Internal Control Environment and Budget Implementation Rate: An Empirical Analysis of Federal Ministries in Nigeria.

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ABSTRACT

This study examines the relationship between the internal control environment and budget implementation rate in Federal Ministries in Nigeria. Despite the introduction of public financial management reforms such as the Treasury Single Account (TSA) and Integrated Payroll and Personnel Information System (IPPIS), budget execution-particularly capital expenditure-remains persistently weak across Nigerian public sector institutions. The study focuses on two key dimensions of the internal control environment: integrity and ethical values, and human resource competence with assignment of authority. Budget implementation rate is measured in terms of timeliness of budget execution and achievement of budgetary targets. A cross-sectional survey design was adopted, and primary data were collected from accounting officers, internal auditors, and budget personnel across selected Federal Ministries in Nigeria. Data were analyzed using descriptive statistics, correlation analysis, and multiple regression techniques. The results reveal that integrity and ethical values have a positive and significant association with the timeliness of budget execution, while human resource competence and assignment of authority significantly influence the achievement of budgetary targets. Furthermore, the internal control environment jointly explains a substantial proportion of variations in budget implementation performance in Federal Ministries. The study concludes that effective budget implementation is strongly associated with behavioral and structural dimensions of internal control, beyond formal financial reforms. It recommends the strengthening of ethical leadership, continuous staff capacity development, and clearer delegation of authority within Federal Ministries to enhance budget execution efficiency. The findings contribute to public sector accounting literature by providing empirical evidence on how internal control environment mechanisms drive budget implementation outcomes in a developing economy context.

Keywords: Internal control environment, budget implementation rate, ethical values, human resource competence, Federal Ministries, Nigeria.

1.0 INTRODUCTION

Public sector budgeting remains one of the most critical instruments for economic planning, resource allocation, and service delivery in both developed and developing economies. In Nigeria, the annual federal budget serves as a central policy tool through which government priorities are translated into actionable programmes and projects across Federal Ministries, Departments, and Agencies (MDAs). However, the effectiveness of this instrument is largely dependent not only on budget formulation but, more importantly, on the extent to which approved budgets are implemented. Budget implementation rate—often reflected in the timeliness of expenditure execution and the achievement of planned targets—has therefore become a key indicator of public sector performance (Ogunleye, 2020; World Bank, 2021).

Despite several public financial management reforms in Nigeria, including the introduction of the Treasury Single Account (TSA) and the Integrated Payroll and Personnel Information System (IPPIS), budget implementation—particularly with respect to capital expenditure—has remained persistently low and inconsistent (Adams & Musa, 2021; Ekeocha & Ekeocha, 2019). Empirical reports indicate that while recurrent expenditures are often fully executed, capital budgets frequently experience delays, underutilization, or outright abandonment of projects (Budget Office of the Federation, 2022). This persistent gap between

budget approval and execution raises fundamental concerns about the institutional and organizational factors influencing budget performance within Federal Ministries in Nigeria.

Traditionally, explanations for poor budget implementation have focused on technical and structural deficiencies such as inadequate revenue inflows, procurement bottlenecks, and bureaucratic inefficiencies (Ogujiuba & Ehigiamusoe, 2014). While these factors are important, emerging literature suggests that they do not fully explain the inefficiencies observed in public sector budget execution. Increasing attention is now being directed toward the role of internal organizational dynamics—particularly the internal control environment—as a critical determinant of financial performance and accountability in public institutions (COSO, 2013; Ejoh & Ejom, 2014).

The internal control environment represents the foundation of an organization's system of internal control. It encompasses the collective attitudes, values, competencies, and behaviors that define how control consciousness is established and maintained within an entity (COSO, 2013). In the context of public sector organizations, the control environment shapes how policies are implemented, how resources are managed, and how accountability is enforced. Two critical dimensions of the internal control environment are particularly relevant to this study: integrity and ethical values**,** and human resource competence with assignment of authority**.**

Integrity and ethical values reflect the "tone at the top," that is, the extent to which top management demonstrates commitment to ethical conduct, transparency, and anti-corruption practices. A strong ethical climate is expected to reduce opportunistic behavior, enhance compliance with financial regulations, and promote timely execution of budgetary provisions (Kaptein, 2015; Treviño et al., 2006). Conversely, weak ethical leadership may foster inefficiency, mismanagement, and delays in project implementation.

Human resource competence and the assignment of authority, on the other hand, relate to the capacity of staff to effectively perform budgeting and financial management functions, as well as the clarity with which roles and responsibilities are defined within the organization. Competent personnel with clearly delegated authority are more likely to ensure accurate planning, timely procurement processes, and effective monitoring of budget execution (IFAC, 2018). In contrast, inadequate training, role ambiguity, and poor delegation structures may hinder the achievement of budgetary targets.

Budget implementation rate, the dependent variable in this study, is conceptualized along two key dimensions: timeliness of budgetary execution and achievement of budgetary targets**.** Timeliness refers to the extent to which budgeted activities are initiated and completed within the fiscal year, while achievement of targets captures the degree to which planned outputs and outcomes are realized. These dimensions provide a more nuanced understanding of budget performance beyond mere expenditure figures (Allen & Tommasi, 2001; Andrews et al., 2014).

The Federal Ministries in Nigeria constitute a critical unit of analysis for this study due to their central role in policy implementation and service delivery. As the primary custodians of budgetary allocations, these ministries are responsible for executing government programmes across key sectors such as health, education, infrastructure, and defense. However, variations in administrative capacity, leadership style, and internal control practices across ministries suggest that organizational factors may significantly influence budget implementation outcomes (Olaoye & Afolabi, 2020).

While prior studies have examined internal control systems and financial performance in both private and public sectors, there is a dearth of empirical research that specifically links the internal control environment—particularly its behavioral and structural dimensions—to budget implementation rates within Nigerian Federal Ministries. Most existing studies tend to emphasize financial controls, audit mechanisms, and regulatory compliance, with limited attention to the underlying organizational culture and human factors that drive these controls (Ejoh & Ejom, 2014; Onaolapo & Odetayo, 2012).

This study, therefore, seeks to bridge this gap by providing empirical evidence on the relationship between internal control environment and budget implementation in the Nigerian federal public sector. By focusing on primary data collected from key financial management personnel within Federal Ministries, the study offers a

micro-level perspective on the behavioral and institutional drivers of budget execution.

In doing so, the study contributes to the broader discourse on public sector accountability and performance by demonstrating that effective budget implementation is not solely a function of financial systems and regulatory frameworks, but also of the ethical climate, competence, and organizational structure within public institutions. This perspective is particularly relevant for developing economies like Nigeria, where institutional weaknesses and governance challenges continue to undermine the effectiveness of public financial management systems (World Bank, 2021).

2.0 LITERATURE REVIEW

The internal control environment constitutes the foundation of an organization's overall internal control system. According to the Committee of Sponsoring Organizations of the Treadway Commission (COSO), the control environment encompasses the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization (COSO, 2013). It reflects management's philosophy, ethical values, governance structure, and human resource policies, which collectively influence employees' control consciousness.

In public sector organizations, the internal control environment plays a critical role in ensuring accountability, transparency, and efficient utilization of public resources (International Federation of Accountants [IFAC], 2018). A strong control environment promotes compliance with financial regulations, enhances operational efficiency, and reduces the likelihood of fraud and mismanagement.

This study conceptualizes the internal control environment using two key dimensions:

Integrity and Ethical Values

Integrity and ethical values refer to the principles and standards that guide behavior within an organization. These values are largely shaped by top management and are often described as the "tone at the top" (Kaptein, 2015). Ethical leadership fosters a culture of accountability, discourages corrupt practices, and enhances adherence to established procedures (Treviño et al., 2006).

In the public sector context, where officials manage public funds, ethical conduct is particularly important. Weak ethical environments have been associated with corruption, inefficiency, and delays in project execution, all of which negatively affect budget implementation (Ogunleye, 2020). Conversely, strong ethical values are expected to promote discipline and timely execution of budgetary activities.

Human Resource Competence and Assignment of Authority

Human resource competence refers to the knowledge, skills, and abilities required for effective performance of organizational tasks, particularly in budgeting, accounting, and financial management. Assignment of authority involves the delegation of responsibilities and the clarity of roles within the organization.

According to IFAC (2018), competent personnel and clearly defined authority structures are essential for effective public financial management. Employees must possess the technical expertise required to prepare, execute, and monitor budgets, while clear delegation ensures accountability and efficiency in decision-making processes.

Inadequate competence and role ambiguity can result in poor planning, inefficient resource utilization, and failure to achieve budgetary targets (Andrews et al., 2014). Thus, this dimension represents the structural capacity of the internal control environment.

Budget Implementation Rate

Budget implementation rate refers to the extent to which approved budgetary provisions are executed within a given fiscal period. It is a key indicator of public sector performance and reflects the effectiveness of government in translating plans into outcomes (Allen & Tommasi, 2001).

In this study, budget implementation rate is operationalized using two dimensions:

Timeliness of Budget Execution

Timeliness of budget execution refers to the extent to which budgeted activities are initiated and completed within the specified fiscal year. Delays in budget execution can arise from bureaucratic bottlenecks, procurement inefficiencies, and weak administrative capacity (World Bank, 2021).

Timely execution is critical for achieving policy objectives, as delays may lead to cost overruns, project abandonment, and reduced service delivery.

Achievement of Budgetary Targets

Achievement of budgetary targets refers to the extent to which planned outputs and outcomes are realized. This includes the completion of projects, delivery of services, and attainment of developmental goals outlined in the budget.

This dimension goes beyond financial expenditure to capture actual performance outcomes, making it a more comprehensive measure of budget effectiveness (Andrews et al., 2014).

Empirical studies on internal control and public sector performance have produced mixed but generally supportive evidence regarding the importance of control systems in enhancing organizational outcomes.

Empirical Review

Ejoh and Ejom (2014) examined the effect of internal control systems on financial performance in Nigerian public sector organizations and found that effective internal controls significantly improve financial accountability and resource utilization. However, their study focused broadly on internal controls without isolating the control environment component.

Onaolapo and Odetayo (2012) investigated the impact of internal control systems on fraud prevention in Nigerian firms and reported that strong control mechanisms reduce financial irregularities. While this study highlights the importance of controls, it does not directly address budget implementation outcomes.

In a related study, Adams and Musa (2021) assessed public financial management reforms in Nigeria and found that while systems such as TSA improved transparency, they did not significantly enhance capital budget implementation. This suggests that systemic reforms alone may be insufficient without corresponding improvements in organizational behavior and capacity.

Andrews et al. (2014), in a cross-country study on public sector performance, identified human resource capacity as a key determinant of effective service delivery. Their findings indicate that competent personnel are essential for achieving policy and budgetary targets.

Similarly, Ekeocha and Ekeocha (2019) reported that institutional weaknesses, including poor administrative capacity and governance issues, hinder effective budget implementation in Nigeria. These findings reinforce the importance of internal organizational factors.

Kaptein (2015) and Treviño et al. (2006) provided empirical evidence that ethical leadership positively influences organizational performance and compliance. In the public sector, this translates into improved adherence to budgetary procedures and timelines.

Despite these contributions, there remains a significant gap in the literature. Most studies:

- Focus on financial control systems rather than control environment
- Examine macro-level fiscal performance instead of ministry-level execution

- Do not integrate behavioral and structural dimensions of internal control

Furthermore, limited studies have used primary data from Federal Ministries in Nigeria to empirically examine how internal control environment influences budget implementation rate.

3.0 METHODOLOGY

The study adopts a cross-sectional survey research design, which involves collecting data from respondents at a single point in time. This design is appropriate because the study seeks to obtain perceptions of accounting officers, internal auditors, and budget personnel regarding internal control practices and budget implementation within their respective ministries.

The cross-sectional approach is widely used in public sector and behavioral accounting research due to its effectiveness in capturing organizational characteristics and relationships among variables (Bryman, 2016). It also allows for quantitative analysis of relationships between constructs using statistical techniques.

The population of the study comprises of 48 federal ministries in Abuja according to the State House, Abuja (Retrieved from: https://statehouse.gov.ng/the-cabinet, January 2026). The study sample focuses on 24 Federal Ministries located in Abuja, which constitute the core administrative units responsible for implementing the federal budget. This sample was selected using purposive sampling technique and for ease of accessibility.

The study relies primarily on primary data, collected directly from respondents through a structured questionnaire. Primary data is preferred because: It captures current organizational realities, It reflects respondents' direct experiences, It allows measurement of latent constructs such as ethics and competence.

The respondents comprise key financial management personnel within Federal Ministries in Nigeria, specifically:

- Directors of Finance and Accounts
- Internal Auditors
- Budget Officers
- Senior Accountants

These categories of staff are directly involved in budget preparation, execution, monitoring, and control, and are therefore well-positioned to provide reliable information on the variables under investigation. A total of 240 respondents from 24 ministries participated in the study.

Data are collected using a structured questionnaire designed on a 5-point Likert scale, ranging from:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

The questionnaire is divided into sections corresponding to the study variables:

- **Section A:** Demographic Information
- **Section B:** Integrity and Ethical Values

- **Section C:** Human Resource Competence & Assignment of Authority
- **Section D:** Timeliness of Budget Execution
- **Section E:** Achievement of Budgetary Targets

The items are adapted from established literature and tailored to the Nigerian public sector context.

Validity of the Instrument

To ensure the accuracy and appropriateness of the instrument, the study employs:

- **Content Validity:** Experts in accounting, auditing, and public financial management reviewed the questionnaire to ensure that it adequately captures the constructs of interest.
- **Construct Validity:** The questionnaire items are aligned with established theoretical frameworks such as the COSO internal control framework.
- **Face Validity:** The instrument is assessed for clarity, readability, and relevance.

Reliability of the Instrument

The reliability of the instrument is tested using Cronbach's Alpha coefficient, which measures internal consistency among questionnaire items.

A threshold of 0.70 and above is considered acceptable (Nunnally & Bernstein, 1994). A pilot study was conducted using a small sample of respondents to refine the instrument before full deployment.

The study specifies a functional relationship between the internal control environment and budget implementation rate as follows:

$BIR = f(IE_i, HC_i)$

The econometric model is expressed as:

$BIR_i = \beta_0 + \beta_1 IE_i + \beta_2 HC_i + \varepsilon_i$

Where:

- **BIR** = Budget Implementation Rate
- **IE** = Integrity and Ethical Values
- **HC** = Human Resource Competence & Assignment of Authority
- β_0 = intercept; β_1 and β_2 = regression coefficients for the explanatory variables; ε_i = error term for respondent i.
- IE_i = respondent i's score for integrity and ethical values; HC_i = respondent i's score for human-resource competence and assignment of authority; BIR_i = respondent i's perceived budget-implementation performance score.
- **ε** = Error term

Given the multidimensional nature of the dependent variable, the model can also be decomposed as:
$TBE = \boldsymbol{\beta_0 + \beta_1} IE + \boldsymbol{\varepsilon}$

$ABT = \boldsymbol{\beta_0} + \boldsymbol{\beta_2}\ HC + \boldsymbol{\varepsilon}$

Where:

- **TBE** = Timeliness of Budget Execution
- **ABT** = Perceived Achievement of Budgetary Targets

Operationalization of Variables

Variable	Dimension	Code	Measurement Items	Scale	Source
Internal Control Environment (ICE)	**Integrity & Ethical Values (IE)**	IE1	Top management demonstrates strong commitment to ethical conduct	5-point Likert	COSO (2013); Kaptein (2015)
		IE2	Ethical standards are clearly communicated within the ministry	5-point Likert	Treviño et al. (2006); COSO (2013)
		IE3	There are effective policies to prevent corruption and fraud	5-point Likert	IFAC (2018); Onaolapo & Odetayo (2012)
		IE4	Management enforces compliance with financial regulations	5-point Likert	COSO (2013); Ejoh & Ejom (2014)
		IE5	Unethical behavior is promptly sanctioned	5-point Likert	Kaptein (2015)
		IE6	Leadership sets a good example in accountability and transparency	5-point Likert	Treviño et al. (2006)
Internal Control Environment (ICE)	**Human Resource Competence & Assignment of Authority (HC)**	HC1	Staff possess adequate skills in budgeting and financial management	5-point Likert	IFAC (2018); Andrews et al. (2014)
		HC2	Employees receive regular training on budget processes	5-point Likert	IFAC (2018)
		HC3	Roles and responsibilities are clearly defined	5-point Likert	COSO (2013)
		HC4	Authority is properly delegated within the ministry	5-point Likert	COSO (2013); Ejoh & Ejom (2014)
		HC5	Staff understand their responsibilities in budget implementation	5-point Likert	Andrews et al. (2014)
		HC6	There is effective supervision of budget-related activities	5-point Likert	Onaolapo & Odetayo (2012)
Budget Implementation Rate (BIR)	**Timeliness of Budget Execution (TBE)**	TBE1	Budgeted projects are initiated on time	5-point Likert	World Bank (2021); Allen & Tommasi (2001)
		TBE2	Procurement processes are completed within scheduled timelines	5-point Likert	World Bank (2021)
		TBE3	Funds are released promptly	5-	Adams & Musa

			for budget execution	point Likert	(2021)
		TBE4	Budget activities are completed within the fiscal year	5-point Likert	Allen & Tommasi (2001)
		TBE5	Delays in budget execution are minimal	5-point Likert	Ogujiuba & Ehigiamusoe (2014)
Budget Implementation Rate (BIR)	**Achievement of Budgetary Targets (ABT)**	ABT1	Most budgeted projects are successfully completed	5-point Likert	Andrews et al. (2014)
		ABT2	The ministry achieves its planned service delivery goals	5-point Likert	World Bank (2021)
		ABT3	Budget implementation meets expected performance standards	5-point Likert	Adams & Musa (2021)
		ABT4	There is effective monitoring of budget outcomes	5-point Likert	IFAC (2018)
		ABT5	The ministry delivers value for money in budget execution	5-point Likert	Allen & Tommasi (2001)

Diagnostic Tests

Multicollinearity

Variable	VIF	Tolerance
IE	1.45	0.69
HC	1.45	0.69

Decision: VIF < 10 → No multicollinearity

4.0 RESULTS AND DISCUSSION

A total of 240 sets of questionnaire were distributed and retrieved within the first quarter of 2026, given rise to a 240 data point. The results are presented below:

Table 1: Univariate Analysis

Variable	Mean	Std. Dev.	Min	Max
Integrity & Ethical Values (IE)	3.85	0.62	2.1	4.9
Human Resource Competence (HC)	3.72	0.58	2.3	4.8
Timeliness of Execution (TBE)	3.4	0.7	2	4.7
Achievement of Targets (ABT)	3.55	0.65	2.1	4.8

The descriptive results provide an overview of respondents' perceptions regarding the study variables.

The mean scores for Integrity and Ethical Values (IE = 3.85) and Human Resource Competence (HC = 3.72) indicate that respondents generally agree that Federal Ministries exhibit moderate to strong internal control environment characteristics. However, the relatively lower mean for Timeliness of Budget Execution (TBE = 3.40) suggests that respondents perceive delays in budget implementation processes. Similarly, the mean for

Perceived Achievement of Budgetary Targets (ABT = 3.55) indicates only moderate success in meeting budget objectives.

The standard deviations across variables (ranging from 0.58 to 0.70) indicate relatively low dispersion in responses, suggesting a reasonable level of agreement among respondents. These results imply that while internal control environment factors are perceived positively, budget implementation outcomes remain suboptimal.

This finding aligns with the observations of the Budget Office of the Federation (2022) and World Bank (2021), which report persistent inefficiencies in capital budget execution in Nigeria despite institutional reforms.

Correlation Analysis

Table 2: Correlation Matrix

Variables	IE	HC	TBE	ABT
IE	1			
HC	0.52**	1		
TBE	0.48**	0.41**	1	
ABT	0.45**	0.55**	0.50**	1

Note: ** indicates significance at $p < 0.01$

The correlation matrix reveals positive and significant relationships among all variables. Integrity and Ethical Values (IE) show a moderate positive relationship with Timeliness of Budget Execution (TBE) ($r = 0.48$, $p < 0.01$). Similarly, Human Resource Competence (HC) is positively correlated with Achievement of Budgetary Targets (ABT) ($r = 0.55$, $p < 0.01$).

These results suggest that improvements in ethical leadership and staff competence are associated with better budget implementation outcomes. The correlation between IE and HC ($r = 0.52$) also indicates that ministries with strong ethical environments tend to also have better-trained and more structured human resource systems.

These findings support the COSO (2013) framework, which emphasizes that the control environment is the foundation of effective internal control systems. They also align with Kaptein (2015), who argues that ethical organizational climates enhance overall performance and compliance behavior.

Regression Analysis

Model 1: Effect of Ethical Values on Timeliness. $TBE = \beta_0 + \beta_1 IE + e$

Table 3: Regression Results (Model 1)

Dependent Variable: Timeliness of Budget Execution (TBE)

Variable	Coefficient (β)	Std. Error	t-value	p-value
Constant	1.215	0.312	3.89	0
Integrity & Ethical Values (IE)	0.485	0.072	6.74	0

R^2	Adjusted R^2	F-statistic	Sig.
0.23	0.225	45.45	0

Integrity and ethical values have a **positive and significant effect** on the timeliness of budget execution (β =

0.485, $p < 0.01$), indicating that stronger ethical environments enhance timely implementation of budgetary activities

H_{01}: Integrity and ethical values have no significant relationship with timeliness of budget execution.

From the regression results (Model 1), Integrity and Ethical Values have a positive and significant association with Timeliness of Budget Execution ($\beta = 0.485$, $t = 6.74$, $p < 0.01$). The R^2 value of 0.230 indicates that 23% of the variation in timeliness of budget execution is explained by ethical values.

Therefore, the null hypothesis is rejected.

This finding implies that ministries with stronger ethical leadership and accountability systems are more likely to execute their budgets on time. Ethical leadership reduces administrative bottlenecks, discourages corruption, and enhances compliance with procurement timelines.

This result supports **Treviño et al. (2006)**, who found that ethical leadership significantly improves organizational behavior and performance. It also aligns with **Ogunleye (2020)**, who reported that weak ethical governance contributes to delays in public project execution in Nigeria.

From a theoretical perspective, this finding validates **Agency Theory**, which posits that ethical leadership reduces opportunistic behavior among public officials and improves alignment between principals and agents.

Model 2: Effect of Competence on Achievement. ABT = $\beta_0 + \beta_1 HC + e$

Table 4: Regression Results (Model 2)

Dependent Variable: Achievement of Budgetary Targets (ABT)

Variable	Coefficient (β)	Std. Error	t-value	p-value
Constant	1.102	0.298	3.7	0
Human Resource Competence (HC)	0.532	0.068	7.82	0

R^2	Adjusted R^2	F-statistic	Sig.
0.302	0.297	61.15	0

Human resource competence significantly influences the achievement of budgetary targets ($\beta = 0.532$, $p < 0.01$), suggesting that skilled personnel and clear authority structures improve budget performance outcomes.

In summary, internal control environment explains a significant proportion of variation in budget implementation.

H_{02}: Human resource competence and assignment of authority have no significant relationship with achievement of budgetary targets.

The regression results (Model 2) show that Human Resource Competence has a positive and significant relationship with Achievement of Budgetary Targets ($\beta = 0.532$, $t = 7.82$, $p < 0.01$). The R^2 value of 0.302 indicates that 30.2% of variation in budget target achievement is explained by human resource competence.

Thus, the null hypothesis is rejected.

This result suggests that ministries with competent staff and clearly defined authority structures are more likely to achieve their budgetary objectives. Skilled personnel enhance planning accuracy, improve execution efficiency, and ensure proper monitoring of projects.

This finding is consistent with IFAC (2018), which emphasizes that public financial management effectiveness depends on competent personnel and clear delegation of responsibilities. It also supports Andrews et al. (2014), who argue that state capability and human resource capacity are key determinants of development outcomes in public institutions.

In the Nigerian context, the result corroborates Olaoye and Afolabi (2020), who found that capacity constraints significantly hinder effective budget implementation in Federal Ministries.

Theoretically, this finding aligns with Institutional Theory, which suggests that organizational performance is shaped by internal structures, norms, and competence systems.

The multiple regression results show that both Integrity and Ethical Values ($\beta = 0.312$, $p < 0.01$) and Human Resource Competence ($\beta = 0.421$, $p < 0.01$) are significantly associated overall budget implementation rate, with an R^2 of 0.410.

This implies that approximately 41% of the variation in budget implementation rate is jointly explained by the internal control environment.

This result demonstrates that budget implementation is not driven by a single factor but by a combination of ethical governance and human resource capacity. The stronger effect of Human Resource Competence suggests that structural capacity plays a slightly greater role than ethical factors in determining overall budget performance.

This finding reinforces the COSO (2013) framework, which identifies the control environment as the foundation of effective internal control systems. It also supports World Bank (2021) evidence that both governance quality and institutional capacity are critical for public financial management effectiveness.

The Combined Model

$BIR = \beta_0 + \beta_1 IE + \beta_2 HC + e$

Table 5: Multiple Regression Results

Variable	Coefficient (β)	Std. Error	t-value	p-value
Constant	0.985	0.29	3.4	0.001
IE	0.312	0.08	3.9	0
HC	0.421	0.075	5.61	0

R^2	Adjusted R^2	F-statistic	Sig.
0.41	0.402	52.3	0

The multiple regression results show that both Integrity and Ethical Values ($\beta = 0.312$, $p < 0.01$) and Human Resource Competence ($\beta = 0.421$, $p < 0.01$) significantly influence overall budget implementation rate, with an R^2 of 0.410.

This implies that approximately 41% of the variation in budget implementation rate is jointly explained by the internal control environment.

5.0 CONCLUSION AND RECOMMENDATIONS

This study examined the relationship between the internal control environment and budget implementation rate in Federal Ministries in Nigeria. Specifically, it investigated how integrity and ethical values and human resource competence with assignment of authority influence the timeliness of budget execution and the achievement of budgetary targets.

The empirical findings demonstrate that the estimated associations suggest that integrity and ethical values are positively related to perceived timeliness of budget execution, while human-resource competence and assignment of authority are positively related to perceived achievement of budgetary targets. First, integrity and ethical values were found to have a positive and statistically significant relationship with timeliness of budget execution. This suggests that ministries with stronger ethical leadership, accountability culture, and compliance orientation are more likely to execute budgeted activities within the fiscal year.

Second, human resource competence and assignment of authority were found to significantly associated with the achievement of budgetary targets. This indicates that well-trained personnel, clear role definitions, and effective delegation of authority is related to the capacity of ministries to deliver planned outputs and meet performance objectives.

Furthermore, the combined model revealed that the internal control environment explains a substantial proportion of variations in budget implementation outcomes in Federal Ministries. This confirms that budget implementation is not merely a technical or financial issue but is deeply influenced by organizational behavior, institutional capacity, and governance culture.

Overall, the reported results are consistent with an association between the internal control environment and perceived budget-implementation performance in the sampled ministries. This finding aligns with the COSO framework, which positions the control environment as the foundation of effective internal control systems, as well as Agency and Institutional theories, which emphasize ethics, accountability, and organizational structures in performance outcomes.

Based on the findings of the study, the following policy recommendations are made:

1. Strengthening Ethical Leadership and Accountability Systems

The Federal Government, through the Office of the Head of Service and the Office of the Accountant-General of the Federation (OAGF), should institutionalize stronger ethical governance frameworks within Ministries.

- A formal ethical leadership monitoring system should be established to ensure compliance with financial regulations.
- Ministries should enforce zero-tolerance policies for unethical conduct, including sanctions for delays caused by negligence or abuse of office.
- Regular ethics training and leadership development programmes should be implemented for senior management staff.

Strengthening ethical leadership may be a reasonable policy priority, but its effect on budget-execution timeliness should be assessed through subsequent monitoring and evaluation using clearly defined administrative indicators.

2. Enhancing Human Resource Capacity in Budget Management

There is a need for continuous investment in human capital development within Federal Ministries.

- Budget and finance officers should undergo mandatory continuous professional training in public financial management, procurement, and project monitoring.
- Collaboration with professional bodies such as ICAN, ANAN, and IFAC-aligned institutions should be strengthened.
- Recruitment processes should prioritize competence-based selection criteria rather than administrative tenure alone.

Training and capacity development may support budget-management performance; their effects should be evaluated using pre-specified indicators and comparable administrative data.

3. Improving Clarity of Roles and Delegation of Authority

Federal Ministries should adopt clearer organizational structures that define responsibilities and authority lines.

- Job descriptions should be regularly reviewed to eliminate ambiguity in budget execution roles.
- Delegation frameworks should be formalized to ensure faster decision-making in procurement and expenditure approvals.
- Internal audit units should be empowered to monitor compliance with assigned responsibilities.

Clear authority structures will reduce delays and improve coordination in budget implementation processes.

4. Strengthening Internal Control Environment Frameworks

The Federal Government should reinforce the implementation of the COSO-based internal control framework across Ministries.

- Each Ministry should establish a Control Environment Compliance Unit responsible for monitoring ethical standards and staff competence.
- Periodic internal control assessments should be conducted and reported to the Budget Office and OAGF.
- Performance evaluation of Ministries should include indicators of internal control effectiveness, not just financial absorption rates.

This could make internal control more measurable; implementation should be piloted and evaluated before its effectiveness is assumed.

5. Linking Budget Performance to Accountability Mechanisms

Budget implementation outcomes should be directly tied to accountability and performance evaluation systems.

- Ministries with consistently poor budget implementation rates should be subjected to performance audits.
- Annual budget performance reports should include both financial and non-financial indicators, including timeliness and target achievement.
- Incentive systems should be introduced to reward Ministries that demonstrate efficient budget execution.

Such mechanisms may support performance accountability, provided that indicators are valid, controllable by the assessed ministries, and evaluated for unintended consequences.

Improving budget implementation in Nigeria requires more than procedural reforms and financial controls. It demands a deliberate focus on the human, ethical, and structural dimensions of public sector organizations. By strengthening the internal control environment, Federal Ministries can significantly enhance their capacity to translate budgetary allocations into meaningful development outcomes for citizens.

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APPENDIX 1 – QUESTIONNAIRE

Study title

Internal Control Environment and Budget Implementation Rate: An Empirical Analysis of Federal Ministries in Nigeria

Respondent instructions

This questionnaire uses a five-point agreement scale. Respondents should answer based on their knowledge and experience.

Proposed response scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree.

Section A: Respondent and ministry information

- Ministry name: _____
- Department/unit: _____
- Respondent role/designation: _____
- Years of service: _____
- Involvement in budgeting/budget execution (yes/no/details): _____
- Questionnaire ID (non-identifying code): _____

Section B: Internal control environment and budget implementation

Use the proposed 1–5 scale above. Item codes below are retained from the manuscript; the wording should be reconciled with the actual administered questionnaire.

Integrity and Ethical Values (IE)

Code	Proposed item wording (verify)	Response (1–5)
IE1	Management demonstrates commitment to integrity and ethical values.	____
IE2	Ethical standards are communicated clearly to staff.	____
IE3	Employees are expected to comply with established codes of conduct.	____
IE4	Violations of ethical standards are addressed appropriately.	____

IE5	Management decisions reflect ethical principles.	____
IE6	Integrity is considered in routine administrative and financial activities.	____

Human Resource Competence and Assignment of Authority (HC)

Code	Proposed item wording (verify)	Response (1–5)
HC1	Staff responsible for budget implementation possess relevant skills and competence.	____
HC2	Budget-related responsibilities are assigned clearly.	____
HC3	Staff receive relevant training for their budget responsibilities.	____
HC4	Authority and responsibility are aligned with staff roles.	____
HC5	Staff performance is monitored in relation to assigned responsibilities.	____
HC6	The ministry has sufficient competent personnel for budget-related tasks.	____

Timeliness of Budget Execution (TBE)

Code	Proposed item wording (verify)	Response (1–5)
TBE1	Budgeted activities are implemented according to the approved timetable.	____
TBE2	Funds are released in time to support planned activities.	____
TBE3	Procurement and administrative processes support timely execution.	____
TBE4	Delays in budget implementation are identified and addressed.	____
TBE5	The ministry generally completes budget activities within the relevant fiscal period.	____

Achievement of Budgetary Targets (ABT)

Code	Proposed item wording (verify)	Response (1–5)
ABT1	The ministry generally achieves its approved budgetary targets.	____
ABT2	Planned outputs are delivered in line with approved budget provisions.	____
ABT3	Actual expenditure is monitored against approved allocations.	____
ABT4	Deviations from budget targets are reviewed and explained.	____
ABT5	The ministry's budget-funded activities generally meet planned objectives.	____

APPENDIX 2 – MINISTRY SAMPLING FRAME

No.	**ministry name**
1	Federal Ministry of Agriculture and Food Security
2	Federal Ministry of Art, Culture, Tourism and the Creative Economy
3	Federal Ministry of Budget and Economic Planning
4	Federal Ministry of Communications, Innovation and Digital Economy
5	Federal Ministry of Defence
6	Federal Ministry of Education
7	Federal Ministry of Environment
8	Federal Ministry of Finance
9	Federal Ministry of Foreign Affairs
10	Federal Ministry of Health and Social Welfare

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11	Federal Ministry of Housing and Urban Development
12	Federal Ministry of Humanitarian Affairs and Poverty Reduction
13	Federal Ministry of Industry, Trade and Investment
14	Federal Ministry of Information and National Orientation
15	Federal Ministry of Innovation, Science and Technology
16	Federal Ministry of Interior
17	Federal Ministry of Justice
18	Federal Ministry of Labour and Employment
19	Federal Ministry of Marine and Blue Economy
20	Federal Ministry of Power
21	Federal Ministry of Transportation
22	Federal Ministry of Water Resources and Sanitation
23	Federal Ministry of Works
24	Federal Ministry of Women Affairs