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Forensic Accounting Techniques and Corruption in the Public Sector of South-West, Nigeria

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ABSTRACT

Corruption is recognized as a significant global challenge which remains unresolved, Nigeria inclusive. It continues to impede progress, economic growth, and social development. Also, Corruption have been the focus of ongoing literature discussion especially Sub-Saharan Africa, centering on the adverse effects of corruption, hindering post-pandemic recovery and efforts to address economic, ecological, and healthcare challenges. From literature, researchers focused on conventional audit as solution variable. This study, thereby, examined the effect of forensic accounting techniques on corruption in the public sector of South-West, Nigeria. The study adopted a survey research design. The population of the study comprised 395 staff working in the Anti-graft agencies and ministry and departmental agencies in South-West, Nigeria. A sample of 254 respondents was determined using the Krejcie and Morgan formula. The result of Cronbach's alpha was greater than 0.70 and the AVE was greater than 0.5, the adapted questionnaire was deemed reliable and valid to proceed for analysis. The paper used the two methods of statistics (descriptive statistics and inferential statistics) to analyse the data. Forensic accounting techniques had significant effect on corruption (Adj R2 = 0.07, F (5, 220) = 4.77, p < 0.05). Audit quality and quality of governance significantly controlled the effect of forensic accounting techniques on corruption (Adj R2 = 0.07, F (7, 218) = 3.42; p < 0.05). The study concluded that forensic accounting techniques affected corruption in the public sector of South-West, Nigeria. It was recommended that the anti-graft agencies and Ministry and departmental agencies should integrate forensic accounting techniques into their processes in order to achieve transparency and accountability in the management of public funds. The governments of South-West, Nigeria must ensure to establish forensic accounting unit where trained expert are employed with attractive remuneration to carry out investigation cases of corruption to ensure enough evidence and facts are presented in courts for effective prosecution of such cases.

Keywords: Audit quality, Corruption, Economic situation, Forensic accounting technique, Quality of governance and public sector.

INTRODUCTION

Corruption has a far-reaching impact on society, affecting areas such as environmental protection, human rights, national security, access to healthcare and justice, economic development, and the legitimacy of governments worldwide (Feathers, 2014). The Corruption Perceptions Index (CPI), published by Transparency International, ranks countries based on their perceived levels of corruption in the public sector. Corruption is defined as the misuse of entrusted power for personal gain (CPI definition). The latest CPI report, released in January 2023, evaluates 180 countries on a scale of 0 to 100, reflecting the period from May 2021 to April 2022. Countries like Denmark, Finland, New Zealand, Norway, Singapore, and Sweden consistently rank as the least corrupt, while Somalia, Syria, and South Sudan are seen as the most corrupt (CPI 2022).

Corruption poses significant risks to society, including hindering progress, economic growth, inequality reduction, and improvements in living standards (Trapnell et al., 2017). Although corruption is often associated with developing countries, its impact extends beyond national borders and can be found worldwide. Sub-Saharan Africa is particularly affected by corruption, as evidenced by the recent CPI results. The region faces challenges in recovering from the COVID-19 pandemic, addressing rising living costs, and tackling economic, ecological, and healthcare issues. To overcome these challenges, it is vital to prevent funds from being lost to corruption. The CPI scores for Sub-Saharan African countries reveal that Seychelles leads the region with a score of 70, followed by Botswana and Cabo Verde, both scoring 60. Conversely, Burundi, Equatorial Guinea, South Sudan, and Somalia have low scores of 17, 17, 13, and 12, respectively.

Efforts by governmental and non-governmental organizations, such as the United Nations, Transparency International, and the World Bank, aim to combat corruption. However, corruption remains a persistent problem (Feathers, 2014). In Nigeria, for instance, the Corruption Perceptions Index awarded a score of 76, indicating a significant level of corruption and a global ranking of 155 (Transparency International, 2023). Corruption's prevalence poses substantial challenges to the public sector, hindering economic development and resulting in financial losses due to fraud (Okpala, 2019). Forensic accounting has emerged as a potential solution to combat financial fraud and enhance accountability (Okpala, 2019). As the business sector continues to expand, the demand for skilled forensic accountants becomes increasingly evident. On average, approximately 5% of revenues are lost to fraud each year, with financial statement fraud accounting for nearly 10% of cases in 2016, leading to median losses of nearly $1 million. Perpetrators in 95% of cases attempt to conceal the fraud.

Given the global rise of corruption in the public sector, forensic accounting has gained attention as a potential tool. Hegazy, Sangster, and Kotb (2017) suggest that forensic accounting in the UK is a multidisciplinary field that extends beyond accounting, with the potential to become a recognized profession through teams of individuals with complementary skills. However, the implementation of forensic accounting faces challenges, such as the absence of a suitable framework (Akinbowale, Klingelhöfer, & Zerihun, 2020). Financial crimes in Africa, including

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bribery, embezzlement, security fraud, and bankruptcy, are deemed unprofessional and contradictory to the legal principles of forensic accounting (Haruna, Ibrahim, Yusuf, & Ardo, 2023).

Okpala (2019) views forensic accounting as an effective approach to combating financial fraud, while Okoye, Adeniyi, and Igbojindu (2020) and Akinadewo and Akinkoye (2019) believe it can enhance accountability and address mismanagement. Despite the growing demand for forensic accounting services, Bierstaker, Brody, and Pacini (2006) found that organizations underutilize forensic accounting in fraud investigations. Although corruption is recognized as a significant global challenge, it continues to impede progress, economic growth, and social development. Sub-Saharan Africa, in particular, grapples with the adverse effects of corruption, hindering post-pandemic recovery and efforts to address economic, ecological, and healthcare challenges. Forensic accounting, despite being seen as an effective approach to fraud control, faces hurdles in terms of implementation and utilization in the fight against corruption. Therefore, this study aims to assess the impact of forensic accounting on corruption in Nigeria's public sector and also to evaluate the controlling effect of audit quality and quality of governance in the relationship between forensic accounting techniques and corruption in the public sector of South West, Nigeria. The objectives are to examine the effect of forensic accounting techniques on corruption in the public sector of South-West, Nigeria, and evaluating the controlling effect of audit quality and quality of governance in the relationship between forensic accounting techniques and corruption in the public sector of South-West, Nigeria.

LITERATURE REVIEW& THEORETICAL REVIEW

Corruption

In recent years, indicators and tools have been developed to measure corruption more accurately, but when those are not feasible, one study suggests using body fat as a rough guide, as it was found to be highly correlated with corruption levels among cabinet ministers in post-Soviet states (Hamilton, 2017). Corruption pervades every aspect of Nigeria, as indicated by its presence in the country's languages and the widespread reputation of endemic corruption in its political structures and society (Blavatskyy, 2020; Lazarus, 2018; Lazarus & Okolorie, 2019). Nigeria consistently ranks poorly in corruption perceptions indexes, such as the Transparency International Corruption Perceptions Index, reinforcing its reputation as a corrupt country (Transparency International, 2020). Corruption is a global issue and a symptom of poor governance and institutional weakness, affecting every country. Addressing corruption requires not only measurement and research but also efforts to change the culture through education and training (Lord & Levi, 2017; Albanese & Artello, 2018; Hope, 2017). Accurate measures of corruption include:

Petty corruption refers to corruption that occurs on a smaller scale, typically involving interactions between public officials and the public in places like registration offices, police stations, and licensing boards.

Grand corruption, on the other hand, occurs at the highest levels of government and involves significant subversion of political, legal, and economic systems. It is often found in countries with authoritarian governments or inadequate anti-corruption measures.

Systemic corruption, also known as endemic corruption, is corruption that stems from the weaknesses within an organization or process. It is not limited to individual officials but is ingrained in the system itself. Factors that contribute to systemic corruption include conflicting incentives, discretionary powers, lack of transparency, low salaries, and a culture of impunity.

Forensic Accounting Techniques:

Forensic accounting is the use of analytical and investigative techniques to address financial disputes in accordance with legal standards (Abdulrahman, 2019). It encompasses various domains where evidence may be sought in court, and for financial statement users, it involves gathering, recording, analyzing, presenting, and interpreting financial information (Amahi, 2023). The Association of Certified Fraud Examiners defines forensic accounting as utilizing accounting skills in legal matters, including auditing principles, lost profits determination, internal controls evaluation, and fraud investigation (ACFE, 2019). It is a scientific accounting method that uncovers, analyzes, resolves, and prevents fraud and white-collar crimes, producing admissible evidence for court (Oyedokun, 2017). Forensic accounting combines accounting, auditing, and investigative skills to conduct investigations and settle legal disputes (Ogundana et al., 2018). It plays a crucial role in fraud detection, including in Nigeria, and involves the application of forensic science to economic data (Oyedokun & Asaolu, 2018; Zachariah et al., 2019; Sule et al., 2019). Accounting and auditing standards and procedures: Guidelines and practices that ensure financial information is accurately recorded, reported, and audited in accordance with established principles.

- Data management & electronic discovery: The organization and handling of data, including electronic data, in a way that allows for efficient retrieval, analysis, and legal disclosure during investigations or litigation.
- Data analysis techniques for fraud detection: Analytical methods and tools used to examine large volumes of data for patterns, anomalies, or indicators of potentially fraudulent activity.

Theoretical Review

Institutional theory was introduced in the late 1970s by John Meyer and Brian Rowan as a means to explore further how organizations fit with, are related to, and were shaped by their societal, state, national, and global environments. The theory was used to anchored the study of forensic accounting and corruption in Nigeria public sector. The theory focused on the processes through which structures, such as schemes, rules, norms, and routines, become established as authoritative guidelines for social behavior (Scott, W. Richard 2004). It explores how these elements are created, diffused, adopted, adapted, and eventually decline. The two dominant trends within institutional theory are old institutionalism and new institutionalism. Old institutionalism focuses on the formal and legal aspects of government structures and policy-making (DiMaggio, Paul & Powell, Walter, 1991). New institutionalism, on the other hand, rejects rational-actor models and seeks cognitive and cultural explanations for social and organizational phenomena. It emphasizes the influence of supra-individual units of analysis and the role of institutional isomorphism, which refers to organizations conforming to prevailing rules and belief systems to gain legitimacy (DiMaggio, Paul & Powell, Walter 1991).

Institutional theory provided insights into how institutions shape social behavior, organizational practices, and policy-making, and how they interact with and influence

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economic and social systems. Luo (2005) used institutional approach to understanding corruption in the development of his model. Lou argues that many disciplines have examined corruption, however they have not been able to address the organizational context, behaviors, and processes that support corruption.

According to Misangyi, Weaver & Elms (2008) there are two alternative frameworks that have dominated research into corruption. First, the economic perspective is concerned with the influence of rational self-interest, efficiency, and formal regulative structures in explaining the development of corruption. They go on to argue that this approach provides limited results in combating corruption as it does not include the normative and cognitive structures.

Empirical Review

Ahmed and Ahmed (2022) used an exploratory study of the opinions of a sample to investigate the role of integration for forensic accounting and the board of supreme audit in combating financial and administrative corruption. The study was conducted in the Kurdistan Region of Iraq. The study used questionnaire distribution to conclude that influential role for the required skills, forensic accounting techniques, and the Bord of Supreme audit together in fighting financial and administrative corruption. Similar study conducted in Kurdistan, Saleh, Azhar, and Azeer, (2020) identified the effect of forensic accounting techniques in detecting corruption and fraud as well as identifying the skills that required for forensic accounting in detection and combating the practices of corruption and financial fraud. The study concluded that forensic accounting techniques have an impact in detecting and combating financial corruption.

In the region of Kurdistan in Iraq particularly, Rubin (2018) reported that the corruption and fraud activities have been occurring and there appear to be serious attempts to combat this problem. Saleh, Azhar, and Azeez (2020) also used the collated forty-seven (47) developed questionnaire to conclude that role Forensic Accounting in combating fraud and financial corruption in the Kurdistan Region and there are many factors that hinder the application of forensic accounting. Other researchers who worked on administrative corruption include Ahmed and Saleh, (2022), who studied the impact of integrated between the commission of integrity and judicial audit to reduce financial and administrative corruption in Iraq.

Corruption has been considered with other variables such as role of international accounting standards, role of accounting practices, etc. Thabit, (2020) worked on the role of international accounting standards in reducing the financial corruption phenomenon in Iraq. The study used the relevant scientific references-academic and professional specialized in accounting standards, international supervision, and discreet websites to determine the most important ways to adopt standards that reduce the phenomenon of financial corruption. The researchers concluded several results that would increase the effectiveness and efficiency of using IAS in Iraq, as the legal and legislative context of the country can negatively affect the procedures for adopting IAS due to the slowness of these legislations, their poor response to changes and their subjection to conflicts and political tensions. Khalaf and Mousa (2022) used an exploratory study on financial reports for civil society organizations in Iraq. The study focused of finding the relationship between variables of financial corruption and accounting profession ethics factors, that found out significant relationship among the factors and preventing financial corruptions in NGOs. The key finding of the study resulted that commitment to the professional

standards and religious values are considered as core for mitigating financial corruptions and enhance trust with financiers.

Other researchers have studied considered forensic accounting techniques with other variables such as crimes reduction, detection of occupational fraud, fraud detection etc. Mike, Okpe, and Abu (2022) studied forensic accounting investigation techniques and financial crimes reduction in Nigeria public sector. The study used Anti-graft agencies as a case study. The study used ordinary least square regression analysis to conclude that foreign investigation techniques employed by the anti-graft agencies in Nigeria have the likelihood of reducing financial crimes in the Nigeria public sector. Bako, Vincent, Usman, and Ayuba (2022) worked on forensic accounting and detection of occupational fraud using the banking sector. The research also used ordinary least square regression analysis to discover how data mining technique has a significant positive effect on occupational fraud detection. Other studies who used forensic accounting techniques and occupational fraud detection include Okoye et al. (2020).

Another study who studied financial accounting technique and fraud prevention include Oladipipo et al. (2019) who studied forensic accounting and fraud prevention using deposit money bank by using descriptive survey approach. The study analyzed simple linear regression and found that forensic accounting impacted the detention and prevention of fraud in deposit money banks in Ekiti State. Some studies provided evidence that shows a connection between forensic accounting and occupational fraud. This is evident in studies conducted by Mohammed et al. (2022); Adesola et al. (2020); Ewa (2022); Okoye et al. (2020); Oladipipo et al. (2019); Henry et al. (2017); all found that forensic accounting has positive and significant effects occupational fraud detection in various sectors studied. On the contrary, some studies found that forensic accounting has no significant effect on fraud detection (Bingilar et al., 2021; Bassey et al., 2017). The conclusion inferred by most of these studies is that the application of forensic accounting will enhance the detection of occupational fraud; therefore, it is implied that the more forensic accounting is employed, the more the number of occupational frauds is detected.

Researchers also suggested that most research concerning occupational fraud mostly focused on corruption and financial statement fraud (Ananda et al., 2020; Rizqa et al., 2019; Ogr, 2019; Evy et al., 2019; Rani et al., 2019; Oyedokun et al., 2018). Even though most studies have upheld the significance of forensic accounting in detecting occupational fraud, especially corruption and financial statement fraud as proposed by previous studies, there is a need to analyze the effect of forensic accounting methods in detecting asset misappropriation fraud as well. Ewa et al. (2020) assert that "Nigeria has experienced big investment frauds and trading scams that have resulted in the loss of billions of dollars from gullible people as it is alleged that Nigeria's financial sector does not have effective fraud detection mechanism and the prevailing business laws are inadequate to prosecute offenders. Hasni et al. (2020) asserted that academic studies on asset misappropriation are rather very limited. The prevalent and consistent occurrence of occupational fraud in the financial system is an indication that much more is expected of forensic accountants to curb this ugly menace.

The government should focus on forensic accounting in order to observe and investigate alleged fraud incidents (Kamal & Tanim, 2016). Previous research has found that fraud

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investigation and detection through forensic accounting is significantly and positively related to fraud reduction (Dada, Owolabi, & Okwu, 2013; Madumere & Onumah, 2016). Ehioghiren and Atu (2016) discovered that forensic accounting has a significant impact on fraud detection and control. In terms of fraud prevention, detection, and response, forensic accountants have significantly higher levels of capability and competence (Knowledge, Skills, and Task performance fraud risk assessment) than auditors (Popoola, Ahmad, & Samsudin, 2016). The study confirms the existence of a significant positive relationship between skill requirement on task performance, fraud risk assessment, and knowledge requirement on task performance fraud risk assessment. There is a strong correlation between forensic accounting and financial reporting (Madumere & Onumah, 2016). In Nigeria, forensic accounting skills have a significant impact on forensic auditing and fraud investigations (Saidu, 2015). Stakeholders generally agree on the effectiveness of forensic accounting in fraud control, financial reporting, and internal control quality (Modugu & Anyaduba, 2013).

One of the gaps identified by the current study is that previous researchers did not take the time to decompose the concept of financial accounting tools into proxies and concepts that could be easily analyzed for proper study understanding. Anuolam, (2017), investigated the relative impact of forensic accounting on the Nigeria financial crisis without focusing on decomposed measures of forensic accounting or financial crime variables, but they used the concept of forensic accounting as it was. Unlike previous studies that focused on knowledge and skills of task performance fraud risk, this study filled a gap in in the literature by providing empirical evidence on the effect of forensic accounting on financial crimes in the South West Nigeria public sector.

METHODOLOGY

In this paper the effect of forensic accounting techniques and corruption in the public sector of South-West, Nigeria. The study adopted a survey research design. The population of the study comprised 395 staff working in the Anti-graft agencies and Ministry and departmental agencies in South-West, Nigeria. A sample of 254respondents was determined using the Krejcie and Morgan formula. A structured and validated questionnaire was used to collect data.

The sample size was calculated in the table using a formula developed by the research division of the National Education Association of the United States of America. The study's geographical scope included Lagos, Ogun, and Oyo states in Nigeria's south-west geopolitical zone. The formulated questionnaires were distributed randomly across the Ministry and departmental agencies (MDAs) such as the office of the auditor general of the State, accountant general of the state.

The result of the pilot study indicated that the research instrument was reliable, since the Cronbach's alpha reliability co-efficient for the constructs range from 0.70 to 0.90. The reliability of the research instrument was tested, and the returned copies of the questionnaires were analyzed using Statistical Package for Social Sciences (SPSS). Descriptive and inferential (Multi Regression) statistics were used to analyze the data at 5% level of significant.

Based on the method, the model of the analysis is formulated as thus:

$$Y = f(X)$$

Where,
Y= Dependent Variable: corruption
X= Independent Variable: forensic accounting techniques
Z = Controlling Variable
X= (x_1, x_2, x_3, x_4, x_5, x_6,),
Z = (z_1, z_2)
x_1 = Litigation support service (LSS)
x_2 = Investigative accounting (IA)
x_3 = Expert witness (EW)
x_4 = Data minning (DM)
x_5 = Fraud investigation (FI)
z_1 = Audit Quality
Z_2 = Quality of Governance
The model is formulated as thus:

$$CO_1 = \beta_\circ + \beta_1 LSS_i + \beta_2 IA_i + \beta_3 EW_i + \beta_4 DM_i + \beta_5 FI_i + u_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$CO_2 = \beta_\circ + \beta_1 LSS_i + \beta_2 IA_i + \beta_3 EW_i + \beta_4 DM_i + \beta_5 FI_i + \beta_6 AQ_i + \beta_7 QOG_i + u_i \ldots\ldots (2)$$

$\beta_\circ$ represents the intercept for forensic accounting; β_1 is the estimated coefficient of litigation support services; β_2 is the estimated coefficient of investigative accounting; β_3 is the estimated coefficient of expert witness, β_4 is the estimated coefficient of data mining, $\beta_5$is the estimated coefficient of fraud investigation, β_5, β_6 are the estimated coefficient of audit quality and while ε is the random error term.

Following the model formulated, the hypothesis and the conceptual model are explained as thus:

- $H_0$1(Null Hypothesis): There is no significant effect between forensic accounting techniques and corruption in the public sector of South West, Nigeria;
- $H_0$1(Null Hypothesis): Audit quality and quality of governance do not have a controlling effect on the relationship between forensic accounting technique and corruption in the public sector of South West, Nigeria;

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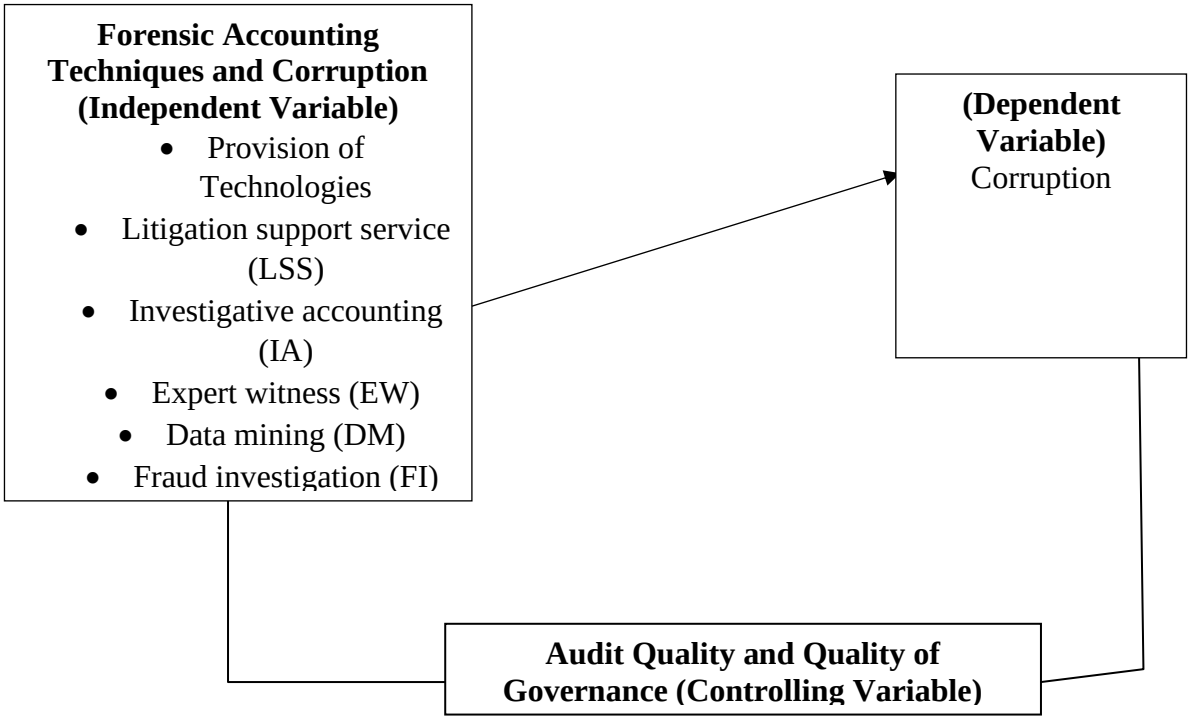


Figure 1: Researcher's Conceptual Model (2023)

DATA ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS

This section explains the results of the descriptive statistics, correlation analysis and the multiple linear regression model. In the analysis, Table 1 shows the result of the mean, standard deviation, minimum, and maximum value displayed below. In the result, the respondents across all the three offices agreed to the use of LSS, IA, EW, DM, and FI of forensic accounting techniques with IA showing the highest mean value of 4.2788.

Table 1: Descriptive Statistics

	Minimum	Maximum	Mean		Std. Deviation	Skewness
CO	3.00	5.00	4.1150	.03576	.53752	.093
LSS	1.00	5.00	3.8938	.04099	.61627	-.508
IA	2.00	5.00	4.2788	.03952	.59419	-.306
EW	3.00	5.00	4.2832	.03599	.54109	.082
DM	2.00	5.00	4.0973	.04342	.65272	-.487
FI	3.00	5.00	4.0929	.03290	.49463	.203
AQ	1.00	5.00	4.1549	.03804	.57186	-.576
QOG	2.40	5.00	4.0628	.03260	.49002	-.308

Where LSS indicates Litigation support service IA- Investigative accounting EW- Expert witness DM- Data minning FI- Fraud investigation AQ- Audit quality QOG Quality of Governance
Number of Observation = 254.
Source: Author's Work, (2023).

The result in Table 2 was analysed using Pearson product moment correlation coefficient. In the result, the level of relationship between the proxies of forensic accounting techniques were

determined. All the proxies of techniques showed a positive relationship and it ranges from a weak positive relationship to a strong positive relationship.

Table 2: Correlation Analysis

	Correlation Test					
	LSS1	IA1	EW1	DM1	FI1	AQ1
LSS	1.000					
IA	.300**	1.000				
EW	.304**	.389**	1.000			
DM	.280**	.468**	.463**	1.000		
FI	.251**	.229**	.333**	.330**	1.000	
AQ	.324**	.317**	.274**	.364**	.342**	1.000
QOG	.470**	.318**	.489**	.425**	.346**	.374**

Where LSS indicates Litigation support service IA- Investigative accounting EW- Expert witness DM- Data minning FI- Fraud investigation AQ- Audit quality QOG Quality of Governance
Source: Author's Work, (2023).

Interpretation

From the result of the analysis displayed above, it is shown that a weak positive relationship between all the proxies of forensic accounting technique. This indicated that the value of the correlation is not greater than 0.75, as indicated by Baltagi, (2012). Hence, there is no problem of multicollinearity as the variables are independence of each other. The result of the multicollinearity test is also tested by variance inflation factor and tolerance level. From the result of the VIF, if the VIF is less than 10, it indicates there is problem of multicollinearity test. The result of the tolerance level is less than 1, also proving there is problem of multicollinearity. Hence, a need to proceed with the multicollinearity test.

Table 4.1: Forensic Accounting Techniques and Corruption

	MODEL 1				MODEL 2			
Variable	**Coeff**	**Std. Err**	**T-Stat**	**Prob**	**Coeff**	**Std. Err**	**T-Stat**	**Prob**
Constant	2.643	.377	7.005	0.000	2.644	0.397	6.657	0.000
LSS	-0.063	0.061	-1.037	0.301	-0.058	0.065	-0.892	0.374
IA	0.185	0.068	2.722	0.007	0.182	0.069	2.647	0.009
EW	-0.002	0.076	-0.027	0.978	0.007	0.079	0.090	0.929
DM	0.085	0.065	1.309	0.192	0.085	0.067	1.277	0.203
FI	0.143	0.076	1.875	0.062	0.141	0.079	1.789	0.075
AQ					.030	0.070	0.425	0.671
QOG					-.040	0.091	-0.435	0.664
Adj R^2	0.077				0.070			
F-Stat (Prob)	4.771 (0.000) DF = 5, 248				3.428 (0.002) DF = 7, 246			

Where LSS indicates Litigation support service IA- Investigative accounting EW- Expert witness DM- Data minning FI- Fraud investigation AQ- Audit quality QOG Quality of Governance
Source: Author's Work, (2023).

$$CO_1 = \beta_\circ + \beta_1 LSS_i + \beta_2 IA_i + \beta_3 EW_i + \beta_4 DM_i + \beta_5 FI_i + u_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

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$$CO_1 = 2.643 - 0.063 + 0.185 - 0.0022 + 0.085 + 0.143$$

$$CO_2 = \beta_\circ + \beta_1 LSS_i + \beta_2 IA_i + \beta_3 EW_i + \beta_4 DM_i + \beta_5 FI_i + \beta_6 AQ_i + \beta_7 QOG_i + u_i \ldots\ldots (2)$$

$$CO_2 = 2.644 - 0.058 + 0.182 - 0.007 + 0.085 + 0.141 + 0.030 - 0.040$$

Interpretation

Hypothesis one of this study aimed to determine if forensic accounting has a significant effect on corruption in the public sector of South West, Nigeria, while Hypothesis two of this study aimed to determine if forensic accounting has a significant effect on corruption in the public sector of South West, Nigeria, when controlled by audit quality and quality of governance. Considering the signs of the estimated parameters, Investigating Accounting (IA), Data Mining (DM), and Fraud Investigation (FI)) have positive relationships with Corruption (CO) in the public sector of South West, Nigeria, whereas Litigation and Support Service (LSS) and Expert Witness (EW) showed negative relationships with Corruption (CO) in the public sector of South West, Nigeria. 1unit increase in LSS will have negative effect of 0.063 on Corruption, while the t-statistics is -1.037, the P-Value as 0.0301 shows that LSS has no significant effect on Corruption. 1unit increase in IA will lead to 0.0185 positive effect on Corruption with the t-statistics2.722, the P-value of 0.007 reflects that IA has Significant effect on Corruption. 1unit increase in EW will have negative effect of 0.002 on Corruption, while the t-statistics is -0.027, the P-Value as 0.978 shows that EW has no significant effect on Corruption. 1unit increase in DM will lead to 0.0085 positive effect on Corruption with the t-statistics 1.309, the P-value of 0.0192 reflects that DM has Significant effect on Corruption. 1unit increase in FI will lead to 0.0143 positive effect on Corruption with the t-statistics 1.0875, the P-value of 0.062 reflects that FI has Significant effect on Corruption.

However, when the model was controlled by audit quality and quality of governance, all the independent variables (i.e. Investigating Accounting (IA), Expert Witness (EW), Data Mining (DM), and Fraud Investigation (FI), together with one of the control variables Audit Quality (AQ), had positive effects on Corruption (CO) in the public sector of South West, Nigeria, whereas Litigation Support Service (LSS) maintained a negative relationship together with one of the control variables, Quality of Governance (QOG) have negative relationship on Corruption (CO) in the public sector of South West, Nigeria. This is reflected by the signs of the coefficients β_2,β_3 β_4, β_5 and β_6 i.e., $0.182IA_i$, $0.007EW_i$, $0.085DM_i$, $0.1417FI_i$ and $0.030AQ_i$ respectively, while β_1 and β_7 had coefficients $-0.058LSS_i$ and $-0.040QOG_i$ respectively.

The adjusted R^2 values for the models show the change in the dependent variable caused by the collective interactions of the independent variables. Model 1 having adjusted R^2 value 0.077 meant that only 7.7% variations of Corruption (CO) in the public sector of South West, Nigeria is attributed to the collective interactions of all the independent variables (i.e., all Forensic Accounting Techniques (FATs) proxies) used in that model. Model 2 having adjusted R^2 value 0.070 meant that only 7% variations on Corruption (CO) in the public sector of South West, Nigeria is attributed to the collective interactions of all the independent variables (Forensic Accounting Techniques (FATs) proxies) in the model, even when controlled by Audit Quality (AQ) and Quality of Governance (QOG). The comparison of the R^2 and adjusted R^2 implies that

there is good fit of the model. Thus, the remaining 93% of the independent variables are variables not considered in the study or the dataset lost to an error term.

The t-statistics reflects the individual significance of each independent variables in the models. In model 1, only Investigating Accounting (IA) was individually significant at 5% with a t-statistics probability of 0.007 (0.7%). All other independent variables were not individually significant as their t-statistics probabilities were all greater than 5%. In model 2 likewise, after controlling for Audit Quality (AQ) and Quality of Governance (QOG), only Investigating Accounting (IA) was still individually significant at 5% with a t-statistics probability of 0.009 (0.9%). All other independent variables (including the control variables) were not individually significant as their t-statistics probabilities were all greater than 5%.

The F-statistics on the other hand, measures the combined significance of all the independent variables on Corruption (CO) in the public sector of South West, Nigeria. The F-statistics value for model 1 and model 2 showed 4.771 and 3.428 respectively. The significance of these F-statistics values, depicted by their corresponding p-values were 0.000 and 0.002 respectively, which are both less than the 5%, showed that the combined proxies of Forensic Accounting Techniques (FATs) in model 1 (without the control variables) and model 2 (with the control variables) have a significant effect on Corruption (CO) in the public sector of South West, Nigeria.

Decision-$H_0$1 (Model 1)

At a level of Significance 0.05 and degree of freedom 5,248, the F-Statistics is 4.771 while the P-Value of the F-Statistics is 0.000 which is less than 0.05 adopted level of Significance. Therefore, the study rejected the null hypothesis which mean that Forensic accounting techniques have significant effect on Corruption in the public Sector of South west, Nigeria.

Decision-$H_0$2 (Model 2)

At a level of Significance 0.05 and degree of freedom 7,246, the F-Statistics is 3.428, while the P-Value if the F-Statistics is 0.002 which is less than the adopted level of Significance. The study therefore rejected the null hypothesis which means that Audit quality and quality of governance have significant controlling on the relationship between forensic accounting technique and corruption in the public sector of South West, Nigeria.

Discussion of Findings

The research made some findings on forensic accounting techniques and corruption as well adopting audit quality and quality of governance were used as control variables. With respect to the effect of forensic accounting techniques and corruption in the public sector of South West, Nigeria, the study found that only investigating accounting is significant at 5% while fraud investigation is significant at 10%, and other proxies including LSS, EW, and DM insignificantly affected corruption for Model 1. The results in model 1 is consistent with the research findings but only expert witness negatively affected corruption in the public sector of South West, Nigeria. The two control variables signified an insignificant effect with corruption because the proxies are not significant at 5% level of significance. Likewise, AQ had a positive effect and QOG showed a negative effect on Corruption.

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However, model 1 and 2 showed significant effect between forensic accounting technique and corruption. These two models indicated that forensic accounting technique significantly affected the corruption. The findings align with that of Kurdistan et al (2020) which found that forensic accounting technique impact fully detect the combating financial corruption. The research of Mohammed et al. (2022); Adesola et al. (2020); Ewa (2022); Okoye et al. (2020); Oladipipo et al. (2019); and Henry et al. (2017) found that forensic accounting has positive and significant effects occupational fraud detection in various sectors studied. The research of Anuolam (2017) also discovered that forensic accounting significantly affected the financial crimes. Other researchers which found a significant effect and consistency with the research findings include Popoola et al., (2016) and Madumere and Onumah (2016).

Contrarily, Bingilar et al., (2021) and Bassey et al., (2017) found an insignificant effect between forensic accounting and fraud detection. Ewa et al (2020) and Hasni et al (2020) are misappropriation findings. The findings did not have effective fraud detection mechanism and the prevailing business laws which are inadequate to prosecute offenders. The research of Saleh et al (2020) hinder the application of forensic accounting. Also, Ahmed and Saleh (2022) discovered that the commission of integrity and judicial audit to reduce financial and administrative corruption in Iraq.

CONCLUSION AND RECOMMENDATIONS

The research considered forensic accounting technique as an independent variable using the proxies such as litigation support service, investigative accounting, expert witness, data mining technique, and fraud investigation. Using the variables, different research objectives, research questions, and research hypotheses were formulated. The objectives formulated were analyzed using descriptive and inferential method of data analysis. The decision for rejection of the null hypothesis is that the probability value must be less than 0.05 (p-value < 0.05).

CONTRIBUTION TO FUTURE RESEARCH

The study will be extremely useful to academics who plan to conduct similar research in the future. This will help the academicians discover a new concept that will have a large impact on society. The study adds to the body of existing literature by establishing the relationship between forensic accounting techniques and corruption in the public sector of South-West Nigeria. The study will also be added to the body of existing literature by empirically identifying the strength and relevance of forensic accounting techniques in combating corruption in the public sector of South -West Nigerian.

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