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Deficit Financing Components and Inflationary Trend in Nigeria

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Abstract: Aside the fact that the continuous annual deficit spending since the 1980s by the Federal government has led to incommensurable growth in infrastructure development in Nigeria, there seems to be a disconnect with inflationary trends. Thus, this study looked at how deficit financing components determined inflationary path in Nigeria between 1980 and 2023. By applying the ARDL estimation technique, the analysis comes to the conclusion that the domestic financing component of deficit finance in Nigeria has a significant positive long-term effect on inflationary path in the country's economy. This positive effect stems from the fact that when the banking public loan to the federal government to finance its deficit, money supply in the economy is increased. However, the high lending rates of banks makes it difficult for businesses to obtain loans for investment thereby creating a demand-supply gap, which triggers inflation in the economy. Furthermore, external source of financing the fiscal deficit has a significant and negative effect on inflation because often times, government try to tie foreign borrowing to funding its capital expenditure. These projects have the tendency of reducing prices and by extension, inflation in the long-run for the economy. However, other sources of funding the fiscal deficit does not exert significant effect on inflation in the economy, which may not be unrelated to its supportive role to the domestic financing component in particularly funding recurrent budget deficit in the country. Various policy measures were recommended by the study.

Keywords: Deficit financing; Domestic financing; External financing; Other financing sources; Inflation; Nigeria.

JEL Classification: H11, H54, H6.

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1. Introduction

Funding fiscal deficits is frequently regarded as one of the most important mainstream policies that developing nations can implement to ensure their economies expand and develop quickly (Aladejare, 2022). The intuition is based on the following facts: low domestic savings, extreme poverty and unemployment, inefficient production potential, massive infrastructural deficit, reliance on commodity items, poor institutions and economic fundamentals (Yakubu and Aladejare, 2024). The need for a fiscal deficit is sometimes divided into three categories: social, political, and economic (Ebi and Aladejare, 2022). In the modern economy, the political and economic choices made by governments in both developed and developing nations are nearly entwined. In Nigeria, for example, political factors frequently override the government's economic judgements. It is a common belief that governments utilise deficit funding to try to fulfil campaign pledges or public expectations in order to maintain their political viability.

Thus, there is a vast amount of existing research on the relationship between inflation and deficit finance. Furthermore, there is no fresh or definitive evidence to support the claim that deficits in an economy inevitably lead to inflationary pressures. Milton Friedman's well-known statement that "inflation at all times and everywhere is a monetary phenomenon" (Tule *et al.*, 2019) has supported this argument. Consequently, economists and academics, especially those in emerging nations, face a significant task in determining whether the expansion of deficit financing necessarily results in inflationary issues for the economy. It makes sense that the methods used to pay for the fiscal deficit and the projects that these monies support could make the economy's inflationary trend worse.

In Nigeria, the advent of the 1970 budget introduced deficit financing as an expansionary fiscal policy of the government, and has been sustained as an annual norm to date. Deficit financing was introduced in the 1970 budget for post-civil war reconstruction of damaged infrastructure. Consequently, the Federal Government outlay has consistently stayed above estimated revenue. The era between 1981 and 1990 saw huge growth in Federal Government deficits, climbing to a mean yearly value of about ₦8.26 billion (Table 1.2). Similarly, deficit financing increased by a matching mean annual value to 5.43% and 32.9% for each overall budget (Table 1.2). It coincides with the sharp decline in oil receipts that resulted from the oil glut that hit the market in the early 1980s. As a result, the amount of money needed to fund the budgets was far lower than expected. Therefore, the only way the Federal

Government could continue to increase spending was to borrow money, mostly from domestic and foreign sources. Table 1.1 shows that, on average, foreign funding increased slightly to roughly 17.01% of the overall financing option. In contrast, domestic borrowing had a slight depreciation, reaching roughly 41.56%. However, other funds financing means improved to a yearly average of about 41.43%. Evidently, domestic borrowing and other fund sources were the dominant means of financing the deficits.

During the active period of the rolling plans (1991-2000), budget deficits increased dramatically to around ₦70.49 billion (Table 1.1). The budget deficits were caused by the rolling plans, which were designed to restore and provide the social and economic frameworks necessary for the economy to create jobs. The Federal Government greatly boosted its use of domestic financing over other sources in order to fund the whole deficit within the period. For example, Table 1.1 indicates a considerable increase in domestic borrowing to approximately 54.81 percent, while international finance and other money sources declined to roughly 12.53 and 32.66 percent, on average annually. The budget and deficit finance as a share of GDP both decreased to an average yearly of 25.8 percent and 4.05 percent, respectively (Table 1.2).

The total deficit increased from an average of around N324.06 billion per year during the 2001–2010 period to almost N1,949.08 trillion during the 2011–2018 period (Table 1.1). However, fiscal operations for funding the deficits kept getting better compared to the 1991–2000 timeframe. Deficit finance per GDP and the budget decreased steadily between 2001 and 2010 (Table 1.2), averaging 2.62 percent and 14.9 percent year, respectively. On the other hand, during the 2011–2022 period, deficit financing increased to 3.51 percent of GDP and 37.6 percent of budget (Table 1.2). Two things that should have lowered the rate at which deficit financing increased in the 2000s didn't work out. One of the first was the Central Bank of Nigeria (CBN) Act of 2007, which gave the CBN complete operational autonomy. The CBN was given the authority by the act to reject the Federal Government's request to finance its deficit in excess of 5% of real income from the previous year. Concurrently, the Fiscal Responsibilities Act of 2007 was passed, which also restricts government expenditures over 3 percent of the nation's gross domestic product. Both bills were intended to bring the Federal Government's fiscal policy position into line with the CBN's monetary policy objectives. The two measures, however, failed to slow the growth of deficit finance.

Moreover, domestic borrowing remained crucial to funding the deficits in the 2000s (Table 1.1). For example, domestic finance continues to be a significant source of funding for federal government deficits even if it decreased from 83.80 percent in the 2001–2010 period to around 39.55 percent in the 2011–2022 period. Nevertheless, from an average of 3.25 percent per year between 2001 and 2010, to roughly 10 percent per year between 2011 and 2022, foreign borrowing increased (Table 1.1). Comparably, from 2001 to 2010, the average annual growth rate of other fund sources was 12.95 percent; this grew to 50.46 percent from 2011 to 2022 (Table 1.1).

From the 1980s onwards, domestic borrowing was clearly not limited to supplying a sizable portion of the funding required to cover the deficits of the Federal Government. The Federal Government's cash balances were considerably boosted by the surplus it provided. The effect that domestic financing's different components have on borrowing by the Federal Government may be more important than its magnitude. The primary domestic finance source from the 1980s to 2000 was the banking system, most especially the CBN, as seen in Table 1.1. In contrast, the primary sources of domestic funding for the Federal Government throughout the latter eras (2001–2022) were Deposit Money Banks (DMBs) and the general non-bank population. Only between 2001 and 2017 were the proceeds of privatisation investigated as a source of domestic funding. Between 2001 and 2010, its average annual domestic financial contribution was N1.335 billion; between 2011 and 2017, it increased to N57.58 billion (Table 1.1).

The aforesaid trend has remained so because the primary provider of social services, including programmes for reducing poverty, subsidies, and disaster management, is still the federal government (Aladejare and Musa, 2024a; Aladejare, 2025). The rise in deficit finance in Nigeria has also been explained by structural factors, which include a high rate of tax evasion and avoidance, a high degree of income and wealth disparity, demographic pressures, and ineffective government. Additionally, governments have not been able to considerably increase tax collections for political relevance. This is a result of the general public's persistent mistrust in the efficient use of tax funds to promote capital formation and employment creation in Nigeria. The aforementioned variables have forced the use of internal and external borrowing for deficit financing in order to close the revenue-expenditure gap.

Ever since the 1980s, the country's infrastructure deficits have been reduced through a variety of federal government economic policy initiatives that have

made yearly deficit financing of the national budget through borrowing necessary. For example, the federal government implemented the Structural Adjustment Programme (SAP) from mid-1986 to 1989. By eliminating price volatility, the over-reliance on crude oil exports for revenue, and reducing the importation of producer and consumer goods, the strategy seeks to efficiently reform and reconstitute the production and consuming patterns in the economy. Conversely, due to the weaker naira to dollar exchange rate, the SAP only succeeded in making the nation's inflationary crisis worse (Aladejare, 2021; Aladejare and Musa, 2024b).

The Rolling Plan phases (1990–1999) followed, whose objectives were to provide and restore social and economic infrastructure. Regrettably, growing recurring expenses also made these goals more difficult to achieve (Ebi and Aladejare, 2022; Aladejare, 2022). Within the period, Nigeria experienced over a 100% rise in the average annual inflation rate from the preceding period. Specifically, while the mean annual deficit financing as a share of GDP and the budget declined to 4.05 and 25.6%, respectively, inflation sharply rose from 14.09 in the preceding decade to 30.60% (see, Table 1.2). The value far outweighing the CBN's average annual target of 13% for the period.

Furthermore, a number of economic interventions were introduced since the 2000s including the National Economic Direction (1999-2003), National Economic Empowerment Development Strategy Vision (2004-2007), 7-point agenda (2007-2010), transformation agenda (2011-2015), and Economic Recovery and Growth Plan (2016-2020). Specifically, the 2001-2010 period witnessed declines in deficit financing as a share of GDP and the budget to 2.62 and 14.9, respectively (see, Table 1.2). Likewise, inflation rate dropped to 16.3% within the era (see, Table 1.2). Conversely, the average annual deficit financing as a share of GDP and the budget accelerated sharply in the 2011-2022 period. However, on an average annual, inflation rate continued its downward trend to 14.84% within the era (see, Table 1.2).

Aside the fact that the continuous annual deficit spending since the 1980s due to various policy interventions by the Federal Government has led to incommensurable growth in infrastructure development (Fasanya *et al*., 2021; Aladejare, 2022), there seems to be a disconnect with inflationary trends. This phenomenon contradicts empirical studies that have aligned with the inflationary effect of deficit financing, particularly for Nigeria.

Therefore, this research examined the effects of government deficit financing components namely domestic financing, external financing, and other sources

of financing on inflation in Nigeria. Methodologically, this study applied the autoregressive distributed lag (ARDL) technique to empirically investigate the deficit financing component-inflation nexus, for Nigeria. Empirically, Tule *et al.* (2019) and Fasanya *et al.* (2021) are the known related studies to have applied the method in their studies. However, both studies did not disaggregate the effects from deficit financing into components as this study; hence, the empirical contribution. In addition, it is still empirically unclear how precisely deficit funding and inflation are related in Nigeria. For example, while Oseni and Sanni (2016) discovered a bi-directional relationship, Aladejare (2022) concluded that there is no significant direct-effect of deficit financing on inflation in Nigeria. In contrast, Tule *et al.* (2019) and Fasanya *et al.* (2021) submitted that deficit financing is inflationary only when it is evaluated with other macroeconomic variables. Furthermore, scant literature considered how Nigerian inflation is impacted by sources of deficit funding. The ambiguity in the effect of deficit financing on inflation, as well as the latter's potential responses to the components of deficit financing in Nigeria provides empirical justification for this study.

The rest of the paper shows Section 2 contains the reviewed literature; Section 3, the study's data and methodology; Section 4, the study findings and discussion; Section 5, the conclusions and policy implications.

2. Literature Review

2.1. Theoretical review

2.1.1. The quantity theory of money

According to the quantity theory of money, changes in the amount of money will, ceteris paribus, cause changes in the level of prices by roughly the same amount. The theory explains how changes in the money supply and the overall level of prices are mechanically and fixedly proportional. Any change in the amount of money will cause the level of prices to alter proportionately. MV = PY is the standard alphabetical representation of the quantity theory of money, where M stands for the money supply and V for the velocity of money circulation, or the average number of transactions a unit of money completes over a given period of time. The final output is represented by Y, and the price level by P. Quantity theory has its roots in accounting identity, which holds that total economic expenditure (MV) and total revenue from the sale of finished products and services (PY) are equal (Tsoulfidis,

2008). We may then transform this identity into a behavioural expression by determining the values of V and Y.

In response to the influx of precious metals from the New World, the quantity theory of money first emerged in sixteenth-century Europe. As a result, it ranks among the first economic theories. However, theoretical arguments supporting the relationship between M and P only begin to appear in the literature of the late mercantilists. According to the theory's premise, a government that maintains a budget deficit in a steady-state scenario will benefit more from an increase in M (for example, through deficit financing). so that goods prices would rise in response to the growing desire for more expenditure. Consequently, making more money for a different group of business owners whose need for factor inputs would rise even more (Tsoulfidis, 2008). The projected result of the relationship would be the return to equilibrium, but at higher costs, even if this chain reaction is predicted to eventually fade out.

The quantity theory of money is a fundamental component of the value and distribution theory of the classical economists. Say's law of markets, according to which output is taken for granted, was cited. Additionally, it is assumed that V is determined and provided by the institutional arrangements of society and payment customs (Tsoulfidis, 2008). It then means that P will reflect the relative changes in M and vice versa. Specifically, David Ricardo argued that causality flows from P to M rather than the other way around, restating the standard causal nexus of the quantity theory of money. The argument is that the value of money serves as a baseline against which all other prices' amounts are calculated. implying that it is reasonable to assume that the value of government bonds will typically decline and that other commodity prices will rise if government deficits result in an excess supply of money as a result of the issuance of a fresh issue of government bonds to finance the deficits.

Consequently, it may be argued that the causal relationship between P and M is crucial. Money is therefore endogenously derived, meaning that it is influenced by elements in the economic system. Irving Fisher, a proponent of the neoclassical school of economics, developed the quantity theory further by emphasising exogeneity. A slight modification of the initial quantity theory, Fisher's equation of exchange is mathematically given as $MV + M'V' = PT$. In this equation, M stands for currency, M' for demand deposits, V and V' for velocities, and T for the aggregate unit of transactions, not just final goods.

In summary, the quantity theory of money postulates that increasing the quantity of money, such as deficit financing, tends to create inflation and vice versa. For example, the theory holds that if the Central Bank should double the supply of money in the process of financing government deficit, the long-term prices in the economy is likely also to double.

2.1.2. The Neoclassical Money and Growth Model

Tobin (1965) expanded the Solow model of real growth by including monetary components, which led to the introduction of neoclassical money and growth models into macroeconomic research. One example is Tobin's 1965 study on "Money and Economic Growth," which examined how monetary factors affect an economy's level of capital accumulation. He pointed out that economists like Maynard Keynes and Irving Fisher have drawn important distinctions between decisions that affect wealth and those that affect how money is spent. The worth of wealth being accumulated and the amount being preserved as opposed to consumed are determined by the first group of options. The way that savers store both new and old savings is identified by the second category.

Uzawa (1966), Sidrauski (1967), Levhari and Patinkin (1968), Nagatani (1970), and others later developed the Tobin type model. Important features of these latter advancements include the acknowledgement of money as an asset in addition to actual capital and the adoption of money market disequilibrium as the basis for the study of inflation and inflationary anticipation. A crucial aspect of the Classicals' quantity theory of money, Say's law of the market for goods, was also built upon by the neoclassicals. Any goods-market concerns can be disregarded because the labour market phenomena were taken from Solow (1956), who based them on the macroeconomic marginal productivity model of the income distribution and the assumption of full employment. Tobin's monetary growth theory-based models have eventually given rise to a large body of work on equilibrium growth theories, which aim to maximise the conduct of economic agents.

The later Tobin neoclassical economists tackled a number of unique concerns, including the analysis of the steady-state impacts of the money supply growth rate and the Tobin effects. These neoclassicals also examined the steady state's local stability, particularly the destabilising role of inflationary anticipation in the scenario where adaptively generated inflationary expectations adjusted much more quickly.

Generally speaking, the neoclassicals believed that the amount of projected savings per unit of capital was equivalent to the accumulated capital (i.e., $s^{*}y(x)$). Where s^{*} is planned savings per unit of output, and $y(x)$ is output per unit of capital. According to their approach, if n is the effective labour growth and x is the effective labour to capital ratio.

Under the simple two-asset portfolio structure of the neoclassical money and growth framework, economic actors have the option to save their wealth as capital or money. Capital taxes are regarded as one-time levies. If the returns of two assets are different, wealth owners will desire to invest all of their money in the asset that offers the yield that is greater, according to neoclassical models. This is one of the three assumptions that the models make about the behaviour of portfolios. Additionally, if the yields are equal, wealthy people won't care how much money they allocate to each asset. If the yields on both assets are positive, they will probably only be included in portfolios if they are equal. These presumptions demonstrate how the yield of capital is regulated by the institutionally set rate of interest on money. In particular, the neoclassical models argued that the Keynesian deflationary bottleneck is caused by the rate of interest, which is the minimal rate of profit.

2.1.3. Stockman Cash-in-Advance (CIA) model

A model known as the anti-Tobin's Effect was created by Stockman (1981) in which the steady-state capital stock is inversely correlated with the rate of inflation. Stockman's model, like Tobin's, makes the assumption that people divide their wealth between capital and money. In order to challenge Tobin's assumptions regarding substitutability and a perfect credit market, Stockman developed his theory of an imperfect credit market, in which money serves to supplement the private credit market's function in the event of a financial system failure. The financial system is prone to disruptions because of specific restrictions on lending money to the private sector. Additionally, according to Stockman's model, economic agents must contend with liquidity or CIA constraints in addition to budgetary constraints. According to the CIA constraint, agents use money balances from the prior period plus transfers received at the start of the period to support their purchases of current consumption and gross investment, which encourages inflation. According to the model, money is more expensive to retain with higher inflation rates, which results in a reduced net return on investment (measured in terms of consumption or utility). As a result, the steady-state capital stock and investment decline.

2.1.4. Synthesis of Theoretical Literature Review

The quantity theory of classical economics states that if the amount of money supplied increases by twofold, prices will double as well by the same amount. resulting in the economy experiencing inflation. Neoclassicals, on the other hand, emphasised that an economy might have surplus saving and even eliminate it. According to neoclassicals, the excess savings may be reduced by increasing inflation, which will make money less appealing than real capital. The neoclassical approach also pointed out that the growing saving rate will be counterbalanced by the subsequent increase in capital formation. Consequently, the level of aggregate demand is maintained. Nevertheless, the dynamic character of Stockman's CIA model, however, led to its adaptation for this investigation. Furthermore, because deficit financing may be connected to the model's liquidity restriction, the model is attractive for this study because it imposes a budget and liquidity constraint on capital and consumption items.

2.2. Empirical Review

The paper by Tule *et al.* (2019) tested the validity of the fiscal theory of the price level in Nigeria. The study used quarterly data spanning from the first quarter of 2002 to the fourth quarter of 2017. Empirical submissions from the study was derived using autoregressive distributed lag (ARDL) technique. Also, to diagnose the inflationary effect of fiscal deficit, the study used the domestic and external components of deficit financing. Findings from the study revealed a substantial inflationary implication from the components of deficit financing in Nigeria. Hence, the study concluded that fiscal dominance is highly prevalent in Nigeria.

Ali and Khalid (2019) examined fiscal deficit financing sources and their inflationary tendencies for Pakistan. By applying the ARDL estimation technique, the study showed that the establishment of a long-run nexus between inflation and the financing sources of fiscal deficit. Specifically, it was revealed that inflation is substantially and positively determined by bank, Central Bank, and domestic borrowings. Furthermore, Central Bank borrowing demonstrated greater inflationary tendencies than the other means of financing the fiscal deficit in Pakistan.

Khan *et al.* (2020) attempted showing with their study that while fiscal deficit may be inflationary, their means of funding can influence the level of significance and impact for Malaysia. The study used quarterly data from 2000-2018 to show that

borrowing from the monetary authority and domestic sources (DMBs) has little inflationary effect in the long-term. Conversely, external borrowings were found to be inflationary only in the short-term. The study noted that inflation is more responsive to medium and long-term borrowing in Malaysia.

Olaniyi (2020) attempted to determine the asymmetric and symmetric nexus between inflation and fiscal deficit within the framework of bootstrap simulations in Nigeria. Quarterly data spanning 1981 to 2016 was used with non-linear regression estimates. Empirically, it was revealed by the study that neither symmetric nor asymmetric impact of fiscal deficit exist on inflation in Nigeria. Implying that fiscal deficits do not promote inflation and neither do the consistent double-digit inflation rates give rise to the perennial growth in fiscal deficit in Nigeria.

Similarly, Oluwole *et al*. (2020) tried showing the relationship between inflation, budget deficit, and economic development in Nigeria between 1981 and 2018. The study applied the ARDL and Granger causality approaches in deriving its inferences. Findings from the study indicates that there is an adverse effect of budget deficit and inflation on the development of the Nigerian economy in the short and long-run periods. The study further noted that the means of financing the deficit are inflation triggers in the economy.

By conducting a panel study, Durguti (2020) investigated how the budget deficit affects inflation rate in Western Balkans economies from 2001-2017. Hence, the study used the panel vector error correction mechanism (PVECM). The study revealed that the budget deficit does significantly affect inflation rate in Western Balkans nations

Also, Tahir and Tahir (2020) examined the relationship between fiscal deficit and inflation in Pakistan by using dataset from the period 1977 to 2018, and the dynamic ARDL technique. The study found substantial and positive effect of fiscal deficit on inflation, with dire consequences for economic growth in the long-run. Conversely, the effect of fiscal deficit on inflation was reported to be insignificant in the short-run.

In a related study, Minhajuddin (2021) tried to determine the impact of budget deficit on inflation in Pakistan. The study used ARDL and Granger causality estimation method in arriving at its submission. The study showed that fiscal budget deficits are inflationary and they contribute to accelerating inflation rate in Pakistan. Also, the causality result reveals that there is a one-way flow of causality from fiscal deficit to inflation.

In the study by Onyedibe *et al*. (2021), they tried to determine the effect of money supply and budget deficit financing on inflation in Nigeria. The empirical connection between the variables was estimated using VECM and causality method. Result from the paper demonstrated that, while there was no relationship between the variables of interest in the short-term, fiscal deficit financing sources were significantly inflationary in the long-run. Similarly, there was long-run causality between inflation, money supply, and deficit financing for Nigeria.

Eita *et al*. (2021) assessed the impact of fiscal deficit on inflation in Namibia from 2002 to 2017, through the application of the ARDL estimation approach. Empirically, the study revealed that there is a long-run significant positive effect of fiscal deficit on inflation in Namibia. Furthermore, a uni-directional causality was found from fiscal deficit to inflation for Namibia.

Kaur (2021) investigated the relationship between inflation and fiscal deficit in India using quarterly date from 1996 to 2017. By applying the ARDL method, the study showed that fiscal deficit significantly and adversely affects inflation in the long-run for India. Specifically, the study showed that crude oil price and exchange rate are supply exacerbating factors. While from the demand-side, the absence of a significant output-price level nexus was found for India

Khieu (2021) tried to unravel the association between inflation, money growth and budget deficit in Vietnam for the period between 1995 and 2012. The study applied a structural vector autoregressive technique. The study showed that inflation does not respond significantly to fiscal deficit and growth in money supply. Thus, the study findings suggest that monetary and fiscal policies were relatively autonomous of each other within the study period being considered by the study.

Bordo and Levy (2021) conducted a chronological survey for two centuries trying to link inflation and expansionary fiscal policy. The study submitted that during wartime when the public sector relied on expansionary fiscal policy to fund the war, inflation tax grows. Also, in peacetime periods, bond-financed fiscal deficits, which are unguaranteed by future taxes do end up being inflationary. The study further observed that fiscal dominance on monetary policy played essential role in the great inflation of 1965-1983. However, expansionary fiscal and monetary policies failed to trigger inflation during the global financial crisis of 2007-2008; nevertheless, both policies as responses to the COVID-19 pandemic are likely to promote fiscal dominance and future inflationary episodes.

Fasanya *et al.* (2021) investigated the fiscal deficit-inflation nexus for Nigeria from 1980 to 2019 and applied the ARDL method. Specifically, the paper analysis showed the effect of government deficit on inflation with and without structural breaks. Empirical findings from the study revealed fiscal deficit to be inflationary alongside other macroeconomic variables. Hence, they submitted that fiscal management should be tailored towards revenue enhancement, rather than expansionary outlays to help curtail the growth of inflationary pressures in the economy.

In a related paper, Aimola and Odhiambo (2021) assessed the effect of public borrowing on inflationary tendency in Nigeria. The study used dataset from 1983 to 2018 and applied ARDL estimation technique in deriving its findings. It was found by the research that public debt does not exert significant effect on inflation growth either in the short or long-run periods in Nigeria. Thus, indicating that there could be other inflationary driving forces in Nigeria.

Likewise, Oyeleke (2021) examined the non-linear association between fiscal deficit and inflation in Nigeria. The study employed dataset from 1981 to 2015 and used the ARDL estimation approach to derive its inferences. The outcome of the study showed that in the short and long run periods, squared fiscal deficit had substantial and positive on inflation in Nigeria. Hence, suggesting the presence of a non-linear nexus between government fiscal deficit and inflation in Nigeria.

Similarly, Aladejare (2022) showed the relationship between deficit financing, inflation and capital formation in Nigeria between 1970 and 2017, by using the GMM technique. The study found that deficit financing components significantly and indirectly impacted on inflation. This find contradicts earlier studies that have shown that a direct nexus existed between both variables for Nigeria.

Nguyen *et al.* (2022) examined the effect of monetary and fiscal policy on inflation in Vietnam. The study's dataset spanned from 1997 to 2020, and the vector autoregressive (VAR) technique was used in the study to estimate the results. Deduced finding from the study showed that fiscal deficit alongside other macroeconomic variables such as money supply, public outlay, and interest rates has a significant and positive impact on inflation in Vietnam.

The long-term nexus between budget deficit, money supply, and inflation in Ghana was examined by Duodu *et al.* (2022). By applying quarterly data 1991 to 2019, and adopting the Granger causality and VECM method for analysis, the study was able to derive its inferences. Findings from the study showed that while money supply had a significant adverse effect on inflation, budget deficit demonstrated

a significant and positive effect on inflation for Ghana. Furthermore, the impulse response output showed that inflation is more responsive to budget deficit shocks positively.

Sannoh and Fanneh (2022) examined whether the means of financing fiscal deficit creates inflation in the Gambia. The study employed dataset from 1970 to 2020 and applied the VECM as well as Granger causality techniques in ascertaining the short and long run relationships between the variables. The outcome of the study indicates that the means of financing the deficit which includes broad money growth, exchange rate, gross capital formation, and current account balance all have significant short and long run effect on inflation in the Gambia. The study particularly noted that broad money growth constitutes the key financing source of budget deficit and thus, exerts the highest impact on inflation in the Gambia.

Mwankemwa and Luvanda (2022) examined the threshold impact of fiscal deficit on inflation in Tanzania for the period between 2001 and 2019. The study data was quarterly in nature and the ARDL method was used to generate the output. By squaring the fiscal deficit variable, the study's quadratic regression model showed that the is a valid U-shaped nexus between fiscal deficit and inflation for Tanzania.

In a related study, Mwamkonko (2022) assessed whether the mode of deficit financing in Tanzania has inflationary tendencies for the economy. Two estimation techniques including error correction and cointegration methods were used by the study. The study observed that the inflationary magnitude of budget deficit depends on the choice of financing adopted by the government. Thus, the study demonstrated that while foreign or external financing means are deflationary, domestic financing sources are otherwise inflationary. However, seigniorage financing had no significant inflationary effect as grant financed budget deficit does for the country. Also, deficit financing by means of drawing down excess external reserves was reported to have the potential of mitigating inflation.

Osei and Ogunkola (2022) tried to determine the regime impact of fiscal deficit funding and the dynamism of inflation in Ghana. The study used dataset spanning from 1980 to 2018 which was analysed using Markov-switching regime dynamic model (MSRDM). Empirical evidence form the study's output suggested two fiscal regimes, and the persistent regime of fiscal deficit financing in Ghana. In the higher regime of fiscal deficit financing, inflation dynamics were more responsive as against its subdued response in the lower regime.

Garba (2023) tried to determine the non-linear effect of budget deficit and inflation in Nigeria, by using a dataset between 1986 and 2020. Findings from the study were deduced through the application of the NARDL approach. The paper outcome showed that in the long-run, increases in budget deficit has positive accelerating effect on inflation. In contrast, a long-run decline in budget deficit does not significantly promote inflation in Nigeria.

Sheikh and Malik (2023) tried to assess the effect of different deficit financing sources on inflation rate and output growth in Pakistan. The study used the structural VAR (SVAR) model in deriving its findings. Evidence from the study suggest that despite bond and monetized funding means of fiscal deficit being inflationary, they help enhance output growth in the country.

Due to the critical financial and monetary challenges the Argentine economy is facing, Al-Senjari and Al-Anzi (2023) conducted a study where they examined the impact of fiscal budget deficit on inflation rate. The study used dataset from 1990 to 2020 and applied the ARDL estimation technique. Output derived from the study found overwhelming evidence that government budget deficit does have a significant and positive effect on inflation rate.

Batool *et al*. (2023) investigated the challenge of Pakistan in bridging the deficit gap despite numerous attempts. The study further investigated the inflationary tendency of Pakistan's budget deficit. Empirical findings from the research were derived using the two-stages least squares (2-SLS) approach. Submission by the study showed that there is a significant and positive effect of budget deficit on inflation in Pakistan.

The study by Ho *et al*. (2023) tried to show that government fiscal deficits which emanates from fiscal policy decisions of the government aimed at advancing economic growth can end-up being inflationary. Thus, they examined dataset from 34 developed economies from 2022 to 2019, and used the GMM estimation procedure to derive their findings. The outcome of the paper revealed that the fiscal deficit-inflation nexus is strongly related to the prevalent governance environment. Specifically, they submitted that while fiscal deficits are deflationary in developed economies, they are inflation triggers in developing countries.

Sumba *et al*. (2023) examined the association between fiscal deficit financing and inflation in Sub-Saharan African (SSA) economies. The research further determined if the means of fiscal deficit financing adopted drives inflationary tendencies in the economy. Methodologically, the study used the two-step GMM

estimation method, applied to a penal dataset from 45 SSA countries spanning 2005 and 2020. It was found by the study that deficit financing by means of domestic and foreign borrowing promotes inflation among SSA economies. However, the severity of the inflationary effect differs between both means of deficit financing.

In a similar study, Shah *et al*. (2024) examined the relationship between inflation and public debt in emerging economies from 1990 to 2020. The study employed panel Granger causality on datasets sourced from 39 countries. It was found by the study that inflation significantly Granger causes public debt. By splitting the study countries into lower middle-income and upper middle-income countries, a bi-directional Granger causality was reported between both variables. Thus, suggesting that public debt and inflation reinforce each other in the studies countries.

Agu and Oshim (2024) investigated the impact of deficit budget financing means have on inflationary growth in Nigeria between 2011 and 2020. The study applied Ordinary Least Squares (OLS) approach in deriving its findings. Evidences from the study showed that foreign borrowings and treasury bills substantially and positively impacts inflation rate in Nigeria. Similarly, Ways and Means advances positively and significantly contribute to inflationary tendencies in the country.

Tariq *et al*. (2024) attempted a critic of the threshold impact of fiscal deficit on inflation for the Indian economy. The paper used the dataset drawn from 1971 to 2020 and leveraged the smooth transition autoregressive (STAR) and Toda-Yamamoto causality techniques. The choice of the approach was to incorporate the non-linear nexus that responds to the particular threshold level of fiscal deficit. Empirically, the study showed that when fiscal deficit exceeds the 3.40% threshold, inflation dynamics will choose to have a marked transition in India; and hence, the presence of non-linear impacts. Similarly, the causal result suggest that fiscal deficit leads to inflation in India.

2.2.1. Literature Gap

From the above reviewed literature, there seem to be scant empirical works that have successfully determined the effect of deficit financing component on inflation; particularly as it pertains to Nigeria. Although the review demonstrates proof of most studies consenting to the inflationary tendency of fiscal deficit financing, however, the same view is not concurred to in terms of the effect exerted by the means of financing the deficit on inflation; particularly for a developing economy such as Nigeria.

3. Data and Methodology

3.1. Data

This research applied secondary sources of data collected between 1980 and 2023 to evaluate the effect of deficit financing component on Nigeria's inflation. The World Bank World Development Indicators and the CBN statistical bulletin are the primary sources from which these data were derived. Secondary data including consumer price index (CPI) to proxy for inflation (dependent variable); domestic financing per GDP (DMFGDP), external financing per GDP (XTFGDP), other sources of financing per GDP (OSFGDP) (independent variables), and exchange rate (EXCH), the moderating variable were collected for the study.

3.2. Model Specification

The primary model showing the functional association between deficit financing components and inflation is specified thus:

$$CPI = f(DFC) \quad (1)$$

where CPI and DFC denotes consumer price index and deficit financing components, respectively. Equation 1 can be decomposed by incorporating the three broad components of deficit financing that affects inflation in Nigeria as follows:

$$CPI = f(DMFGDP, XTFGDP, OSFGDP, EXCH) \quad (2)$$

where DMFGDP, XTFGDP, and OSFGDP represents domestic financing per GDP, external financing per GDP, and other sources financing per GDP, respectively. EXCH is the official exchange rate and it was introduced into the model as a moderating variable. This is because effective public expenditure planning and inflation targeting cannot exist in isolation of the exchange rate value for a country's currency (Zubair and Aladejare, 2017). Equation (3.2) was explicitly specified in its econometric form as follows:

$$ICPI_t = \beta_0 + \beta_1 DMFGDP_t + \beta 2\, XTFGDP_t + \beta_3 OSFGDP_t + \beta_4 EXCH_t + \varepsilon_t \quad (3)$$

The study employed the autoregressive distributed lag model (ARDL) approach, which is also known as the bounds testing approach to co-integration and was made popular by Pesaran *et al.* (2001), to investigate the study's objectives. Compared to the Engle-Granger and maximum likelihood based approaches suggested by Juselius (1990) and Johansen (1991) co-integration procedures, this methodology has several econometric advantages. First, since the bounds test can be performed on series that are mutually integrated, solely I(0), or I(1), it is not necessary to pre-

test the series to ascertain their order of integration. Second, according to Mallik and Chowdhury (2001) and Jatil *et al.* (2008), the ARDL modelling includes an adequate amount of lags to reflect the data-generating process that is peculiar to a certain modelling framework.

Furthermore, this technique addresses endogeneity issues because the ARDL is modelled applying the proper lags to adjust for serial correlation and endogeneity issues. According to Jatil *et al.* (2008), endogeneity is less problematic if serial correlation is absent from the predicted ARDL model. This method estimates the model's long- and short-term parameters simultaneously and makes the assumption that every variable is endogenous.

An ARDL representation of long run and short run of Equation (3) can be specified as follows:

$$\begin{aligned}\Delta lCPI_t = {} & \beta_0 + \delta_1 DMFGDP_{t-i} + \delta_2 XTFGDP_{t-i} + \delta_3 OSFGDP_{t-i} + \delta_4 EXCH_{t-i} \\ & + \sum_{i=1}^{m} \beta_1 \, \Delta DMFGDP_{t-i} + \sum_{i=1}^{m} \beta_2 \, \Delta XTFGDP_{t-i} + \sum_{i=1}^{m} \beta_3 \, \Delta OSFGDP_{t-i} \\ & + \sum_{i=1}^{m} \beta_4 \, \Delta EXCH_{t-i} + \theta_t ecm_{t-1} + \varepsilon_t \qquad (Equ. 4)\end{aligned}$$

where ECM depicts error correction mechanism and its coefficient θ, is the speed of adjustment parameter from short to long run steady state and by a priori, is demanded to be negative signed and statistically substantial to affirm the prevalence of a long-run adjustment process.

4. Estimated Results and Discussions

4.1. Descriptive Statistic Test Outcome

Table 1 summarises the descriptive statistics applied in this research. The estimates shown in the table indicates that the average consumer price index over the studied period was 87.783, suggesting that the cost of the market basket was low for the study period since the value is below 100. With a mean domestic financing per GDP of 11.02%, external financing per GDP of 18.05%, and other sources financing per GDP of 0.89%, this indicates that Nigeria has been borrowing more from external sources than domestic and other sources to fund its deficit. The study period's mean exchange rate was ₦119.8/$1, suggesting that the exchange rate was considerably moderate within the study period. Additionally, CPI, DMFGDP, XTFGDP, OSFGDP,

and EXCH exhibit positive skewness, which results in a large right tail in their data distribution and indicates that a preponderance of positive values dominates their frequency distribution.

Table 1: Descriptive Statistic

	CPI	*DMFGDP*	*XTFGDP*	*OSFGDP*	*EXCH*
Mean	87.783	11.022	18.054	0.892	119.810
Skewness	1.514	0.422	0.832	0.057	1.018
Kurtosis	4.349	2.709	2.191	3.234	3.072
Jarque-Bera Prob	20.139 0.000	1.462 0.482	6.277 0.043	0.124 0.940	7.602 0.022
Obs	44	44	44	44	44

Source: Author's estimated result.

4.2. Unit Root Test

Establishing the degree of stationarity of the data being used is a crucial step before beginning any economic research. This will support the researcher in coming to any necessary empirical conclusions. The stationarity level of the variables utilised in the analysis was ascertained through the ADF and PP unit root procedures. These test outcomes are represented in Tables 4.2 and 4.3, respectively. For the critical unit root analysis, three test criteria were used: test with constant, test with constant and trend, and test without constant and trend.

The ADF unit root outcome is shown in Table 4.2, while the PP unit root outcome is shown in Table 4.3. Table 4.2 shows that the sole level stationary variable is OSFGDP. However, additional stationarity testing showed that first difference stationary variables CPI, DMFGDP, XTFGDP, and EXCH are present. In a similar vein, the PP unit root technique identifies CPI, DMFGDP, XTFGDP, and EXCH as I(1) stationary variables and OSFGDP as an I(0) series. Thus, our investigation confirmed that CPI, DMFGDP, XTFGDP, and EXCH are first difference stationary variables, with the exception of OSFGDP, which obtained level stationary. As a result, the results of the ADF and PP unit root tests strongly supported one another and also justifies the application of the ARDL methodology.

4.3. ARDL Bounds Cointegration Test Result

The ARDL bounds cointegration test is employed in this research to determine the long-term nexus between the study's independent variables and the outcome

Table 2: Unit Root Test

	ADF Test			*PP Test*		
	With Constant	*With Constant & Trend*	*Without Constant & Trend*	*With Constant*	*With Constant & Trend*	*Without Constant & Trend*
lCPI	-2.929*[1]	-4.273***[1]	-1.978**[1]	-2.793*[1]	-2.986	-1.848*[1]
DMFGDP	-7.119***[1]	-7.136***[1]	-7.218***[1]	-7.186***[1]	-7.383***[1]	-7.286***[1]
XTFGDP	-4.815***[1]	-4.873***[1]	-4.875***[1]	-4.832***[1]	-4.867***[1]	-4.891***[1]
OSFGDP	-5.431***[0]	-5.726***[0]	-4.254***[0]	-5.504***[0]	-5.737***[0]	-4.349***[0]
lEXCH	-5.511***[1]	-5.895***[1]	-4.485***[1]	-5.511***[1]	-5.925***[1]	-4.547***[1]

Where *, **, *** indicates significance at 10%, 5%, and 1% respectively, and 0 and 1 are stationarity at level and first difference, respectively.
Source: Author's estimated output.

is shown in Table 3. Depicted on Table 3 is the computed F-statistic (21.251) which is higher than the lower and upper limits values at the 1%, 2.5%, 5%, and 10% significance levels. Thus, null hypothesis—that no long-term link between the regressors—is thus statistically and significantly rejected. Put another way, there is a long-run relationship between DMFGDP, XTFGDP, OSFGDP, and EXCH.

Table 3: ARDL Bounds Test for Cointegration

Equation	*Test statistic*	*Value of F-Statistic*	*K*	*Sign.*	*I(0)*	*I(1)*
CPI=f(DMFGDP, XTFGDP, OSFGDP, EXCH)	Sample size (n)=43	21.251	4	10% 5% 2.5% 1%	2.2 2.56 2.88 3.29	3.09 3.49 3.87 4.37

Source: Author's estimated result.

4.4. ARDL Estimated Outcomes

Table 4 displays the long-term outcome, which indicates that the domestic financing has a significant positive influence on inflation. Specifically, a percentage rise in domestic financing of the fiscal deficit indicates a 0.121 percentage point increase in inflation in the long-run. This relationship is statistically significant at 5% level. In contrast, external financing means for the fiscal deficit has a significant adverse effect on inflation outcome in the long-run. A percentage increase in external financing will lead to 0.024% decline in inflationary levels. This association is statistically significant at 1% level.

On the other hand, other sources of financing the deficit though positive, has an insignificant effect on inflation as seen in Table 4, over the long term. According to the findings, a percentage rise in other sources financing will produce a 0.090% increase in inflation which is revealed to be statistically insignificant. However, exchange rate is shown to have a significant positive long-run effect on inflation levels. According to the results, inflationary tendencies will increase by 1.009 percentage points for every percentage increase in the exchange rate of the naira to the US dollar. This relationship is statistically significant at the 1% level.

Furthermore, the study's short-term outcomes are also shown in Table 4. The output provides evidence that domestic financing will insignificantly hinder inflation growth. According to the findings, there will be a short-term, 0.005 percentage point increase in inflation growth for every percentage increase in domestic financing. However, this relationship is statistically insignificant. It also turns out that exchange rate insignificantly hinders inflation growth. According to the findings, there will be a 0.067 percentage increase in inflation growth for every percentage increase in exchange rate in the near run. Nevertheless, this finding is shown to be statistically insignificant.

Moreover, Table 4 shows that the error correction mechanism (ECM), which in ARDL modelling represents the alignment velocity from short- to long-term convergence, is statistically significant and negatively signed. The ECM's a priori behaviour in theory is consistent with its negative coefficient and importance at the 1% level in the ARDL estimation process. Its coefficient of -0.183 indicates that, in order to achieve long-term steady state or equilibrium restoration, roughly 18% of modifications must be made each year. Put another way, it will take roughly sixty-six months for the disequilibrium caused by these deficit financing sources to re-align to their long-run path given the existence of short-run disequilibrium in their behaviours.

Table 4: ARDL Long-run Estimates for Deficit Financing Components' Effect on Inflation in Nigeria

Variables	*Coefficient*	*Std. Error*	*t- statistics*	*Prob.*
DMFGDP	0.121	0.049	2.501	0.017**
XTFGDP	-0.024	0.007	-3.648	0.001***
OSFGDP	0.090	0.068	1.326	0.194
lEXCH	1.009	0.051	19.831	0.000***
ΔDMFGDP	0.005	0.005	0.912	0.368

Variables	*Coefficient*	*Std. Error*	*t- statistics*	*Prob.*
$\Delta lEXCH$	0.067	0.046	1.452	0.156
ECM	-0.183	0.015	-12.071	0.000***
Intercept	-0.750	0.442	-1.696	0.099*
R^2	0.568		Adj.R^2	0.546
Diagnostic Test				
Normality	1.623			0.444
Serial-correlation	5.575			0.118
Heteroskedasticity	9.345			0.229
Ramsey Reset	0.606			0.442

Note: *, **, *** indicates significance at 10%, 5%, and 1%, respectively.
Source: Author's estimated result.

4.4.1. Stability Test

The stability test, which verifies the model's residual's consistency and stability, is another crucial step in ARDL modelling. The cumulative sum of recursive residuals test (CUSUM) and cumulative sum of squares (CUSUMQ) were used to assess the parameter's stability. The CUSUM and CUSUMQ plots are shown in Figure 1.

The critical boundaries are found to be within the 5% level of statistical significance, according to the CUSUM statistics plot. At the 5% significance level, the CUSUMQ plot also falls inside the critical boundaries. It follows that this

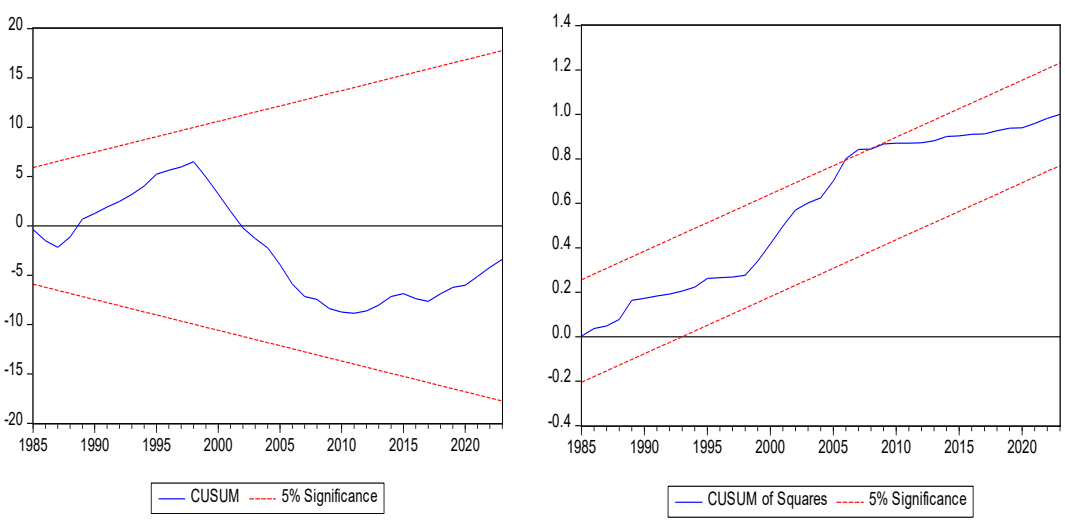

Figure 1: CUSUM and CUSUMSQ for the study model.

Source: Author's estimated output.

indicates the consistency and reliability of the ARDL estimates. Put another way, the analysis's two crucial bounds (red lines) are not outside of the cumulative sum and cumulative sum square (blue lines), indicating that the study's parameters are stable. For the purpose of making policy recommendations, the results of the study analysis are therefore regarded as consistent and trustworthy.

4.5. Discussion of Findings

The present study examines the findings in accordance with the research objectives, drawing on the empirical evidence presented in Table 4. According to Table 4, the effect of domestic financing on inflation is revealed to be positive and significant. Thus, aligning with prior studies such as Tule *et al.* (2019) for Nigeria, Ali and Khalid (2019) for Pakistan, Mwamkonko (2022) for Tanzania, Sumba *et al.* (2023) for SSA countries; and contradicting Aimola and Odhiambo (2021) who found the relationship to be insignificant for Nigeria. Domestic financing aids inflationary tendencies in the economy when the banking public loan to the government to fund its deficit. This action increases the money supply and encourages inflation to grow. For instance, the CBN's Ways and Means Act of 2024, permits the Bank to lend to the Federal Government to a maximum of 10% of the previous year's revenue. However, when the government activates such borrowing to finance its budget shortfall, there is an expansion in the money supply; and with the prevailing high interest rates in the banking sector, it becomes difficult for businesses to borrow. Consequently, more pressure is exerted on prices, and since suppliers may not be able to cover the demand, prices will rise. If this situation persists, then, inflation will ensue in the economy.

Also, most government domestic borrowing are often for its recurrent expenditure. For instance, the Ways and Means financing option from the CBN are meant to be repaid within 12 months (1 year). Thus, indicating that loans might not be suitable for long-term capital ventures but recurrent. Nevertheless, government's recurrent budget is also consistently known to have exceeded capital spending in Nigeria, and in some cases rising three times more than the latter (Aladejare, 2022). Consequently, this situation suggests that most of the domestic financing of the government deficit are to fund immediate consumption demands such as wages and salaries, transfers and grants, etc., which may end-up being inflationary.

Also, as prior observed in Table 4, foreign deficit financing has a significant adverse effect on inflation in Nigeria. While the result agrees with Mwamkonko

(2022) for Tanzania, it contradicts findings by Tule *et al*. (2019) and Ago and Oshim (2024) for Nigeria, Khan *et al*. (2020) for Malaysia, and Sumba *et al*. (2023) for SSA countries who reported positive effects.

Increase in external financing of the fiscal deficit can aid long-term reduction in inflation when such funds are strictly tied to capital projects. For instance, the use of external financing means to tackle the infrastructural deficit in the country in the areas of transportation and energy can reduce the cost of producing goods and services, and consequently, lower inflationary trends in the long-run. When government invest funds derived from external sources into building access roads and rail lines, this can have a significant reducing effect on the prices of goods and services, and farm produces. Also, investing external deficit financing funds in the generation, transmission, and distribution of electricity can help to cut-down on the cost of production of goods and services, and in-turn, reduce prices. For instance, due to the epileptic and high cost of power supply in Nigeria, the Manufacturer's Association of Nigeria (MAN) estimated that electricity cost gulps about 40 to 50 percent of their entire production cost (Oyeleke, 2021). Hence, the investment of external deficit financing sources in electricity provision can reduce this production cost, often passed to the consumers in form of high prices which creates inflation in the economy.

Furthermore, Table 4 demonstrated that other fund sources has an insignificant positive effect on inflation. This outcome aligns with the findings of Olaniyi (2020) for Nigeria and Mwamkonko (2022) for Tanzania. However, the result contrast studies such as Sannoh and Fanneh (2022) who found significant positive effect for Gambia, and Duodu *et al*. (2022) who reported significant negative effect for Ghana. The implication of this outcome is that other fund sources of funding the fiscal deficit derived from sources including treasury clearance funds; public, special and trust funds, excess reserves, Federal Government's contribution to the External Creditors' Fund, etc., do not significantly trigger inflationary pressures in the economy. The insignificance of this component of deficit financing may not be unconnected to the fact that they are used to augment domestic financing which is the main source of funding deficits, particularly in recurrent outlay in the country's budget.

In addition, the positive impact of exchange rate on inflation suggest that an increase in the exchange rate (i.e., currency depreciation) is aiding inflationary trends in the country. One of such channels is through imported inflation, given

that the country is heavily import-dependent for raw materials, consumer goods, and not until recently, imported fuel. Another channel is through higher production cost. As more naira is traded for the US dollar, inputs of domestic manufacturers increases. This cost is later transferred to consumers as higher prices, and when it persists, leads to inflation.

5. Conclusion and Recommendations

This study looked at how deficit financing components determined inflationary path in Nigeria between 1980 and 2023. By applying the ARDL estimation technique, the analysis comes to the conclusion that the domestic financing component of deficit finance in Nigeria has a significant positive long-term effect on inflationary path in the country's economy. This positive effect stems from the fact that when the banking public loan to the federal government to finance its deficit, money supply in the economy is increased. However, the high lending rates of banks makes it difficult for businesses to obtain loans for investment thereby creating a demand-supply gap, which triggers inflation in the economy. Furthermore, external source of financing the fiscal deficit has a significant and negative effect on inflation in Nigeria. Often times, government try to tie foreign borrowing to funding its capital expenditure (Aladejare, 2023b). These projects have the tendency of reducing prices and by extension, inflation in the long-run for the economy. However, other sources of funding the fiscal deficit does not exert significant effect on inflation in the economy, which may not be unrelated to its supportive role to the domestic financing component in particularly funding recurrent budget deficit in the country.

Hence, it is recommended that the fact that a large chunk of the domestic financing component is often expended on consumables, gives rise for caution to prevent a current account deficit. This is a condition whereby the nation's import grows beyond its export (i.e., there is a disadvantaged balance of trade), hence, resulting in a "Twin Deficits" (i.e. a phenomenon where budget and current account deficit coexist together). The implications of the twin deficits include exposing the economy to the ills of imported inflation. Consequently, the CBN should strive to grow net capital inflows to ensure that the aggregate trade balance stays in the positive zone. Also, the federal government will have to accelerate more on growing foreign direct investments, as against foreign portfolio investments to guarantee stability in the inflation variable.

Furthermore, the government will have to ensure that external financing components of the fiscal deficit are not expended on recurrent outlays, rather, on capital projects that can not only guarantee a repayment of the borrowed funds, but also reduce inflation in the long-run. This measure is critical for investment growth to reduce demand for foreign goods and by extension imported inflation. Thus, the use of foreign source of financing to improve on available necessary infrastructure, particularly in the electricity and transportation sectors will ensure a friendlier business environment through stable prices. Both sectors are critical to curtailing rising cost of production of goods and services, often transferred to consumers inform of higher prices.

The government should consider investing funds derived from the other sources of financing the budget in capital projects as against recurrent or consumables. By embarking on this measure, the usual annual rhetoric of having recurrent spending outweighing capital spending may be reversed, and the issue of inflation controlled in the long-term. Thus, instead of other sources of financing augmenting for domestic financing in funding mostly recurrent expenditure, they should be diverted to capital spending deficits in the budget.

Nevertheless, this study is strictly constrained to federal government evaluation. Consequently, the assessment of the components effect of deficit financing on inflation at the sub-national levels (i.e., State and local government levels) was not achievable due to unavailable dataset. Accordingly, subsequent research on the effect of deficit financing components on inflation in the Nigerian economy may explore the aforesaid limitation by conducting a robust examination of the relationship at all government levels (i.e., Federal, State, and Local government). Such study will help to enrich the literature further on the deficit financing-inflation nexus in Nigeria.

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APPENDICES

Appendix 1: Deficit Financing Profile

Table 1.1: Annual Average Deficit Financing Sources in Nigeria

	1981-1990		*1991-2000*		*2001-2010*		*2011-2022*	
Source of Financing	*₦ billion*	*% share in total financing*	*₦ billion*	*% share in total financing*	*₦ billion*	*% share in total financing*	*₦ billion*	*% share in total financing*
Foreign Financing	1.4224	17.01	9.778	12.53	10.484	3.25	387.46	10.0
Domestic Financing:	3.4757	41.56	42.77	54.81	270.526	83.80	1533.39	39.55
Banking System	1.8350		38.433		148.481		568.52	
CBN	1.4030		29.498		23.381		60.54	
DMB	0		8.935		125.1		507.98	
Non-bank Public	1.6419		4.333		120.71		926.42	
Privatization Proceed	-		-		1.335		38.45	
Other Funds	3.4645	41.43	25.484	32.66	41.81	12.95	1956.53	50.46
Total Financing	8.363		78.032		322.82		3877.38	
Recurrent Spending	15.611		217.920		1642.318		7354.50	
Capital Spending	8.98		184.374		618.183		2309.13	
Spending difference	-6.631	79.29	-33.546	42.99	-1024.14	317.25	-5045.37	130.12
Total Deficit	8.261		70.494		324.06		3599.80	

Note: Spending difference = Capital Spending – Recurrent Spending. Minus denote recurrent spending above capital spending.

Source: Computed by Author from CBN Statistical Bulletin (2023).

Table 1.2: Average Annual Deficit Financing per GDP (DEFGDP), Deficit Financing per National Budget (DEFBGT), and Inflation rate (INF)

YEAR	*DEFGDP*	*DEFBGT*	*INF*
1981-1990	5.43	32.9	14.09
1991-2000	4.05	25.8	30.60 (13)
2001-2010	2.62	14.9	16.3 (9.17)
2011-2022	3.51	37.6	14.84 (11.46)

Note: values in parenthesis are targeted CBN rates.

Source: Author's Computation from World Development Indicators and CBN Statistical Bulletin (2023).