# IMPACT OF BUDGETARY CONTROL ON POLICY IMPLEMENTATION IN NIGERIAN PUBLIC SECTOR INSTITUTIONS

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**Abstract**
*This study investigates the impact of budgetary control components- budget planning quality, expenditure monitoring, and variance analysis- on policy implementation in Nigerian public sector institutions. Adopting a descriptive survey design, data were collected from 365 purposively selected management staff within selected Ministries, Departments, and Agencies (MDAs) in Abuja. The sample size was determined using Cochran's formula, and responses were obtained via electronically administered questionnaires. Partial Least Squares Structural Equation Modeling (PLS-SEM), conducted through SmartPLS, was employed to test the hypothesized relationships. The results reveal that only variance analysis has a statistically significant and positive effect on policy implementation, while budget planning quality and expenditure monitoring do not demonstrate significant direct impacts. These findings suggest that while variance analysis plays a pivotal role in improving policy execution, other budgetary control elements may be underutilized or poorly implemented. The study recommends that enhancing policy implementation in Nigeria's public sector requires institutionalized variance reporting, strengthened participatory budgeting, and adoption of digital expenditure tracking systems.*

## INTRODUCTION

Across the globe, public sector institutions rely heavily on budgetary control mechanisms to ensure the effective implementation of policies. In developed economies such as the United States, Canada, and Germany, strong budgetary control systems, characterized by stringent planning, consistent expenditure monitoring, and rigorous variance analysis, have been pivotal in achieving public policy goals (Organisation for Economic Co-operation and Development (OECD), 2021). These systems ensure accountability, fiscal discipline, and transparency in the use of public funds (International Monetary Fund (IMF), 2020).

In Africa, however, the effectiveness of budgetary control varies significantly. Many countries, including Kenya, Ghana, and South Africa, have adopted reforms to improve budget management in the public sector. Nevertheless, challenges such as corruption, weak institutional frameworks, and political interference still undermine the effective utilization of budgets for policy implementation (World Bank, 2022; United Nations Development Programme (UNDP), 2020). For instance, Ghana has seen improvements in budget planning and implementation due to the adoption of program-based budgeting, yet issues remain in expenditure tracking and variance control (Amoako-Tuffour & Asamoah, 2021).

In Nigeria, the public sector has witnessed persistent concerns regarding budget credibility, fiscal discipline, and policy implementation outcomes. Several studies and audit reports by the Office of the Auditor-General and civil society organizations have pointed to low budget performance and poor linkage between allocated funds and actual outputs (BudgIT, 2023). A major challenge is the significant gap between approved budgets and actual expenditures, attributed to poor planning, inadequate monitoring, and lack of accountability (Okafor, 2022).

Budgetary control mechanisms- including budget planning quality, expenditure monitoring, and variance analysis- are essential for public financial management. Budget planning quality entails accurate forecasting, stakeholder participation, and alignment of budgets with strategic objectives (Ijeoma, 2019). Expenditure monitoring involves continuous assessment of fund disbursements and utilization, helping to detect deviations early (Nweze, 2021). Variance analysis is a critical feedback mechanism that allows institutions to compare budgeted figures with actuals and take corrective actions (Olapade, 2022). These components collectively promote diligence, efficiency, and goal congruence in budget execution.

Despite the theoretical and practical significance of budgetary control, Nigeria continues to experience challenges in public sector budget performance. For

instance, in 2023, the federal government reported only 56% implementation of the capital budget (Ministry of Finance, 2023). Moreover, recurring issues such as abandoned projects, poor service delivery, and fiscal leakages raise concerns about the impact of budgetary control on policy implementation. It remains unclear whether these inefficiencies stem primarily from weak adherence to budgetary controls or from systemic administrative flaws. Furthermore, the nexus between budgetary control and policy implementation outcomes in Nigeria has not been holistically examined.

Several empirical studies have attempted to address this relationship but with notable limitations. Prior studies by Adebayo (2020), Musa and Ali (2019), and Chukwuemeka et al. (2021) utilized regression analysis, Chi-square, and ANOVA respectively. However, these methodologies, while informative, often failed to capture the complex, multi-dimensional interactions among variables inherent in budgetary processes. Moreover, many of these studies focused on single agencies or states, limiting generalizability. Hence, there is a methodological and contextual gap that warrants the use of a more robust and comprehensive analytical tool.

This study adopts the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, known for its robustness in modeling complex relationships and its suitability for exploratory research in social sciences (Hair et al., 2020).

Thus, this study aims to:

i. Examine the effect of budget planning quality on policy implementation in Nigerian public sector institutions.
ii. Evaluate the effect of expenditure monitoring on policy implementation in Nigerian public sector institutions.
iii. Assess the effect of variance analysis on policy implementation in Nigerian public sector institutions.

## LITERATURE REVIEW

### Conceptual Clarifications

Budgetary control is defined as the process of planning and exercising financial control through budget preparation, execution, and monitoring to achieve organizational goals (Horngren et al., 2019). According to Pandey (2020), it involves setting budgetary targets, comparing them with actual performance, and addressing variances. In contrast, Otley (2016) emphasizes the behavioural and strategic aspects of budgetary control, noting its role in influencing decision-making. While Horngren et al. focus on the technical aspects, Otley highlights its broader managerial implications.

Budget planning quality refers to the comprehensiveness, accuracy, and strategic alignment of the budgeting process (Ijeoma, 2019). A well-planned budget should be realistic, participatory, and based on reliable data. Akintoye (2020) underscores the importance of stakeholder involvement and scenario analysis in enhancing budget accuracy. Conversely, Obadan (2018) criticizes the lack of inclusiveness and weak forecasting capabilities in most developing economies, especially Nigeria.

Expenditure monitoring involves the systematic tracking of fund disbursement and utilization against planned activities (Nweze, 2021). It helps ensure compliance with budgetary limits and promotes accountability. According to Ezeani and Nnamani (2020), expenditure monitoring is essential for minimizing waste and detecting fraud. In contrast, Musa and Abubakar (2019) argue that in environments with weak institutional frameworks, monitoring mechanisms often exist in theory but are poorly implemented.

Variance analysis is the quantitative assessment of deviations between budgeted and actual performance (Olapade, 2022). It serves as a feedback mechanism to identify inefficiencies and inform corrective actions. Adebayo (2021) notes that variance analysis helps in maintaining financial discipline, while Yakubu and Gambo (2019) stress that its effectiveness depends on timely and accurate reporting.

Policy implementation is the stage in the policy process where government decisions are translated into practical actions to achieve intended objectives, typically carried out through institutions, programs, and actors mandated to execute the policy directives. It involves mobilizing resources, assigning responsibilities, and managing administrative procedures to operationalize policy strategies (Akhakpe, 2021). According to Nchuchuwe and Oviasogie (2020), effective implementation depends on factors such as bureaucratic efficiency, political will, institutional capacity, and adequate funding. In developing countries like Nigeria, implementation is often hindered by issues such as corruption, unclear policy goals, poor budgetary planning, and inadequate monitoring mechanisms (Ibrahim & Salihu, 2021). To bridge the gap between policy design and results, robust institutional frameworks and governance structures must support execution, while mechanisms like budgetary control and performance evaluation ensure accountability and alignment with policy objectives (Eme & Ogbochie, 2023). Ultimately, the success of policy implementation is critical to achieving developmental outcomes, especially in the public sector where the delivery of services and programs directly affects citizens' welfare.

The reviewed studies collectively underscore the pivotal role of budget planning quality, monitoring mechanisms, and stakeholder engagement in enhancing policy implementation, project execution, and institutional

performance across diverse national and sectoral contexts. Empirical findings from countries like Canada (Smith, 2019), Kenya (Ngugi & Wanjiru, 2020; Musiega et al., 2023), Nigeria (Adeoye & Salisu, 2022; Awodiran et al., 2024; Alu & Ogedengbe, 2024; Aloh et al., 2023), China (Zhou & Wei, 2021), Malaysia (Rahman & Yusuf, 2023), Indonesia (Ramdany & Chaeriyyah, 2023), and Mexico (Falcón-Cortés et al., 2021) emphasize that elements such as participatory planning, clarity in budget assumptions, accurate forecasting, and strategic alignment significantly predict successful policy outcomes. However, various limitations were noted, including restricted sectoral focus, non-random sampling, lack of post-implementation evaluations, and context-specific governance frameworks, which may hinder generalizability. Studies like those by Gori et al. (2021) and Nabane et al. (2024) brought innovative methodological approaches such as regression-discontinuity and mixed-methods analysis but also suffered from gaps in transparency or specificity. Notably, effective internal controls, monitoring processes, and audit mechanisms emerged as critical levers for accountability and performance improvement. Conversely, late budget approvals, unrealistic revenue projections, and weak stakeholder consultation were consistently linked to negative implementation outcomes. Despite variations in design and regional focus, the studies collectively affirm that strengthening budget planning and oversight mechanisms is fundamental to improving public sector efficiency and policy effectiveness.

Theoretically, this study is underpinned by the Institutional Theory which was propounded by Meyer and Rowan (1977) and reinforced by DiMaggio and Powell (1983). The theory focuses on how organizations conform to rules, norms, and cultural expectations within their institutional environments to gain legitimacy, stability, and survival. It emphasizes that organizational behaviour- such as budgeting practices and policy implementation- is shaped not only by technical or efficiency considerations but also by pressures to align with institutional norms and regulatory frameworks. In the context of this study, budget planning quality, expenditure monitoring, and variance analysis can be seen as institutionalized practices that reflect broader governmental expectations, audit standards, and public accountability norms. For Nigerian public sector institutions, the adoption and effectiveness of these budgetary control mechanisms may be driven by external pressures from oversight bodies, donor agencies, legal mandates, and societal expectations, rather than purely internal performance logic. Institutional Theory thus provides a valuable lens to understand why some budgeting practices may be implemented symbolically (to appear compliant) rather than substantively (to drive performance), which could explain why some mechanisms like variance analysis show significant effects on policy implementation, while others do not. It highlights the importance of legitimacy and the role of external institutional forces in shaping internal control systems and public sector performance.

**METHODOLOGY**

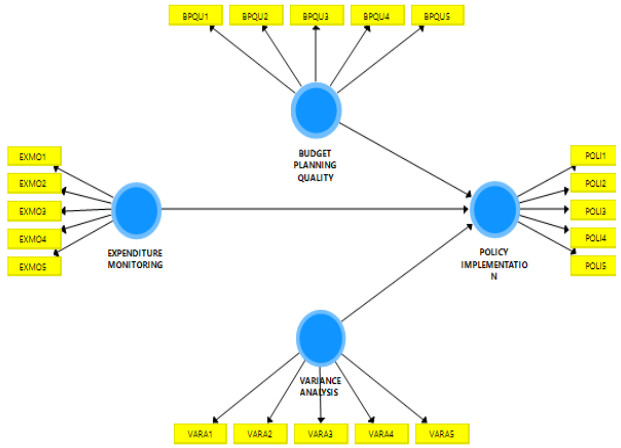
This study adopts a descriptive -survey research design, which is suitable for examining current phenomena and collecting opinions from a specific population (Creswell, 2018). The population of this study comprises the entire management staff of selected Federal Government Ministries, Departments, and Agencies (MDAs) located in Abuja, Nigeria. This is based on the fact that Abuja, as the seat of the Federal Government, hosts the headquarters of most MDAs in the country, making it the administrative center of Nigeria. The scope of the study was limited to nine (9) key Federal MDAs that play significant roles in policy formulation, national development, and public service delivery. These include the Federal Ministry of Education, Federal Ministry of Health, Federal Ministry of Finance, Budget and National Planning, Federal Ministry of Agriculture and Rural Development, Federal Ministry of Transportation, National Agency for Food and Drug Administration and Control (NAFDAC), and the Corporate Affairs Commission (CAC).

As the total population of management staff in these MDAs is unknown, Cochran's formula: $Z^2 \times p \times 0.5 / e^2$ for an unknown population was applied to determine an appropriate sample size, ensuring statistical representativeness. Thus, the ideal sample size was 385 respondents. A purposive sampling technique was used to select the required respondents. This non-probability approach was justified by its flexibility and suitability for targeting management staff within bureaucratic environments where specific expertise and roles are required (Etikan et al., 2016). The questionnaire was designed on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." In order to ensure fair representation, the questionnaires were distributed evenly, with approximately 43 copies allocated to each of the nine MDAs. The distribution was carried out digitally through official staff WhatsApp groups, a method chosen to enhance accessibility, minimize physical contact, and ensure efficient data collection among the management staff. Out of the 385 distributed copies, 365 usable responses were obtained.

PLS-SEM Swas used to test the relationship between the study's variables. PLS-SEM was selected as the statistical technique due to its suitability for modeling complex, multi-construct relationships and its ability to handle small to medium sample sizes with minimal data assumptions (Hair et al., 2020). The software SmartPLS was used to analyze the data and test the study's hypotheses in alignment with the stated objectives. The model is designed below:

**Fig 1**

*Partial Least Squares -Structural Equation Model for the Study*




**Source:** SmartPls Output (2025)

Keys:

**BPQU 1 to BPQU 5:** Responses to the 5 items under the Budget Planning Quality construct.

**EXMO 1 to EXMO 5:** Responses to the 5 items under the Expenditure Monitoring construct.

**VARA 1 to VARA 5:** Responses to the 5 items under the Variance Analysis construct.

**POLI 1 to POLI 5:** Responses to the 5 items under Policy Implementation construct.

See table 1 for the measurement of the study's variables:

**Table 1**

*Variables Measurements*

| Variable | Number of Items | Measurement Scale | Source |
|---|---|---|---|
| Budget Planning Quality | 5 | 5-point Likert Ordinal Scale | Lawal (2014) |
| Expenditure Monitoring | 5 | 5-point Likert Ordinal Scale | Okolie & Agu (2021) |
| Variance Analysis | 5 | 5-point Likert Ordinal Scale | Adeyemi & Olowookere (2018) |
| Policy Implementation | 5 | 5-point Likert Ordinal Scale | Okechukwu & Obiora (2019) |

**Source:** Researchers' Compilations (2025)

**RESULTS AND DISCUSSIONS**

**Table 2**

*Descriptive Statistics*

| Constructs | Mean | Median | Min | Max | Std. Dev. | Kurtosis | Skewness |
|---|---|---|---|---|---|---|---|
| BPQU1 | 3.62 | 4.00 | 1.00 | 5.00 | 1.36 | -0.71 | -0.76 |
| BPQU2 | 3.41 | 4.00 | 1.00 | 5.00 | 1.19 | -0.71 | -0.59 |
| BPQU3 | 3.51 | 4.00 | 1.00 | 5.00 | 1.22 | -0.65 | -0.64 |
| BPQU4 | 4.03 | 4.00 | 1.00 | 5.00 | 1.07 | 1.08 | -1.27 |
| BPQU5 | 3.82 | 4.00 | 1.00 | 5.00 | 1.14 | 0.79 | -1.21 |
| EXMO1 | 3.97 | 4.00 | 1.00 | 5.00 | 1.23 | 0.93 | -1.38 |
| EXMO2 | 3.81 | 4.00 | 1.00 | 5.00 | 1.20 | 0.67 | -1.23 |
| EXMO3 | 3.71 | 4.00 | 1.00 | 5.00 | 1.15 | -0.12 | -0.80 |
| EXMO4 | 3.45 | 5.00 | 1.00 | 5.00 | 1.19 | -0.15 | -0.86 |
| EXMO5 | 3.38 | 4.00 | 1.00 | 5.00 | 1.20 | -0.64 | -0.60 |
| VARA1 | 2.63 | 2.00 | 1.00 | 5.00 | 1.44 | -1.45 | 0.21 |
| VARA2 | 3.67 | 4.00 | 1.00 | 5.00 | 1.08 | 0.28 | -0.88 |
| VARA3 | 3.82 | 4.00 | 1.00 | 5.00 | 1.09 | 0.70 | -1.07 |
| VARA4 | 3.92 | 4.00 | 1.00 | 5.00 | 1.07 | 0.70 | -1.15 |
| VARA5 | 3.80 | 4.00 | 1.00 | 5.00 | 1.19 | -0.14 | -0.87 |
| POLI1 | 3.14 | 3.00 | 1.00 | 5.00 | 1.34 | -1.15 | -0.26 |
| POLI2 | 3.14 | 3.00 | 1.00 | 5.00 | 1.43 | -1.33 | -0.08 |
| POLI3 | 3.26 | 4.00 | 1.00 | 5.00 | 1.51 | -1.45 | -0.28 |
| POLI4 | 3.70 | 4.00 | 1.00 | 5.00 | 1.16 | -0.60 | -0.60 |
| POLI5 | 3.80 | 4.00 | 1.00 | 5.00 | 1.03 | -0.12 | -0.76 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

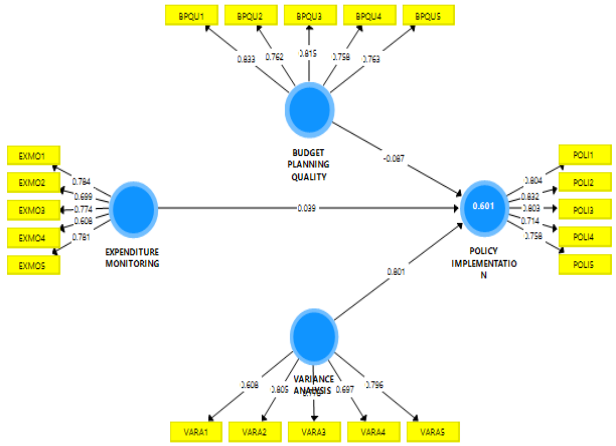
Descriptive statistics for constructs assessing budgetary control's impact on policy implementation in Nigerian public institutions indicate generally favorable perceptions, particularly for Budget Planning Quality (BPQU) and Expenditure Monitoring (EXMO), with high mean scores (up to M = 4.03) and notable negative skewness, reflecting clustered agreement. Variance Analysis (VARA) showed more variability, especially VARA1 (M = 2.63) with low consensus and platykurtic spread, contrasting with

VARA4's stronger agreement. Policy Implementation (POLI) scores were moderately high (up to M = 3.82), with POLI5 showing the strongest alignment. The prevalence of negative skewness and moderate standard deviations suggest consistent positive sentiment, with distribution patterns supporting assumptions of normality for PLS-SEM analysis.

**Measurement Model Assessments**

**Fig 2**

*PLS-SEM Output*




**Source:** SmartPls Output (2025)

**Table 3**

*Reliability Tests*

| Constructs | Loadings | Cronbach Alpha | Composite Reliability | rho_A | Average Variance Extracted |
|---|---|---|---|---|---|
| BPQU1 | 0.83 | | | | |
| BPQU2 | 0.76 | | | | |
| BPQU3 | 0.82 | | | | |
| BPQU4 | 0.76 | | | | |
| BPQU5 | 0.76 | 0.85 | 0.89 | 0.86 | 0.62 |
| EXMO1 | 0.78 | | | | |
| EXMO2 | 0.70 | | | | |
| EXMO3 | 0.77 | | | | |
| EXMO4 | 0.61 | | | | |
| EXMO5 | 0.78 | 0.79 | 0.85 | 0.82 | 0.54 |
| VARA1 | 0.61 | | | | |
| VARA2 | 0.81 | | | | |
| VARA3 | 0.78 | | | | |
| VARA4 | 0.70 | | | | |
| VARA5 | 0.80 | 0.80 | 0.86 | 0.79 | 0.55 |
| POLI1 | 0.80 | | | | |
| POLI2 | 0.83 | | | | |
| POLI3 | 0.80 | | | | |
| POLI4 | 0.71 | | | | |
| POLI5 | 0.76 | 0.84 | 0.89 | 0.85 | 0.61 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The reliability test results presented in Table 3 indicate satisfactory internal consistency across all constructs. For Budget Planning Quality (BPQU), all item loadings exceed the recommended threshold of 0.70 (Hair et al., 2020), with a Cronbach's alpha of 0.85 and composite reliability of 0.89, exceeding the 0.70 benchmark (Nunnally & Bernstein, 1994), confirming high internal consistency. The average variance extracted (AVE) is 0.62, meeting the minimum 0.50 standard for convergent validity (Fornell & Larcker, 1981). For Expenditure Monitoring (EXMO), despite EXMO4 loading slightly below 0.70 (0.61), the overall construct still yields acceptable reliability, with Cronbach's alpha = 0.79, CR = 0.85, and AVE = 0.54. Similarly, Variance Analysis (VARA) displays adequate psychometric properties with item loadings ranging from 0.61 to 0.81, Cronbach's alpha = 0.80, CR = 0.86, and AVE = 0.55. The Policy Implementation (POLI) construct also demonstrates reliability, with loadings above 0.70, Cronbach's alpha = 0.84, CR = 0.89, and AVE = 0.61, all satisfying the acceptable thresholds. Overall, the measurement model exhibits strong reliability and convergent validity, indicating that the indicators consistently and accurately reflect their underlying latent variables.

**Table 4**

*Validity Test*

| | BPQU | EXMO | VARA | POLI |
|---|---|---|---|---|
| BPQU | 0.787 | | | |
| EXMO | 0.63 | 0.732 | | |
| VARA | 0.477 | 0.586 | 0.783 | |
| POLI | 0.673 | 0.75 | 0.772 | 0.74 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The Fornell- Larcker criterion results confirm adequate discriminant validity among all constructs, as the square roots of Average Variance Extracted (AVEs) for Budget Planning Quality (BPQU = 0.787), Expenditure Monitoring (EXMO = 0.732), Variance Analysis (VARA = 0.783), and

Policy Implementation (POLI = 0.74) all exceed their respective inter-construct correlations. For instance, the correlation between Budget Planning Quality and Expenditure Monitoring is 0.63- below the AVE square root for Budget Planning Quality- while the correlation between Policy Implementation and Expenditure Monitoring is 0.75, marginally below the AVE square root for Policy Implementation, still meeting the threshold. These results affirm that each construct shares more variance with its own indicators than with other constructs, validating their empirical distinctiveness.

**Table 5**

*Collinearity Test*

| Variable | Constructs | Variance Inflation Factor (VIF) |
|---|---|---|
| Budget Planning Quality | BPQU1 | 2.14 |
| | BPQU2 | 2.10 |
| | BPQU3 | 2.01 |
| | BPQU4 | 1.96 |
| | BPQU5 | 2.00 |
| Expenditure Monitoring | EXMO1 | 2.25 |
| | EXMO2 | 2.19 |
| | EXMO3 | 2.40 |
| | EXMO4 | 1.52 |
| | EXMO5 | 1.72 |
| Variance Analysis | VARA1 | 1.31 |
| | VARA2 | 1.94 |
| | VARA3 | 2.93 |
| | VARA4 | 2.56 |
| | VARA5 | 1.82 |
| Policy Implementation | POLI1 | 4.44 |
| | POLI2 | 3.75 |
| | POLI3 | 2.75 |
| | POLI4 | 1.87 |
| | POLI5 | 1.84 |

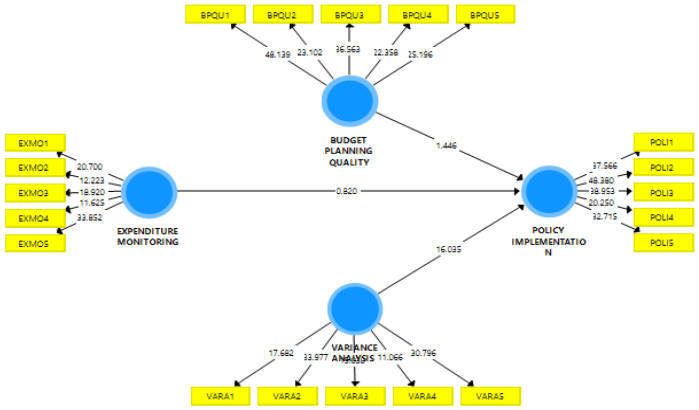
**Source:** Author's computation using SmartPLS (2025) based on field survey data

The collinearity diagnostics show that all indicators for Budget Planning Quality (BPQU), Expenditure Monitoring (EXMO), Variance Analysis (VARA), and Policy Implementation (POLI) have Variance Inflation Factor (VIF) values below the critical threshold of 5.0, indicating no multicollinearity issues. Specifically, BPQU indicators range from 1.96 to 2.14, EXMO from 1.52 to 2.40, VARA from 1.31 to 2.93, and the highest VIF is for POLI1 at 4.44- still within acceptable limits. These results affirm low inter-item correlation, ensuring stable regression estimates and supporting the robustness of the structural model.

**Structural Model Assessments**

**Fig 3**

*PLS-SEM Bootstrapping Output*




**Source:** SmartPls Output (2025)

**Table 6**

*Model Fit Analysis*

| | Saturated Model | Estimated Model |
|---|---|---|
| SRMR | 0.07 | 0.07 |
| d_ULS | 5.31 | 5.31 |
| d_G | 2.58 | 2.58 |
| Chi-Square | 217.97 | 217.97 |
| NFI | 0.91 | 0.91 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The model fit indices demonstrate that the structural model exhibits strong goodness-of-fit, with a Standardized Root Mean Square Residual (SRMR) of 0.07- below the 0.08 threshold-indicating a good match between the model and observed data. The Normed Fit Index (NFI) of 0.91 exceeds the recommended 0.90 benchmark, while low d_ULS (5.31) and d_G (2.58) values indicate minimal discrepancies between empirical and model-implied correlations. Although the chi-square value (217.97) is reported, its interpretation is limited due to sample size sensitivity. Collectively, these indices affirm the model's acceptable and robust fit based on established SEM standards.

**Table 7**

*Construct Effect Size Analysis*

| Variables | BPQU | EXMO | VARA | POLI |
|---|---|---|---|---|
| BPQU | | | | 0.01 |
| EXMO | | | | 0.00 |
| POLI | | | | |
| VARA | | | | 0.60 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The effect size analysis indicates that Variance Analysis (VARA) has a large and substantial impact on Policy Implementation (POLI) with an $f^2$ value of 0.60, while Budget Planning Quality (BPQU) and Expenditure Monitoring (EXMO) show minimal influence with small (0.01) and negligible (0.00) effect sizes, respectively. Based on Cohen's (1988) thresholds, these results highlight VARA as the key driver of policy implementation in Nigerian public sector institutions, with the other constructs contributing marginally to the model's explanatory power.

**Table 8**

*PLS Predict*

| | SSO | SSE | $Q^2$ (=1-SSE/SSO) |
|---|---|---|---|
| BPQU | 1955.00 | 1955.00 | |
| EXMO | 1955.00 | 1955.00 | |
| VARA | 1955.00 | 1955.00 | |
| POLI | 1955.00 | 1272.64 | 0.35 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The PLS Predict analysis reveals that the model demonstrates substantial predictive relevance for Policy Implementation (POLI), with a $Q^2$ value of 0.35- well above the zero threshold- indicating strong predictive capability. In contrast, $Q^2$ values for Budget Planning Quality (BPQU), Expenditure Monitoring (EXMO), and Variance Analysis (VARA) are 0.00, reflecting their roles as exogenous variables. Generally, the model effectively predicts policy implementation outcomes in Nigerian public sector institutions.

**Table 9**

*Model Explanatory Power*

| | R Square | R Square Adjusted |
|---|---|---|
| POLI | 0.60 | 0.60 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The model explanatory power is strong, with an $R^2$ and adjusted $R^2$ of 0.60 for Policy Implementation (POLI), indicating that 60% of its variance is explained by Budget Planning Quality, Expenditure Monitoring, and Variance Analysis. This substantial $R^2$ value, along with its close match to the adjusted $R^2$, confirms the model's robustness, stability, and lack of overfitting in explaining policy implementation outcomes in Nigerian public sector institutions.

**Test of Hypotheses**

**Table 10**

*PLS-SEM Bootstrapping Significance Tests*

| Relationships | Coefficient | Std. Dev. | T Statistics | P Values |
|---|---|---|---|---|
| BPQU -> POLI | -0.09 | 0.06 | 1.45 | 0.15 |
| EXMO -> POLI | 0.04 | 0.05 | 0.82 | 0.41 |
| VARA -> POLI | 0.80 | 0.05 | 16.04 | 0.00 |

**Source:** Author's computation using SmartPLS (2025) based on field survey data

The results presented in Table 10 reveal that only the relationship between variance analysis (VARA) and policy implementation (POLI) is statistically significant ($\beta = 0.80$, $p < .001$, $t = 16.04$), surpassing the critical value of 1.96 for two-tailed tests at the 5% significance level (Hair et al., 2019). Conversely, the paths from budget planning quality (BPQU → POLI, $\beta = -0.09$, $p = .15$, $t = 1.45$) and expenditure monitoring (EXMO → POLI, $\beta = 0.04$, $p = .41$, $t = 0.82$) are not statistically significant, as their p-values exceed .05 and their t-statistics fall below 1.96, indicating no significant direct effect. These findings align with some previous studies that emphasize the central role of variance analysis in driving effective policy outcomes, while contradicting others that found strong links between budget planning or monitoring and policy implementation. Theoretically, the results support the Institutional Theory as propounded by Meyer and Rowan (1977) and later reinforced by DiMaggio and Powell (1983), which posits that organizations are more likely to achieve legitimacy and stability by conforming to institutionalized norms and practices—in this case, the consistent application of variance analysis as a formalized control mechanism within public institutions.

The findings presented in Table 10 have several important implications for public sector financial management and policy implementation. The statistically significant and strong positive relationship between variance analysis (VARA) and policy implementation (POLI) ($\beta = 0.80$, $p < .001$, $t = 16.04$) underscores the critical role of regular and effective variance analysis in ensuring that government policies are implemented as intended. This suggests that when public sector organizations actively compare actual expenditures against planned budgets and investigate deviations, they are more likely to achieve their policy objectives. On the other hand, the non-significant paths from budget planning quality (BPQU) and expenditure monitoring (EXMO) to policy implementation indicate that, in isolation, neither high-quality budget planning nor expenditure monitoring exerts a direct and measurable

influence on policy execution in this context. This may imply that while budget planning and monitoring are foundational, their impact on policy outcomes may depend on how they are integrated with other control mechanisms such as variance analysis. Therefore, policymakers and financial managers in public institutions should place greater emphasis on implementing robust variance analysis procedures as a practical tool for enhancing policy performance; while also reassessing the effectiveness of their planning and monitoring frameworks to ensure they contribute meaningfully to implementation outcomes.

## CONCLUSION AND RECOMMENDATIONS

This study concludes that effective use of variance analysis significantly influences the successful implementation of public policies in Nigeria, while budget planning and expenditure monitoring appear less impactful, possibly due to inefficiencies or lack of institutional enforcement.

Based on this study's finding, it is recommended that public sector managers and Government should;

i. Institutionalize regular variance reporting to quickly detect and correct deviations between planned and actual expenditures.
ii. Strengthen participatory budgeting practices to improve the relevance and accuracy of budget planning in public agencies.
iii. Adopt digital expenditure tracking systems to enhance transparency and real-time budget monitoring.

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