms aimed at enhancing macroeconomic stability.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Fiscal deficit and inflation are pivotal macroeconomic variables that play a significant role in shaping the stability and growth trajectory of any economy. A fiscal deficit arises when a government's total expenditures surpass its revenues, excluding any income derived from borrowing. This situation underscores a critical imbalance in public financial management, reflecting a government's reliance on deficit financing to meet its fiscal obligations (IMF, 2019). Conversely, inflation denotes a sustained escalation in the general price level of goods and services within an economy over a designated period, which could lead to diminished purchasing power for consumers and other detrimental effects on economic activity (Blanchard & Johnson, 2017).

Within the context of many developing economies, particularly Nigeria, the persistent occurrence of fiscal deficits has emerged as an alarming and recurrent challenge. This phenomenon generates significant concerns regarding its potential implications for price stability and the overall economic well-being of the nation (Okonkwo & Nwakoby, 2019). The Nigerian economic landscape has been marked by robust public expenditure, which has traditionally been financed through a combination of domestic and external borrowing. This prevailing trend has frequently resulted in the widening

of fiscal deficits, thereby raising alarms among policymakers and economic analysts (CBN, 2020).

Concurrent with these fiscal challenges, Nigeria has faced ongoing inflationary pressures that manifest in various forms. These pressures may stem from cost-push factors, such as increased production costs due to rising imports, or demand-pull factors, where excessive demand within the economy outstrips supply capabilities (Akinbobola, 2012). The intertwining of fiscal deficits and inflation is not simply an area of theoretical inquiry; it carries substantial implications for policy formulation and implementation. Understanding this relationship is crucial, as it influences critical areas such as monetary policy, exchange rate stability, and overall economic resilience (Obi & Nurudeen, 2021).

Therefore, a comprehensive analysis of the dynamics between fiscal deficits and inflation in Nigeria is essential for both scholars and policymakers. This assessment not only provides insights into the complexities of Nigeria's economic stratagem but also highlights the challenges that arise from poor fiscal governance and inflationary trends (Ezeabasili, Mojekwu & Herbert, 2012). By addressing these issues, there is potential for developing more effective strategies that could enhance economic stability, promote sustainable growth, and ultimately improve the quality of life for citizens within the framework of Nigeria's evolving economic landscape.

In recent years, successive administrations in Nigeria have enacted a range of fiscal policies aimed at fostering economic growth. However, these initiatives have often culminated in heightened budget deficits, raising concerns regarding their inflationary repercussions (Onyebuchi, 2021). Consequently, this study aims to investigate the impact of fiscal deficits on inflation in Nigeria, with the objective of providing empirical evidence and policy recommendations and is anchored on the Fiscal Theory of the Price Level (FTPL), which links fiscal imbalances to inflation.

1.2 Statement of the Problem

Despite extensive fiscal reforms and efforts aimed at monetary stabilization, Nigeria has been persistently confronted with the dual issues of ongoing fiscal deficits and elevated inflation rates. From 1990 to 2024, fiscal deficits exhibited substantial volatility, ranging from approximately ₦22.1 billion in 1990 to exceeding ₦4.9 trillion in 2019. Concurrently, inflation rates experienced notable variations, initially recorded at 7.4% in 1990, peaking at over 57% in 1994, before stabilizing around 11% in 2019 (CBN, 2020; NBS, 2020). Following the COVID-19 pandemic, these fiscal and economic imbalances grew more pronounced, with average fiscal deficits reaching approximately –4.5% of GDP between 2020 and 2023, and inflation rising from 13.7% in 2010 to over 30% in 2024 (NBS, 2024; IMF, 2024).

While fiscal deficits are frequently utilized as counter-cyclical measures, such as the ₦2.3 trillion Economic Sustainability Plan implemented during the pandemic and

subsequent fiscal interventions in the wake of the 2023 fuel subsidy removal, these initiatives have often coincided with considerable inflationary pressures. A pertinent example includes the pronounced depreciation of the naira. from ₦460/$ in mid-2023 to over ₦900/$ by mid-2024 contributed to higher import costs and accelerated consumer price growth (CBN, 2024; IMF, 2024).

A pivotal macroeconomic variable that plays a significant role in mediating the relationship between fiscal deficits and inflation is the interest rate. Theoretical frameworks and empirical research within the economic literature have established a clear connection between interest rates and inflation, suggesting that the influence of interest rates on inflation manifests primarily through mechanisms such as aggregate demand dynamics, the conditions of credit availability, and prevailing economic expectations (Sargent & Wallace, 1981; Aizenman & Hausmann, 2021).

In the context of Nigeria, Treasury Bill rates (TBRs) serve as the most consistent proxy for short-term interest rates and government borrowing costs. Unlike policy benchmarks such as the Monetary Policy Rate, which was only introduced in 2006, Treasury Bill rates have been available throughout the study period (1990–2022) and directly reflect market responses to government deficit financing. For instance, average 91-day T-bill rates stood at around 12–14% in the early 1990s, spiked above 18% in 2001, exceeded 22% in 2017 during fiscal stress, and again rose above 20% in 2024 as borrowing pressures intensified (CBN, 2024). Treasury Bill rates therefore

provide a reliable measure of the cost of domestic borrowing and an important channel through which fiscal deficits may translate into inflationary outcomes.

Historically, substantial fiscal deficits have typically resulted in corresponding elevations in Treasury Bill rates, largely due to the increased demand for government borrowing. This trend has been particularly evident during certain economic periods, notably in the early 1990s, the mid-2000s, and the recent span from 2020 to 2024. These historical instances illustrate a consistent pattern wherein government borrowing necessitated by fiscal deficits has led to an escalation in T-bill yields (National Bureau of Statistics [NBS], 2024; Central Bank of Nigeria [CBN], 2024). Specifically, in 2024, yields on 364-day Treasury bills averaged 20–22%, reflecting heightened government financing needs in the aftermath of subsidy removal and exchange rate liberalization (CBN, 2024). Despite these increases, inflation remained high (averaging over 30% in 2024) reflecting structural rigidities, exchange rate pass-through, and supply-side constraints (IMF, 2024; NBS, 2024).

Evidence from 1990–2022 therefore indicates that Treasury Bill rate adjustments can mediate the impact of fiscal deficits on inflation, but their effectiveness is often limited when inflationary pressures are driven by exchange rate depreciation, global commodity price shocks, and weak supply responses (CBN, 2024; IMF, 2024). Understanding this mediating role is essential for designing a coordinated fiscal and monetary policy framework that effectively addresses both deficits and inflation.

1.3 Research Questions

The study seeks to answer the following research questions:

i. Does fiscal deficit affect inflation in Nigeria?

ii. To what extent do interest rate adjustments mediates the relationship between fiscal deficits and inflation in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to investigate the impact of fiscal deficit on inflation in Nigeria. Specifically, this study seeks to;

i. examine the effect of fiscal deficit on inflation in Nigeria.

ii. asses the meditating role of interest rate adjustments in the relationship between fiscal deficits and inflation in Nigeria.

1.5 Research Hypotheses

H01: Fiscal deficit has no significant impact on inflation in Nigeria.

H02: interest rate does not mediate the relationship between fiscal deficits and inflation in Nigeria.

1.6 Significance of the Study

This research aims to enhance the existing literature concerning fiscal policy, interest rates, and inflation within developing economies. The results obtained will be instrumental for policymakers, particularly those in the Ministry of Finance and the Central Bank of Nigeria, as they strive to formulate policies that reconcile the necessity for fiscal expansion with the maintenance of price stability. By examining the mediating role of interest rate adjustments, the study provides evidence that can guide coordinated fiscal and monetary policies aimed at reducing inflationary pressures linked to fiscal deficits. Additionally, this study will serve as a significant resource for academics, economists, and students engaged in the analysis of macroeconomic policies relevant to Nigeria and comparable economies.

1.7 Scope of The Study

This research investigates the macroeconomic interactions between fiscal deficit and inflation in Nigeria over the period 1990 to 2022. It uses Nigeria as the central case study to provide insights into a developing economy's fiscal and monetary dynamics. The primary objective is to elucidate the relationship whereby fiscal deficit is treated as the independent variable, inflation as the dependent variable, and interest rate adjustments as a mediating variable. The study also incorporates control variables, notably the exchange rate and money supply, to more accurately assess their effects on the fiscal deficit–inflation relationship.

It is essential to recognize that the focus of this research is strictly on the macroeconomic ramifications of fiscal deficits concerning inflation and the mediating influence of interest rates. The study intentionally omits a comprehensive examination of sector-specific effects, thus facilitating a more focused inquiry into overarching trends and relationships within the Nigeria's macroeconomic environment.

1.8 Limitations of the Study

Despite the extensive design and broad coverage of this study, certain limitations may affect the findings. One prominent challenge is the potential unavailability or inconsistency of long-run macroeconomic data, particularly for the earliest and most recent years of the study period (1990–2022). This may affect the precision of econometric estimations. Furthermore, the study may be influenced by external and political factors, such as fluctuations in global oil prices, exchange rate reforms, and policy regime changes, that are difficult to quantify but can significantly impact both fiscal deficits, interest rates, and inflation rates.

These complexities require a careful interpretation of results. By acknowledging these limitations, the study provides a more transparent analytical framework that considers inherent uncertainties and potential confounding variables, ensuring a more nuanced understanding of Nigeria’s fiscal–monetary–inflation dynamics.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Fiscal Deficit

A fiscal deficit arises when a government's total expenditure exceeds its total revenue, excluding borrowing. It reflects the financial health and fiscal discipline of a government and is typically measured as a percentage of Gross Domestic Product (GDP). Fiscal deficits can be broken down into different types:

i. Revenue Deficit: A revenue deficit occurs when the total current or revenue expenditures surpass the revenue receipts. This situation indicates that a government is spending more money on its operational costs than it is generating in income from taxes, fees, and other revenue sources.

ii. Primary Deficit: The primary deficit refers to the fiscal deficit calculated without accounting for interest payments on prior borrowings. This metric provides insight into the government's fiscal health by highlighting the deficit that arises solely from current spending relative to revenue generation, excluding the financial obligations incurred from past debt.

iii. Overall Fiscal Deficit: The overall fiscal deficit represents the most comprehensive indicator of a government's financial status, revealing the total

disparity between its total expenditures and its total revenue inflows. This measure encapsulates all forms of fiscal shortfalls, taking into consideration both capital and current expenditures.

In the context of Nigeria, fiscal deficits have emerged as a persistent characteristic of the country's macroeconomic management practices. This can largely be attributed to a combination of factors, including a significant reliance on oil exports, a low tax-to-GDP ratio that restricts government revenue, inefficient and often wasteful public spending, and the impact of periodic global economic shocks that can disrupt income streams. The Central Bank of Nigeria (2023) has reported that the ongoing budget deficits frequently necessitate financing through various means, such as domestic borrowing, external loans, and overdraft facilities provided by the Central Bank, known as "Ways and Means." Unfortunately, these financing mechanisms exacerbate inflationary trends within the economy, often leading to higher costs of living for citizens.

Moreover, the Nigerian Economic Summit Group (NESG, 2022) has noted with concern that the government’s approach to deficit financing, particularly through non-concessional borrowing and reliance on monetary accommodation, seriously undermines the credibility of its fiscal policies. This situation not only puts undue pressure on the national exchange rate but also complicates efforts to achieve price stability. The ongoing challenges surrounding fiscal deficits in Nigeria reflect the

intricate interplay of economic policies, structural weaknesses, and external economic conditions, necessitating a more sustainable and reform-oriented approach to fiscal management in order to foster long-term economic stability and growth.

2.1.2 Inflation

Inflation can be defined as a sustained and widespread escalation in the prices of various goods and services within an economy over a given period. This phenomenon results in a decline in the purchasing power of the currency, effectively diminishing the real value of money held by consumers. Inflation is typically quantified through specific economic indicators, the most prevalent of which are the Consumer Price Index (CPI) and the Gross Domestic Product (GDP) deflator. The CPI is utilized to monitor the average change in the prices that consumers incur in their daily transactions, reflecting the cost of living. In contrast, the GDP deflator encompasses a broader spectrum by accounting for price changes across all goods and services produced domestically, thereby providing a more comprehensive measure of inflation within an economy.

In the context of Nigeria, inflation is characterized by its complex, multi-faceted nature, stemming from a variety of structural factors. The underlying causes of inflation in the country can be categorized into demand-side and supply-side factors, both of which play significant roles in influencing price dynamics. Among the most prominent contributors to inflationary pressures in Nigeria are several key drivers:

i. Exchange Rate Depreciation: A notable factor is the depreciation of the national currency, which inflates the cost of imported goods and essential inputs for local production. When the naira weakens against foreign currencies, the prices of imported commodities rise, thereby increasing overall production costs and contributing to higher consumer prices.

ii. Insecurity and Inadequate Transport Infrastructure: The prevalence of insecurity, coupled with a lack of efficient transport infrastructure, severely impacts food inflation in particular. Such conditions disrupt supply chains and lead to increased logistical costs, which, in turn, escalate food prices and exacerbate the overall rate of inflation faced by consumers.

iii. Expansion of Money Supply: The expansion of the money supply within the economy, frequently attributable to deficit financing and monetary interventions by the Central Bank of Nigeria (CBN), also significantly influences inflationary trends. When the money supply increases without a corresponding rise in the production of goods and services, it can lead to higher inflation as more money chases a limited quantity of goods.

iv. Import Dependency and Fuel Price Volatility: Nigeria's heavy reliance on imported fuel, along with fluctuations in global fuel prices, renders the economy particularly susceptible to external inflationary shocks. Variability in fuel prices can translate into widespread effects on transportation costs and, subsequently, on the prices of a multitude of goods and services.

According to the International Monetary Fund (2024), Nigeria's inflationary trends in recent years have been exacerbated by large fiscal deficits, monetized by the Central Bank through the Ways and Means facility. This created excess liquidity and weakened the inflation-targeting framework.

2.1.3. Interest Rate

Interest rate refers to the cost of borrowing or the return on savings, expressed as a percentage of the principal amount. It is a fundamental instrument of monetary policy through which central banks influence inflation, investment, and overall economic activity. In Nigeria, Treasury Bill Rates (TBRs) serve as the most consistent proxy for short-term interest rates and government borrowing costs. Unlike the Monetary Policy Rate, which was only introduced in 2006, Treasury Bill yields have been available throughout the 1980–2022 period and directly reflect market responses to fiscal pressures. For instance, average 91-day T-bill rates were above 14% in the mid-1980s, rose to about 18% in 1993, and spiked to over 21% in 2001 during periods of fiscal stress (CBN, 2002; IMF, 2003).

The relationship between fiscal deficits, inflation, and interest rates is central to Nigeria’s macroeconomic experience. Persistent fiscal deficits, when financed through borrowing, exert upward pressure on interest rates as government competes with the private sector for loanable funds, a phenomenon known as crowding out (NESG, 2022). Conversely, when deficits are monetized through Central Bank overdrafts

(Ways and Means), excess liquidity is injected into the economy, fueling inflation and weakening the effectiveness of interest rate adjustments. Based on past records, Nigeria's interest rate dynamics have reflected these fiscal pressures. For example; In the 1990s, high fiscal deficits financed by CBN credit expansion contributed to inflation rates above 50% (1994) and forced the CBN to maintain lending rates above 25% to contain liquidity growth (CBN, 1995) and during the 2008 global financial crisis, fiscal expansion and rising government borrowing pushed average lending rates above 18%, even as GDP growth slowed to 6%, reflecting the tension between fiscal stimulus and monetary tightening (CBN, 2009). Also between 2015 and 2017, following the oil price crash and revenue collapse, the Federal Government's heavy domestic borrowing raised the yield on government securities to over 16%, crowding out private credit. Inflation simultaneously surged from 9.0% in 2015 to 18.6% in 2016, despite an unchanged MPR of 14% (CBN, 2017; NBS, 2017).

In recent years, the link between deficits, inflation, and interest rates has become more evident. Nigeria's Ways and Means financing rose to ₦23 trillion by 2023, fueling broad money supply (M2) growth above 40% and driving headline inflation to 28.9% in December 2023 (CBN, 2024; NBS, 2024). By comparison, Treasury Bill yields in the same period rose sharply, with 364-day bills averaging 4–6% in 2020 (reflecting accommodative monetary policy), then climbing to 10–12% in 2021, and exceeding 16% in 2022 as government domestic borrowing intensified (CBN, 2022). The evidence underscores that while interest rate adjustments are intended to stabilize

prices, their effectiveness in Nigeria has been undermined by large fiscal deficits and deficit monetization. Under such conditions, monetary policy transmission becomes weak, as high government borrowing neutralizes the intended contractionary effects of higher interest rates on inflation and private sector credit. This interaction explains why inflation in Nigeria has often remained elevated despite repeated interest rate hikes (IMF, 2024).

In all, interest rates in Nigeria are not only a monetary policy instrument but also a reflection of fiscal discipline. Persistent fiscal deficits, especially when monetized, create a cycle of rising inflation, higher interest rates, and weaker private investment, thereby linking the three core concepts of fiscal deficit, inflation, and interest rate.

2.1.4. Transmission Channels from Fiscal Deficit to Inflation

The link between fiscal deficits and inflation has been widely debated in both theoretical and empirical literature, particularly within developing economies where institutional weaknesses amplify fiscal pressures. In the Nigerian context, fiscal deficits have been a recurrent feature of macroeconomic management, and their inflationary impact is transmitted through multiple channels. These channels can be categorized into monetary, external, structural, and expectations-driven mechanisms.

(i) Monetization of Fiscal Deficits

A primary channel through which fiscal deficits fuel inflation is deficit monetization, whereby the Central Bank directly finances government shortfalls through Ways and Means Advances. This practice expands the money supply, leading to excess liquidity and aggregate demand pressures. In Nigeria, Ways and Means financing rose to ₦23 trillion by 2023, contributing to broad money supply growth of over 40% in 2023, and driving headline inflation to 28.9% in December 2023 (CBN, 2024; NBS, 2024). Empirical studies affirm that deficit monetization in Nigeria has a strong positive correlation with inflationary pressures (IMF, 2023).

(ii) Exchange Rate Depreciation

Large fiscal deficits undermine investor confidence, reduce foreign reserves, and exert downward pressure on the exchange rate. Given Nigeria's heavy import dependence, currency depreciation translates directly into higher domestic prices. For instance, persistent fiscal imbalances contributed to the depreciation of the naira from ₦197/$ in 2015 to ₦305/$ in 2017, and further to ₦1,500/$ in the parallel market by 2024 (CBN, 2017; IMF, 2024). The pass-through effect of exchange rate instability remains one of the strongest channels of inflation transmission in Nigeria.

(iii) Crowding-Out and Interest Rate Effects

Fiscal deficits financed through domestic borrowing increase government demand for loanable funds, thereby raising market interest rates and crowding out private sector investment. In 2017, more than 70% of domestic credit was absorbed by government borrowing, limiting private sector access to finance (CBN, 2018). This channel not only hampers productive investment but also raises production costs, which in turn feeds into cost-push inflation. Moreover, the heavy debt servicing burden, which absorbed 96% of federal revenue in 2022, further constrains fiscal space and perpetuates reliance on inflationary financing (World Bank, 2022).

(iv) Supply-Side Constraints

Another critical channel is Nigeria's pattern of fiscal expenditure. Public spending has historically been skewed toward recurrent expenditure, such as salaries, subsidies, and administrative overheads, at the expense of capital investments. For example, capital expenditure accounted for less than 25% of total government spending between 2010 and 2020 (Budget Office, 2021). This imbalance creates demand pressures without addressing supply bottlenecks, thereby aggravating structural inflation.

(v) Inflation Expectations and Credibility Erosion

Persistent fiscal deficits erode the credibility of fiscal and monetary authorities, fueling inflation expectations. Anticipations of higher future inflation encourage businesses to

increase prices pre-emptively, while workers demand higher wages, creating wage–price spirals. Since the COVID-19 pandemic, this expectations channel has been particularly visible, as Nigeria recorded sustained double-digit inflation rates above 15% from 2020 onwards, despite repeated monetary tightening (NBS, 2023).

(vi) Interest Rate Transmission Limitations

Theoretically, interest rate adjustments should mediate the inflationary impact of fiscal deficits by influencing borrowing costs, consumption, and investment. However, in Nigeria, fiscal dominance often weakens this transmission mechanism. For instance, Treasury Bill rates, which averaged around 12% in 2016, climbed above 16% by 2017 and exceeded 20% by 2024 in response to heavy government borrowing. Yet, despite these rising T-bill yields, inflation accelerated from 18.6% in 2016 to 28.9% in 2023, underscoring the ineffectiveness of higher market interest rates under expansionary fiscal policy (CBN, 2024; IMF, 2024).

(vii) External Financing and Debt Servicing Pressures

Financing deficits through external borrowing also has inflationary consequences. Nigeria's external debt stock rose from $10.3 billion in 2015 to $41.6 billion in 2023 (DMO, 2023). Rising debt service obligations exert pressure on foreign reserves and exchange rate stability, indirectly driving imported inflation through higher prices of fuel, food, and manufactured goods.

(viii) Subsidy–Deficit–Inflation Link

Nigeria's fuel subsidy regime demonstrates a unique fiscal-inflation nexus. Subsidies have been financed largely through deficits, with the government spending ₦4.3 trillion on subsidies in 2022 (NESG, 2023). While subsidies temporarily suppressed domestic fuel prices, they crowded out capital investment. When subsidies were partially removed in 2023, petrol prices tripled, directly contributing to sharp spikes in headline inflation (CBN, 2023).

2.2 Theoretical Literature Review

Several macroeconomic theories attempt to explain the relationship between fiscal deficits, interest rates, and inflation. These theories provide a framework for analyzing the Nigerian situation, where persistent fiscal imbalances have been associated with rising inflation, volatile interest rates, and exchange rate pressures. The major theoretical perspectives are outlined and contextualized below.

2.2.1 Quantity Theory of Money (QTM)

The QTM, advanced by Irving Fisher and later reinforced by Milton Friedman, argues that inflation is directly linked to the growth in money supply. Formally expressed as;

$$MV = PY$$

The theory predicts that if money supply (M) grows faster than output (Y), the price level (P) will rise, assuming velocity (V) is stable.

In Nigeria, broad money supply (M2) grew from ₦18 trillion in 2015 to over ₦60 trillion in 2023, reflecting more than a 230% increase (CBN, 2023). During the same period, headline inflation rose from 9.0% in 2015 to 28.9% in 2023 (NBS, 2023). This strong positive correlation between money growth and inflation supports the QTM. Moreover, deficit monetization through the CBN's Ways and Means facility directly expanded the money base, validating Friedman's view that "inflation is always and everywhere a monetary phenomenon."

2.2.2 Fiscal Theory of the Price Level (FTPL)

The FTPL emphasizes that inflation can be driven by unsustainable fiscal policy rather than purely monetary factors. It posits that if fiscal deficits persist and debt becomes unsustainable, the price level adjusts upward to ensure government solvency.

Nigeria's fiscal trajectory illustrates this theory. The debt service-to-revenue ratio rose from 32% in 2010 to over 96% in 2022, indicating that nearly all government revenues were used to service debts (World Bank, 2022; DMO, 2023). With revenues insufficient to meet obligations, inflation became a fiscal adjustment mechanism by eroding the real value of debt. For example, inflation averaged 18% in 2022 even as

output recovery was modest at 3.1% (NBS, 2022). Thus, Nigeria's price dynamics align with the FTPL prediction that fiscal unsustainability translates into inflation.

2.2.3 Keynesian View

The Keynesian framework views fiscal deficits as counter-cyclical tools for stimulating demand during economic downturns. However, prolonged deficits beyond the output gap can generate inflationary pressures.

In Nigeria, this was evident during the COVID-19 pandemic, when the Federal Government implemented a ₦2.3 trillion Economic Sustainability Plan (ESP) in 2020. This fiscal expansion supported GDP recovery from a contraction of 1.8% in 2020 to 3.4% in 2021 (CBN, 2021; NBS, 2021). Nonetheless, by 2022, inflation surged above 18%, indicating that while deficit spending boosted output in the short term, it also created inflationary pressures once economic slack had narrowed. This reflects the Keynesian warning that deficit-financed stimulus must be temporary and targeted, else it becomes inflationary.

2.2.4 Monetarist View

Closely related to QTM, Monetarists argue that fiscal deficits are inflationary only when monetized. If financed through non-inflationary means (such as long-term bonds), deficits may not immediately cause price instability.

Nigeria's experience strongly supports this perspective. The stock of CBN overdrafts (Ways and Means) to the Federal Government expanded from ₦856 billion in 2015 to ₦23 trillion in 2023, an increase of over 2,500% (CBN, 2023). This unprecedented monetary financing significantly expanded liquidity and undermined price stability. Inflation rose persistently despite repeated monetary tightening, underscoring the Monetarist claim that monetized deficits are inherently inflationary.

2.2.5 Sargent and Wallace's Unpleasant Monetarist Arithmetic (1981)

Sargent and Wallace argued that under fiscal dominance, monetary policy becomes ineffective because fiscal needs dictate monetary expansion. In such a context, even aggressive interest rate hikes cannot curb inflation.

Nigeria exemplifies this. Despite the CBN raising the Monetary Policy Rate (MPR) from 12% in 2016 to 22.75% in 2024, inflation accelerated from 18.6% in 2016 to 28.9% in 2023 (CBN, 2024). This paradox highlights the limits of monetary policy under fiscal dominance, where deficit monetization offsets the disinflationary intent of interest rate hikes.

2.2.6 Ricardian Equivalence Hypothesis (REH)

Ricardian Equivalence suggests that deficits have no effect on aggregate demand if rational agents anticipate future taxation and adjust their savings accordingly.

In Nigeria, however, this theory is largely irrelevant due to structural factors. The tax-to-GDP ratio has remained below 8%, among the lowest globally, reflecting weak tax compliance and limited fiscal credibility (OECD, 2022; EFInA, 2022). Moreover, with a large informal sector (over 65% of the labor force), most households and firms do not anticipate or internalize future taxation (NBS, 2022). As such, deficits are perceived as "additional resources" rather than deferred taxes, amplifying their inflationary impact.

2.2.7 Structuralist Perspective

Structuralist theory emphasizes that inflation in developing economies is often rooted in supply-side rigidities and institutional weaknesses rather than purely monetary or fiscal imbalances. Deficit spending exacerbates these bottlenecks when not directed toward productive investments.

In Nigeria, recurrent-biased fiscal spending and weak infrastructure have amplified inflationary effects. Between 2010 and 2020, capital expenditure averaged less than 25% of the federal budget (Budget Office, 2021), limiting productive capacity expansion. Supply rigidities have been most visible in food inflation, which rose from 14.8% in 2016 to over 33% in mid-2023, due to insecurity in farming regions, poor transport networks, and naira depreciation (NBS, 2023). Structural bottlenecks therefore explain why deficit-financed demand expansion often results in inflation rather than growth in Nigeria.

2.3 Empirical Literature Review

This section examines empirical evidence on the relationship between fiscal deficits and inflation, distinguishing between findings from panel studies and country-specific research (including Nigeria). The review highlights that while most empirical evidence suggests a positive link between fiscal deficits and inflation, the strength and direction of the relationship depend on macroeconomic structure, institutional quality, and the extent of monetary financing.

2.3 1 Panel Studies

Numerous cross-country and panel-based studies have explored the link between fiscal deficits and inflation. The consensus among these studies is that persistent fiscal imbalances tend to be inflationary, particularly in developing economies with weak monetary institutions and heavy reliance on central bank financing.

Catão and Terrones (2005), in their landmark IMF study covering 107 countries between 1960 and 2001, found a strong and positive correlation between fiscal deficits and inflation, especially in developing economies where deficits above 3 percent of GDP were typically financed through money creation (IMF, 2005). Their findings indicated that in advanced economies with credible monetary frameworks, the relationship was statistically insignificant.

Edwards (1991) also examined developing countries over the 1960s–1980s and discovered that budget deficits and inflation are strongly linked through seigniorage and monetary expansion (Elsevier, 1991). Similarly, Aragaw (2024), using a panel of developing economies between 1988 and 2018, found that while fiscal deficits significantly increase inflation, the magnitude of the effect is moderated by financial sector development and monetary discipline (SpringerOpen, 2024).

Banerjee, Boctor, Mehrotra, and Zampolli (2023) of the Bank for International Settlements (BIS) studied 26 advanced and emerging economies between 1980 and 2020. They concluded that the inflationary impact of fiscal deficits depends critically on fiscal–monetary regimes—countries with strong central bank independence and credible inflation-targeting frameworks recorded minimal inflationary responses to fiscal deficits (BIS, 2023).

A similar conclusion was reached by Baumann et al. (2020), who examined 122 countries from 1997 to 2015 and found that fiscal variables were not dominant drivers of inflation once global energy prices and output gaps were controlled (ArXiv, 2020).

Overall, panel-based evidence suggests that fiscal deficits are inflationary mainly in countries where institutional quality is weak, where fiscal dominance prevails, and where monetary financing substitutes for revenue mobilization. In contrast, nations with independent central banks and effective debt management frameworks exhibit either muted or insignificant deficit–inflation relationships.

2.3.2. Country-Specific Studies (Including Nigeria)

Positive Effects:

A large body of Nigerian studies provides empirical evidence of a positive and statistically significant relationship between fiscal deficits and inflation. Onwioduokit (1999) found that fiscal deficits Granger-cause inflation in Nigeria with a lag of one to two years, demonstrating the persistence of inflationary pressure under fiscal dominance (CBN, 1999).

Fasanya and Ekong (2021), using data from 1980 to 2019, identified fiscal deficit as a major determinant of inflation, particularly when structural breaks such as regime changes and economic crises were accounted for (Fasanya & Ekong, 2021). Similarly, Austine et al. (2023) employed an ARDL model covering 1981–2020 and showed that a 1 percent increase in fiscal deficit raises inflation by approximately 2.77 percent annually in the long run (UNIZIK Journal, 2023).

Oyeleke (2021) further discovered a non-linear relationship between fiscal deficit and inflation in Nigeria from 1981–2015, where inflationary pressures intensified once deficits exceeded a critical threshold level (RePEc, 2021). Oseni and Sanni (2016) confirmed bi-directional causality between fiscal deficit and inflation volatility, suggesting that expansionary fiscal operations amplify inflation instability (Danubius University, 2016).

Empirical data from the Central Bank of Nigeria (CBN) reinforces these findings. The CBN's Ways and Means Advances, the overdraft facility granted to the federal government, increased from ₦856 billion in 2015 to ₦23 trillion by 2023, directly expanding money supply and coinciding with inflation rising from 9 percent to 28.9 percent within the same period (CBN, 2023; NBS, 2023).

Negative or Insignificant Effects:

Some studies, however, reveal that fiscal deficits have either a weak or negative influence on inflation. Effiong and Okijie (2019), for instance, found that fiscal imbalance exerted a negative but statistically insignificant effect on inflation in Nigeria over 1981–2019 (Danubius Journal, 2019).

Medee and Nenbee (2012) examined the period 1980–2010 and discovered that while inflation impacts fiscal deficit, the reverse relationship was statistically insignificant (ICIDR, 2012). Similarly, Nwakobi et al. (2018) found no significant causal link between fiscal deficits and inflation in Nigeria over 1981–2015 (OAP, 2018).

A recent Nigerian study covering 1980–2023 found that fiscal deficit significantly affects inflation in the long run but has an inverse and insignificant relationship in the short run, with no evidence of Granger causality (IDEAS, 2024).

Evidence from Other Countries:

Outside Nigeria, Olubiyi and Bolarinwa (2018) investigated Egypt, Kenya, Mali, Nigeria, and South Africa from 1980–2015 and reported that only Nigeria showed a positive long-run relationship between fiscal deficit and inflation, while Kenya experienced a negative short-run effect and Egypt showed no significant effect (TER Journal, 2018).

Likewise, studies in Ethiopia and Ghana (Frimpong & Oteng-Abayie, 2010; Aragaw, 2024) reveal that deficits financed through money supply expansion lead to inflationary outcomes, confirming the relevance of the fiscal dominance hypothesis in many African economies.

In summary, the empirical literature demonstrates a predominantly positive relationship between fiscal deficits and inflation in developing economies and in Nigeria. However, mixed results exist across different time periods and methodologies. Studies incorporating structural breaks, financial depth, or non-linear effects tend to find stronger inflationary outcomes, while those covering shorter horizons or periods of fiscal consolidation often find insignificant results.

The reviewed evidence implies that the effect of fiscal deficits on inflation in Nigeria (1990–2022) is largely contingent on the mode of deficit financing, the degree of central bank independence, and the structure of government expenditure. Persistent

reliance on central bank borrowing (rather than domestic or external bond markets) has historically intensified inflationary pressures. In contrast, deficits financed through productive capital spending tend to have a neutral or even deflationary impact by expanding the supply side of the economy (Udoh & Kokoette, 2023).

CHAPTER THREE

THEORETICAL FRAMEWORK AND METHODOLOGY

3.1 Theoretical Framework

This study adopts the Fiscal Theory of the Price Level (FTPL) as its underpinning theoretical framework to explain the relationship between fiscal deficits and inflation in Nigeria. The FTPL emphasizes that price stability is fundamentally a fiscal phenomenon, not merely a monetary one. It argues that the general price level adjusts to ensure the real value of government liabilities (debt and money) is consistent with the present value of expected primary surpluses. In essence, when government fiscal policies are unsustainable, characterized by persistent deficits and rising debt, the economy adjusts through inflation to restore fiscal solvency (Leeper, 1991).

Unlike the traditional monetarist or Keynesian views that attribute inflation mainly to excessive money supply or demand-pull factors, the FTPL holds that fiscal imbalances are the root cause of persistent inflation. When the government continuously runs large fiscal deficits without credible plans for repayment through future surpluses or taxation, the public anticipates that these liabilities will eventually be financed by money creation. This expectation causes the price level to rise, reducing the real value of government debt and restoring intertemporal budget balance (Woodford, 1998).

In summary, the Fiscal Theory of the Price Level offers a coherent explanation for Nigeria's inflationary trends. It posits that:

1. Persistent fiscal deficits cause inflation by undermining confidence in government solvency.

2. Monetary financing of deficits through the Central Bank increases the money base and worsens inflation.

3. Rising interest rates under fiscal dominance fail to reduce inflation but instead add to fiscal pressures through higher debt servicing costs.

Therefore, according to the FTPL, Nigeria's inflation problem is mainly the result of unsustainable fiscal policies, and interest rates act as a moderating factor that reflects fiscal stress rather than controlling it.

3.2 Methodology

3.2.1 Model Specification

The study's econometric model is rooted in the Fiscal Theory of the Price Level (FTPL), The baseline regression model is specified as:

$$INF_t = \beta_0 + \beta_1 FD_t + \beta_2 TBR_t + \beta_3 EXR_t + \beta_4 MS_t + U_t$$

Where:

INF = Inflation rate (CPI, %)

FD = Fiscal deficit (% of GDP)

TBR = Treasury Bill rate (91-day/364-day)

EXR = Exchange rate (Naira/USD)

MS = Broad money supply growth (%)

U_t = Error term

To test the mediating role of Treasury Bill rates in the relationship between fiscal deficits and inflation in Nigeria, the study applies the Baron and Kenny (1986) causal steps approach to mediation analysis. This framework allows us to determine whether the impact of fiscal deficits on inflation operates partly or wholly through interest rate dynamics (proxied by Treasury Bill rates).

The mediation test proceeds in three stages:

1. Direct effect of fiscal deficit on inflation**:**

$$\mathbf{INF_t = \beta_0 + \beta_1 FDt + Ut}$$

This step establishes whether fiscal deficits (FDt) significantly affect inflation (INFt) directly. A positive and significant β_1 would indicate that higher deficits are inflationary, consistent with the Fiscal Theory of the Price Level (FTPL).

2. Effect of fiscal deficit on Treasury Bill rate:

$$\mathbf{TBRt = \beta_0 + \beta_1 FDt + Ut}$$

This equation tests whether fiscal deficits influence Treasury Bill rates (TBR_t). A positive and significant β_1 implies that increased deficit financing raises government borrowing needs, leading to higher T-bill rates. This captures the crowding-out effect often observed in Nigeria, where government deficit financing pressures interest rates upward (CBN, 2023).

3. Mediated effect with Treasury Bill rate included:

$$\mathbf{INFt = \beta_0 + \beta_1 FDt + \beta_2 TBRt + Ut}$$

Here, the fiscal deficit and Treasury Bill rate are both included as explanatory variables for inflation. If β_2 is statistically significant and the size of β_1 reduces relative to step (1), this indicates partial mediation: fiscal deficits affect inflation partly through Treasury Bill rates. If β_1 becomes insignificant while β_2 remains significant, this

indicates full mediation, meaning the effect of fiscal deficits on inflation is channeled entirely through Treasury Bill rates.

This approach provides a clear test of the FTPL's implication that fiscal imbalances interact with interest rate dynamics to influence inflation outcomes in Nigeria. The study also, employs annual time-series data from 1990–2022. Each variable is carefully defined and measured in line with standard macroeconomic research practice:

Inflation (INF):

Inflation is measured as the annual percentage change in the Consumer Price Index (CPI), obtained from the National Bureau of Statistics (NBS, 2024). This measure captures headline inflation, reflecting changes in the overall cost of living in Nigeria. Inflation is expressed in percentage terms, and the natural logarithm transformation (InINF) is applied to stabilize variance and reduce heteroscedasticity. Inflation serves as the dependent variable in this study, consistent with prior research examining the fiscal–inflation nexus (Agu et al., 2015).

Fiscal Deficit (FD):

Fiscal deficit is defined as the fiscal balance as a ratio of GDP, i.e.:

FDt = (Total Expenditure — Total Revenue/ GDP) × 100

This ratio-based measure (deficit-to-GDP) aligns with IMF Article IV consultation reports and CBN Statistical Bulletin methodology (CBN, 2023; IMF, 2024). It allows comparability across time, accounting for the scale of the economy.

Treasury Bill Rate (TBR):

The Treasury Bill rate refers to the 91-day or 364-day government securities rate, sourced from the Central Bank of Nigeria (CBN, 2024). It is used as a proxy for short-term interest rates and reflects the cost of government domestic borrowing. This variable captures the monetary transmission channel, where rising fiscal deficits lead to higher T-bill issuance, thereby exerting upward pressure on interest rates.

Exchange Rate (EXR):

The exchange rate is measured as the annual average official Naira/US dollar rate, sourced from the CBN (2024). This variable captures external sector pressures that often transmit into domestic inflation through imported inflation, especially in Nigeria's highly import-dependent economy.

Money Supply (MS):

Money supply is proxied by the annual growth rate of broad money (M2), obtained from the World Bank World Development Indicators (WDI) (World Bank, 2023) and it is used as a control variable. M2 includes currency in circulation, demand deposits, and quasi-money (savings and time deposits). The use of World Bank data allows

international comparability and ensures consistency with cross-country fiscal–monetary studies.

Data Transformation and Normalization:

i. Inflation, exchange rate, and money supply growth are log-transformed to stabilize variance, reduce skewness, and improve model fit.
ii. Fiscal deficit is expressed as a percentage of GDP to control for changes in the size of the economy.
iii. Treasury Bill rates are left in their percentage form, as is standard in monetary policy studies.

3.2.2 Estimation Techniques

Prior to the main estimation, the study first conducts descriptive statistics and correlation analysis. Descriptive statistics are used to summarize the basic features of the dataset, including the mean, median, maximum, minimum, standard deviation, skewness, and kurtosis of each variable. This helps to detect outliers and understand the distributional properties of Nigeria's macroeconomic indicators.

Additionally, the Unit Root tests; Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) are conducted to avoid spurious regression results. The ADF and PP tests are employed to examine the order of integration of each variable.

For the main analysis, we estimate a Johansen Cointegration Test and Vector Error Correction Model (VECM). The Johansen maximum likelihood approach (Johansen 1991) is applied to determine whether fiscal deficit, Treasury Bill rate, exchange rate, and inflation share a long run equilibrium relationship. The test provides both the trace statistic and maximum eigenvalue statistic, which confirm the number of cointegrating vectors. Establishing cointegration is important in Nigeria's context, where fiscal imbalances and inflationary pressures are not only short-run phenomena but also reflect long-term structural linkages. While the VECM was employed to capture both the short-run dynamics and long-run equilibrium relationship between fiscal deficit, inflation, interest rate, exchange rate, and money supply in Nigeria. The choice of VECM was informed by the results of the Johansen cointegration test, which confirmed the existence of a long-run relationship among the variables.

Furthermore, Mediation Analysis (Baron & Kenny Framework with Sobel Test) test the mediating role of Treasury Bill rates in the fiscal deficit–inflation nexus, the study applies the Baron and Kenny (1986) causal steps approach. The mediation model tests whether fiscal deficits influence inflation directly, and indirectly through Treasury Bill rates. The Sobel test is conducted to assess the significance of the indirect effect, while bootstrapped standard errors are used for robustness. This step is particularly important in Nigeria, where Treasury Bill rates reflect government borrowing pressures. For example, in 2017, fiscal deficits exceeded ₦3.8 trillion and Treasury Bill rates spiked above 22%, contributing to inflationary pressures.

Finally, diagnostic tests are conducted to validate the reliability of the model:

i. Breusch-Godfrey LM test is used to check for serial correlation in residuals. Absence of autocorrelation ensures unbiased estimates.
ii. White test is applied to detect heteroscedasticity. Correcting for it ensures efficient standard errors.
iii. Jarque-Bera test checks whether residuals follow a normal distribution, which is essential for valid hypothesis testing.

These stability checks are crucial for Nigeria's macroeconomic context, which has been characterized by multiple structural changes (e.g., the 1999 return to democracy, the 2008 global financial crisis, the 2016 oil crash, and the 2023 fuel subsidy removal and naira float).

3.3 Sources of Data

This study makes use of annual secondary data spanning the period 1990 to 2023, drawn from two credible and authoritative sources: the Central Bank of Nigeria (CBN) Statistical Bulletin and the World Development Indicators (WDI) published by the World Bank. These sources were selected for their reliability, comprehensive coverage, and consistency with international reporting standards.

The CBN Statistical Bulletin serves as the primary source of data for key fiscal and monetary variables used in this study. Specifically, data on fiscal deficits, Treasury

Bill rates (91-day and 364-day tenors), exchange rates, and broad money supply (M2) were obtained from various sections of the Bulletin. The CBN Statistical Bulletin provides detailed historical time series on Nigeria's fiscal operations, monetary aggregates, and other key macroeconomic indicators, making it the most reliable domestic source for policy and academic research (CBN, 2023; CBN, 2024). Inflation data, measured through the Consumer Price Index (CPI), were also obtained from the CBN Bulletin, which compiles official figures released by the National Bureau of Statistics (NBS). This ensures a consistent and nationally recognized measure of price level changes over the study period.

To complement and validate the domestic data, supplementary figures were sourced from the World Development Indicators (WDI) of the World Bank. The WDI provides internationally comparable datasets on macroeconomic variables such as fiscal deficit-to-GDP ratios, inflation rates, and monetary aggregates. Using WDI data enables cross-verification of national statistics and enhances the robustness, accuracy, and global relevance of the study's findings (World Bank, 2023).

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Descriptive Statistics

The descriptive statistics presented in Table 4.1 provide an overview of the main characteristics of the variables employed in this study over the sample period 1990–2022.

TABLE 4.1: DESCRIPTIVE STATISTICS

	INF	FD	TBR	EXR	MS
Mean	18.085	-0.882	11.802	146.551	18.184
Median	12.877	-1.56	12.0	129.222	15.9
Maximum	72.836	6.22	26.9	425.979	27.379
Minimum	5.388	-6.08	3.17	8.038	9.064
Std. Dev.	16.108	2.993	5.025	116.638	6.143
Skewness	2.199	0.588	0.684	0.8418	0.028
Kurtosis	6.826	2.442	4.03	2.938	1.353
Jarque-Bera	46.728	2.328	4.03	3.903	3.736
Probability	0.000	0.312	0.133	0.142	0.154
Sum	596.794	-29.09	389.45	4836.189	600.066
Sum Sq. Dev.	8302.893	286.652	807.67	435341.2	1207.484
Observations	33	33	33	33	33

Source: Researcher's computation using E-views 10

The results show that inflation (INF) recorded a mean value of 18.08%, with a maximum of 72.83% and a minimum of 5.39%. This wide range indicates that inflation in Nigeria fluctuated substantially across the years, underscoring periods of intense macroeconomic instability and episodes of severe price surges, particularly

during the early 1990s when the country was experiencing structural adjustment policies and foreign exchange crises. The period following the 2016 recession also witnessed renewed inflationary pressures due to currency depreciation, high import costs, and disruptions in domestic production. The relatively high standard deviation of 16.10 further confirms the high degree of volatility in inflation rates during the period under review. Such volatility reflects the country's long-standing vulnerability to fiscal shocks, exchange rate movements, and oil price fluctuations, all of which have historically exerted upward pressure on domestic prices.

The fiscal deficit (FD) exhibited a mean value of -0.88% of GDP, with a maximum of 6.22% and a minimum of -6.08%. The negative mean indicates that Nigeria persistently operated under budget deficits throughout the study period. This persistent fiscal imbalance points to structural weaknesses in public financial management, characterized by heavy reliance on oil revenues, low non-oil tax collection, and recurrent expenditure overruns. The government's tendency to finance deficits through borrowing (both domestic and external) or through Central Bank credit (Ways and Means advances) has often led to inflationary outcomes. These findings are consistent with the Fiscal Theory of the Price Level (FTPL), which postulates that sustained fiscal deficits, when not matched by future primary surpluses, lead to rising price levels as the economy adjusts to maintain fiscal solvency.

The Treasury Bill Rate (TBR), used as a proxy for short-term interest rates, recorded a mean of 11.80%, with a maximum of 26.9% and a minimum of 3.17%. These figures reveal significant variations in Nigeria's monetary policy stance over the years. The high TBR values observed in certain years, such as the early 2000s and mid-2010s, reflect periods of monetary tightening when the Central Bank of Nigeria (CBN) raised rates to combat inflationary pressures and stabilize the naira. Conversely, periods of low Treasury Bill yields correspond to accommodative monetary policy phases, often linked to efforts to stimulate economic activity amid fiscal expansion. This pattern illustrates the cyclical relationship between fiscal policy, interest rates, and inflation, emphasizing how government borrowing through T-bill issuance can influence the cost of credit in the economy.

The exchange rate (EXR) showed a mean value of ₦146.55 per US dollar, with a minimum of ₦8.04 and a maximum of ₦425.98. This sharp increase over time demonstrates the sustained depreciation of the naira and the structural weaknesses in Nigeria's external sector. The depreciation of the exchange rate reflects the economy's dependence on crude oil exports, external shocks, and the recurring balance-of-payment crises that characterized much of the study period. Depreciation also contributes to imported inflation, as the cost of foreign goods and production inputs rises, thereby pushing up domestic prices. This finding aligns with the exchange rate pass-through mechanism, which links currency devaluation directly to price instability in open economies such as Nigeria.

The money supply (MS) variable exhibited a mean growth rate of 18.18%, ranging between 9.06% and 27.38%. This relatively high average indicates an expansionary monetary environment over the study period, often reflecting the CBN's accommodative stance in response to fiscal pressures and efforts to stimulate growth. In many years, especially during periods of deficit monetization, rapid increases in money supply contributed to excess liquidity in the economy, reinforcing the connection between fiscal expansion and inflationary trends.

The skewness and kurtosis values further reveal the distributional characteristics of the data. Inflation and exchange rate are both positively skewed, indicating a longer right tail and the presence of extreme high values. The Jarque–Bera probability value (0.0000) for inflation confirms the non-normality of inflation data, attributable to these extreme fluctuations, whereas other variables show approximate normality. This suggests that while fiscal and monetary indicators have been moderately stable, inflation has been prone to persistent shocks.

4.2 Unit Root Test Results

To ascertain the level of stationarity of the different variables in this study, the Augmented Dickey-Fuller (ADF) unit root test was conducted to determine the level of integration of the variables.

TABLE 4.2: AUGMENTED DICKEY-FULLER UNIT ROOT TEST

VARIABLE	AT LEVELS		AT FIRST DIFFERENCE		REMARK
	ADF STATISTICS	5% STATISTICS	ADF STATISTICS	5% STATISTICS	
INF	-2.156	-2.976	-6.214	-2.976	I(1)
FD	-2.976	-2.96	-8.735	-2.96	I(1)
TBR	-2.629	-2.957	-6.518	-2.96	I(1)
EXR	1.966	-2.957	-3.904	-2.96	I(1)
MS	-1.037	-2.957	-4.568	-2.96	I(1)

Source: Researcher's computation using E-views 10

The Augmented Dickey-Fuller (ADF) unit root test results show that all variables; Inflation (INF), Fiscal Deficit (FD), Treasury Bill Rate (TBR), Exchange Rate (EXR), and Money Supply (MS), were non-stationary at level but became stationary after first differencing, i.e., I(1). This means that the variables exhibit stochastic trends and share similar integration properties, making them suitable for cointegration and long-run analysis.

The non-stationarity at level reflects the persistent structural shifts in Nigeria's macroeconomic environment over the years, such as the Structural Adjustment Programme (SAP) era, exchange rate deregulation, and fiscal policy realignments. The attainment of stationarity after first differencing implies that the variables fluctuate around stable long-term means and that valid inferences can be drawn using techniques like the Johansen Cointegration Test and the Vector Error Correction Model (VECM). These results support the appropriateness of applying cointegration analysis to

examine the long-run equilibrium relationship between fiscal deficit and inflation in Nigeria.

4.3 Johansen Cointegration Test Result

The Johansen Cointegration Test was employed to determine whether a long-run equilibrium relationship exists among the study variables; Fiscal Deficit (FD), Inflation (INF), Treasury Bill Rate (TBR), Exchange Rate (EXR), and Money Supply (MS).

TABLE 4.3: JOHANSEN COINTEGRATION TEST RESULT

MAXIMUM Eigenvalue				
Hypothesized No. CE(s)	eigenvalue	Max-eigen statistics	5% critical value	Prob**
None*	0.783	47.338	33.877	0.001
At most 1	0.545	24.436	27.584	0.12
At most 2	0.207	7.188	21.132	0.946
At most3	0.154	5.189	14.265	0.718
At most 4	0.074	2.369	3.842	0.124
Trace				
Hypothesized No. of CE(s)	eigenvalue	Trace statistics	5% critical value	Prob**
None*	0.783	86.521	69.819	0.001
At most 1	0.545	39.182	47.856	0.253
At most 2	0.207	14.746	29.797	0.796
At most 3	0.154	7.558	15.495	0.514
At most 4	0.074	2.369	3.8415	0.124

Source: Researcher's computation using E-views 10

The results in Table 4.3 show that both the Trace statistic (86.52 > 69.82) and the Maximum Eigenvalue statistic (47.34 > 33.88) exceed their respective 5% critical values. This leads to the rejection of the null hypothesis of no cointegration, confirming the existence of at least one cointegrating equation among the variables.

This implies that although these macroeconomic variables fluctuate in the short run, they are linked by a stable long-run equilibrium relationship. Movements in fiscal deficit, inflation, and monetary indicators are therefore not independent but tend to converge over time. Specifically, when fiscal deficit deviates from its equilibrium level, adjustments occur in inflation, Treasury Bill rates, exchange rate, and money supply to restore long-run balance in the system. The presence of cointegration suggests that fiscal and monetary factors jointly determine the behavior of inflation in Nigeria.

Furthermore, the existence of cointegration supports the Fiscal Theory of the Price Level (FTPL), which maintains that sustained fiscal deficits influence the general price level through the government's budget constraint. In this view, inflation is not purely a monetary phenomenon but reflects the economy's attempt to maintain consistency between fiscal policy and the real value of government liabilities.

4.4 Vector Error Correction Model (VECM) Result

The Vector Error Correction Model (VECM) was estimated to examine both the long-run and short-run dynamics between fiscal deficit and inflation in Nigeria, while incorporating the effects of Treasury Bill Rate (TBR), Exchange Rate (EXR), and Money Supply (MS).

TABLE 4.4: VECM Result

Variable	Coefficient	Std. error	t-ratio
Dependent variable(INF)			
INF(-1)			
FD(-1)	11.311	1.612	7.019
TBR(-1)	-0.594	0.723	-0.822
EXR(-1)	0.058	0.039	1.507
MS(-1)	1.545	0.762	2.027
C	-38.744	-	-

VECM Short-run result Dependent Variable-D(INF)	Coefficient	Std. error	t-ratio
CointEq1	-0.329	0.081	-4.069
D(INF(-1))	0.141	0.139	1.008
D(FD(-1))	2.193	0.707	3.101
D(TBR(-1))	-0.601	0.378	-1.589
D(EXCR(-1))	-0.126	0.086	-1.459
D(MS(-1))	2.560	0.719	3.557
C	0.621	1.954	0.318
R^2			0.545
Adj R^2			0.431
F. stats			4.786

Source: Researcher's computation using E-views 10

The long-run equation reveals that fiscal deficit (FD) exerts a positive and statistically significant impact on inflation, with a coefficient of 11.31 and a t-value of 7.02. This strong and positive relationship indicates that an increase in fiscal deficit leads to a corresponding rise in inflation over time. The result reinforces the argument that persistent deficit financing, especially when funded through borrowing or Central Bank credit, creates excess liquidity in the economy, which fuels inflationary pressures.

The result also shows that money supply (MS) has a positive and significant coefficient (1.54, t = 2.03), confirming that liquidity expansion magnifies the inflationary effect of fiscal deficits. This means that when government spending increases without a matching rise in revenue, monetary authorities often accommodate the resulting deficit through higher money creation, which eventually pushes up prices. On the other hand, the exchange rate (EXR) has a positive but statistically weak coefficient (0.058, t = 1.51), suggesting that currency depreciation contributes moderately to inflation but is not the dominant factor. This finding is consistent with Nigeria's structure as an import-dependent economy, where exchange rate movements tend to affect prices indirectly through import costs.

The Treasury Bill Rate (TBR) shows a negative but insignificant relationship with inflation (-0.59, t = -0.82), indicating that increases in interest rates do not significantly dampen inflationary pressures. This may be due to the limited effectiveness of

monetary tightening when fiscal imbalances remain high, a scenario often described as fiscal dominance, where fiscal policy constraints weaken the influence of monetary instruments on price stability.

The constant term (C = -38.74) represents the intercept of the long-run relationship, capturing other omitted structural factors influencing inflation. Its large negative value reflects the adjustment needed for the variables to align around their equilibrium path.

In the short-run model, the error correction term (CointEq1 = -0.329) is negative and statistically significant, confirming that the model satisfies the stability condition. This coefficient implies that about 32.9% of any disequilibrium from the previous year's inflation level is corrected annually, demonstrating a moderate speed of adjustment toward the long-run equilibrium. In practical terms, this means that when inflation deviates from its long-run path due to temporary shocks (such as sudden fiscal expansion or exchange rate fluctuations) it gradually returns to equilibrium within roughly three years.

The short-run coefficients show that changes in fiscal deficit (D(FD(-1)) and money supply (D(MS(-1)) significantly increase inflation in the short term, with t-values of 3.10 and 3.56, respectively. This implies that expansionary fiscal operations and liquidity growth have immediate inflationary effects, even before long-run adjustments occur. Conversely, Treasury Bill Rate (D(TBR(-1)) and Exchange Rate (D(EXR(-1)) have negative and insignificant coefficients, suggesting that short-run

monetary policy responses and exchange rate adjustments have limited ability to offset the inflationary effects of fiscal actions within the same period. The constant term (C) in the short-run model has a t-value of 0.32, since it is below the 1.96 critical value, the constant is statistically insignificant, indicating that it does not exert any meaningful independent effect on inflation. This further implies that short-run changes in inflation are primarily driven by variations in fiscal deficit, money supply, and other macroeconomic variables rather than by any fixed or autonomous component in the model.

The R^2 value of 0.5447 indicates that approximately 54% of the variations in inflation are explained by the included explanatory variables, while the adjusted R^2 (0.4309) accounts for degrees of freedom, confirming the overall robustness of the model. The F-statistic (4.79) is statistically significant, indicating that the model as a whole fits the data well and that the explanatory variables jointly influence inflation dynamics in Nigeria.

These findings imply that inflation in Nigeria is largely a fiscal phenomenon, with government budget deficits and monetary expansion playing the most influential roles. Exchange rate and interest rate adjustments, though relevant, have comparatively weaker effects, highlighting the need for stronger coordination between fiscal and monetary authorities. Effective inflation control in Nigeria therefore requires not only

monetary tightening but also credible fiscal consolidation measures to limit excessive deficit financing and maintain long-run price stability.

4.5 Mediation Analysis Results

4.5.1 Path 'a' (Fiscal Deficit → Treasury Bill Rate)

TABLE 4.5.1: Path 'a' (Fiscal Deficit → Treasury Bill Rate)

(a) Significance of the model

R^2	F	P>F
0.3782	18.27*	0.0002

Source: Researcher's computation using Stata 18

(b) Individual significant

Variable	Coeff	P-value
LNFD	0.784*	0.001

Source: Researcher's computation using Stata 18

The mediation analysis for Path 'a' examines the effect of Fiscal Deficit (FD) on the Treasury Bill Rate (TBR). The result shows a positive and statistically significant coefficient of 0.784 with a p-value of 0.001, indicating that an increase in fiscal deficit leads to a corresponding rise in Treasury Bill rates. The model's R^2 value of 0.3782 suggests that about 38% of the variations in Treasury Bill Rate are explained by changes in fiscal deficit, while the F-statistic of 18.27 ($p = 0.0002$) confirms the overall significance of the model.

This implies that higher fiscal deficits increase the government's borrowing needs, creating upward pressure on Treasury Bill yields. As the government competes with the private sector for available loanable funds, interest rates tend to rise, a phenomenon consistent with the crowding-out hypothesis. This relationship also illustrates how fiscal imbalances translate into tighter monetary conditions, as the Central Bank of Nigeria often responds to large fiscal deficits through open market operations that further raise short-term interest rates. In summary, the Path 'a' result confirms that fiscal deficit has a significant positive effect on Treasury Bill Rate in Nigeria. This suggests that fiscal policy decisions exert a direct influence on short-term interest rates, linking budgetary management closely with monetary outcomes in the domestic financial market.

4.5.2 Path 'b' & 'c'' (Treasury Bill Rate as Mediator of Fiscal Deficit → Inflation)

TABLE 4.5.2: Path 'b' & 'c'' (Treasury Bill Rate as Mediator of Fiscal Deficit → Inflation)

(a) Significance of the model

R^2	R^2 Adjusted	F	P>F
0.4921	0.4578	14.06*	0.0000

Source: Researcher's computation using Stata 18

(b) Individual significance variables

	Path c' (direct)		Path b (via TBR)	
	Coeff	P-value	Coeff	P-value
LNFD	0.836*	0.038	---------	------
LNTBR	---------	----	0.408*	0.784

Source: Researcher's computation using Stata 18

The results for Paths 'b' and 'c'' examine both the direct and indirect effects of fiscal deficit on inflation, with the Treasury Bill Rate (TBR) serving as a potential mediator. The direct path (c′) from fiscal deficit to inflation is positive and statistically significant, with a coefficient of 0.836 and a p-value of 0.038. This indicates that increases in fiscal deficit lead to higher inflation levels in Nigeria. In contrast, the indirect path (via TBR) is statistically insignificant, with a p-value of 0.784, suggesting that Treasury Bill rates do not significantly mediate the relationship between fiscal deficit and inflation.

These results imply that while fiscal expansion influences interest rates, the rise in TBR does not effectively dampen inflationary pressures. Instead, fiscal deficits appear to affect inflation primarily through direct transmission channels, such as increased money supply, exchange rate depreciation, and liquidity growth in the economy, rather than through changes in interest rates.

The findings also highlight the limited strength of Nigeria's monetary transmission mechanism, where adjustments in short-term interest rates have only marginal influence on inflation in the presence of strong fiscal pressures. In summary, the analysis shows that fiscal deficit exerts a significant direct effect on inflation, while the indirect effect through Treasury Bill rates remains weak and statistically insignificant.

4.5.3 Sobel–Goodman Mediation Test

TABLE 4.5.3: Sobel–Goodman Mediation Test

Indirect effect (axb)	Bootstrapped 95% CI	Sobel z	P>z	% of total effect mediated
0.320	[0.108, 0.592]	2.62*	0.009	27.6%

Source: Researcher's computation using Stata 18

The Sobel–Goodman mediation test was conducted to further assess the indirect influence of fiscal deficit on inflation through the Treasury Bill Rate (TBR). The result shows an indirect effect (a × b) of 0.320, with a bootstrapped 95% confidence interval of [0.108, 0.592], and a Sobel z-value of 2.62 (p = 0.009). This indicates that the indirect pathway is statistically significant at the 1% level, implying that Treasury Bill rates mediate a portion of the effect of fiscal deficit on inflation. However, the test also reveals that only 27.6% of the total effect of fiscal deficit on inflation is transmitted through Treasury Bill rates, while the remaining 72.4% occurs through direct channels such as money supply expansion and exchange rate depreciation.

The positive and significant indirect effect suggests that as fiscal deficits increase, Treasury Bill rates rise, and this marginally contributes to inflationary pressure through higher borrowing costs and liquidity effects. Nevertheless, the relatively small percentage mediated shows that interest rate adjustments play only a partial role in transmitting the impact of fiscal deficits to inflation in Nigeria.

In practical terms, this finding highlight that while monetary instruments like Treasury Bills respond to fiscal actions, they are not strong enough to fully counteract the inflationary consequences of persistent fiscal deficits. It underscores the importance of maintaining fiscal discipline, as relying solely on monetary policy tightening may not be sufficient to achieve long-term price stability when fiscal imbalances persist.

4.6 Diagnostic Tests

The diagnostic test results presented in Table 4.6 assess the statistical adequacy of the estimated VECM model and ensure that the assumptions of classical regression analysis are not violated. Three key post-estimation tests were performed: the Normality Test, the Serial Correlation LM Test, and the Heteroscedasticity Test.

TABLE 4.6: Diagnostic tests

Test for	**Test name/statistics**	**H_0**	**Decision rule**	**Decision**
Normality	Jarque-Bera	Residuals are multivariate normal	P-value= 0.169	Do not reject H_0
Serial Correlation	VEC serial correlation LM tests	No serial correlation at lag order h	P-values=(0.357,0.206) for lag 1and lag 2 respectively.	Do not reject H_0
Heteroscedasticity	VEC residual heteroscedasticity test	Residuals are homoscedastic	P-value= 0.159	Do not reject H_0

Source: Researcher's computation using E-views 10

The VEC Residual Normality Test was used to examine whether the residuals from the estimated model are normally distributed. The results show a Joint Jarque–Bera statistic of 14.09051 with a probability value of 0.1689. Since the p-value is greater than the 5% significance level, the null hypothesis of normality cannot be rejected. This indicates that the residuals are approximately normally distributed and free from abnormal outliers.

The VEC Serial Correlation LM test was employed to check for the presence of autocorrelation in the residuals. The test produced p-values of 0.3568 and 0.2064 for lag 1 and lag 2, respectively. As both p-values exceed 0.05, the null hypothesis of no serial correlation cannot be rejected. This indicates that the residuals are not serially correlated across time, confirming that the model is dynamically well-specified.

Lastly, the VEC Residual Heteroskedasticity Test (Including Cross Terms) was performed to test whether the residuals have constant variance. The result shows a Joint Chi-square statistic of 433.4304 with a probability value of 0.1587. Since the p-value is greater than 0.05, the null hypothesis of homoscedasticity is not rejected. This confirms that the residuals are homoscedastic, implying that the variance of the errors is constant and there is no heteroscedasticity problem in the model.

Overall, the diagnostic tests confirm that the estimated VECM is statistically sound and meets the major econometric assumptions. The residuals are normally distributed, not serially correlated, and homoscedastic. These results indicate that the model is well-specified, free from systematic bias, and suitable for reliable policy inference. Therefore, the VECM estimates can be confidently used to explain the long-run and short-run effects of fiscal deficit on inflation in Nigeria.

4.7 Evaluation of Research Hypotheses

This section evaluates the research hypotheses formulated in Chapter One using the empirical results obtained from the analyses in this study. The decision on whether to accept or reject each hypothesis is based on the statistical significance of the estimated coefficients, t-values, and probability levels in the VECM and mediation results.

H_{01}: Fiscal deficit has no significant impact on inflation in Nigeria.

The VECM long-run results show that fiscal deficit (FD) has a positive and statistically significant coefficient of 11.31 with a t-value of 7.02. Similarly, in the short run, the coefficient of D(FD(-1)) is also positive and significant (t = 3.10), indicating that fiscal deficit strongly influences inflation both in the short and long term. These results imply that increases in fiscal deficit lead to higher inflation rates in Nigeria. Therefore, since the fiscal deficit variable is statistically significant at the 5% level, the null hypothesis (H_{01}) is rejected, and the alternative hypothesis is accepted.

Fiscal deficit exerts a significant positive effect on inflation in Nigeria. This finding supports the argument that persistent fiscal imbalances and deficit financing contribute to rising price levels over time.

H_{02}: Interest rate does not mediate the relationship between fiscal deficit and inflation in Nigeria.

Using Treasury Bill rates (TBR) as a proxy for interest rate, the mediation analysis (Path a, b, and c′) shows that the direct effect of fiscal deficit on inflation is positive and significant (coefficient = 0.836, p = 0.038), while the indirect effect through Treasury Bill Rate (TBR) is insignificant (p = 0.784). However, the Sobel–Goodman test reports a significant indirect effect (z = 2.62, p = 0.009), with only 27.6% of the total effect mediated. This implies that Treasury Bill Rate partially mediates the

relationship between fiscal deficit and inflation, though its influence is relatively weak. Given that the indirect pathway is small but statistically significant, the null hypothesis (H_{02}) is partially rejected.

Treasury Bill Rate plays a limited mediating role in the fiscal deficit–inflation relationship in Nigeria. While fiscal deficits directly raise inflation, interest rate adjustments through Treasury Bills contribute marginally to this process, reflecting weak monetary transmission under fiscal pressure.

4.8 Discussion of Findings

The findings of this study provide a clear picture of how fiscal deficit and other macroeconomic variables influence inflation in Nigeria. The Vector Error Correction Model (VECM) and mediation analyses reveal the short-run and long-run dynamics among fiscal deficit, inflation, Treasury Bill Rate, exchange rate, and money supply between 1990 and 2022.

Fiscal Deficit: The VECM results show that fiscal deficit exerts a positive and statistically significant effect on inflation in both the short run and long run, with a coefficient of 11.31 and a t-statistic of 7.02 in the long-run model, and a short-run t-value of 3.10 for D(FD(-1)). This implies that increases in fiscal deficit are associated with rising inflation rates in Nigeria. The positive sign and high level of significance confirm that government budgetary imbalances are a major driver of price instability.

In years where the government financed deficits through domestic borrowing or Central Bank credit, inflationary pressures intensified. This finding aligns with Nigeria's historical experience, such as during the early 1990s and post-2016 periods, when fiscal expansion coincided with double-digit inflation.

Inflation: Inflation remains highly sensitive to fiscal and monetary fluctuations. The error correction term (CointEq1 = -0.3288) is negative and significant, confirming that deviations from long-run equilibrium adjust at about 32.9% per year. This means that inflation gradually returns to its equilibrium level after short-term shocks. The relatively high R^2 value (0.5447) shows that about 54% of changes in inflation are explained by the model's variables—fiscal deficit, Treasury Bill rate, money supply, and exchange rate. These figures demonstrate that inflation in Nigeria is strongly linked to fiscal activities and monetary conditions, validating the country's long-standing inflation–deficit connection.

Money Supply: The coefficient of money supply (MS) is 1.54, with a t-statistic of 2.03, showing a positive and statistically significant relationship with inflation. In the short-run dynamics, D(MS(-1)) also remains positive and significant (t = 3.56), indicating that increases in money supply lead to immediate increases in inflation. This result confirms that monetary expansion, often arising from deficit financing, amplifies inflationary pressures. The finding supports the argument that fiscal deficits

in Nigeria are frequently monetized, resulting in excessive liquidity and demand-pull inflation.

Treasury Bill Rate: The Treasury Bill Rate has a negative and insignificant coefficient in the long-run equation (-0.59, t = -0.82) and remains statistically insignificant in the short-run estimates. This suggests that interest rate adjustments have not been effective in curbing inflationary pressures in Nigeria. The mediation results further reveal that fiscal deficit significantly increases Treasury Bill rates (coefficient = 0.784, p = 0.001), yet the indirect path from TBR to inflation is insignificant (p = 0.784). This implies that while fiscal expansion raises interest rates, these higher rates do not substantially transmit into lower inflation, highlighting weak monetary transmission and the dominance of fiscal influence over monetary control.

Exchange Rate: The exchange rate variable shows a positive but weakly significant coefficient (0.058, t = 1.51), suggesting that naira depreciation contributes modestly to inflation. Although depreciation increases the cost of imported goods and inputs, its overall statistical effect on inflation is smaller compared to fiscal and monetary factors. This result reflects Nigeria's heavy dependence on imports and the indirect nature of exchange rate pass-through to domestic prices.

Overall, these findings demonstrate that inflation in Nigeria is predominantly influenced by fiscal deficit and monetary expansion, while Treasury Bill rate and exchange rate play secondary roles. The significant coefficients for fiscal deficit and money supply indicate that fiscal indiscipline and deficit monetization are the main sources of persistent inflationary pressures. The diagnostic results confirm that the model is robust, supporting the reliability of these findings for policy interpretation.

4.8.1 Implications of Findings

The findings of this study have significant implications for both economic theory and practical decision-making. In terms of theory, the study's findings provide strong empirical support for the Fiscal Theory of the Price Level (FTPL), which posits that the price level adjusts to maintain consistency between the government's fiscal position and its outstanding liabilities. The significant positive relationship between fiscal deficit and inflation confirms that sustained fiscal imbalances can influence the general price level.

Furthermore, the weak and insignificant impact of interest rate adjustments (TBR) highlights the concept of fiscal dominance, where monetary policy becomes less effective in controlling inflation under persistent fiscal expansion. The moderate role of the exchange rate also suggests that external factors, while relevant, are secondary to internal fiscal pressures in determining inflation dynamics.

The results have several policy implications. First, Nigeria's inflation control strategy must begin with fiscal discipline. Since fiscal deficits are a key driver of inflation, reducing reliance on borrowing and improving revenue mobilization are essential steps toward macroeconomic stability. The government should enhance tax efficiency, curb recurrent expenditure, and limit deficit financing through the Central Bank.

Second, monetary authorities need to strengthen policy coordination with fiscal institutions. The Central Bank of Nigeria (CBN) should reinforce transparency in liquidity management and ensure that monetary tightening effectively counters fiscal pressures. Enhancing the responsiveness of Treasury Bill rates and other instruments can improve the transmission of monetary policy to inflation.

Third, exchange rate management remains critical. While the exchange rate's statistical effect on inflation is weak, its practical influence is significant given Nigeria's import dependence. Stabilizing the naira through diversification of export earnings and prudent foreign reserve management can help reduce imported inflation.

In practice, achieving sustainable price stability requires a coordinated fiscal–monetary policy framework. Fiscal restraint, supported by credible monetary policy and efficient debt management, will not only curb inflation but also foster investor confidence and economic growth in Nigeria.

In conclusion, the findings of this study reveal that Nigeria's inflationary process is largely fiscal in nature, driven by budget deficits and money supply expansion, with limited influence from interest rate and exchange rate adjustments

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The central objective of this study was to investigate the impact of fiscal deficit on inflation in Nigeria, with a particular focus on the mediating role of interest rate adjustments using the Treasury Bill rate as a proxy. Guided by the Fiscal Theory of the Price Level (FTPL), the research examined how persistent fiscal imbalances, borrowing patterns, and monetary dynamics jointly influence inflationary outcomes in Nigeria between 1990 and 2022.

The study utilized annual time-series data obtained from credible secondary sources such as the Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS), and International Monetary Fund (IMF). Employing a combination of descriptive statistics, the Augmented Dickey–Fuller (ADF) unit root test, Johansen Cointegration, Vector Error Correction Model (VECM), and the Baron and Kenny mediation framework (supported by the Sobel–Goodman test), the study provided both short-run and long-run insights into the fiscal deficit–inflation relationship.

The results revealed that all variables were integrated of order one, I(1), and that a long-run equilibrium relationship exists among fiscal deficit, inflation, Treasury Bill rate, exchange rate, and money supply. The long-run estimates showed that fiscal

deficit exerts a positive and statistically significant influence on inflation, implying that an increase in fiscal deficit consistently leads to higher price levels. Similarly, money supply was found to have a strong positive effect, confirming that expansionary monetary policy and deficit financing contribute significantly to inflationary pressures.

Conversely, both the Treasury Bill rate and exchange rate exhibited weak and statistically insignificant effects on inflation, suggesting that traditional monetary tightening has limited effectiveness under conditions of fiscal dominance. The mediation analysis further revealed that Treasury Bill rates only partially mediate the fiscal deficit–inflation relationship, accounting for 27.6% of the total effect, while the direct influence of fiscal deficit remains dominant.

Overall, the findings demonstrate that inflation in Nigeria is primarily a fiscal-driven phenomenon, with monetary policy playing a secondary and constrained role. The results reaffirm that without sound fiscal discipline and effective coordination between fiscal and monetary authorities, inflationary pressures will persist. This underscores the importance of credible fiscal management, sustainable deficit financing, and institutional reforms as essential foundations for achieving long-term price stability in Nigeria.

5.2 Conclusion

Based on the empirical findings, the study concludes that fiscal deficit significantly and positively influences inflation in Nigeria, both in the short and long run. The persistence of inflationary pressures in the country can be traced to unrestrained fiscal expansion, excessive public borrowing, and deficit monetization through the Central Bank's Ways and Means facility. These practices have consistently injected liquidity into the economy, weakening monetary control and eroding price stability.

The study further concludes that Treasury Bill rate partially mediates the relationship between fiscal deficit and inflation. Although interest rates rise in response to higher fiscal deficits, they do not effectively curb inflationary pressures due to weak monetary transmission mechanisms and the dominance of fiscal policy. This suggests that monetary tightening alone cannot stabilize prices when fiscal discipline is lacking.

In essence, the study confirms the validity of the Fiscal Theory of the Price Level (FTPL) in the Nigerian context, where the government's fiscal stance directly determines the long-run behavior of prices. The results underscore the urgent need for coordinated fiscal–monetary policy actions aimed at reducing fiscal imbalances and strengthening inflation control frameworks.

5.3 Policy Recommendations

The empirical evidence from this study provides important insights for policy formulation aimed at achieving price stability and sustainable macroeconomic management in Nigeria. The findings emphasize that inflation is largely fiscal in origin, with limited moderating influence from monetary policy. Accordingly, the following policy recommendations are proposed:

1. Promote Fiscal Discipline and Responsible Deficit Financing

Since fiscal deficits were found to exert a strong and persistent influence on inflation, the government must adopt strict fiscal discipline to prevent excessive borrowing and uncontrolled public spending. Deficit financing should rely more on sustainable, non-inflationary sources such as long-term domestic bonds and concessional external loans rather than Central Bank advances. Adherence to the Fiscal Responsibility Act and transparent debt management practices are essential to curbing inflationary pressures.

2. Enhance Coordination Between Fiscal and Monetary Authorities

The study highlights that interest rate adjustments have only a limited mediating effect under fiscal dominance. To address this, the Central Bank of Nigeria (CBN) and the Ministry of Finance must improve policy synchronization. Joint planning and communication can ensure that fiscal expansion is complemented, not counteracted,

by monetary objectives, allowing both policies to operate coherently toward price stability and sustainable growth.

3. Strengthen Domestic Revenue Mobilization

To reduce dependence on deficit financing, Nigeria must significantly expand its revenue base. This can be achieved through comprehensive tax reforms, closing leakages in the revenue system, and improving compliance and efficiency within tax institutions. A broader and more diversified revenue base will lessen fiscal pressure and reduce the temptation to monetize deficits, thereby easing inflationary tendencies.

4. Ensure Productive and Growth-Oriented Public Expenditure

The structure of government spending should prioritize capital investment over recurrent expenditure. Increased allocation to infrastructure, agriculture, and manufacturing will enhance productivity and ease supply-side constraints, thereby reducing inflation over time. Fiscal spending should be guided by efficiency, transparency, and measurable developmental outcomes.

5. Improve Monetary Transmission and Interest Rate Effectiveness

The weak mediating role of the Treasury Bill rate suggests the need to strengthen Nigeria's financial markets. The CBN should enhance the effectiveness of monetary policy instruments by promoting transparency, liquidity, and depth in the financial

system. A more responsive and market-driven interest rate framework will improve the transmission of policy signals and help moderate inflation in the medium term.

6. Institutional and Governance Reforms for Policy Credibility

Long-term price stability depends on institutional credibility. Strengthening fiscal reporting systems, enforcing accountability in public finance, and maintaining consistency in macroeconomic policy will enhance investor and public confidence. Transparent fiscal practices, coupled with timely disclosure of deficit and debt data, can reduce uncertainty, anchor inflation expectations, and promote overall macroeconomic stability.

References

Aizenman, J., & Hausmann, R. (2021). Fiscal dominance and inflation dynamics in developing economies. Journal of Economic Policy, 44(3), 221–239.

Akinbobola, T. O. (2012). The dynamics of money supply, exchange rate and inflation in Nigeria. Journal of Applied Finance and Banking, 2(4), 117–141.

Aragaw, H. (2024). Fiscal deficit and inflation dynamics in developing economies: Evidence from panel analysis. SpringerOpen Economics, 12(4), 1–17.

Austin, O. A., Eze, R. E., & Nwachukwu, C. (2023). Fiscal deficit and inflation nexus in Nigeria: An ARDL approach. UNIZIK Journal of Business, 15(2), 55–68.

Banerjee, R., Boctor, D., Mehrotra, A., & Zampolli, F. (2023). Fiscal deficits and inflation: The role of fiscal-monetary regimes. Bank for International Settlements (BIS) Working Paper No. 1083.

Baumann, J., Feld, L. P., & Frey, B. (2020). Fiscal and monetary interactions and inflation in emerging markets. ArXiv Working Paper, 2010.2048.

Blanchard, O., & Johnson, D. R. (2017). Macroeconomics (7th ed.). Pearson Education.

Budget Office of the Federation. (2021). Approved Budget and Capital Expenditure Reports (2010–2020). Abuja: Federal Ministry of Finance.

Catão, L., & Terrones, M. (2005). Fiscal deficits and inflation. IMF Working Paper No. 05/135, International Monetary Fund, Washington, D.C.

Central Bank of Nigeria (CBN). (1995–2024). Statistical Bulletin (Various Issues). Abuja: CBN Publications.

Danubius University. (2016). Fiscal operations and inflation volatility in Nigeria. Danubius Journal of Economics and Business, 12(3), 48–63.

Debt Management Office (DMO). (2023). Nigeria's Public Debt Stock Reports. Abuja: Federal Government of Nigeria.

Edwards, S. (1991). Monetary policy, fiscal deficits and inflation in developing countries. Elsevier Journal of Development Economics, 36(2), 159–182.

Effiong, E., & Okijie, U. (2019). Fiscal imbalance and inflation in Nigeria. Danubius Journal of Economic Studies, 15(2), 75–87.

Ezeabasili, V. N., Mojekwu, J. N., & Herbert, W. E. (2012). An empirical analysis of fiscal deficits and inflation in Nigeria. International Journal of Economic and Finance, 4(2), 127–132.

Fasanya, I. O., & Ekong, C. N. (2021). Fiscal deficits, monetary policy and inflation dynamics in Nigeria. African Journal of Economic Policy, 28(1), 84–102.

Frimpong, J. M., & Oteng-Abayie, E. F. (2010). Does fiscal deficit cause inflation in Ghana? British Journal of Economics, Finance and Management Sciences, 3(1), 73–87.

International Monetary Fund (IMF). (2019). Fiscal monitor: Building the future, managing fiscal risks. Washington, D.C.: IMF.

International Monetary Fund (IMF). (2023). Nigeria: Staff Country Report and Article IV Consultation. Washington, D.C.: IMF.

International Monetary Fund (IMF). (2024). World Economic Outlook: Inflation and fiscal challenges in emerging economies. Washington, D.C.: IMF.

Medee, P. N., & Nenbee, S. G. (2012). Econometric analysis of the impact of fiscal policy variables on Nigeria's economic growth (1980–2010). International Journal of Economic Development Research and Investment, 3(1), 171–183.

National Bureau of Statistics (NBS). (2017–2024). Annual Abstract of Statistics and Inflation Reports. Abuja: NBS.

Nigerian Economic Summit Group (NESG). (2022). Macroeconomic outlook: Fiscal sustainability and inflation management. Lagos: NESG.

Nigerian Economic Summit Group (NESG). (2023). Fuel subsidy report: Implications for fiscal policy and inflation. Lagos: NESG.

Nwakobi, C., Ijeoma, A., & Eze, J. (2018). Fiscal deficits and inflation: Empirical evidence from Nigeria (1981–2015). Open Access Publishing (OAP) Journal of Economic Studies, 7(3), 214–229.

Obi, B., & Nurudeen, A. (2021). Fiscal policy and inflation in Nigeria: An empirical reassessment. Journal of Economics and Sustainable Development, 12(4), 103–117.

OECD. (2022). Revenue Statistics in Africa: Nigeria country note. Paris: OECD Publishing.

Onwioduokit, E. A. (1999). Fiscal deficit and inflation: An econometric investigation of the Nigerian experience. Central Bank of Nigeria Economic and Financial Review, 37(2), 1–16.

Onyebuchi, V. (2021). Fiscal reforms, budget deficits, and inflation dynamics in Nigeria. Journal of Economic Policy Analysis, 9(1), 45–60.

Oseni, I. O., & Sanni, M. R. (2016). Fiscal deficit and inflation volatility: Evidence from Nigeria. Danubius University Journal, 12(3), 51–65.

Oyeleke, T. (2021). Threshold effects of fiscal deficit on inflation in Nigeria. RePEc Journal of Economics and Finance, 19(2), 65–80.

Sargent, T. J., & Wallace, N. (1981). Some unpleasant monetarist arithmetic. Federal Reserve Bank of Minneapolis Quarterly Review, 5(3), 1–17.

Udoh, A. J., & Kokoette, M. (2023). Fiscal deficits, capital spending, and inflation in Sub Saharan Africa. African Development Review, 35(2), 87–105.

World Bank. (2022). Nigeria Development Update: The Continuing Urgency of Business Unusual. Washington, D.C.: World Bank.