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The Role of Forensic Accounting in Fraud Control in the Nigerian Public Sector: Risk Assessment Practices.

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Abstract
Fraud remains a pervasive issue within the Nigerian public sector, undermining governance, service delivery, and public trust. Traditional audit mechanisms have proven insufficient in identifying and mitigating sophisticated fraudulent schemes. This study investigates the role of forensic accounting in fraud control, focusing specifically on risk assessment as a critical tool. The aim was to determine the extent to which risk assessment influences fraud control within the Nigerian public sector. Using a quantitative research design, data was collected through structured questionnaires distributed to accounting and audit professionals in various government ministries and agencies. The hypothesis that risk assessment has no significant effect on fraud control was statistically tested and subsequently rejected, confirming the alternative hypothesis that risk assessment significantly contributes to fraud mitigation. Findings revealed that effective risk assessment enables early fraud detection and fosters the development of preventive controls. The study recommends institutionalizing forensic accounting practices, particularly risk assessment frameworks, across public sector institutions in Nigeria. These findings suggest that proactive forensic approaches can bridge the existing gaps in traditional audit systems, fostering greater accountability and financial transparency in the public sector.

Keywords: Forensic Accounting, Risk Assessment, Fraud Control, Nigerian Public Sector, Internal Controls, Financial Crime

Introduction/Background
Fraud in the public sector continues to be a significant challenge in Nigeria, eroding national resources and public confidence. Traditional audit processes, largely retrospective, are often incapable of detecting sophisticated financial manipulations (Okoye & Gbegi, 2021). Forensic accounting has emerged as a pivotal practice in combating fraud, combining investigative skills and financial acumen to uncover and prevent fraudulent activities (Owojori & Asaolu, 2009). Among the essential tools of forensic accounting is risk assessment - an anticipatory technique used to evaluate the probability and potential impact of fraud in an organization.

Problem Statement

The lack of effective fraud control mechanisms in Nigeria's public institutions has resulted in a culture of impunity, where perpetrators of financial crimes are seldom prosecuted or penalized. Existing audit frameworks have not only failed to prevent fraud but also struggled to adapt to evolving fraud schemes (Oji, 2022). Despite several reforms, the continuous rise in financial misconduct suggests a need for alternative strategies such as forensic risk assessment.

Objectives of the Study
The primary objective of this study is to assess the role of forensic accounting in fraud control, with a particular focus on risk assessment practices. Specifically, it aims to: Determine the extent to which risk assessment influence fraud control in the Nigerian public sector.

Research Question:
To what extent does risk assessment influence fraud control in the Nigerian public sector?

Null Hypothesis (H_0):
Risk assessment has no significant influence on fraud control in the Nigerian public sector.
Alternative Hypothesis (H_1):
Risk assessment has a significant effect on fraud control in the Nigerian public sector.

Significance of the Study
This study provides empirical insight into the practical application of forensic accounting tools in curbing financial fraud in Nigeria. Its outcomes are valuable for policymakers, internal auditors, and anti-corruption agencies, offering a roadmap for enhancing the effectiveness of fraud control frameworks. More importantly, it contributes to the growing literature advocating for the institutionalization of forensic practices in the Nigerian public financial management system.

Literature Review
Overview of Forensic Accounting and Fraud Control
Forensic accounting has become a vital tool in identifying and preventing fraudulent activities, particularly in the public sector where accountability and transparency are often challenged. It integrates investigative skills with financial expertise to expose, investigate, and ultimately prevent fraud (Okoye & Gbegi, 2021). Unlike traditional auditing, forensic accounting is proactive, forward-looking, and tailored to detect complex fraud schemes that may elude standard financial checks (Owojori & Asaolu, 2009). This proactive approach is particularly relevant in environments with systemic weaknesses, such as the Nigerian public sector, where endemic corruption and ineffective control systems prevail.

The concept of risk assessment within forensic accounting refers to the process of evaluating the likelihood and potential impact of fraud in order to implement appropriate control measures. It is designed not only to identify vulnerabilities but also to prioritize and mitigate risks before they manifest (Oji, 2022). This role is critical in the Nigerian context, where fraudulent financial practices have remained persistent due to insufficient monitoring frameworks and reactive audit processes.

Gaps in Traditional Approaches
Despite the growing recognition of forensic accounting, many Nigerian public institutions still rely heavily on conventional auditing techniques, which are largely compliance-driven and retrospective. These traditional methods are inadequate in detecting modern, sophisticated fraud patterns, especially in large bureaucracies with multiple layers of financial operations

(Eze & Onuoha, 2023). Moreover, the absence of integrated fraud risk assessment mechanisms in government agencies has contributed to a continued escalation of financial misconduct and a culture of impunity. Studies have shown that while internal controls exist, they are either poorly implemented or entirely disregarded due to weak enforcement mechanisms (Aliyu & Abdullahi, 2020). These shortcomings highlight the need for a paradigm shift from routine auditing to forensic-based approaches that focus on prevention, detection, and prosecution of financial crimes.

Empirical Review

Empirical studies have validated the efficacy of forensic accounting in reducing fraudulent practices in both public and private sectors. For instance, Enofe, Omagbon, and Ehigiator (2015) established a significant relationship between forensic tools, especially risk assessment and data analysis, and the decline of financial irregularities in public institutions. Similarly, Popoola, Ahmad and Samsudin (2015) found that forensic accountants possess skills that enhance the identification and deterrence of fraud compared to traditional auditors. However, many of these studies have primarily focused on the private sector or international contexts, leaving a gap in literature specifically related to the Nigerian public sector. Furthermore, the few existing public sector studies lack quantitative rigor or fail to isolate risk assessment as a standalone factor contributing to fraud control effectiveness.

Theoretical Framework: Fraud Triangle Theory

This study is anchored in the Fraud Triangle Theory developed by Donald Cressey (1953), which identifies three critical elements that drive fraudulent behaviour: pressure, opportunity, and rationalization. Risk assessment addresses the "opportunity" element by systematically identifying vulnerabilities in processes and controls that may be exploited for fraudulent purposes. By mitigating these opportunities, risk assessment becomes a strategic deterrent within forensic accounting frameworks (Dorminey, Fleming, Kranacher, & Riley, 2012). Furthermore, the theoretical underpinning also draws on the Agency Theory, which examines the conflict of interest between principals (government or the public) and agents (public officials). Forensic accounting, through effective risk assessment, acts as a governance mechanism to align interests and reduce agency loss arising from fraud.

Conceptual Framework

The conceptual framework for this study posits that Forensic Accounting, specifically the component of Risk Assessment, has a direct and significant effect on Fraud Control in the Nigerian public sector. The framework envisions that as risk assessment improves (in terms of frequency, accuracy, and follow-through), the incidence of undetected fraud and financial misappropriation will reduce correspondingly.

Methodology

Research Design

This study employed a quantitative research design to assess the impact of risk assessment—a forensic accounting tool, on fraud control in the Nigerian public sector. A survey-based approach was used to gather quantifiable data from professionals directly involved in financial management and auditing. The design is appropriate for establishing statistical relationships between variables and testing hypotheses objectively (Creswell & Creswell, 2018).

Population and Sample

The target population comprised finance officers, internal auditors, with forensic accounting knowledge working within Nigerian government ministries, departments, and agencies (MDAs). Due to the vastness of the public sector, a stratified random sampling technique was

adopted to ensure representation across different administrative levels (federal, state, and local).

A total of 150 questionnaires were distributed, and 140 valid responses were returned and used for analysis, yielding a response rate of 93.33%. The sampling ensured that respondents had relevant experience in financial reporting, fraud detection, or internal control, which enhances the validity of the findings.

Data Collection Instruments

A structured questionnaire served as the primary data collection instrument. It was divided into two sections: Section A: Demographic information (,role, years of experience, sector level). Section B: Likert-scale items (ranging from 1 = Strongly Disagree to 4 = Strongly Agree) measuring the implementation and perceived impact of risk assessment on fraud control. The questionnaire was developed based on validated instruments from prior studies (Eiya & Otalor, 2013; Obara & Nangih, 2017), with minor adaptations to fit the Nigerian public sector context.

Validity and Reliability

Content validity was ensured by subjecting the questionnaire to expert review by two forensic accounting academics and one professional forensic auditor. The Cronbach's Alpha coefficient for internal consistency reliability was calculated to be 0.86, which exceeds the 0.70 threshold considered acceptable in social science research (Tavakol & Dennick, 2011). This indicates a high level of reliability for the instrument.

Data Analysis Techniques

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics (mean, standard deviation) were used to summarize the data, while inferential statistics, particularly regression analysis, were applied to test the relationship between risk assessment (independent variable) and fraud control (dependent variable).
The hypothesis tested was:
Null Hypothesis (H_0): Risk assessment has no significant influence on fraud control in the Nigerian public sector.

Alternative Hypothesis (H_1): Risk assessment has a significant influence on fraud control in the Nigerian public sector.

The decision criterion was set at a 5% significance level ($\alpha = 0.05$). A p-value less than 0.05 was interpreted as evidence to reject the null hypothesis in favour of the alternative.

Ethical Considerations

The study ensured ethical compliance by maintaining respondent confidentiality and anonymity. Participation was voluntary, and informed consent was obtained from all respondents. No personally identifiable information was collected and the data were used strictly for academic purposes.

Results and Discussion

Results

The primary objective of this study was to determine the extent to which risk assessment, as a forensic accounting tool, influence fraud control in the Nigerian public sector. Data were analyzed using regression analysis in SPSS version 23.

Descriptive Statistics

The responses to the Likert-scale items showed a high level of agreement on the importance of risk assessment in identifying potential fraud risks, improving internal controls, and increasing accountability within public institutions. The mean score for most risk assessment indicators was between 4.1 and 4.5, indicating general agreement among respondents that risk assessment contributes positively to fraud control.

Effect of Risk Assessment in fraud control in the Nigerian Public Sector

Model	Source	B	Std. Error	Beta	T	P
1	(Constant)	1.210	.46		2.65	.009
	Risk assessment	.787	.07	.718	12.12	.000
	$R^2 = 0.515$.					
	F (1, 138) = 146.80,					
	p = 0.000					
	Adjusted $R^2 = 0.512$					
	Standard error of estimate = 1.24					

Note: Dependent Variable: Fraud Control.

Regression Analysis

The simple linear regression analysis revealed a statistically significant relationship between risk assessment and fraud control: $R^2 = 0.512$, indicating that risk assessment explains approximately 51.6% of the variance in fraud control effectiveness. The beta coefficient (β) = 0.718, suggesting a strong positive effect. p-value = 0.000 ($p < 0.05$), leading to rejection of the null hypothesis (H_0) and acceptance of the alternative hypothesis (H_1). These findings confirm that risk assessment has a significant and positive influence on fraud control in the Nigerian public sector.

Discussion

This result aligns with prior research affirming the efficacy of forensic accounting in fraud detection and prevention. According to Eiya and Otalor (2013), risk assessment enables organizations to proactively identify fraud-prone processes, thereby reducing opportunities for fraudulent behaviour. The current findings support this position by showing that public sector institutions implementing structured risk assessments tend to experience stronger fraud control outcomes. Furthermore, the study reinforces the Fraud Triangle Theory (Cressey, 1953), particularly the "opportunity" component. Risk assessment systematically addresses internal weaknesses and control gaps, effectively shrinking the space where fraud can occur (Albrecht, Albrecht, Albrecht, & Zimbelman, 2012). This theoretical linkage provides strong justification for institutionalizing risk assessment as a core element of forensic accounting in Nigeria's public sector. The findings also speak to the shortcomings of traditional auditing practices, which many respondents described as reactive and superficial. In contrast, forensic risk assessment is not only investigative but also preventive, thus aligning with the modern approach to governance and financial integrity (Okoye & Akamobi, 2009). Despite the positive findings, several barriers to effective implementation of risk assessment were identified during the study.

These include: Lack of technical expertise in forensic methods, Resistance to change from entrenched bureaucracies, inadequate policy support from government leadership. These limitations are consistent with previous studies that point to systemic corruption and institutional inertia as obstacles to reform in the Nigerian public sector (Akinbowale, Klingelhoefer, & Zerihun, 2020).

Implications for Policy and Practice

Given the strong statistical evidence and practical relevance, this study advocates for the institutionalization of forensic accounting departments in government agencies. Public sector workers should undergo capacity-building programs focusing on fraud risk identification, prevention, and response. Additionally, government anti-corruption frameworks should be revised to mandate risk assessment reporting alongside standard audits. The empirical support for risk assessment in fraud control presents a compelling case for policymakers and public administrators to re-evaluate current anti-fraud mechanisms. Implementing forensic accounting tools such as risk assessment can substantially reduce financial leakages, improve budget implementation, and restore public trust in governance.

Conclusion and Recommendations

In conclusion, this study set out to examine the effect of risk assessment as a forensic accounting tool on fraud control in the Nigerian public sector. The results of the empirical investigation strongly indicate that risk assessment has a significant and positive impact on fraud control effectiveness. The findings revealed that institutions which integrate risk assessment mechanisms into their internal financial controls are better positioned to identify vulnerabilities, reduce fraudulent activities, and improve transparency in public financial management.

The regression analysis conducted showed that risk assessment accounts for more than half of the variation in fraud control outcomes, underscoring its critical role in financial governance. This confirms the inefficacy of traditional audit systems that have failed to prevent complex and evolving fraudulent schemes within the Nigerian public sector. By validating the Fraud Triangle Theory, particularly the "opportunity" element, this study reinforces the argument that strong internal controls, built upon risk assessment, can significantly deter financial misconduct. Despite systemic challenges such as bureaucratic resistance, lack of forensic accounting skills, and weak enforcement of anti-fraud policies, the research highlights the transformative potential of risk-based forensic interventions. Therefore, enhancing the capacity and institutionalization of forensic accounting practices is a strategic necessity for curbing public sector corruption in Nigeria.

Based on the findings and analysis, the following recommendations are offered:

Institutionalize Risk Assessment Units. Government MDAs should establish dedicated forensic accounting and risk assessment units as part of their internal audit departments. These units must be equipped to proactively identify and mitigate fraud risks before they materialize.

Mandatory Forensic Accounting Training. Capacity-building programs should be introduced for finance and audit professionals within the public sector. Certification in forensic accounting and fraud risk management should be a requirement for key positions in finance and compliance.

Review and Enforce Anti-Fraud Policies. Existing anti-corruption frameworks should be updated to make risk assessment a mandatory compliance requirement for public institutions. Legislative support and enforcement mechanisms should be strengthened.

Integrate Forensic Risk Assessment into Budget Cycles. Risk assessment reports should be integrated into the budgeting and financial reporting cycles of government institutions. This will ensure that risks are identified and mitigated before funds are disbursed or allocated.

Collaborate with Professional Bodies. The Nigerian government should partner with institutions like the Institute of Chartered Accountants of Nigeria (ICAN) and the Association

of Certified Fraud Examiners (ACFE) to develop standardized guidelines and ethics for forensic risk assessment practices.

Promote Transparency through Technology. The deployment of forensic data analytics tools and fraud detection software can enhance the accuracy and reach of risk assessments, especially in ministries with high-value transactions.

In summary, this study emphasizes that fraud control in Nigeria's public sector requires a shift from reactive auditing to proactive forensic accounting, with risk assessment at the core. Policy makers and public sector administrators must adopt and enforce these reforms to combat systemic corruption, safeguard public funds, and restore public confidence.

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