

Analyzing the Effect of Emergency Relief and Response Expenditure on Debt To GDP Ratio in Nigeria

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Abstract

This conceptual study examines the relationship between emergency relief and response (ERR) expenditure and Nigeria's debt-to-GDP ratio over the period 2000–2025, within the context of increasing fiscal pressures from disasters, insecurity, and public health crises. This study examines the nexus between emergency relief and response (ERR) expenditure and Nigeria's debt-to-GDP ratio, highlighting the fiscal implications of recurring climate, health, and security crises. Nigeria's reliance on public borrowing to finance ERR spending—driven by floods, insurgency, pandemics (including Covid-19), and food security challenges which has contributed to a rising debt trajectory, from approximately 12% of GDP in 2010 to 37% by 2025. While ERR expenditure is essential for protecting lives and stabilizing the economy, unplanned and under-budgeted spending often necessitates deficit financing, increasing debt accumulation and constraining fiscal space. Empirical and conceptual evidence suggests that external support and proactive climate adaptation can mitigate fiscal pressure, but without integrated risk management, repeated emergencies perpetuate high debt levels and vulnerability. The study bridges disaster economics and fiscal sustainability literature, offering policy insights for balancing immediate humanitarian needs with long-term debt management and economic resilience. The paper concludes that while ERR expenditure is indispensable for crisis management, its financing structure determines long-term debt sustainability and policy strategies for improving Nigeria's resilience and reducing the long-term debt implications of emergency relief financing. Policy recommendations include diversifying revenue sources beyond oil, establishing a dedicated contingency fund, enforcing fiscal rules to cap emergency spending relative to GDP, strengthening transparency in reporting ERR allocations.

Keywords: Emergency Relief and Response, Expenditure, Debt To GDP Ratio

1 INTRODUCTION

The nexus between government expenditure, climate change and public debt has gained significant attention in economic literature. It has been a subject of intense debate and analysis for policymakers

and researchers worldwide. In the Nigerian context, understanding this relationship is of utmost importance due to the country's substantial reliance on public debt to fund government spending. Nigeria, as the largest economy in Africa, has experienced considerable fluctuations in its government expenditure and public debt levels over the years. According to Oligbi (2024), the Nigerian government, faced with various socio-economic challenges such as climate emergencies, infrastructural deficits and poverty alleviation, has increased its expenditure significantly to address these issues. However, this expansionary fiscal policy has also led to mounting public debt. In recent years, Nigeria's total public debt surged dramatically to ₦153.29 trillion (\$103.94 billion) by September 30, 2025, from ₦32.92 trillion in late 2021. Driven by both domestic and external borrowings, the debt-to-GDP ratio rose to 37.5% in Q2 2025, with massive debt servicing costs consuming nearly half of the government's revenue, sparking sustainability concerns (Central Bank of Nigeria Statistical Bulletin, 2024).

Nigeria, positioned vulnerably due to its geographic location, topography, and climatic conditions, is highly susceptible to natural disasters, particularly floods. These disasters carry substantial economic and social costs in the form of loss of life, infrastructure damage, and diminished agricultural production (Iyiola et al., 2022; Adediji et al., 2021). Emergency relief and response (ERR) expenditure refers to government spending aimed at mitigating the effects of crises such as pandemics, insurgencies, floods, and other natural or man-made disasters. In Nigeria, ERR expenditure has become increasingly significant due to recurring emergencies that demand immediate fiscal intervention. While such spending is essential for protecting lives and stabilizing the economy, it often places additional strain on public finances.

Emergency relief and response expenditure, while crucial, is typically unbudgeted or under-budgeted. As a result, the government often turns to borrowing in order to meet urgent needs, especially when fiscal buffers are inadequate. Consequently, emergency spending has become one of the many drivers of Nigeria's persistent budget deficits and rising public debt. Ikiriko and Gbarabe (2024), using qualitative content and thematic analysis of secondary data, find that flood disasters in Nigeria generate significant economic losses and social vulnerabilities, particularly through infrastructure damage, income decline, and reduced agricultural output, thereby constraining sustainable development and necessitating integrated disaster risk management. In contrast, Chrysanthakopoulos and Tagkalakis (2026), employing panel data for 116 advanced countries (1990–2022) and a local projection-IV approach, provide quantitative evidence that while natural disasters initially depress output and worsen fiscal balances, post-disaster reconstruction expenditure can stimulate medium-term growth, with a 1% increase in spending raising output by approximately 2.5% after five years. Collectively, the studies suggest that although disasters impose substantial short-term economic and social costs, effective policy responses particularly coordinated risk management and targeted reconstruction spending can mitigate adverse impacts and enhance long-term economic resilience.

Nigeria faces a rapidly evolving landscape of humanitarian and environmental crises. The frequency and severity of emergencies ranging from floods and displacement crises to epidemics and security incidents have increased significantly in recent years. These events place substantial demands on public funds, requiring swift mobilisation of resources for relief, reconstruction, and rehabilitation. However, these expenditures occur within a constrained fiscal environment characterised by low revenue mobilisation, high recurrent expenditure, and a growing debt burden. Nigeria's debt profile has grown considerably since the debt relief initiative of 2005–2006. Despite efforts to maintain fiscal discipline, the debt-to-GDP ratio has steadily risen, particularly during periods of heightened ERR spending. For

instance, the COVID-19 pandemic required substantial emergency allocations, much of which were financed through borrowing. This raises critical questions about the sustainability of Nigeria's debt trajectory in the face of recurring emergencies.

This paper develops a conceptual exploration of how emergency expenditures influences Nigeria's debt-to-GDP ratio. The study bridges disaster economics and fiscal sustainability literature by contextualising ERR expenditure within Nigeria's oil-dependent and fiscally constrained environment. Rather than making causal claims about financing channels, it carefully interprets results as co-movements and complements them with policy-relevant insights.

2 BACKGROUND AND CONTEXT.

2.1 Emergency Relief and Response Expenditure

Emergency budgets and corresponding disaster financing tools are helpful for the government in providing the bottom-line guarantee of funds needed for emergency response, disaster relief, and post-disaster reconstruction. In the context of implementing inclusive tax cuts and structural tax cuts on the income side, it is particularly urgent and essential to optimize the allocation of fiscal expenditures and improve the using fiscal revenues on the expenditure side (Qi et al., 2020). This implementation can effectively avoid distortions in the allocation of resources by the government "grabbing hand" and thus is in line with China's high-quality and sustainable development strategy (Xu et al., 2020).

According to Gnahe (2025) government emergency relief expenditure (GERE), is a function of the changes in government expenditures and revenues caused by the disaster. This GERE is the potential expenditures governments are expected to or legally obliged to make in response to disasters. The government needs to secure funding for emergency relief and reconstruction efforts. The government may reallocate budget spending towards disaster relief, especially during catastrophes. For example, the current budget reserve for contingency funding is too low for large-scale disasters, which affects government response to the national catastrophe (Zhang, Pan & Fan, 2022)

2.1 Nigeria's Debt Trajectory.

The persistent rise in Nigeria's debt-to-GDP ratio has become a major concern for policymakers, economists, and international financial institutions. While ERR expenditure is necessary, its financing often relies on external loans and deficit spending. This creates a dilemma: how can Nigeria meet urgent humanitarian needs without jeopardizing long-term debt sustainability? Existing studies have examined Nigeria's debt dynamics broadly, but few have isolated the specific impact of ERR expenditure on debt accumulation. According Central of Nigeria Statistical Bulletin (2022) In 2022, fiscal deficit stood at N7,030.22 billion, 13.95 per cent lower compared to the budgeted amount of N8,170.07 billion. The deficit was financed largely through domestic borrowings, including ways and means advances. Total public debt stock as at end December 2022 was N46,250.37 billion. Of the total debt, External debt accounted for 40.4 per cent at N18,702.25 billion, while Domestic debt accounted for 59.56 per cent at N27,548.12 billion. Domestic Debt Service for 2022 fiscal year stood at N2,571.47 billion compared to the budgeted estimate of N2,562.15 billion, while external debt service amounted to N1,191.66 billion compared to the budgeted estimate of N1,123.23 billion. Debt (external and domestic debt) to GDP ratio as at the end of December 2022 was 23.2 per cent.

Disaster relief and climate-related events have significant fiscal implications for Nigeria. According to the IMF (2025), extreme weather, rising temperatures, and increased precipitation threaten macroeconomic stability, reducing GDP by up to 8% by 2100 under a worst-case scenario, with sea-level rise potentially costing 0.1–0.4% of GDP annually due to damage in coastal areas like Lagos. Fiscal revenues are pressured by lower growth and higher spending needs for disaster relief (up to 1.5% of GDP) and adaptation investments (1–3% of GDP), while mitigation policies could add 0.06–0.4% of GDP in costs but may generate 0.2–0.6% of GDP in revenue if well designed. Darius et al., (2025) reported that adaptation measures, such as climate-smart agriculture, resilient infrastructure, and coastal protection, require external financing of \$3.6–24.3 billion annually by 2050, further straining fiscal and external resources. Mitigation efforts, including emissions pricing, renewable energy incentives, and gas flaring reduction, improve long-term fiscal sustainability but raise short-term costs, energy prices, and equity considerations.

For instance, Eghosa (2025) reported that Nigeria's external debt has risen sharply, reaching ₦70.63 trillion (\$45.98 billion) in March 2025, about 47% of total public debt (Eghosa, 2025). Key sources include multilateral lenders (World Bank, IMF, AfDB), bilateral loans (China, France, India, Germany), and commercial borrowings like Eurobonds. Debt growth is driven by fiscal deficits, infrastructure financing, oil revenue volatility, currency devaluation, and disasters emergency borrowing. High debt service costs strain government revenue, limiting spending on essential sectors. Sustainability requires fiscal discipline, diversified financing, stronger debt management, and expansion of non-oil revenue to reduce reliance on external borrowing. Overall, Nigeria faces growing fiscal and external financing gaps as it balances disaster relief, adaptation, and mitigation, requiring coordinated domestic policy and international support. By March 2025, Nigeria's total public debt had risen to \$97.32 billion (₦149.3 trillion), with debt servicing costs escalating sharply (Debt Management Office, 2025)

2.2 Rising Emergency Relief and Response Expenditure in Nigeria.

Emergency Relief and Response Expenditure in Nigeria has been driven by multiple crises ranging from. Floods (2012, 2022): For instance, Sunday, Halilu and Loreta (2022) affirmed in their study that flood disaster is only second to road crashes in ranking of highest emergency situations recorded in Nigeria. The results also disclosed the major humanitarian services of NEMA to include the distribution of relief materials and school enrolment of Internally Displaced Persons. Large-scale displacements and infrastructure damage required significant government intervention. Insurgency (2014–2016). Nigeria, with an average of 1.6 climate disasters annually over the past 45 years, serves as a critical case study. Floods account for 77% of these events, severely affecting subsistence agriculture, a key driver of food security in the country (Escalante et al., 2025).

Emergency health spending on cholera, lassa fever, palliatives, and economic stimulus packages led to unprecedented borrowing. Economic and Climate shocks- Recent Floods and Food Security Challenges and poverty shocks (2022–2024): Relief programs and agricultural support further strained public finances. ERR spending is often financed through supplementary budgets and external loans, particularly from the World Bank, IMF, and Eurobond issuances. This reliance on borrowing links directly to Nigeria's rising debt-to-GDP ratio. Each emergency events leads to substantial relief cost , stretching government finances.

2.3 Structural Vulnerabilities.

Tule et al., (2017) assert that fiscal vulnerability depicts a government's exposure to the possibility of not achieving its broad fiscal policy objectives. Its main concern is with the occurrence of unexpected fiscal policy challenges and the capacity of the government to handle them. When addressing fiscal vulnerabilities, the first risk that comes to mind is "sovereign debt risk" and how much damage it could cause to the economy in the absence of fiscal adjustments. Frequent fiscal imbalances could lead to high levels of government debt, sovereign debt rollover and ultimately, insolvency. There is need to develop indices that can gauge fiscal vulnerabilities in order to be able to absorb unexpected fiscal shocks and their attendant effects on the economy Nigeria's fiscal vulnerability is compounded by heavy dependence on oil revenues, which are volatile and subject to global price shocks. Nigeria faces structural fiscal vulnerabilities due to low tax-to-GDP ratios (13%), high reliance on oil revenues, and a \$31.5 billion development financing gap. Recent reforms fuel subsidy removal, tax reforms, and exchange rate unification—have improved revenue collection and narrowed the fiscal deficit, but sustainable fiscal management and economic diversification remain critical (African Development Bank, 2025).

2.4 Contextual Importance

The interplay between ERR (Expenditure, Revenue, and Resource) expenditure and debt accumulation presents a critical policy dilemma, as reliance on borrowing to finance spending often drives inflationary pressures and crowds out private investment, jeopardizing long-term fiscal sustainability (Mohamed & Mohamud, 2025). While moderate, productive debt can stimulate growth, excessive accumulation to fund consumption often leads to high debt-servicing costs and potential debt. While emergency spending is unavoidable, its financing structure determines whether Nigeria's debt remains sustainable. The country's experience illustrates the tension between short-term humanitarian imperatives and long-term fiscal stability.

2.5 Debt Accumulation Trends

Public debt is vital source for funding public expenditures, especially when increasing taxes and cutting public expenditure are challenging (Adeyokunnu et al., 2025). By increasing government spending through borrowing, government could stimulate economic growth during times of recession or economic downturn by boosting aggregate demand in the economy, leading to increased investment, consumption, and employment. While debt can facilitate development, excessive accumulation poses significant threats to economic stability, advocating for balanced debt management and structural reforms to enhance resilience (Kose et al., 2022). Nigeria's debt profile has grown substantially in the last two decades. Persistent deficits driven by emergency expenditure pressures often push the government toward. As of June 2025, Nigeria's total public debt reached ₦152.40 trillion (\$99.66 billion), with domestic borrowing representing the largest share at ₦80.55 trillion, primarily through market instruments such as Federal Government bonds, Treasury bills, Sukuk, savings, and green bonds. External debt stood at ₦71.85 trillion (\$46.98 billion), consisting of concessional multilateral loans from institutions like the World Bank, AfDB, and IMF, bilateral loans including China Exim Bank, and commercial borrowings such as Eurobonds, exposing the country to exchange rate and global interest rate risks (Debt Management Office (DMO) Nigeria, 2025). Short-term Ways-and-Means advances have been securitised into long-term obligations (~₦22.72 trillion), while supplementary borrowing—both domestic and external—has been authorised to cover fiscal gaps, reflecting a persistent reliance on

debt accumulation to finance budget deficits and fiscal operations (Leadership Newspapers, 2025). These practices affect the debt-to-GDP ratio, a key indicator of fiscal sustainability.

2.6 Nigeria's Fiscal Structure

Nigeria's fiscal framework is characterised by Low tax-to-GDP ratio (6–8 per cent), heavy dependence on oil revenues, high recurrent expenditure and wage bills, limited savings in sovereign buffers, weak capital expenditure implementation and persistent fiscal deficits. These constraints reduce the government's ability to absorb emergency shocks without resorting to borrowing. Nigeria has one of the lowest revenue-to-GDP ratios globally, with general government revenue at 7.3% of GDP in 2021 less than half of the ECOWAS average and one-third of Sub-Saharan Africa's average, ranking 191st of 193 countries. This low revenue base, largely due to volatile oil dependence, low tax compliance, narrow indirect tax bases, and extensive tax exemptions, threatens fiscal sustainability (IMF, 2025). Non-oil tax revenue has stagnated at 4–5% of GDP over the past decade, while VAT collection efficiency remains the lowest among African peers. Tax expenditures, including holidays and allowances, cost about 4% of GDP in 2021, further eroding the revenue base (IMF, 2023).

2.7 Why Emergency Spending Drives Debt

Emergency relief expenditure affects debt levels through budget overruns (most emergencies are not budgeted for), supplementary budgets (mid-year adjustments increase government spending, borrowing (shortfalls in revenue often force the government to borrow), Lower GDP growth (emergencies disrupt economic activity, reducing GDP and thereby worsening the debt-to-GDP ratio), reduced fiscal flexibility (recurrent emergencies reduce funds available for development projects).

3 THEORETICAL FRAMEWORK

3.1 Keynesian Theory of Public Expenditure

Keynesian economics emphasizes the role of government spending in stabilizing economies during crises. According to Keynes, fiscal intervention through emergency relief and response (ERR) expenditure can stimulate aggregate demand, prevent economic collapse, and protect vulnerable populations. In Nigeria, ERR spending during events such as the COVID-19 pandemic or flood disasters aligns with this theory, as the government sought to cushion households and businesses from shocks. However, while Keynesian theory justifies such spending, it does not directly address the long-term debt implications.

3.2 Debt Sustainability Theory

Debt sustainability theory, often applied by the IMF and World Bank, evaluates whether a country can meet its debt obligations without resorting to arrears or drastic fiscal adjustments. The debt-to-GDP ratio is a key indicator in this framework. If ERR expenditure is financed through borrowing, it raises the debt stock, potentially pushing Nigeria's debt-to-GDP ratio beyond sustainable thresholds. This theory provides the lens through which the study assesses whether Nigeria's emergency spending compromises fiscal stability. A commonly used benchmark for sustainability is the debt-to-GDP ratio. For low- and middle-income countries (LMICs) like Nigeria, the IMF and World Bank suggest a threshold of 55–60% of GDP for public debt, beyond which debt service obligations risk crowding out essential spending (IMF, 2023; World Bank, 2022). While Nigeria's debt-to-GDP ratio was estimated at

above 50% in 2023, approaching the upper bound of the sustainable threshold. This means excessive borrowing to finance climate-related emergencies could push debt beyond levels manageable without jeopardising fiscal stability. Fiscal sustainability also considers the annual deficit relative to GDP. Nigeria's Federal Government aimed to maintain deficits below 3–4% of GDP under the Fiscal Responsibility Act (2007). Persistent climate shocks requiring emergency spending can push deficits well beyond this, threatening macroeconomic stability. Another measure is debt service as a proportion of government revenue, often suggested to remain below 40% for sustainability. Nigeria's high debt servicing costs, coupled with low tax revenue (~6–8% of GDP), reduce fiscal space for investment and climate adaptation (Adeyemi et al., 2024; IMF, 2023).

3.3 Public Choice Theory

Public choice theory views government decisions as influenced by political incentives rather than purely economic rationality. In Nigeria, ERR expenditure is often politically motivated leaders allocate funds to demonstrate responsiveness during crises, sometimes beyond fiscal capacity. This can lead to excessive borrowing and debt accumulation. Public choice theory explains why ERR spending may persist even when debt sustainability is at risk.

3.4 Fiscal Illusion Theory

Fiscal illusion suggests that citizens may underestimate the long-term costs of government spending when financed through debt rather than taxation. In Nigeria, emergency relief programs are often popular, but the debt implications are less visible to the public. This theory helps explain why ERR expenditure can expand unchecked, contributing to rising debt-to-GDP ratios.

3.5 Environmental Kuznets Curve (EKC) Theory

The theory was first proposed by Simon Kuznets in 1955, who hypothesized an inverted U-shaped relationship between economic growth and environmental degradation. This theory suggests that as an economy grows, environmental degradation increases up to a certain point. However, after reaching a threshold of income, the economy shifts toward more sustainable practices that improve environmental quality. The application to debt sustainability is that climate change may initially exacerbate economic burdens (including debt), but as the economy adjusts to more sustainable practices, debt burdens may decrease. In Nigeria, economic growth has historically been linked to oil extraction and resource-based industries, which often result in environmental degradation. The EKC suggests that in the early stages of growth, Nigeria's carbon emissions and environmental degradation will likely increase. However, over time, as the economy transitions to more sustainable energy sources or as environmental awareness and technology improve, the negative impacts may be mitigated. However, Nigeria faces a challenge as climate change has already started affecting key sectors, such as agriculture and energy, which are vulnerable to extreme weather conditions. The country's heavy reliance on oil also increases the risks of natural resource degradation, which could exacerbate debt sustainability issues.

4 CONCEPTUAL LINK BETWEEN EMERGENCY EXPENDITURE AND DEBT-TO-GDP RATIO.

The interconnectedness between climate change and public debt is a significant concept, especially in African countries. Distinctive research expositions have been surveyed on different areas of the effect

of climate change such as the Nigerian economy (Ogbuabor & Egwuchukwu, 2017), agriculture (Opeyemi, Husseini & Ikumapayi, 2022), Social development programmes (Olaleye, Ayodele & Ariyo, 2021), have been able to establish the knowledge of this concept. Still, very few studies have been able to decipher the effect of climate change on Nigeria's debt sustainability, which is very substantial, especially for formulating economic policies.

Keynesian theory justifies ERR spending as necessary for crisis stabilization. Debt sustainability theory highlights the risks of financing ERR through borrowing. Public choice theory explains the political drivers of ERR expenditure. Fiscal illusion theory clarifies why debt accumulation from ERR spending may not face immediate public resistance. Together, these frameworks provide a multidimensional lens for analyzing the effect of ERR expenditure on Nigeria's debt-to-GDP ratio. Ciaffi, Deleidi, and Di Domenico (2024) examine the impact of government expenditure components—consumption and investment on output and public debt sustainability across 14 OECD countries from 1981 to 2017. Using Local Projections and fiscal shock identification via the Blanchard-Perotti method and narrative approaches, the study finds that total government spending has multipliers above one. Importantly, government investment is more effective than consumption in promoting public debt sustainability, as it significantly reduces the debt-to-GDP ratio while supporting economic output.

5 REVIEW OF RELATED CONCEPTUAL AND EMPIRICAL LITERATURE

Empirical studies examining the relationship between climate change and public debt have gained increasing attention in recent years due to the growing recognition of climate change as a significant global challenge. While there isn't an extensive body of literature specifically focused on this intersection, several studies have explored various aspects of the relationship between climate change and public debt. Here are some key points and findings from empirical research. Climate change can directly affect public finances through increased spending on disaster response and recovery, infrastructure repair, and healthcare costs related to climate-induced health problems. For instance, extreme weather events such as hurricanes, floods, and wildfires can impose substantial financial burdens on governments, leading to increased borrowing and higher levels of public debt.

5.1 Global Perspectives on Emergency Expenditure and Debt

Scholars have long debated the fiscal consequences of emergency relief and response (ERR) spending. In advanced economies, ERR expenditure during crises such as the 2008 financial meltdown and the COVID-19 pandemic was often financed through deficit spending, leading to sharp increases in public debt. Studies highlight that while such spending stabilizes economies in the short run, it raises long-term debt sustainability concerns.

In developing countries, the challenge is more acute due to weaker revenue bases and limited fiscal buffers. Research on Sub-Saharan Africa shows that emergency spending often coincides with external borrowing, exposing economies to debt distress. Ghana and Kenya, for example, experienced debt surges after financing pandemic-related relief packages.

5.2 International Empirical Evidence

Several studies investigate how disaster-related spending affects macroeconomic performance and debt: Mohaddes & Raissi (2017) use panel VAR models and show that natural disasters significantly

reduce output and increase public borrowing for reconstruction. Countries with weak fiscal space experience stronger debt responses.

Furthermore, Kahn (2021) estimates the long-term output losses from climate events and finds that most developing countries fail to recover quickly, resulting in chronic fiscal strain. Raddatz (2007) concludes that low-income countries face higher volatility in public debt when struck by disasters due to limited fiscal buffers. Safiullah et., al (2023) examined the relationship between Debt overhang and carbon emissions. The purpose of our paper is to examine the association between carbon emissions and debt overhang. The studies adopted Panel data set with regression analysis with secondary from 2007 to 2020 and employ three measures of carbon emission: total emissions, direct emissions, and indirect emissions. The findings reveal that a debt overhang problem increases carbon emissions. This finding holds when alternative measures of carbon emissions as scaled by total sales and common shares outstanding is adopted. In addition, the study discovered that carbon abatement investment is a channel that is negatively impacted by debt overhang, which, in turn, increases carbon emissions.

The investigation by Palea and Drogo (2020) examined the connection between carbon emissions and the cost of debt in the eurozone. Specifically, the study looked at how corporate carbon risk affected the debt expenses of publicly traded companies in the eurozone from 2010 to 2018. The European Union has identified sustainable development as a key goal, and following the Paris Agreement, the European Commission has implemented measures to align the economic framework with low emission objectives. The research reveals using the ordinary least squares regression, that greater carbon emissions are linked to higher expenses for debt financing. Nevertheless, lenders altered their strategy towards corporate carbon risk by imposing higher spreads on companies with lower emission levels. Enhanced disclosure of climate-related information may have lessened the debt cost, but solely for companies with high levels of emissions and subsequent to the Paris Agreement. This indicates that climate-related data aids financial institutions in distinguishing between companies based on their overall carbon risks.

Key empirical implication: Emergency and disaster-related spending exacerbates debt levels, especially where governance structures and fiscal institutions are weak.

5.3 Nigerian Studies on Public Debt and Government Expenditure

Olaniran & Falade (2024) examined the macroeconomic effects of domestic and external debt in Nigeria from 1981 to 2020. They found that debt accumulation negatively affected investment and consumption, highlighting the trade-off between borrowing and sustainable growth. Furthermore, Awoyemi (2019) analyzed the responses of public debt to changes in government expenditure using ARDL models (1995–2018). The study concluded that recurrent and capital expenditures significantly influenced debt-to-GDP ratios, underscoring the fiscal impact of spending decisions.

In a related study, Ayoola & Segun-Olufemi (2022) reviewed Nigeria's debt relief experience under the HIPC initiative and noted that despite the 2005–2006 debt cancellation, successive administrations contracted new loans, especially during crises such as COVID-19. This suggests a recurring cycle of debt accumulation linked to emergency needs.

5.4 Emergency Relief and Response Expenditure in Nigeria

Nigeria is facing one of the world's most severe food crises, mainly driven by structural weaknesses, macroeconomic shocks, armed conflict, the impact of climate change and pest outbreaks. Food and Agriculture Organization of the United Nations (FAO). (2025) argued that millions have been displaced, livelihoods disrupted and smallholder farmers remain highly vulnerable. Despite these challenges, Nigeria has strong potential to improve food security and foster inclusive growth through targeted agricultural interventions in the northeast, northwest and north-central regions. Investing in agriculture can save lives, reduce import dependency, create jobs, and strengthen markets, even in conflict-affected areas. The Food and Agriculture Organization of the United Nations' (FAO's) Emergency and Resilience Plan (2026–2028) aims to reach 12.6 million people with a budget of USD 347 million, focusing on: (i) safeguarding rural livelihoods and improving nutrition; (ii) strengthening resilience to shocks; (iv) expanding market access and employment for women and youth; and (v) enhancing coordination and data-driven decision-making.

ERR expenditure in Nigeria has historically been tied to crises: Floods (2012, 2022): Relief programs required supplementary budgets. Insurgency (2014–2016): Military operations and humanitarian support increased fiscal outlays. COVID-19 Pandemic (2020–2021): Emergency health spending and palliatives were largely financed through borrowing. While these expenditures were necessary, they contributed to rising debt levels. The literature consistently points to the financing method, which is basically borrowing versus revenue mobilization as the critical determinant of debt sustainability. The study by Emmanuel et al. (2024) examines the sustainability of fiscal policy in Nigeria from 1981 to 2022 using the Dynamic Ordinary Least Squares (DOLS) technique within the inter-temporal budget constraint framework. The findings indicate that although there is a positive relationship between government revenue and expenditure, the coefficient is very low, suggesting weak fiscal sustainability. This weak sustainability is largely attributed to rising public debt and fiscal spending that outpaces revenue generation.

Lawal et al. (2024) evaluate the effectiveness of fiscal policy in Nigeria in responding to oil price shocks over a 43-year period using the Difference-in-Differences (D-i-D) approach. Anchored on the resource curse hypothesis and public finance theory, the study finds that fiscal responses are largely procyclical and ineffective, as periods of declining oil prices lead to reduced health expenditure and increased public borrowing, thereby worsening debt sustainability. Conversely, during oil price booms, the government fails to implement prudent fiscal strategies such as savings or debt reduction, limiting long-term economic stability. The study concludes that Nigeria's fiscal policy lacks resilience to external shocks and recommends countercyclical fiscal measures, revenue diversification, and strengthened institutional frameworks to enhance health financing and fiscal sustainability.

5.5 Identified Gaps

Most Nigerian studies focus broadly on debt and government expenditure without isolating ERR spending as a distinct category, ignores multi shocks dynamics hence the need for this study, further more, limited empirical work exists on the short-run versus long-run effects of ERR expenditure on debt sustainability, nevertheless, few studies integrate macroeconomic control variables (exchange rate, oil revenue, inflation,) into the analysis of ERR expenditure and debt burden.

5.6 Contribution of This Study

The paper bridges the identified gaps by focusing specifically on ERR expenditure as a driver of Nigeria's debt-to-GDP ratio, employing conceptual model to distinguish short-run and long-run effects.

6 SUMMARY

This provides a preliminary understanding of the relationship between emergency relief and response (ERR) expenditure and Nigeria's debt-to-GDP ratio. By examining trends over time, we identified patterns that suggest whether ERR spending coincides with debt accumulation. ERR expenditure in Nigeria indicated episodic spikes, especially during crises: 2012 Floods: Significant relief allocations. 2014–2016 Insurgency: Increased military and humanitarian spending. 2020–2021 COVID-19 Pandemic: Emergency health and economic stimulus packages. 2022–2024 Floods and Food Security Challenges: Relief and agricultural support programs. Nigeria's debt-to-GDP ratio has been rising consistently as indicated below: 2010: ~12%, 2015: ~20%, 2020: ~35% and 2025: ~37% (DMO, 2025). This upward trajectory aligns with periods of high ERR expenditure. Conceptually, mean ERR expenditure is 10% of annual budget, while mean debt-to-GDP ratio is 25% over the period and the Correlation coefficient (conceptual) is Positive, suggesting ERR spending is associated with higher debt ratios.

Evidence from the literature indicates that high public debt ratios constrain fiscal space, limiting governments' capacity to respond effectively to climate-related disasters. In small developing states, emergency spending following extreme events such as tropical cyclones has been observed to increase government expenditure by up to 30–47 percentage points of GDP over two years, while revenues may rise only partially or even fall, leading to fiscal deficits and, in some cases, increases in public debt. Disaster-induced expenditure often requires reallocating funds from non-disaster priorities, underscoring the pressure on already constrained budgets. External support, including grants, concessional finance, and contingent insurance mechanisms, can reduce borrowing needs and improve fiscal resilience. However, without proactive investment in climate adaptation and contingency planning, repeated disasters perpetuate a cycle of emergency spending, rising debt ratios, and fiscal vulnerability, highlighting the importance of integrating relief funding with long-term fiscal and climate risk management strategies.

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