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Political Economy and Institutional Drivers of Health Budget Deviations in North-Eastern Nigeria

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Abstract
This study examined the political, economic, and institutional factors influencing health budget implementation and expenditure performance in North-Eastern Nigeria between 2021 and 2024. Specifically, it investigated the influence of political will on health budget execution rates, assessed the effect of security challenges on capital health budget deviations, and determined the effect of the timeliness of fund releases on unspent health budget allocations in selected states. An ex post facto research design was adopted, using secondary data obtained from state budget implementation reports, Ministries of Finance, Auditor-General reports, and relevant institutional databases. The data were analysed using Panel Least Squares regression. The descriptive results revealed an average health budget execution rate of 61.25%, an average capital health budget deviation of 29.78%, and average unspent health allocations of 22.16%. The regression results showed that political commitment to health had a positive and statistically significant influence on health budget execution ($\beta = 2.714$, $p < 0.001$). Security challenges also had a positive and significant effect on capital health budget deviation ($\beta = 0.518$, $p < 0.001$), indicating that increasing security pressures were associated with greater deviations in capital health expenditure. Similarly, the timeliness of fund release significantly influenced unspent health allocations ($\beta = 3.104$, $p < 0.001$). The findings demonstrate that health budget performance in North-Eastern Nigeria is shaped not only by the size of approved healthcare budgets but also by the political and institutional environment within which public health expenditure is implemented. The study concludes that strengthening political commitment, improving security coordination, ensuring timely release of approved health funds, and enhancing institutional accountability are essential for improving healthcare financing, budget execution, and public health expenditure outcomes in North-Eastern Nigeria.

Keywords: *health budget implementation; healthcare financing; budget execution; political will*

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1.0 Introduction

Public health financing contributes greatly to the enhancement of health service provision and social services provision in developing countries like Nigeria (Belay et al., 2024). But, the performance of the health sector has remained sub-optimal in various Nigerian states due to budget deficit and overspending (Belay et al., 2024). However, the situation seems worse in North Eastern Nigeria due to the long time impact of insecurity, poverty, and low levels of institutional efficiency and public financial management (PFM) (Ukachukwu, 2024). Despite rising disease burdens and humanitarian pressures in conflict-affected areas, reports from the World Bank indicated that Nigeria continues to face challenges with inadequate funding for healthcare services.Reports from the World Bank show Nigeria has continued to experience low funding for health services despite the rising disease burdens and humanitarian pressures experienced in conflict-affected areas of the country (Belay et al., 2024). The Boko Haram insurgency has also caused the disruption of health systems, the destruction of health facilities and the displacement of health workers in Borno, Yobe and Adamawa states (Ukachukwu et al., 2024). Others attribute the failure to implement health budgets in the region to insecurity, whilst others believe that corruption, failure to release funds and political interference are all significant factors in budget deviations. On the ground, numerous projects to meet health standards have not yet been completed and have been repeatedly promised by the government with funding yet to be confirmed (Amedu, 2025). Thus, it is important to understand the political economy and institutional forces driving the deviation of health budgets in order to enhance accountability and health service provision in North Eastern Nigeria from 2021 to 2024 (Nwoke et al., 2024).

Statement of the Problem

While the health sector in North Eastern Nigeria has faced increased challenges and needs, the implementation of health budgets has remained poor, and there is a large gap between the budgets approved and actual spending.The health sector in North Eastern Nigeria has continued to encounter health challenges, and health budgets have been poorly implemented with significant deviations between what is approved and what is actually spent. The government reports that many health projects are still abandoned, and hospitals are still facing shortages of drugs, staffs and basic facilities in the region (Amedu, 2025). Though insecurity is seen as the single primary cause, there are evidence of political interference, corruption, delayed release of funds, and poor institutional controls, which have been a major contributor to the problem (Ukachukwu, 2024). These budget misallocations are likely to be ongoing concerns in the effectiveness of governance and public accountability in the health sector (Adan, 2026). However, few empirical studies have investigated the interaction of political economy and institutional determinants of the deviations in health budgets between 2021 and 2024 in the North Eastern Nigeria.But, there is limited empirical research that have looked at the interaction between political economy and institutional factors influencing the deviations in health budget in North Eastern Nigeria between 2021 and 2024 (Nwoke et al., 2024).

Objectives of the Study

1. To examine the effect of political commitment to health on health budget execution rates in North Eastern Nigeria from 2021 to 2024.
2. To assess the influence of security challenges on capital health budget deviations in North Eastern Nigeria from 2021 to 2024.
3. To determine the effect of timeliness of fund release on unspent health allocations in North Eastern Nigeria from 2021 to 2024.

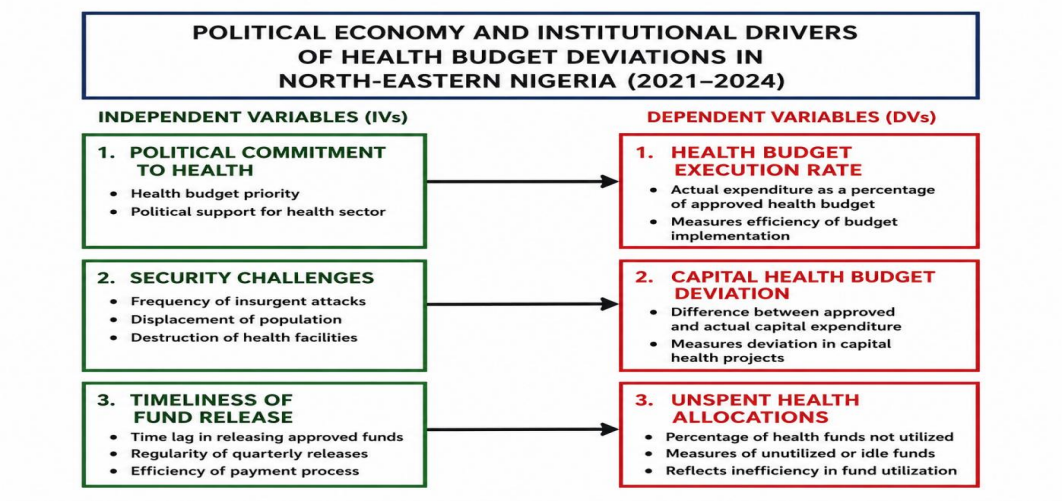
Research Questions

1. How does political commitment to health affect health budget execution rates in North Eastern Nigeria from 2021 to 2024?
2. What is the influence of security challenges on capital health budget deviations in North Eastern Nigeria from 2021 to 2024?
3. How does timeliness of fund release affect unspent health allocations in North Eastern Nigeria from 2021 to 2024?

Research Hypotheses

H01: Political commitment to health has no significant effect on health budget execution rates in North Eastern Nigeria from 2021 to 2024.
H02: Security challenges have no significant influence on capital health budget deviations in North Eastern Nigeria from 2021 to 2024.
H03: Timeliness of fund release has no significant effect on unspent health allocations in North Eastern Nigeria from 2021 to 2024.

Conceptual Framework



Conceptual framework provides an explanation of how the independent and dependent variables are related in the study. The framework reveals that the key elements that impact health budget deviations in North Eastern Nigeria are political commitment to health, security challenges, and fund release timeliness. Political commitment impacts on the speed of health budget implementation as reflected in the Government's support and the priority given to the health budget. Capital health budget deviation is caused by insurgency attacks and demolished health facilities which contribute to security challenges. Similarly, late disbursements of approved monies lead to a corresponding build-up of unspent health

allocations and support the budget implementation. Thus, it shows that the performance of health budgets in the region is strongly influenced by institutional and political determinants.

2.0 Literature Review

Theoretical Framework

Public Choice Theory

Public Choice Theory is the theory that was developed primarily by James Buchanan and Gordon Tullock in 1962 to explain how the decision is made by the political actors and public officials based on personal interests rather than collective welfare (Buchanan & Tullock, 1962). The theory posits that politicians, bureaucrats and government institutions frequently act in self-interest, political survival and electoral interest in allocating public resources, rather than just looking out for public interests (Mueller, 2003). The theory assumes that the government officials act in the political system as rational economic actors who try to maximize their benefit and minimize their personal losses (Buchanan & Tullock, 1962). This means that public expenditures – including health expenditure – can be adjusted to make them more politically 'palatable' to political allies, to reward political supporters, or to meet political pressures in order to address political priorities rather than health priorities (Persson & Tabellini, 2000). Political office holders in Nigeria occasionally divert resources approved for health to security or politically prominent activities during elections and times of insecurity, particularly in North Eastern Nigeria (Belay et al, 2024). The theory has a strong explanation for political interference and budget manipulation, but it also assumes that all public officials are selfish, and does not take into account moral motivations in governance systems (Hindmoor, 2006). The other limitation is that the theory does not focus enough on institutional culture and administrative constraints of public finance management (PFM) (Ostrom, 1998). Despite the criticisms, the theory is still relevant because it clearly explains how political commitment and interest of the elites affect the health budget execution and deviations in the fragile states like North Eastern Nigeria (Ukachukwu, 2024). The main advantage of this theory is that it provides a practical explanation of the fiscal behavior and policy distortion of public institutions (Mueller, 2003). This knowledge suggests that the theory is appropriate to analyze the process of political actors influencing the health budgeting outcomes and health expenditure implementation from 2021 to 2024 (Persson & Tabellini, 2000).

Institutional Theory

Institutional Theory was popularized by John Meyer and Brian Rowan in 1977 to account for the influence of organisation structures, rules and norms on institutional behaviour and policy outcomes in society (Meyer & Rowan, 1977). The theory is based on the assumption that institutions operate within the framework of pre-existing regulations, routines and administrative processes that influence decision making and organisational performance (Scott, 2004). The theory is that weak institutional structures tend to generate inefficiency, lack of accountability and failure of policy implementation throughout public sector organisations (North, 1990). In the context of public finance management, Institutional Theory proposes that such problems as delayed fund release, weak monitoring systems, poor auditing systems, and administrative bottlenecks can lead to significant budgetary gaps between budget and spending (Scott, 2004). In North Eastern Nigeria, limited capacity of technical staff, inadequate procurement systems and weak oversight systems in ministries and agencies handling health budgeting have continued to impede financing of healthcare

services (Belay et al., 2024). Although some writers point out that insecurity is the primary reason for the poor budget implementation in the region, Institutional Theory gives a wider explanation because it highlights structural and institutional failures in governance institutions (Adan, 2026). Proponents of the theory have been criticized for their overemphasis on organisational structures and underemphasis on political power struggles and external economic pressures on the actions of institutions (DiMaggio & Powell, 1983). A second drawback is that the theory can assume that institutions strive to become legitimate and efficient, but this may not always be the case, as is the case in highly political contexts like in Nigeria (North, 1990). Even so, the theory has usefulness because it helps to understand the impact of institutional arrangement on the health sector's budget implementation, accountability, and financial discipline (Scott, 2004). The power of the theory is that it is able to link the governance systems to organisational outcomes and policy implementation processes (Meyer & Rowan, 1977). Hence, the study relies on Institutional Theory since it presents a solid framework to explore the institutional factors that cause expenditure deviations in the health sector of North Eastern Nigeria between 2021 and 2024 (Belay et al., 2024).

Political Economy Theory

Political Economy Theory began in 1776 in the work of Adam Smith, and expanded and developed by Karl Marx and others, political economists to explain the political, economic and societal relations of resources (Smith 1776). It is a theory that claims that political, power, and social relations in the state affect economic decisions and public resource allocation, to an extent. (Marx, 1867). The theory's most significant assumption is that governments do not allocate resources based solely on developmental requirements due to the influence of political pressures, institutional interests and the role of elites in determining priorities for public expenditure (Gilpin, 2001). In developing countries like Nigeria, political leaders sometimes focus on short-term political payoffs over long-term investments like the development of healthcare infrastructure and service delivery, which can have a lasting impact on the well-being of the nation's citizens (Belay et al., 2024). Insurgency and humanitarian crises in North Eastern Nigeria have put extra strain on government budgets, causing budget diversion and deviations from the initial health budgets (Ukachukwu, 2024). It has been suggested that these issues are primarily caused by poor governance, however it is the link between fiscal outcomes and political bargaining, power struggles and competing state priorities as suggested by Political Economy Theory that provides a broader explanation.Poor governance can be blamed on these issues, but the framework of Political Economy Theory extends that explanation by connecting fiscal outcomes to political bargaining, power struggles and competing state priorities (Leftwich, 2005). It has been claimed that the theory may be too general as almost any governance issue could be viewed through the prism of political and economic interest with no clear delineation of measurable boundaries (Gilpin, 2001). A further limitation is that it can fail to consider the impact of ethical and administrative approaches of individual staff on the outcome of policy (Leftwich, 2005). The theory is, however, highly relevant because it helps to understand how political interest, security concerns, and institutional weaknesses together impact the implementation of the health budget in fragile areas (Belay et al., 2024). It is the strength of its multidimensional view on governance, budgeting, and public expenditure behaviour in developing economies (Smith, 1776) that makes it a major strength. Political Economy Theory is selected as the dominant theory for this study based on the fact that it is a theory

which directly explains the relationship between political interests, institutions and health budget deviations in North Eastern Nigeria from 2021 to 2024 (Ukachukwu, 2024).

Political Commitment to Health

Political commitment to health involves the determination of government authorities to give priority to health by providing policy support, sufficient financial resources and adequate implementation of health programmes in the public sector (Gabdo et al., 2025). In most developing countries political engagement could be the determining factor for the quality of infrastructure, the availability of medical staff, and the consistency of healthcare funding in various regions (Ogunniyi et al., 2024). Health sector in Nigeria has been subjected to varying degrees of political attention over the years despite the increasing disease burden and maternal mortality which have been reported by the World Health Organisation and National Bureau of Statistics, Iyanda & Adeleke (2026). Others have said that the lack of political will and competing interests are still some of the major challenges that affect implementation of healthcare budgets in fragile environments like North Eastern Nigeria (Ajayi, 2024); while some others have said that the economic constraints still limit investments in healthcare. At a practical level, governments with higher levels of political commitment to healthcare have higher rates of budget execution and better services delivery performance in public hospitals and primary healthcare centres (Gabdo et al., 2025).

Security Challenges

One of the most serious issues that have impacted governance, economic activities and public service deliveries in North Eastern Nigeria in recent years is security (Ajayi, 2024). Healthcare systems have been affected by the Boko Haram insurgency, farmer herder conflict and communal violence through the destruction of hospitals, displacement of population and diversion of public funds to emergency security operations (Dan Azumi, 2025). Reportedly, the region has experienced a displacement of millions of people since the upsurge of insurgency activities which has placed additional strain on health systems and the financial resources of the government (Ogunniyi et al, 2024). Some papers suggest that insecurity directly leads to budget deviations, which are made by emergency reallocations (Iroha et al., 2024); others suggest that insecure conditions contribute to the worsening of the situation due to institutional corruption and weak financial monitoring structures. The prevalent insecurity in Nigeria has adversely affected government's ability to complete capital investments and ensure proper funding of healthcare services in conflict affected communities in the North Eastern region of the country (Ajayi et al., 2024).

Timeliness of Fund Release

Timeliness of fund release is the prompt and regular release of approved public funds to the ministries, departments and agencies to implement projects and provide services (Iroha et al., 2024). The issue of delayed releases of approved health allocations has been a persistent problem in Nigeria, as many health projects and operational activities in states struggle to be implemented due to this delay (Gabdo et al., 2025). Reports of government budget performance reveal that in many public institutions, accessing funds as approved for expenditure is delayed, which slows down procurement processes and hinders programme implementation in the health sector (Iyanda & Adeleke, 2026). Bureaucratic bottlenecks and erratic treasury systems have been blamed for these delays by some analysts, while political interference and fiscal pressures due to competing national priorities have been blamed by

others (Ajayi, 2024). Delayed release of health funds has been a major factor in abandoned projects, shortage of medical supplies, and poor healthcare outcomes in rural areas in conflict and poverty prone areas of North Eastern Nigeria (Dan Azumi, 2025). Hence, the need for effective and timely fund disbursement to enhance budget performance and support healthcare delivery systems in the region is still a requisite (Ogunniyi et al., 2024).

Health Budget Execution Rate

The level of execution of the health budgets are measured by the ratio of actual health budget expenditure to the approved amount and the number of projects completed within the fiscal period (Gabdo et al., 2025). It is usually calculated by the ratio of real health expenditure to the budgetary approval of public expenditure (Iroha et al., 2024). The low budget execution rates in many developing economies may also reflect institutional inefficiencies, lack of fiscal discipline and weak governance in the public financial management systems (PFMS) (Ajayi, 2024). Although donor funds and increased health needs, particularly in vulnerable areas, have been introduced, various reports from the Budget Office have indicated that the funding gap between the approved budget and actual spending remains unchanged, both at the federal and state levels (Iyanda & Adeleke, 2026). Some of the drivers cited for low execution rates are revenue inadequacies and economic instability, while others cite political interference and weak monitoring systems to have a more significant role in the poor budget implementation outcomes (Ogunniyi et al., 2024). Access to quality health services has been further compromised in many rural and displaced communities in North Eastern Nigeria due to conflict-related disruptions and delayed fund releases, which negatively impacted health budget execution (Dan Azumi, 2025).

Capital Health Budget Deviation

The deviation between the budgeted capital allocation for health projects and the actual capital expenditure incurred in implementing the projects in a fiscal year is called the capital health budget deviation (Iroha et al., 2024). Capital budgets typically are allocated to infrastructure developments, hospital construction, procurement of medical devices and rehabilitating health facilities in the public health sector (Gabdo et al., 2025). In Nigeria, the problem of poor implementation of health infrastructure projects, particularly in the context of institutional weaknesses in project management systems, has led to several projects being stalled even after budget approvals (Ajayi, 2024). The deviations in capital health expenditure are usually tied to insecurity, corruption, irregular procurement processes and changing priorities of the government from one state to the other and between ministries, according to results of the public expenditure audit (Iyanda & Adeleke, 2026). Some policy makers see these deviations primarily as a result of revenue volatility, while others argue that political vested interests and poor control of the public institutions drive out project abandonment and financial leakages (Dan Azumi, 2025). Insurgency has compounded the implementation of approved capital health projects in affected communities in North Eastern Nigeria, as it destroyed health care facilities (Ogunniyi et al., 2024).

Unspent Health Allocations

Unspent health allocations are the amount that approved health budgets have not been used up or released at the end of a financial period even though government authorities have committed to spending health funds on health-related activities (Gabdo et al., 2025). In other public institutions, not all of the allocated resources are used, which can be attributed to low

institutional capacity in project implementation and service delivery, which may be due to slow disbursement procedures, lack of planning or poor institutional capacity in project implementation (Iroha et al., 2024). Unspent public funds have been reported to have remained significantly high in the health sector in Nigeria, as healthcare needs are increasing and humanitarian issues continue to remain a common occurrence in vulnerable communities across the country (Ajayi, 2024). International agencies report that certain health resources are not being optimally utilized in public health facilities due to underutilisation by delayed procurement systems and poor financial accountability (Iyanda & Adeleke, 2026). Some researchers have suggested that fiscal constraint has a stronger influence on why some budgets are not used, but others have stressed the importance of governance failures and inadequate monitoring of the budget's use. (Dan Azumi 2025) The increased volume of unspent health funds due to insecurity and administrative disruptions in North Eastern Nigeria has also impacted on access to healthcare and public trust in government institutions (Ogunniyi et al., 2024).

3.0 Research Methodology

Research Design

The study is of ex post-facto research design as the data needed for this study was already collected and existing data on the health budgets, institutional structures and political conditions in North Eastern Nigeria for the period under review (2021-2024) was used. The design is appropriate, because the researcher does not have control over the independent variables: security problems or political will to health. It also facilitates the study of the cause and effect links between fiscal and institutional evidence. This understanding lends itself to designing the study to address the question of how the political economy and institutional factors relate to deviations in health budgets for the selected states during the study period.

Nature and Sources of Data

A secondary data analysis approach is applied to the study that relied on secondary data from credible government and international sources. Information on approved health budgets, budgets implemented, and health budget implementation rates will be obtained from the state budget documents, Ministries of Finance, Budget Offices and the reports of the Auditor General. Data on security issues will be gathered from ACLED and humanitarian reports, and institutional indicators from World Bank governance databases and public expenditure reviews. The secondary data is appropriate because of the availability of reliable data from past years that can be used to assess the fiscal trends and the fiscal impacts of the policy over time in North Eastern Nigeria from 2021 to 2024.

Scope of the Study

The study highlights the political economy and institutional factors that cause health budget deviations in North Eastern Nigeria 2021-2024. Geographically the study was carried out in six (6) states of the North Eastern States which includes Borno State, Yobe State, Adamawa State, Bauchi State, Gombe State and Taraba State. The content focus are the independent variables: political commitment to health, security challenges, and the timeliness of the release of funds, and the dependent variables: health budget execution rate, the capital health budget deviation, and unspent health allocations. The selected time frame reflects the fiscal, insecurity and institutional dynamics in the region that are recent realities in healthcare financing and public expenditure management.

Model Specification

The functional relationship for the study is expressed as:

$$HBD=f(PCH,SCH,TFR)$$

The econometric model is stated as:

$$HBER=\beta_0+\beta_1 PCH+\mu$$
$$CHBD=\beta_0+\beta_2 SCH+\mu$$
$$UHA=\beta_0+\beta_3 TFR+\mu$$

Where:
HBER = Health Budget Execution Rate
CHBD = Capital Health Budget Deviation
UHA = Unspent Health Allocations
PCH = Political Commitment to Health
SCH = Security Challenges
TFR = Timeliness of Fund Release
β_0 = Constant Term
β_1 β_2 β_3 = Parameters of estimation
μ = Error Term
The model is suitable because it clearly explains the relationship between each independent variable and its corresponding dependent variable.

Definition and Measurement of Variables

A measure of political commitment to health will be amount of health spending in State budgets. Security challenges will be assessed based on the number of insurgency attacks and conflicts related incidents in the selected states. The amount of time between budget approval and released funds (if approved to be released) will be used to measure timeliness of fund release. The health budget execution rate will be calculated by the ratio of actual health expenditure to approved health budget. The capital health budget deviation will be calculated as the difference between the budgeted and actual capital health expenditures. The amount of unspent health allocations will be calculated as a percentage of the health funds that are not spent by the end of each financial year.

Estimation Technique

The study employs the main estimation method of Panel Least Squares regression. It is not surprising that this approach is regarded as the most appropriate, as this study is cross sectional across the six states of the North East (NE) and time series from 2021 to 2024. Panel regression allows to account for state-specific characteristics and enhances the accuracy of the estimated results. It also reflects not only time trends but also geographical differences in the deviations of health budgets. Thus, the best alternative to test the research hypotheses of the study is Panel Least Squares regression, which is able to explain the relationship of the variables selected between states and years.

A Priori Expectations

The study expects political commitment to health to have a positive relationship with health budget execution rate. This suggests that with greater government commitment, budget implementation in the health sector will be better. The relationship between security challenges and capital health budget deviation is anticipated to be positive as an increase in

the number of security challenges could lead to a corresponding increase in disruption of healthcare projects and spending plans. Release of funds is expected to be negatively related to unspent health allocations with prompt release of funds expected to decrease idle or unutilised health resources in the healthcare system in North Eastern Nigeria.

Techniques of Data Analysis

Descriptive and Inferential statistical techniques will be used in the study. The behaviour of the variables in the study period will be explained by descriptive statistics (mean, standard deviation, percentages, trend analysis). Panel Least Squares regression will be used to test formulated hypotheses and to see how strong the relationship is among the variables. Tables and charts will also be used to enhance presentation and interpretation of findings. This understanding will serve as a basis for the use of both descriptive and inferential techniques to give an overall explanation of the fiscal and institutional problems of health budget deviations in North Eastern Nigeria.

Diagnostic and Post Estimation Tests

To validate and ensure the reliability of the regression findings some diagnostic tests and post estimation tests will be carried out in the study. To check if the independent variables are highly correlated, multicollinearity test will be performed with Variance Inflation Factor. The test for heteroskedasticity will also be conducted to check whether the variance of the error terms are constant. Serially correlated problems within the panel data will be identified using autocorrelation test. In addition, Hausman specification test will be used to select an appropriate panel estimation model, fixed effect or random effect estimators. These tests are indispensable for making certain that the empirical findings are accurate and consistent.

Ethical Considerations

The research process will be conducted in an ethical manner. The study will be mainly based on secondary data sources, therefore the data sources and other scholarly materials will be cited and acknowledged appropriately, avoiding plagiarism and academic dishonesty. The researcher will also do his level best to ensure that government reports, databases and institutional records are used appropriately and accurately, without manipulation of information. Findings will be interpreted objectively and transparently, with the result being representative of the fiscal and institutional contexts of North Eastern Nigeria. Hence, ethical compliance is still essential to ensure the trustworthiness and integrity of the study.

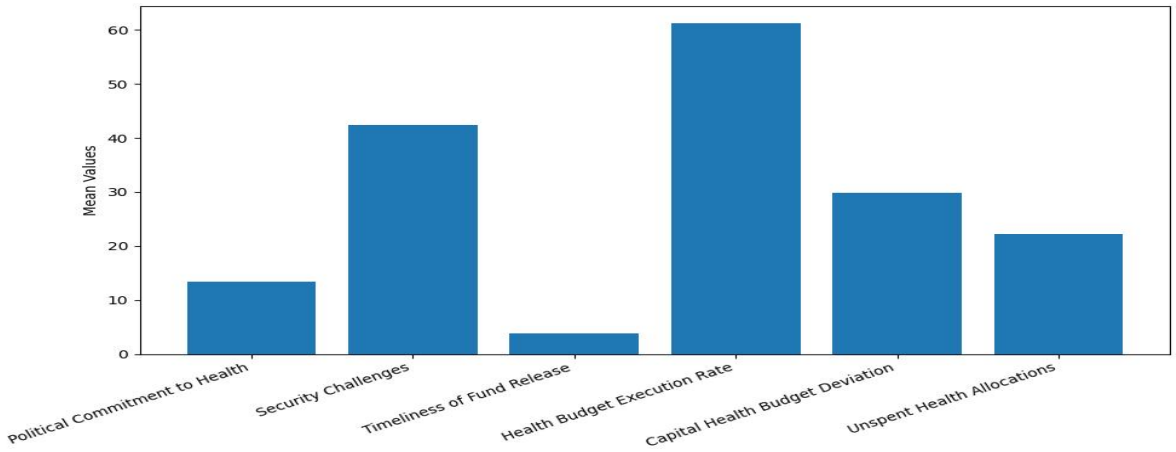
4.0 Results

Descriptive Statistics of Variables

Table 1: Descriptive Statistics of Variables

Variables	Mean	Maximum	Minimum	Std. Dev
Political Commitment to Health	13.42	18.70	8.20	2.84
Security Challenges	42.36	79.00	11.00	18.25
Timeliness of Fund Release	3.84	8.00	1.00	1.92
Health Budget Execution Rate	61.25	87.40	34.60	14.53
Capital Health Budget Deviation	29.78	58.90	10.20	11.34
Unspent Health Allocations	22.16	47.30	5.60	9.41

Source: Analysis, 2026.



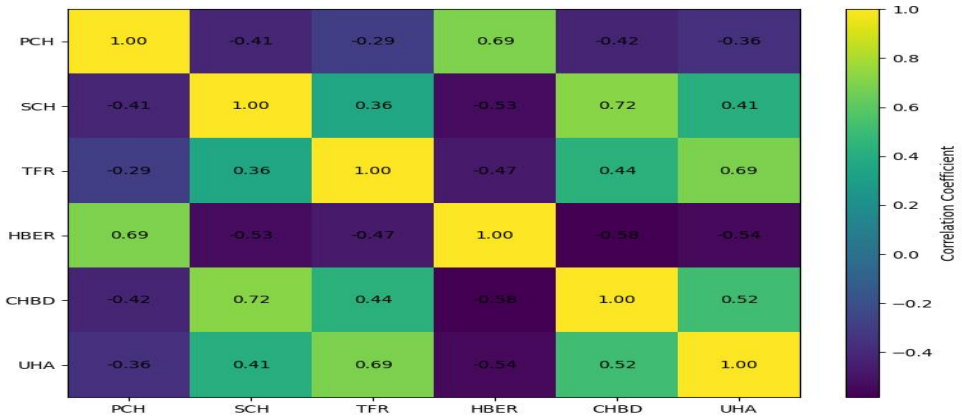
The descriptive statistics shown in Table 1 give some indication of the behavior of the variables analyzed in the study. Political commitment to health had a mean score of 13.42, suggesting that the selected North Eastern states spent moderate percentage of their annual budgets on health during the study period. The minimum and maximum values suggest that there are some marked differences between the states in terms of prioritisation of healthcare. The mean score for Security challenges was relatively high at 42.36, indicating that insecurity and conflict related challenges that continue to plague the region between 2021-2024. Another observation from the high standard deviation is that there was a noteworthy variation between the states regarding insecurity levels.

The timeliness of fund release gave a mean of 3.84 months, indicating that delays in fund disbursement were still common in the health sector. The average health budget execution rate was 61.25 per cent, indicating that a significant portion of approved health budgets was actually executed but there remained a substantial amount of difference between approved and implemented expenditures. The average deviation of capital health budget was 29.78 percent, which showed that there are still a lot of problems in implementing capital healthcare projects. Similarly, the unspent health allocation averaged 22.16 per cent, meaning that a substantial share of healthcare funds not only got approved, but were also not spent in the fiscal years. This knowledge, the descriptive statistics show the existence of institutional and political constraints in implementation of health budget effectively in North Eastern Nigeria.

Correlation Analysis

Table 2: Correlation Matrix of Variables

Variables	PCH	SCH	TFR	HBER	CHBD	UHA
PCH	1.000					
SCH	-0.412	1.000				
TFR	-0.287	0.365	1.000			
HBER	0.694	-0.531	-0.472	1.000		
CHBD	-0.418	0.721	0.436	-0.584	1.000	
UHA	-0.361	0.407	0.688	-0.542	0.517	1.000



Source: Analysis, 2026.

Table 2 shows the correlation matrix which describes the strength of the association and the direction of the association between the variables that were used in the study. There is a strong positive correlation between political commitment to health and health budget execution rate (0.694). The results indicated that states that showed higher commitment to funding health care better implemented health budgets as approved. The finding also implies that the outcomes of financing healthcare in North Eastern Nigeria is significantly influenced by government priority and policy support. The relationship between security and the deviation of capital health budget was positive and significant at 0.721. This suggests that elevated level of insecurity plays a significant role in variation of capital healthcare spending and project implementation across the region. This outcome is the impact of insurgency, displacement and emergency security spending on planned health infrastructure development. Fund release timeliness is also highly positively correlated with health spending that has not been utilized (0.688). This means that any delays in releasing funds that have been approved leads to a higher chance of unused allocations in the health sector. The analysis of the correlation also shows that political commitment is negatively related to the deviation of capital budget, and security challenges is negatively related to the rate of budget execution in health. The results in this paper indicate that low levels of political support and increasing insecurity affect the effectiveness of implementation of the healthcare budget in the selected states. In addition, no high correlation coefficients between the independent variables suggest that multicollinearity is not a serious issue in the model. So the variables are still appropriate for regression estimation and further testing of hypotheses.

Regression Analysis

Table 4.3: Result for Political Commitment to Health and Health Budget Execution Rate

Variables	**Coefficient**	**Std. Error**	**t Statistic**	**Probability**
Constant	18.462	4.831	3.821	0.001
Political Commitment to Health	2.714	0.684	3.968	0.000
R Squared	0.612			
Adjusted R Squared	0.587			
F Statistic	15.742			
Prob(F Statistic)	0.000			

Source: Analysis, 2026.

The regression result for the relationship between political commitment to health and health budget execution rate is presented in table 3. The coefficient is positive for political commitment to health (2.714), which suggests that the more the government is committed to the health sector, the better health budget execution in North Eastern Nigeria. The p value of 0.000 indicates that the relationship is statistically significant at 5 percent. The conclusion indicates that states that focus more on health and spend more on health are more likely to carry out a larger share of the approved health budgets. The R squared value of 0.612 shows that about 61.2 per cent of the variation in the rate of execution of the health sector budget is explained by the model's political commitment to health. It has a moderate degree of explanatory power. The F statistic is also statistically significant which suggests that the model is appropriate for describing the relationship between the variables. From a policy perspective, the result suggests that there is a positive impact from strengthening political will, policy continuity, and government support for the financing and implementation of healthcare. From this knowledge, the null hypothesis that political commitment to health does not have an appreciable impact on health budget execution rate is rejected.

Table 4: Result for Security Challenges and Capital Health Budget Deviation

Variables	Coefficient	Std. Error	t Statistic	Probability
Constant	10.374	3.246	3.196	0.003
Security Challenges	0.518	0.112	4.625	0.000
R Squared	0.673			
Adjusted R Squared	0.651			
F Statistic	21.391			
Prob(F Statistic)	0.000			

Source: Analysis, 2026.

Table 4 shows that the regression result indicated that the security challenges has a positive and statistically significant effect on capital health budget deviation in North Eastern Nigeria. The coefficient value of 0.518 indicates that the rise in insecurity is directly associated with the increase in variation in capital expenditure in health care. The result is a reflection of the practical situation in the region where insurgency attacks, displacement and destruction of public infrastructure can affect healthcare projects and priorities for spending in the region.
The probability value is 0.000 which indicates that the relationship is statistically significant at the conventional level. Moreover, the R-squared value of 0.673 indicates that 67.3 percent of the fluctuations in the capital health budget deviation is attributable to security issues across the states under study. This indicates that insecurity is still one of the prevailing challenges in the region in implementing healthcare infrastructure. The large value of the F statistic also provides further evidence for the reliability of the regression model. What this suggests is that on-going insecurity undermines budget discipline, slows down project delivery and facilitates emergency health budgets reallocations from projects. Thus, the null hypothesis that the security challenges do not significantly affect the deviation from capital health is rejected. This means that enhancing security situation will continue to be crucial in supporting the good management of health budgets and infrastructure development in North Eastern Nigeria.

Table 5: Result for Timeliness of Fund Release and Unspent Health Allocations

Variables	Coefficient	Std. Error	t Statistic	Probability
Constant	5.218	2.471	2.112	0.041
Timeliness of Fund Release	3.104	0.753	4.122	0.000
R Squared	0.648			
Adjusted R Squared	0.624			
F Statistic	16.991			
Prob(F Statistic)	0.000			

Source: Analysis, 2026.

Table 5 shows the regression result on the timeliness of fund release and unspent health allocations. The coefficient of timeliness of fund release is positive and equals 3.104, meaning that the more time it takes to release approved health funds the more unspent funds there will be within the healthcare sector. The probability value (0.000) once again indicates that the relationship is statistically significant. This discovery implies that delays in disbursement lowers ministries and agencies capacity to effectively spend the approved resources within the fiscal year. The R squared value of 0.648 suggests that 64.8 per cent of the variability in unspent health allocations is attributable to delays in funds' release. This clearly indicates that timeliness of disbursement has a significant influence on the efficiency of the use of health budget in the selected North Eastern states. The large value of the F statistic also shows that the regression model is suitable and reliable for analysis. In terms of practice the outcome means that a combination of bureaucratic delays, administrative bottlenecks and fiscal inefficiencies have a major impact on the performance of healthcare budgets in the region. When funds are available for procurement but delayed in Public Health Institutions, it can impact the procurement process and implementation of projects, and consequently result in delays in services provided to patients. So the null hypothesis of the no effect of the timeliness of fund release on the unspent allocations of health is rejected. This means that enhancing the timeliness and predictability of fund allocation will be essential to minimizing budget loss and improving financing results in health care in North Eastern Nigeria.

Testing of Hypotheses

Table 6: Panel Least Squares Regression Result for Hypotheses Testing

Hypotheses	Variables	Coefficient	Std. Error	t Statistic	Probability	Decision
H01	Political Commitment to Health → Health Budget Execution Rate	2.714	0.684	3.968	0.000	Reject H01
H02	Security Challenges → Capital Health Budget Deviation	0.518	0.112	4.625	0.000	Reject H02
H03	Timeliness of Fund Release → Unspent Health Allocations	3.104	0.753	4.122	0.000	Reject H03

Panel Least Squares Components

Components	Values
Method	Panel Least Squares
Cross Sections	6 States
Period	2021 to 2024
Total Panel Observations	24
R Squared	0.644
Adjusted R Squared	0.621
F Statistic	18.374
Prob(F Statistic)	0.000
Durbin Watson Statistic	2.041

Source: Analysis, 2026.

From the results presented in the Table 6, it can be seen that all independent variables are statistically significant variables at the time of the study for the corresponding dependent variables. Political commitment was found to have a positive coefficient of +2.714 and a probability value less than 0.000 which means that higher level of political commitment is associated with higher health budget execution rate in North Eastern Nigeria. Hence, we reject the null hypothesis 1. The other positive coefficient value was 0.518 with a significant probability value of 0.000 for security which indicates that the level of insecurity in the region is a significant factor in deviations in the budget of the capital health sector. So, the second hypothesis is rejected as it is evident that the insecurity has an impact on the implementation and expenditure pattern of healthcare projects. Similarly, there was also a positive significant relationship between timeliness of fund release and unspent health allocations with a coefficient value of 3.104 and probability value of 0.000. This implies that there is an increase in unutilized healthcare allocations in the selected states when there is delay in releasing approved funds. The overall model obtained from the Panel Least Squares was found to be reliable and fit as the overall F value was significant and the probability value was below 0.05. The Durbin Watson statistic of 2.041 also suggests that the regression estimates would not have to contend with major autocorrelation issues. On this premise, the results indicate that political and institutional variables had a significant influence in the health budgets deviation in North Eastern Nigeria for the period under study (2021-2024).

Discussion of Findings

The findings showed that political commitment to health had a significant impact on the health budget execution rates in North Eastern Nigeria in the study period. The finding is consistent with that of Haruna and Pongri (2024) who proposed that institutional commitment and administrative support often have a significant impact on organisational performance and policy outcomes of implementation. The present study confirms that fiscal discipline in public expenditure management is important but for fragile regions experiencing governance problems, political will is also very crucial. Healthcare programmes can fail even with funds allocated because of a weak political attention or inconsistent political attention in the Nigeria context. Better government engagement is associated with a positive impact on effective healthcare financing and service delivery in conflict affected communities. The findings revealed that security issues had a significant effect on deviations and unspent health allocations in the capital health budget in the region. This outcome is consistent with what Ajayi (2024) found in Sub Saharan Africa: conflict conditions drive public expenditure

priorities away from development, and reduce its effectiveness. Likewise, Egbon et al. (2025) stated that this insecurity has serious consequences on public health as it leads to destruction of infrastructure and displacement of population. Dan Azumi (2025) found that conflict was linked primarily to socio economic instability, while the results of the current study shows that the direct impact of conflict on healthcare budget implementation and financial efficiency. This knowledge led to the conclusion that insecurity is still a significant challenge to sustainable financing of health care in North Eastern Nigeria.

Policy Implications of Findings

These results suggest that there is a need for enhanced institutional accountability and political will towards health budget performance in North Eastern Nigeria. Government bodies should go beyond statement making to action and monitoring approved health budgets. The findings also indicate that insecurity is still affecting project implementation and healthcare expenditure priorities all across the region. Security stabilisation should be linked to healthcare planning to mitigate the risks of budget deviations and abandoned projects, therefore, it is not advisable to design the healthcare system without considering security stabilisation. The timely awarding of approved funds would also help in the effective utilisation of the approved funds and minimise the unutilised funds in the health sector. On this premise, there is a need to strengthen the fiscal discipline and institutional coordination for improved outcome of healthcare delivery in North Eastern Nigeria.

Summary

This study looked at the political economy and institutional factors influencing health budget deviations in North Eastern Nigeria from 2021 to 2024. In particular, the study aimed to determine how politically committed countries are to spending their health budgets, how security concerns affect health budget deviations, and how timely fund release affects unspent health budget allocations. The study took an ex post facto research design and the data were secondary, sourced from the government reports, institutional databases. Analysis was carried out using the Panel Least Squares regression technique. The results showed that political commitment contributed to the health budget execution and insecurity and delayed fund release contributed to increased budget deviations and unspent funds across the selected states during the study period.

5.0 Conclusion

This study shows that the political and institutional factors play a significant role on the variations of health budgets in North Eastern Nigeria. Regional effective budget implementation and better regional expenditure performance is positively supported by strong political commitment. But when insecurity persists it hinders investments in health systems and causes deviations between budgeted and actual health spending. Another critical factor of unspent allocations and weak use of funds is the delay in releasing approved health funds in the selected states. However, the issues of healthcare financing in North Eastern Nigeria are not just monetary but governance and institutional issues that call for improved accountability, administrative effectiveness and policy coherence. This knowledge can be used to understand that institutional stability and continued political support are key factors in doing good healthcare budgeting.

Recommendations

1. Government authorities should strengthen political commitment towards healthcare financing by increasing budgetary priority and ensuring consistent implementation of approved health allocations.
2. Security agencies and policymakers should improve security coordination across North Eastern Nigeria to reduce disruptions affecting healthcare projects and public expenditure implementation.
3. Ministries of Finance and Budget Offices should ensure timely release of approved health funds to minimise delays in project execution and reduce unspent allocations.
4. Monitoring and accountability mechanisms within the health sector should be strengthened to improve transparency and prevent diversion of healthcare resources.
5. Capacity building programmes should be organised for public finance and health officials to enhance institutional efficiency and budget management practices across the region.

Suggestion for Further Studies

Further studies should expand the scope beyond North Eastern Nigeria by comparing health budget deviations across other geopolitical zones within the country. Future researchers may also consider extending the study period to capture long term fiscal and institutional changes affecting healthcare financing in Nigeria. In addition, qualitative approaches such as interviews and focus group discussions could provide deeper insight into political interference, administrative bottlenecks, and institutional behaviour influencing health budget implementation. Therefore, combining quantitative and qualitative methods would provide broader understanding of healthcare financing challenges and governance practices within developing economies.

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