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FORENSIC ACCOUNTING AND PUBLIC PROCUREMENT FRAUD PREVENTION: EVIDENCE FROM OSUN STATE, NIGERIA

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Abstract

Despite the existing controls and planning mechanisms put in place by the public sector, instances of fraud and corruption in public procurement remain prevalent. Forensic accounting with its focus on detailed analysis of financial records and transaction provide the necessary precaution that discloses hidden fraud and ensure fraud prevention. This study investigated the effect of forensic accounting in the prevention of procurement fraud within the Osun State public sector. The population of this study included 300 staffs working in the selected Osun State public sector. The sample size encompassed 150 respondents from Osun State ministries, agencies, and public tertiary institutions. The research utilized a survey design, collecting data through questionnaires. Data analysis methods used included correlation, descriptive statistics, and regression analysis. Results from this finding indicated a significant relationship between forensic accounting and public procurement fraud prevention evidenced by t-statistics of (23.727 and 0.000) respectively. The study concludes that forensic accounting greatly influences fraud prevention in Osun State public sector. The study recommends the employment of qualified forensic accountants so as to ensure the detection and prevention of public procurement fraud in the Osun State public sector. Additionally, it suggests adopting a robust forensic accounting system to uncover vulnerabilities in public procurement fraud prevention and detection.

Keywords: Forensic Accounting, Fraud, Fraud Diamond, Public Procurement, White Collar Crime

JEL Classifications: M41, M42

INTRODUCTION

Public procurement fraud involves illegal activities that reduced the integrity of the procurement process, leading to the misuse or theft of public funds. This type of fraud can take various forms including bid rigging, kickbacks, overbilling and collusion among contractors (OECD, 2016). Adane et al. (2023) stated that public procurement in both developed and developing nations is governed by regulations and guidelines to ensure fairness, transparency, and efficiency in utilizing public funds. Fourie and Malan (2020) opined that public procurement process does not only play a crucial role in government operations but also exerted a substantial impact on the economy. Despite the existing controls and planning mechanisms put in place by the public sector, instances of fraud and corruption in public procurement remain prevalent. World Bank (2011) stated that

establishing clear, vigorous legal and regulatory frameworks for procurement processes will help in public procurement fraud prevention. Regular training of procurement officials on ethical standards, fraud detection techniques and the latest development in procurement fraud prevention will enhance their ability to detect and prevent fraud (Transparency International, 2020).

Forensic accounting plays a pivotal role in fortifying fraud prevention in public procurement. It is a proactive measure, and it also deters potential fraudsters as well as fosters accountability (Adebayo et al. 2023). Gbrgo & Adebisi (2014) opined that forensic accounting serves as a tool for fraud detection in both public and private sectors. They further emphasized that fraud is an intentional deception for unfair gain, it is a pervasive global issue affecting developed and developing nations, governments, and private sectors alike. Fraudulent activities encompass a spectrum from distorting financial information to deceptive schemes aimed at acquiring money, assets, or services. According to Azih and Okoli (2019), forensic accounting serves as a crucial tool for detecting fraud in public sectors worldwide, including Nigeria's public sector. They noted that the credibility of certain government agencies, ministries, and executives in Nigeria's public sector has been compromised due to administrative shortcomings.

Moreover, Nwaiwu and Aron (2018) asserted that certain public officials in Nigeria engage in both direct and indirect misappropriation of tangible and intangible government assets, resulting in significant losses and impeding the government's ability to carry out its functions effectively. There have been several instances of public procurement fraud in Osun State, Nigeria one of which is the incidence of ghost contracts of 1.3 billion naira that were alleged to be awarded to non-existent firms between 2019 and 2021 (ICIR, 2023). Olukowade and Balogun (2015) expressed the view that governments at various levels have been grappling with financial fraud and other forms of corruption, employing appropriate policies, and establishing anti-graft agencies. Eze and Okoye (2019) argued that despite various measures implemented by both Nigeria federal and state governments to reduce or eliminate fraudulent activities, they persist, eroding public confidence in the government and the country. The prevalence of fraud in the Nigerian public sector, particularly in the exploitation of public funds and manipulation of records related to public procurement, is alarming (Asusu, 2019; Gabriel, 2012), contributing to the persistent poverty afflicting in Osun State and Nigeria as a whole.

The Economic and Financial Crimes Commission (EFCC) corroborated this in a report, attributing Nigeria's enduring poverty to approximately 70% of corruption cases related to procurement within the nation's economic and political system. According to the Chartered Institute of Purchasing and Supply Management of Nigeria's 2020 report, the manipulation of the public procurement process has caused Nigeria to lose 30% of its resources, with instances of fraud benefiting a select few, especially in public sectors. Various forms of public procurement fraud in Osun State and Nigeria includes project abandonment, inflated government project costs, budget padding, money laundering, oil bunkering, payments to nonexistent employees, subsidy fraud, embezzlement, tax evasion, diversion of public funds for personal use, and extravagant spending by government officials (Aremu & Olayinka, 2023; Mukoro, 2013; Onodi et al., 2015). To combat such fraud cases in Osun State, and other States in Nigeria, have begun to utilize forensic accounting as a tool for prevention and detection of public procurement fraud as (Oseni, 2017), Okoye, et al. (2020) suggested that forensic accounting can enhance accountability and address the mismanagement of public funds in both the public and private sectors.

Furthermore, while the impact of forensic accounting on public procurement has garnered attention from researchers globally, only a limited number have focused on assessing its effect specifically within the public sector. Numerous studies, including those by Abdulrahman (2019), Alao et al. (2023), Aremu and Olayinka (2023), Dada and Jimoh (2020), Fidelis and Amahi (2023), Fury and Eka (2018), Gabriel et al. (2022), Sunday and Babatunde (2018), Ola (2017), Riyazuddin and Mohd (2023), and Yasmin (2023), explored various aspects such as forensic accounting techniques, procurement practices, the role of forensic accounting in combating corruption or financial crimes, and public procurement's impact on performance in both developed and developing nations, including Nigeria. Notably, the sole research found that specifically delves into the effect of forensic accounting on public procurement is the study conducted by Adane et al. (2023) in Ethiopia. Most Nigerian studies, such as those by Abdulrahman (2019), Alao et al. (2023), Aremu and Olayinka (2023), Dada and Jimoh (2020), Gbegi and Okoye (2013), Imam et al. (2015), Ola (2017), and Sunday and Babatunde (2018), primarily examined the impact of forensic accounting on fraud prevention, overlooking its influence on public procurement. This highlighted a clear research gap in understanding the effects of forensic accounting on public procurement in both developed and developing nations. This study aims to address this research gap by thoroughly investigating how forensic accounting influences public procurement fraud prevention in the Nigerian public sector.

LITERATURE REVIEW

Conceptual Review Public Procurement

Adane et al. (2023) described public procurement as the process of acquiring goods and services for the public sector and it involved the purchase of items by government organizations. Manyenze (2013) emphasized that public procurement extends beyond mere acquisition, encompassing the procurement of goods and services at the most favorable price, appropriate quantity, and quality. In Nigeria, the Public Procurement Act of 2007 governs public procurement activities, with its primary objectives being the promotion of transparency, accountability, and competition in the procurement process. The National Council on Public Procurement (NCPP) oversees the Act's implementation, while the Bureau of Public Procurement serves as the apex regulatory body responsible for formulating and monitoring procurement policies in Nigeria. Mensah (2015) stressed the importance of adhering to laid guidelines when reviewing tenders and awarding contracts, urging public officers to avoid breaching established rules in public procurement. Mburu and Njeru (2014) also noted that activities such as bureaucracy, lack of transparency, bribery, absence of free competition, mismanagement of funds, and forgery or manipulation of records are prevalent among public procurement officers. Osei-Tutu et al. (2019) supported this observation, stating that the intense desire to secure contracts at any cost encourages contractors, consultants, and suppliers to engage in corrupt practices with procurement officials, adversely impacting procurement performance. Research from Nigeria, Uganda, Ethiopia, Ghana, and Europe, as noted by Adane et al. (2023), Aremu and Olayinka (2023), Gabriel et al. (2022), and Warren (2023), have highlighted a significant prevalence of public procurement fraud cases over the years.

Forensic Accounting

Forensic accounting, as described by Yasmin (2023), is a specialized discipline that integrates accounting, auditing, and investigative skills to uncover financial fraud, detect discrepancies, and

provide evidence for legal proceedings. Its application is not confined to the private sector; it is equally pertinent in the public sector for detecting and preventing fraud, as affirmed by Akinadewo and Akinkoye (2020), who highlighted forensic accounting as a valuable tool in government sectors to combat fraudulent practices. Ogundajo et al. (2023) outlined various forensic accounting techniques, including investigative accounting, litigation support services, data mining, fraud investigation, and expert witness services. Forensic accounting services, often rendered by experts known as forensic accountants (Nnedu & Aggreh, 2023), are crucial for combating financial and related fraud. According to Gbegi and Okoye (2013), forensic accountants should possess a solid education, training, and experience. The surge in technology, rise in financial statement fraud, public procurement fraud, cybercrimes, and tax evasion have led to a heightened demand for forensic accounting services (Adebayo, et al. 2023).

Forensic Accounting and Public Procurement Fraud Prevention

Agustina, Nurkholis, and Rusydi (2021) argued that the prevalence of fraud in the public sector consistently leads to adverse consequences for a nation's growth and development. According to Uleiman and Ahmi (2018), one of the most effective measures available to Nigerian anticorruption institutions for combating corruption in both the public and private sectors is the utilization of forensic accounting. Amid the global financial fraud and white-collar crimes within the current complex financial system, there is a clear need for high-level audit and forensic expertise to detect and prevent fraud (Agustina, et al. 2021). Enofe, et al. (2013) also affirmed that forensic accounting reveals vulnerabilities, weaknesses, and challenges in fraud investigations and detection in Nigeria. Notably, forensic accounting has played a crucial role in several high-profile cases in Nigeria, including the N5.6 billion aviation fraud involving the then Minister of Aviation in 2009 (Ojeme, 2010), as well as the money laundering and fraud cases of James Ibori, the former governor of Delta State, Nigeria (Chibuike, 2023). Other instance of public procurement fraud in Osun State is the incidence of ghost contracts of 1.3 billion naira that were alleged to be awarded to non-existent firms between 2019 and 2021 (ICIR, 2023).

More so, forensic accounting has facilitated the detection and prevention of numerous instances of fraud, a trend observed over the years. Ogundajo et al. (2023) emphasized the crucial role of forensic accounting in uncovering fraud and highlighting its significance in public sector. In Nigeria, the strategies to combat corruption are embedded in specific institutions, their enabling laws, and various administrative measures within the mandates of diverse entities beyond core anti-corruption agencies. Key anti-corruption institutions with prevention mandates include the Independent Corrupt Practices and Other Related Offences Commission (ICPC), the Economic and Financial Crimes Commission (EFCC), the Code of Conduct Bureau (CCB), the Bureau of Public Procurement (BPP), the Nigerian Extractive Industries Transparency Initiative (NEITI), and others. The BPP has developed a procurement manual, implementing regulations, and National Standard Bidding Documents (NSBDs) for the procurement of goods, works, and consulting services. This regulatory framework has contributed to improvements in public procurement policies and practices. To enhance transparency, the BPP continues to distribute all public procurement documents to stakeholders through the National Orientation Agency and the BPP Website, aligning with the thematic compilation of relevant information submitted by Nigeria Article 6 UNCAC.

Further, the impact of fraud on Nigeria has been profoundly detrimental, encompassing adverse economic effects and have tarnished national image (Ribadu, 2003). Akinadewo and Asaolu (2020) contended that the effectiveness of forensic accounting in Nigeria encounters significant challenges. According to Emeh and Obi (2013), financial crimes like fraud within public sectors are orchestrated by individuals across various ranks, contingent on their capacity, capability, and intelligence. The consequences ripple widely, leading to a lack of economic resources for essential public developmental projects, degraded infrastructure, compromised political programs, challenges in meeting staff salary obligations, and overarching adverse effects on the economy. A significant number of anti-corruption institutions in Nigeria rely on forensic accounting investigative tools for the detection of fraud within public sectors.

Theoretical Framework

This study is grounded in the white-collar crime theory and the fraud diamond theory. The white-collar crime theory posits that white-collar crimes are typically perpetrated by public officials with elevated social status and respect, a concept introduced by Edwin Sutherland in 1939. Fury and Eka (2018) asserted that white-collar crimes often occur in the realms of politics, business, and professions, involving non-violent offenses committed by business and government professionals for financial gain. Common white-collar crimes among public officers in the public sector include fraud, public procurement fraud, bribery, embezzlement, money laundering, wage theft, and labor racketeering (Sutherland, 1950). These white-collar criminals are opportunistic individuals who, over time, exploit their positions to accumulate wealth (Sutherland, 1983). According to Fredrichs (2007), the high status of white-collar criminals necessitates the involvement of highly trained and experienced professionals, such as accountants or forensic auditors, to effectively prevent the elevated incidence of all types of fraud including procurement fraud. One of the limitations of white-collar crime is that it is often bias in the enforcement and prosecution of white collar crimes, with individuals from lower socio- economic backgrounds or smaller organizations facing harsher penalties compare to the wealthy and influential people (Reiman & Leighton, 2016).

Furthermore, the fraud diamond theory, introduced by Wolfe and Hermanson in 2004, builds upon the fraud triangle theory. This theory contends that the presence of pressure, rationalization, and opportunity alone is insufficient to instigate fraud unless the individual also possesses the capability to execute the fraudulent act (Wolfe & Hermanson, 2004). Consequently, it suggested that in any organization, for fraud to occur, there must be the co-existence of pressure, opportunity, justification, and capability (Gbegi & Okoye, 2013). The fraud diamond holds significance for this study as it provides a framework for comprehending the underlying factors driving public procurement fraud. By identifying and addressing these factors, public sector organizations can mitigate the risk of fraud and ensure the accuracy and reliability of their financial records (Aremu & Olayinka, 2023). Wolfe and Hermanson (2004) asserted that for an individual to engage in fraud, their position or function within a company may grant them the power or ability to exploit opportunities for fraudulent activities. The fraud diamond theory aligns with the white-collar crime theory, suggesting that individuals committing financial crimes in the government sector are opportunists who, over time, learn to leverage their positions to amass wealth (Sutherland, 1983). Murphy and Free (2016) argued that the limitation of fraud diamond theory is that both public and private sectors may over rely on the fraud diamond theory using it as a checklist rather than a guide. This could lead to complacency and a failure to recognize fraud risks that fall outside the model's considerations.

Empirical Review

Ola (2018) investigated the role of forensic accounting in managing public funds and combating corruption in the Jordanian public sector. The study distributed 100 questionnaires to staff in audit firms' offices within the Jordanian public sector and an additional 30 questionnaires to forensic accountants in the accountability bureau offices. Hypotheses derived from the study were tested using one-sampled tests. The results revealed that forensic accounting plays a substantial role in reducing corruption and fraud in the Jordanian public sector.

Alhassan (2021) examined the impact of forensic accounting on fraud prevention and detection, employing a survey research design. The study focused on 10 ministries in the Federal Capital Territory of Nigeria. The sample size included 150 respondents, consisting of auditors and accountants. Analysis of variance (ANOVA) served as the method for data analysis in the study. The findings indicated that forensic accounting has a positive influence on both fraud detection and prevention, with a significant and noteworthy effect.

Aremu and Olayinka (2023) investigated the impact of forensic accounting techniques on procurement practices in Nigeria. Two out of five federal government agencies were deliberately chosen for the research. The target population consisted of 131 accountants within the two selected agencies, and questionnaires were distributed to all 131 accountants, with 126 questionnaires successfully retrieved. The researchers employed multiple regression analysis to analyze the collected data. The results revealed that forensic accounting techniques exert a positive and significant influence on public procurement practices and the attainment of value for money in the Nigerian public sector.

Also, Adane et al. (2023) delved into the impact of forensic accounting on public procurement, highlighting it as a novel approach to fraud prevention in Ethiopia. They selected 10 public institutions in Ethiopia for their study, with a sample size consisting of 109 procurement officers from these institutions. Questionnaires were administered to the 109 respondents, and multiple linear regression was employed for data analysis. The study's results indicated that forensic accounting has the potential to decrease public procurement fraud, revealing a negative significance between forensic accounting and public procurement fraud in Ethiopia.

In a similar vein, Alao et al. (2023) investigated the influence of forensic accounting techniques on corruption in the Nigeria Southwest public sector. The study utilized a survey research design with a population comprising 395 staff from ministries and government agencies. The sample size included 254 respondents selected from these ministries and agencies. Multiple regression analysis was employed for data analysis, and the findings demonstrated that forensic accounting exerts a significant influence on reducing corruption in the Nigeria public sector.

METHODOLOGY

The study employed survey research method and collected data through primary sources, specifically utilizing questionnaires. The target population included 300 accountants and auditors within the ministries, agencies, and public institutions of Osun State, Nigeria. The sample size, selected through purposive sampling, consisted of 150 individuals, including accountants, procurement officers, and auditors from all Osun State ministries and agencies, as well as two public institutions in Osun State. 120 questionnaires were administered to accountants,

procurement officers, and auditors in the ministries and agencies of Osun State, the remaining 30 were distributed to auditors, procurement officers, and accountants in the two selected public institutions. The questionnaires were carefully designed for reliable and valid data collection, using a 5-point Likert scale method. Practitioners in the accounting field confirmed the reliability of the research instrument through their responses. The collected data underwent analysis using descriptive statistics and inferential statistics, including correlation and panel regression analysis.

RESULT AND DISCUSSIONS

Table 1

| Gender | Frequency | Percent | |
|------------------------------|-----------|---------|--|
| Male | 90 | 60 | |
| Female | 60 | 40 | |
| Total | 150 | 100 | |
| Age | Frequency | Percent | |
| 29-40 years | 70 | 47 | |
| 41-50 years | 50 | 33 | |
| 51 years & above | 30 | 20 | |
| Total | 150 | 100 | |
| Department | Frequency | Percent | |
| Audit | 50 | 33 | |
| Account | 70 | 47 | |
| Procurement | 30 | 20 | |
| Total | 150 | 100 | |
| Qualification | Frequency | Percent | |
| HND/B.Sc. | 100 | 67 | |
| MBA/M.Sc. | 30 | 20 | |
| Others | 20 | 13 | |
| Total | 150 | 100 | |
| Working Experience | Frequency | Percent | |
| 1 – 5yrs | 30 | 20 | |
| 6 – 10yrs | 50 | 33 | |
| above 10 | 70 | 47 | |
| Total | 150 | 100 | |
| Sector | Frequency | Percent | |
| Ministries | 70 | 47 | |
| Agencies | 50 | 33 | |
| Public Tertiary Institutions | 30 | 20 | |
| Total | 150 | 100 | |

Source: Author's Computation (2024)

The demographic information table revealed that 60% of the participants are male, while 40% are female, indicating a higher response rate from males in the questionnaire. Additionally, a notable proportion of the respondents (33%) fall within the 41-50 years' age bracket, with 47% and 20% distributed among the 29-40 years and above 51 years' age brackets, respectively. Predominantly, 47% of the respondents are affiliated with the account department, while 33% and 20% are associated with the audit and procurement departments, respectively. In terms of educational qualifications, 67% hold BSc. and HND degrees, 20% possess Masters/MBA degrees, and 13% hold other qualifications. Regarding work experience, 33% of the respondents have 6-10 years, 20% have 1-5 years, and 47% have more than 10 years of experience. Furthermore, 47% of the respondents are employed in Osun State Ministries, 33% in Osun State Government agencies, and 20% in public tertiary institutions.

Table 2: Mean and standard deviation of responses on the effects of forensic accounting on public procurement fraud prevention in Osun State public sector.

| public procurement traud prevention in Osun State publi | | 1 | T |
|---|-------|-------|---------|
| Items | X | SD | REMARKS |
| FORENSIC ACCOUNTING | | | |
| Utilizing forensic accounting in public procurement strengthens fraud | | | |
| prevention by meticulously examining financial transactions, identifying | | | |
| irregularities, and promoting transparency. | 4.667 | 0.473 | Agreed |
| The need for forensic accounting in the public sector arises from the | | | |
| escalating frequency of fraudulent cases and activities within the Nigerian | | | Agreed |
| public sector. | | | |
| | 3.933 | 0.682 | |
| The deficient credibility of certain government agencies, ministries, and | | | |
| executives has impinged on the administrative competence of some public | | | |
| sectors in Nigeria. Forensic accounting stands out as an effective tool | | | |
| employed to evaluate the credibility of these ministries, agencies, and | | | |
| institutions. | 4.333 | 0.946 | Agreed |
| Forensic accounting serves as a potent means to bolster accountability, | | | |
| mitigate mismanagement of public funds, and thwart procurement fraud | | | |
| within the Osun State Public Sector. | 4.467 | 0.501 | Agreed |
| Forensic accounting is recognized as a valuable instrument in the | | | |
| governmental sphere, forensic accounting is harnessed in the battle against | | | |
| fraudulent practices, and its integration has been embraced in the Osun State | | | |
| public sector. | 4.267 | 1.240 | Agreed |
| Forensic accounting exposes all the vulnerabilities and shortcomings in | | | |
| fraud investigations and detection within Nigeria. | 4.133 | 0.720 | Agreed |
| In the Osun State Public Sector, forensic accounting has a significant impact | | | |
| on both the detection and prevention of procurement fraud. | 3.600 | 1.651 | Agreed |
| PUBLIC PROCUREMENT FRAUD PREVENTION | | | |
| Public procurement stands as a pivotal means for governments to have | | | |
| direct or indirect influence across all facets of public and economic life, | | | |
| aligning with national strategic objectives. | 4.793 | 0.406 | Agreed |

Adebayo, A. O., Adenle, O. E., Ojeleye, A. D. and Ayeni, F. T. (2024). Forensic accounting and public procurement fraud prevention: evidence from Osun State, Nigeria. *Malete Journal of Accounting and Finance*, 4 (2), 232-245

| The primary function of public procurement lies in ensuring the efficient allocation of public funds while concurrently supporting societal objectives | | | |
|---|-------|-------|---------|
| and fostering economic development. | | | |
| and rostering economic development. | 4.933 | 0.250 | Agreed |
| The primary impediments to satisfactory service delivery within the | ,555 | 0.200 | 1181000 |
| Nigerian public sector stem from fraudulent practices among public | | | |
| servants and political officeholders. | | | |
| The same that the same transfer is a same transfer in the same transfer | 3.800 | 1.049 | Agreed |
| The prevalence of fraud within the Nigerian public sector, particularly | | | |
| concerning the exploitation of public funds and manipulation of records | | | |
| related to public procurement, is alarming. Forensic accounting has | | | |
| emerged as a potent tool effectively employed to combat these | | | |
| unscrupulous activities. | 4.100 | 0.540 | Agreed |
| Manipulation of public procurement, primarily within public sectors, is | | | |
| often orchestrated to benefit select individuals. | | | |
| | 4.533 | 0.501 | Agreed |
| In Nigeria, various anticorruption institutions, including those in Osun | | | |
| State, utilize forensic accounting investigative tools for detecting | | | |
| procurement fraud. | | | |
| | 3.467 | 1.591 | Agreed |
| Concrete measures aimed at preventing corruption and procurement fraud | | | |
| within the Nigerian public sector are rooted in specific institutions such as | . = | | |
| the Bureau of Public Procurement (BPP). | 4.733 | 0.444 | Agreed |

Source: Author's Computations (2024)

According to Table 2, the respondents expressed agreement with all the presented items, as evidenced by mean scores surpassing the established decision value of 2.61. The standard deviation, spanning from 0.250 to 1.651, signifies minimal variability in the responses received. This underscores that forensic accounting holds a significant and commendable impact on preventing public procurement fraud within the Nigeria Public Sector, specifically within the ministries, agencies, and public tertiary institutions in Osun State.

Table 3: Correlation Analysis

| | | FORENSIC ACCOUNTING | PUBLIC PROCUREMENT |
|----------------|---------------------|------------------------|-----------------------|
| Spearman's rho | Forensic Accounting | 1.000 | .890 |
| | | | .000 |
| | Public Procurement | .890 | 1 |
| | | .000 | |
| | | | |

Source: Author's Computations (2024)

The correlation matrix in Table 3 illustrates the relationship between the dependent variable "Public Procurement" and the independent variable "Forensic Accounting." The correlation coefficients (1.000 and 0.890) reveal a strong positive correlation between Public Procurement

and Forensic Accounting. This implies that the independent variables exert an influence on the dependent variable.

Test of Hypotheses

H_{o1}: forensic accounting does not have effect on public procurement fraud reduction in the Nigerian public sector.

Table 4: Summary of Linear Regression Analysis

| Variables | Coefficient | Std. Error | Beta | t-statistics | Prob |
|-------------|-------------|------------|-------|--------------|-------|
| С | 0.876 | 0.151 | | 5.802 | 0.000 |
| Forensic | 0.819 | 0.035 | 0.890 | 23.727 | 0.000 |
| Accounting | | | | | |
| R-square | 0.792 | | | | |
| Adj. Square | 0.790 | | | | |
| F- Stat | 562.987 | | | | |
| Prob>F | 0.000 | | | | |

Author's computation (2024)

Table 4 above demonstrated that forensic accounting explains 79% (R2 = 0.792) of the variance in public procurement fraud prevention within the Osun State public sector. This indicates that 21% of the variance is attributed to other tools, aside from forensic accounting, that contribute to preventing public procurement fraud. The model exhibits extreme significance, with a significance level of 0.000 and an F-statistic value of 562.987, surpassing the benchmark of 0.05. The results of the hypothesis test highlighted the significant impact of forensic accounting on public procurement fraud prevention, evident through t-statistics of 23.727 and a p-value of 0.000. The Beta value stands at 0.890, accompanied by a significant value of 0.000, which is below 0.05. This implies that the utilization of forensic accounting in the public sector significantly influences the prevention of public procurement fraud in the Osun State Public Sector.

Discussion of Findings

This study explored the impact of forensic accounting on the prevention of public procurement fraud. The data analysis revealed that forensic accounting holds the potential to deter public procurement fraud in the Osun State public sector, as indicated by t-statistics and p-values of (23.727 and 0.000), respectively. This implies that the application of forensic accounting tools in Osun state public sector will help to prevent public procurement fraud. The implication of this finding is also that forensic accounting serves as a potent means to bolster accountability, mitigate mismanagement of public funds, and thwart procurement fraud within the Osun State Public Sector. This finding aligns with Fredrichs' (2007) recommendation that combatting white-collar fraud in the public sector requires the employment of experienced and knowledgeable accountants well-versed in forensic accounting, investigators, forensic accounting tools and highly trained professionals. The studies conducted by Akinadewo and Akinkoye (2020), Enofe et al. (2017), and Alao et al. (2023) aligned with the outcomes of this research, highlighting the significant impact of forensic accounting on preventing public procurement fraud prevention. Also, Nor et al. (2013), Agustina, Nurkholis & Rusydi (2021), and Ola (2018) concurred with the findings of this study by emphasizing that forensic accounting contributes to fraud prevention in the public sector. Aremu

and Olayinka (2023) and Alhassan (2021) identified a positive significant connection, while Adane et al. (2023) uncover a negative relationship between forensic accounting and fraud prevention in the public sector.

CONCLUSION AND RECOMMENDATIONS

The outcome of this study revealed that forensic accounting serves as a crucial tool employed by the public sector to proactively prevent and detect various types of fraud, including instances related to public procurement. More so, conclusion of this study is derived from its findings, indicating that forensic accounting holds the potential to significantly contribute to the prevention of public procurement fraud in the Osun State government. As a result, the study recommends that ministries, agencies, and institutions in Osun State should engage qualified and experienced forensic accountants to enhance the detection and prevention of public procurement fraud. Furthermore, the study advocates for strict adherence to procurement laws within the Osun State public sector by all government-owned ministries, agencies, and tertiary institutions. Additionally, the adoption of a robust forensic accounting system is recommended to effectively uncover loopholes, weaknesses, and challenges associated with preventing and detecting public procurement fraud in the Osun State public sector.

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