

APPLICATION OF FORENSIC ACCOUNTING SKILLS AND FRAUD DETECTION IN THE PUBLIC SECTOR IN NIGERIA

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ABSTRACT

This study investigated the relationship between forensic accounting skills and fraud detection in Nigeria's public sector. It employs a cross-sectional field survey with a sample of 44 out of 47 audit firms that employ forensic skills when auditing MDAs in Plateau state. Data was collected via structured questionnaires, and hypotheses were tested using multiple linear regression. Results indicated that persuasive and investigative skills have significant relationship with fraud detection, while no significant positive relationship was found with litigation support. The study recommends enhancing auditor and investigator skills through training and development programs to improve fraud detection in the public sector.

Keywords: Forensic Accounting, Persuasive Skills; Investigative Skills; Litigation Support; Fraud

1.0 INTRODUCTION

The public sector in Nigeria has faced significant challenges in recent times. Fraudulent activities in this sector have caused a significant loss of public funds, as well as widespread damage to the reputation of government institutions. Fraud has been a prevalence issue linking to corruption in the public sector in Nigeria. In Nigeria, financial corruption needs an urgent attention President Muhammadu Buhari has received a list of top corruption cases linked with stolen or mismanaged funds worth N900 billion. In letter delivered by Human environmental development Agenda (HEDA) warned that the country was sliding into the red-light district of corruption. Again, a letter title "Re Awakening the anti- corruption Drive" and signed by HEDA chairman, Suraju Olanrewaju, the group said the volume of money linked to ignored fraud and corruption cases since 2015 when President Buhari assumed office was not less than N900 billion. The anti- corruption groups regret that many cases of fraud and corruption involving prominent people have been scuttled by the government- appointed gatekeepers. In the case that included the Managing Director of first bank Nigeria Plc, who was arrested during the 2015 general elections by the Economic and financial crimes commission (EFCC) for allegedly receiving \$115 million in cash from a former minister of petroleum resources, Diezani Alison-Madueke; Executive Director of First bank Plc, Dauda Lawal, tried by the EFCC for allegedly handling the sum of \$25 million of \$153m rolled out by Mrs Alison- Madueke; former comptroller General of Customs, Abdullahi Dikko, who was alleged to have stolen over N40 billion, but was asked to return N1.5 billion to the federal Government, and Former accountant -general of the federation, Jonah Otunba, linked to a N2billion graft. Others were the dubious payment of \$16.9 million fees to tow friends as new lawyers for the recovery of loot traced to a former Nigerian head of state, Sanni Abacha which a lawyer was hired and fully paid by the previous government, Enrico Monfrini. Also, a multi- million-naira fraud in Nigeria incentive- based risk sharing system for agricultural lending (NIRSAL) through a letter ordering the EFCC and the ICPC, the DSS and the Nigerian financial intelligence unit (NFIU) to halt investigating the financial misappropriation in NIRSAL. A report by the Nigerian Economic and Financial Crimes Commission (EFCC) estimated that the country lost over \$4 billion to fraud between 2012 and 2016 (Adeniran, 2017). This loss is a significant setback for Nigeria's economy and its development goals. Hence these calls for the use of forensic accounting skills in detecting and preventing the level of fraud in the public sector.

Forensic accounting is a specialized area of accounting that employs various techniques to detect fraudulent activities. However, despite its potential value in fraud detection, the adoption of forensic

accounting practices in the public sector is still relatively low in Nigeria. Forensic accounting has been identified as a valuable tool in fraud detection and prevention in the public sector. Forensic accounting involves the use of accounting principles and investigative techniques to analyze financial transactions and uncover fraud. It is a multidisciplinary approach that combines accounting, investigative, and legal skills to provide an in-depth analysis of financial records and transactions. Forensic accountants have specialized skills that enable them to identify fraudulent activities, analyze financial data, and provide expert testimony in legal proceedings (Wysocki & Lynch, 2016). The application of forensic accounting in fraud detection in the public sector in Nigeria is still in its early stages. There is a need to build awareness of the importance of forensic accounting in fraud detection and prevention, as well as to develop specialized skills for forensic accountants in Nigeria. The need for forensic accounting has been recognized by various stakeholders, including the Nigerian government, financial institutions, and professional bodies.

This study conceptualized forensic accounting skills to include persuasive skills, investigative skills and litigation support. Forensic accounting experts require persuasive communication skills in handling fraud-related issues in the public sector and communicating the results of their investigations. The incorporation of financial analysts' testimonies and opinions is crucial in prosecuting fraud cases and presenting evidence satisfactorily to different stakeholders, agencies, and the court. Besides, as fraud issues frequently involve non-finance-oriented individuals, the forensic accountant must exhibit the ability to present investigation results in a way that reflects the audience's understanding level. According to Adebayo et al. (2017), persuasive skills enable forensic accountants to communicate with confidence and clarity. They can present their findings in a clear, concise, and objective manner. This ability is not limited to forensic accountants alone but extends to all who bear responsibility for detecting and preventing fraudulent activities. Successful fraud prevention requires constant communication and education of the workforce. Forensic accountants must use investigative techniques for fraud detection in the public sector. Investigative procedures involve a detailed examination of financial records, identification of discrepancies and irregularities, and other methods of discovering fraudulent activities. Data analysis is one of the key techniques used in forensic accounting. Data analysis involves utilizing forensic accounting software that can automate data handling tasks, identify patterns, and anomalies in financial records and transactions. According to Okoye et al. (2018), forensic accountants must have a keen eye for detail when conducting fraud investigations and risk assessments. They must analyze financial records and transactions critically, including an evaluation of internal control systems' effectiveness. They must also be able to identify possible fraud risks that could lead to revenue losses. Forensic accountants are valuable in promoting litigation support services in the public sector as they can provide expert testimony that can sway the judge and, ultimately, the outcome of the case. Forensic accountants can provide valuable insight in strengthening the case against fraudulent activities in the public sector. They utilize their skills and knowledge in this field to present forensic evidence, testify in court, and provide consulting services during the litigation or arbitration period of a lawsuit. According to Adeyemo and Appah (2019), the litigation support service is essential for victims of fraud in the public sector. It enables the affected parties to present a robust case that provides sufficient evidence of wrongdoing. Therefore, forensic accounting has garnered wide acceptance in the present-day economy. This research aimed to explore the application of forensic accounting skills for fraud detection in the public sector in Nigeria.

1.2 Statement of the problem

The public sector in Nigeria has been plagued by fraudulent activities, resulting in significant financial losses and a loss of public trust. As a result, government and stakeholders are looking for ways to combat this problem effectively. One approach that has been gaining traction is the application of forensic accounting skills for fraud detection.

One of the significant challenges of applying forensic accounting skills in the public sector in Nigeria is the lack of awareness of the skills and knowledge required to conduct a comprehensive fraud investigation adequately. Although some public sector agencies in Nigeria are taking steps to enhance

their capacity to detect fraud, the majority lack the resources and expertise in forensic accounting. Hence, there is a need for increased awareness creation programs that emphasize the value of forensic accounting skills in detecting fraudulent activities. Moreover, forensic accountants in the public sector in Nigeria face challenges in obtaining evidence to support their findings. Investigation of financial irregularities in the public sector can be complicated, and the lack of complete financial records and poor record-keeping systems can hamper the investigation process. Additionally, forensic accountants need to exhibit a high level of ethical conduct and be mindful of their responsibilities as public servants. The forensic accountant's ethical conduct should be guided by global best practices to enhance the credibility of forensic reports and testimonies. Furthermore, litigation support services are costly and time-consuming, and the resources required are often inadequate in the public sector. While forensic accounting experts can provide valuable insights and testimonies during litigation proceedings, the public sector agencies often lack the resources to access these services. Therefore, this study is conducted to examine the relationship between forensic accounting skills and fraud detection in the public sector in Nigeria.

1.3 Research Questions

The following research questions are stated to guide the study based on the issues raised in the statement of the problem.

- i. What effect does persuasive skills have in detecting fraud in the public sector particularly MDAs in Nigeria?
- ii. What effect does investigative skills have in detecting fraud in the public sector particularly MDAs in Nigeria?
- iii. What effect does litigation support have in detecting fraud in the public sector particularly MDAs in Nigeria.

1.4 Objectives of the Study

The main objective of the study is to examine the relationship between forensic accounting skills and fraud detection in the public sector in Nigeria. The other specific objectives are as follows;

- i. To examine the effect of persuasive skill in fraud detection in the public sector in Nigeria.
- ii. To determine the effect of investigative skill in fraud detection in in the public sector in Nigeria.
- iii. To assess the effect of litigation support in fraud detection in in the public sector in Nigeria.

1.5 Research Hypotheses

The following research hypotheses will be stated in null form;

- i. **H₀₁**: Persuasive skill has no significant effect on fraud detection in in the public sector in Nigeria.
- ii. **H₀₂**: Investigative skill has no significant effect on fraud detection in in the public sector in Nigeria.
- iii. **H₀₃**: Litigation support has no significant effect on fraud detection in in the public sector in Nigeria.

2.0 LITERATURE REVIEW

2.1 Conceptual Review

Forensic accounting is seen as encompassing fraud investigation, prevention and anti-fraud controls analysis and financial and nonfinancial information gathering (Singleton & Singleton 2010). However, forensic accounting according to Okoye, Maimako, Jugu and Jat (2017), can assist in detecting and interpreting the evidences of both normal (non-fraudulent) and abnormal (fraudulent) phenomenon introduced into the books and records of accounting system and the resultant effects upon the accounts, inventories and the presentation thereof (Okoye, Maimako, Jugu & Jat 2017).

Forensic accounting is a science dealing with the application of accounting facts and concepts gathered through auditing methods, techniques and procedures to resolve legal problems which requires the integration of investigative, accounting, and auditing skills (Arokiasamy & Cristal, 2009; Dhar & Sarkar, 2010). According to Stanbury and Paley-Menzies (2010) state that forensic accounting is the science of gathering and presenting information in a form that will be accepted by a court of jurisprudence against perpetrators of economic crime. Hopwood, Leiner, and Young (2008) argued that forensic accounting is the application of investigative and analytical skills for the purpose of resolving financial issues in a manner that meets standards required by courts of law. Degboro and Olofinsola (2007) noted that forensic investigation is about the determination and establishment of fact in support of legal case. That is, to use

forensic techniques to detect and investigate a crime is to expose all its attending features and identify the culprits. In the view of Howard and Sheetz (2006), forensic accounting is the process of interpreting, summarizing and presenting complex financial issues clearly, succinctly and factually often in a court of law as an expert.

Persuasive skill is defined as an effort intended to influence another's mental state through communication in a circumstance which the persuadee has some measure of freedom and both parties seek mutual benefit that do not undermine the public interest (O'keefe's, 1990). Persuasion in a profession must include persuaders concern for the welfare of the persuadee. Adherence to this requirement has been emphasized through the centuries by theories of rhetorical persuasion (Joweth&O'Donnel, 1986). The definition of persuasion appropriate to the accounting profession must also include a requirement of "concern for the public interest". Mautz (1988) argues that responsibility, wisdom, and concern for the public welfare are worth differentiating a professional firm from other firms (Morley & walker, 1987). The content of persuasion in accounting includes all primary and secondary qualitative characteristics of information specified in the FASB's conceptual framework project. Primary characteristics of financial accounting are (1) Relevance, which is divided into predictive, feedback, and timeliness values; (2) Reliability with its three components of verifiability, representational faithfulness and neutrality (FASB's SFAC No. 2, 1980).

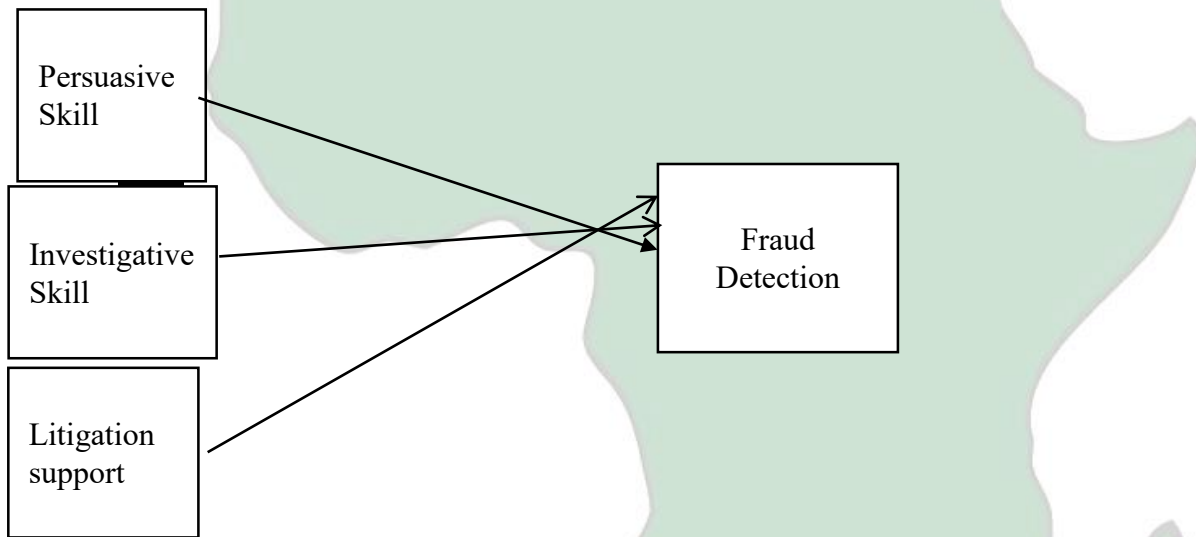
Investigative skill is the utilization of specialized skills in carrying out an inquiry conducted in such a manner that the outcome will have application to a court of law. Investigation is the act of determining whether criminal matters such as employee theft, security fraud (including falsification of financial statements) identify theft and insurances fraud have occurred (<http://www.forensic.accounting-information.com/>). As part of forensic accountant's work, he must recommend actions that can be taken to minimize future risk or loss. Investigative accounting is a multi-disciplinary profession, bringing together the skills of Auditor, accountant, investigator, legal practitioner and computer technologist (Abu et al., 2018). The course was introduced into Nigerian Universities' curriculum due to the increasing number of financial frauds in Nigeria. The idea is to train students in this special area of accounting so that after graduation, they would have the competence, skills and capability to fight against the perpetration of these crimes. The rate of increase in financial and other related crimes is alarming and it appeared that traditional auditors were incapacitated in curbing the menace. For the investigation of financial fraud cases to be successful, the person must have skills and expertise in financial accounting, sound fraud knowledge, sound computer knowledge, good background and understanding of business organization dealing with, and expertise in the legal system. This is because you cannot give what you don't have. For students after graduating to perform excellently in fraud-related cases, such student should have acquired all the skills and expertise's required during the undergraduate training.

Litigation support represents the Factual presentation of economic issues relating to existing or pending litigation. It provides assistance of an accounting nature in a matter involving existing or pending litigation. A typical litigation support assignment would be calculating the economic loss resulting from breach of contract. In this capacity, the forensic accounting professional quantifies damages sustained by parties involved in legal disputes and can assist in resolving dispute even before they reach the court room. Not every forensic accounting process ends up in the court of law. However, if a dispute reaches the court room, the forensic accountant may testify as an expert witness. Omoniyi (2004), stated that the function of an expert witness is to assist the court reach a conclusion on matters on which the court itself may not have the necessary knowledge to decide what a forensic accountant can contribute to litigation will depend substantially on the circumstances and the nature of each case.

Litigation consultants are usually engaged in legal action where financial information requires critical analysis. It typically involves the forensic accountant being engaged by a lawyer to make an assessment of financial losses involved. Engagements relating to civil disputes may fall into several categories. Calculating and quantifying losses and economic damages, whether suffered through tortious breach of contract, disagreement relating to company acquisitions-perhaps earn-outs or breach of warranties and

business valuation. Forensic accountants often assist in professional negligence claims where they are assessing and commenting on the work of other professionals (Dauenhauer et al.2020).

Defining fraud is as difficult as identifying and locating it. It has been observed that there is no laid down rule or General proposition in defining the term fraud as it includes surprise, trick, cunning and unfair ways by which another is cheated. Some have referred it to be a legal term that is intentional misrepresentation of the truth in order to manipulate or deceive someone. Davia (2011) in Agaba (2016) states that fraud is not a possibility but a probability. He further explained that fraud can better be prevented if decisions are made by a group and not an individual. Fraud aims at creating a misjudgment or maintain an existing misjudgment to induce somebody to make a contract. Agaba (2016), explained that when all frauds are analyzed, it is ascertained that three components come together when committing the crime, there are pressure, opportunity and justification and that constitute the fraud triangle. Accordingly, he viewed the components of fraud triangle as the fuel, spark and oxygen which together ignites the fire called fraud. (2004), Anyanwu (1993), Ajie andEzi (2000), Okafor (2004) gave a summary of the types of fraud in Nigeria to include, defalcation, outright theft, suppression, embezzlement, tampering with reserves, insistent abuses and forgeries, fraudulent substitutions, unauthorized lending, ghost workers syndrome, impersonation, fake payment, fraudulent use of firms document, fictitious accounts, false proceeds, fake declarations, misuse of suspense accounts and much more.



Source: Researcher’s model 2022.
Figure1: Conceptual Framework of the Study.

2.2 THEORETICAL REVIEW

2.2.1 Fraud Triangle Theory

According to Dorminey, Fleming, Kranacher and Riley (2010), the origin of the theory dates to the works of Sutherland, who coined the term white collar crime, and Cressey, one of Sutherland's former students. The fraud triangle theory consists of three elements that are necessary for theft or fraud to occur: perceived pressure, perceived opportunity and rationalization.

The fraud triangle has been put forward to explain the prevalence of fraud in organizations. According to Adebisi, Okike and Yoko (2016), forensic accounting relies on the fraud triangle to identify weak points in the business systems and to identify possible suspects in cases of fraud. It consists of three core concepts which together create a situation ripe for fraud: incentive, opportunity, and rationalization. People must have the incentive and opportunity to commit financial fraud, as well as the ability to justify it.

Golden, Skalac and Clayton (2006) asserted that within each of the broad risk categories in the fraud triangle, many different and specific potential red flags may be visible within an organization. They identified the risk categories as: Incentive and Pressure; Opportunity; Justification/Rationalization and

Attitude. Thus, it would be in the interest of the forensic accountant to acquire good knowledge of these factors to better understand how to prevent fraud.

Nigrini (2011) posit that the first reason employees get involved in fraud is pressure. He/she enumerates the pressure factors to include: Pressures with financial content, Pressures stemming from habits and Pressures related with the job. As noted by Olukowade and Balogun (2015), the harsh economic environment in Nigeria has more than anything else which pressured employees into financial malpractice in order to take care of financial obligations. Opportunity is another important component of the fraud triangle. It directly involves top management and owners of the business in particular. Providing the opportunity to commit fraud is one of the most important factors arising from frauds. Since the business could greatly influence opportunity factor, this point should receive particular attention for fraud prevention. Mukoro, Ogijo, and Faboyede (2013) asserted that weak internal control systems make it overly easy for employees to pass over certain fraudulent activities. Finally, is the attempt or effort by the fraudster to justify or rationalize their nefarious activity? Some individuals are more prone than others to commit fraud. Other things being equal, the propensity to commit fraud depends on people's ethical values as well as on their personal circumstances. Ethical behavior is motivated both by a person's character and by external factors. Depending on ethical values, the fraudster is likely to put forward one of the following as justification for his/her crime: I deserve this; No one is hurt and the company is helped; the company does not really care; it is just temporary among many others (Golden, Skalak & Clayton 2006).

2.2.2 Deterrence Theory

The deterrence theory was propounded by Cesare Beccaria and Jeremy Bentham in the year (1964). Rooted in conceptions of free will, which assumed that deterrence is concerned with how sanction threats and the imposition of sanctions inhibit criminal activity from occurring in society at large (in the case of general deterrence) and with the persistence of crime among offenders (in the case of specific deterrence). Sanctions are presumed to deter future crime to the extent that punishment is certain, swift, and severe enough to outweigh the reward obtained from crime commission.

Certainty relates to the likelihood or risk of detection and subsequent punishment, swiftness refers to how quickly the sanction is applied after the offense and subsequent detection, and severity refers to the strength or magnitude of the punishment. Moreover, deterrence is a perceptually based phenomenon or a social psychological theory, as individuals must perceive sanction threats to be affected by them (Geerken & Gove 1975). As Beccaria (1986), noted, "to it that men fear the laws and nothing else." Assuming that humans are rational actors who weigh the costs and benefits when deciding whether to offend, sanction threats and imposed punishments are presumed to inhibit initial criminal activity and deter its subsequent recurrence by increasing the costs of crime.

Considering the two theories discussed above, the fraud triangle theory, and deterrence theory. The study is underpinned on the deterrence theory. The essential idea in the deterrence theory is concerned with how sanction, punishment and threats as well as the imposition of sanctions to deter accountants and other intended parties from indulging in criminal and other fraudulent activity from occurring. Therefore, deterrence theory serves as the means upon which fraud is detected and prevented in the public sector in Nigeria.

2.3 EMPIRICAL REVIEW

Bassey and Ohimai (2017). The study critically considers the effect of forensic accounting and litigation support on fraud detection in Nigerian companies. The objective of this study is to predispose if forensic accounting and litigation support have any significant effect on fraud detection in Nigeria companies. In order to actualize this objective, data were sourced for through primary sources and this was achieved with the help organized questionnaires of two segments administered to the employees of Zenith Bank Nigeria Plc. and Union Bank Nigeria Plc. in Calabar, Cross River State. The data collected were presented with the help of tables and interpreted with the help of inferential statistics using Analysis of Variance (ANOVA). The study revealed that forensic accounting and litigation supports do not have significant effect on fraud detection in Nigerian companies. It was recommended that Management and Shareholders should be educated on the usefulness of the services of forensic accountants in litigation

matters and that Nigeria legal system should be strengthened, so that it can lend credibility or confidence in their legal system.

Eze and Okoye (2019). The study investigated the effects of forensic accounting and fraud prevention in the Nigerian public sector with Imo state as a case study. The research design used was the descriptive survey. The study adopted structured questionnaire for data collection after validity and reliability test with z-test for the hypothesis testing. The result revealed a significant relationship between forensic accounting and fraud detection and prevention in the public sector. It was recommended among other things, that forensic accounting should be strengthened in the public sector and that the top-level management should be committed to the program while the anti-graft agencies like the EFCC and ICPC should be repositioned to adopt forensic accounting techniques.

Okoye *et al* (2019). This study assessed the effect of Forensic Accounting on fraud management. The objectives were to find the effectiveness of forensic accounting in fraud prevention and the positive effect of forensic litigation on recovery of funds lost to fraud. Survey design was adopted. Questionnaire was used in data collection from accounting staff of Nigeria Breweries Plc, Cadbury Nigeria Plc, Nigeria Bottling Company and Dupril Forma Nigeria Ltd, all in Aba, Abia State. 190 were used as sample size. The study adopts descriptive statistics which involves the use of mean and standard deviation while regression analysis was adopted to test the stated hypotheses. Findings revealed that forensic accounting significantly influence fraud detection and prevention. It was also revealed forensic litigation has no significant positive effect on recovery of funds lost to fraud. Based on the above, it is recommended that companies in Nigeria step up their forensic accounting practices in order to deter fraud.

Ademola & Ajibola (2019). This study reviewed the relevance of forensic accounting in consolidating the implementation of Treasury Single Account with understanding that, operation of Treasury Single Account and its ancillary platforms such as Government Integrated Financial Management Information System, Integrated Personnel Payroll Information System, and Remita do not foreclose corruption entirely. In doing this, the work examines the gains and challenges of Treasury Single Account, and equally takes a look at the nexus between Forensic Accounting, Corruption and Treasury Single Account. Extant literatures on corruption, forensic accounting, and Treasury Single Account were reviewed. The study concludes that, integration of forensic accounting into the governance system and engagement of forensic accounting experts to reinforce effective and successful criminal prosecution of corrupt individuals in a manner that will create atmosphere of punishment for corruption to consolidate the on-going institutional reforms for desired result is imperative.

Efut & Okoye (2019). This study explains how forensic accountants can be employed to confront head on this pressing challenge. The study was an empirical research which critically discussed the roles of forensic accounting fighting fraud and fraud related activities in Nigeria, vital difference between the conventional accountant and forensic accountant, major characteristics and qualities required of a forensic accountant, and the impact of forensic accountant to deter, detect and prevent fraud and financial crimes in the Nigerian society. From the research, it was discovered that the services of forensic accountant will assist in mitigating and possibly reduce fraud to its barest minimum in Nigeria. Among the recommendations made was that government should enforce it on all the agencies in Nigeria to employ forensic experts and ensure that all government transactions are subjected to forensic audit.

Nader *et al*. (2020). This study examines the impact of two forensic accounting domains –the expert witness and litigation support –on financial corruption in Lebanon. The study adopts the analytical descriptive approach utilizing an empirical study. A well-structured five-point Likert style questionnaire was devised as the study tool and was distributed among a sample of 323 of the total population that consists of all certified public accountants (CPAs) in Lebanon, tax controllers, senior tax controllers, and heads of the departments and divisions in the Lebanese Ministry of Finance, and auditors at the Lebanese Audit Bureau. The study reached important findings, mainly that there is an impact of the expert witness, which is one of the forensic accounting domains, on curbing financial corruption in Lebanon, and that there an impact of the litigation support, which is one of the forensic accounting domains, on curbing financial corruption in Lebanon.

Firas (2020). This study investigated the role of forensic accounting techniques in detecting non-numerical fraud risk factors in manufacturing corporations in Amman Stock Exchange. The research population consisted of manufacturing companies listed in Amman Stock Exchange. A random sample of amounting 87 subjects was selected. The study used a self-administrated questionnaire. 87 questionnaires were recollected, 9 ones disregarded with a sample a 78. Data was collected data and analyzed using SPSS. Findings revealed that there is a statistically significant role of Forensic Accounting Techniques in Detecting Non-Numerical Fraud Risk Factors in Manufacturing Corporations in Amman Stock Exchange. Also, result showed that (FPDDS) (Fraud prevention, detection and deterrence skills) and (FAIIS) (Forensic audit, investigation, and interviewing skills), and (LMAS) (Litigation, mediation, and arbitration skills) in Detecting Non-Numerical Fraud Risk Factors in Manufacturing Corporations in Amman Stock Exchange and finally (CARDR) (Computer-assisted reviews and document reviews) play a role in Detecting Non-Numerical Fraud Risk Factors in Manufacturing Corporations in Amman Stock Exchange.

Abuh and Acho (2018). Forensic Accounting and Economic Stability in Nigerian Public Sector: The Role of Economic and Financial Crime Commission” is written to examine whether the use of forensic accounting has helped in combating financial crimes in Nigeria public sector through the effort of EFCC. The study elicits data from primary and secondary sources while the sample size of 116 was obtained out of the total population of 164 using Taro Yamane sample size statistical technique. The method of data analysis is the 5 points likert scale for descriptive statistics and analysis of variance (ANOVA) in testing the research hypotheses. The paper concludes that application of forensic accounting skills and techniques has contributed immensely to in the investigation of complex financial crimes thereby enhancing economic stability. Therefore, the paper recommends that Government should institutionalized forensic accounting as a course of study in the field of accounting; necessary training should be given to the employees of anti-corruption agencies like EFCC in order to detect financial and other economic related crimes in Nigerian public sector while appropriate sanctions be applied when financial crime is detected where prosecution is considered appropriate. Finally, proper forensic procedures should be followed during investigation and trained professional forensic accountant be used in investigating economic and financial frauds in Nigerian public sector with the view to enhancing economic stability

Literature Gap

From the various literatures that have been reviewed in this chapter, it can be deduced that a large body of evidence suggests that forensic accounting tools are vital and essential in fraud detection. The relationship between forensics accounting and fraud prevention, fraud management, economic stability, financial corruption, treasury single account has been conducted. Also, the effect of forensic accounting as means fraud detection and prevention has been examined by scholars as has been extensively studied by scholars. Therefore, previous studies have been conducted industrial sector, financial sector, manufacturing sector as well as the public sector but few studies on the public sector with reference to MDAs. However, MDAs have not been given adequate attention considering the various studies conducted in foreign countries and in Nigeria. This gap in literature therefore necessitates the need for this study in order to advance and expand the existing body of knowledge in the field of forensic accounting tools such as persuasive accounting, investigative accounting and litigation support in fraud detection.

3.0 METHODOLOGY

3.1 Research Design

This study employed a cross-sectional field survey for simultaneous data collection of dependent and independent variables due to the cost and time constraints associated with longitudinal surveys. The field survey is a non-experimental design, as it doesn't manipulate independent variables but measures them for statistical analysis, as explained by Kumar (2014). It excels in capturing real-world insights through questionnaires, following Creswell's (2008) approach.

3.2 Population of the Study

The population for the study was 47 audit firms in Plateau State. This is because the study focuses on forensic accountants who are saddle with the expertise to detect fraud in the course of audit investigation. It is only these firms who have the accountants in this area to examine the MDAs in the state where applicable.

3.3 SAMPLING

3.3.1 Sample Size Determination

In determining the sample size for the study, Krejcie and Morgan (1970) sample size determination formula was used. According to the table, for a population of 47 audit firms, the sample size is 44. Therefore, the sample size is 44 audit firms.

3.3.2 Sampling Strategy

This study employed purposive sampling technique to sample a total of 44 firms. The purposive sampling is a type of non- probability sampling that is most effective when one needs to study a certain cultural domain with knowledgeable experts within (Tongco, 2007). In this study, the researcher aimed at studying forensic accounting tool and fraud detection. As such, purposive sampling was used to sample the opinion of those in position such as, the top executive head of the MDAs. Therefore, purposive sampling was found suitable for the study.

3.4 Method of Data Collection

The instrument for collecting primary data for this research was questionnaire and it was administered to respondents on the constructs in respect to forensic accounting skills (persuasive accounting, investigative accounting and litigation support) and fraud detection to seek for their opinions through the use of five-point Likert scales itemized indicating as (Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree). The questionnaire was administered to the respondents on proxy and face-to-face basis.

3.5 Instrument Validation

The instrument for data collection in this study will be questionnaire. This is considered appropriate due to the nature of the study variables which are measured using perceptual measure in prior studies (Baer & frees, 2003, Namugenyi, 2012, Larreta, 2011). Therefore, the instruments were validated in terms of its validity and reliability.

3.5.1 Reliability

Reliability test was used to test the internal consistency of the questionnaire. In establishing internal consistency, the Cronbach alpha reliability was employed. The rule is that the statistics should be 0.7 and above (Hair.,et al 2010).

Table 1
Reliability test

Variables	Cronbach's Alpha ^a	N of Items
Investigative Skills	.724	5
Litigation Support	.824	5
Persuasive Skills	.856	5
Fraud Detection	.707	4

Source: SPSS Output

Interpretation: From Table 1, the reliability test was conducted for the whole items of the latent variables based on the number of items that measured it. The variables have value of the Cronbach Alpha above 0.7. It can be inferred that the questionnaire is a reliable instrument.

Decision: The result indicated that all the variables are reliable and are certified for further analysis.

3.5.2 Validity

The validity of the measurement instrument would be dissected into *content* and *construct validity*. *Content validity* measures the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose (Haynes et. al., 1995). In this study, content validity was addressed using a panel of experts such as senior academics like professors. The Content Validity Index CVI was computed by obtaining the proportion of the items assessed as valid divided by the total number of items. The threshold is that CVI should not be less than 0.7 for each of the constructs to be valid.

Construct validity was tested in two dimensions: convergent and discriminant validity. Convergent validity is used to assess the extent to which test instruments actually measure what theory purports while discriminant validity aimed at establishing heterogeneity among items that are not theoretically related (Sarantokos, 2005). The rule of thumb is that the AVE must be greater than 0.5 to achieve construct validity.

Table 2:
Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)
Investigative skills	0.641
Persuasive skills	0.683
Litigation support	0.626
Fraud detection	0.689

Source: Spss Output 2022

3.6 METHOD OF DATA ANALYSIS

The aim of this study was to test the relationship between forensic accounting tool and fraud detection. This suggests the use of parametric statistics such as regression. As such multiple linear regression was used to test the direct association between the independent and the dependent variables. It is important to consider how persuasive accounting, investigative accounting, litigation support using a multiple regression model.

$$FA = \beta_0 + \beta_1 PA + \beta_2 IA + \beta_3 LS + e$$

Where:

FD= Fraud detection

PA= Persuasive Accounting

IA= Investigative Accounting

LS= litigation Support

β_0 = Constant

e = error term for the Model that is, the difference between the observed value and the predicted value of fraud detection.

4.2.3 Normality

To confirm whether the data meet assumption of normality, statistical methods were used as such can give an objective basis for interpretation. For the statistical method, the skewness and kurtosis were employed and tested.

Table 4:
Normality Test

		Investigative Accounting	Litigation Support	Persuasive Accounting	Fraud Detection
N	Valid	44	44	44	44
	Missing	0	0	0	0
Skewness		-1.047	-.811	-.446	-.776
Std. Error of Skewness		.361	.361	.361	.361
Kurtosis		-.290	-.352	-1.250	.741
Std. Error of Kurtosis		.709	.709	.709	.709

From Table 4, the values are not far from zero which further suggests that the sample is from a population with a normal distribution (Pallant, 2007). In view of that, this was not considered an issue for running a multiple regression.

4.2.4 Test of Homogeneity of Variance

Parametric statistics assume that the variance is equal throughout the study population. To test for equality of variance, Field (2009) suggests the use of Levene's test. This was applied in the current study. The rule of thumb to establish homogeneity is that the Levene statistics should not be significant and the variances of all the variables shall be equal.

Table 5
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Investigative skills	Based on Mean	6.475	3	39	.638
Litigation Support	Based on Mean	1.225	3	39	.723
Persuasive skills	Based on Mean	3.210	3	39	.630
Fraud Detection	Based on Mean	4.773	3	39	.465

The data employed the use of Levene's test to establish whether the variances in the groups are equal and the difference between the variance is zero as suggested by Field (2009). Homogeneity of variance is sustained when the Levene's value is not significant Field, 2009; Hair et al., 2010). Table 5 indicates that the Levene's value for all the study variables are not significant implying that the assumption of the homogeneity is upheld.

4.2.5 Multicollinearity

This is where three or more independent variables are highly correlated. The objective of conducting the test is to establish the Variance Inflation Factors (VIF) and the Tolerance (being the reciprocal of VIF) values. To screen for multicollinearity, Variance Inflation Factor (VIF) and tolerance level were examined through regression results from the SPSS.

Table 6
Multi-collinearity

Model		Coefficients ^a	
		Tolerance	VIF
1	Investigative Accounting	.788	1.269
	Litigation Support	.918	1.089
	Persuasive Accounting	.748	1.337

a. Dependent Variable: Fraud Detection

From table 6, it is clearly seen that the VIF and the tolerance values do not exceed 10 and are not less than 0.10 respectively. The independent variables are therefore correlated.

4.0 RESULTS /INTERPRETATIONS/DISCUSSION

4.1 Results

4.1.1 Descriptive Statistics

The descriptive statistics for the study variables are presented in Table 8.

Table 8:
Descriptive statistics for the study variables

	N	Minimum	Maximum	Mean	Std. Deviation
Investigative Accounting	43	1.80	5.00	3.7953	.05874
Litigation Support	43	1.80	3.80	3.1302	.64717
Persuasive Accounting	43	2.60	4.60	3.6837	.68066
Fraud Detection	43	2.00	4.50	3.5291	.65966
Valid N (listwise)	43				

The descriptive statistics for the study variables are presented in Table 8. The results indicate that the mean score of the latent variables range between 3.13 and 3.79 on a 5- point Likert scale, while the standard deviation ranges between 0.05 and 0.68 as well as the max and min ranges from 1.80- 5.00 for all the variables. The standard deviations are small relative to their respective means, implying that the statistical mean provides a good fit of the observed data (Field, 2009).

4.1.2 Test of Hypotheses

A multiple regression was run to test the relationship between persuasive skill, litigation support, investigative skill and fraud detection. The results in table 10 shows the relationships.

Table 9
Table of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.491	.913		4.921	.000
	Investigative skills	.028	.102	.045	1.276	.021
	Litigation Support	.236	.154	.232	1.533	.113
	Persuasive skills	.433	.162	.447	2.668	.011

a. Dependent Variable: Fraud Detection

R = 0.927, R² = 0.682, Adjusted R² = 0.579

As shown in Table 9, the standardized regression Beta-value and t- statistics for persuasive accounting on fraud detection is 0.447 and 2.668 suggesting that this path is statistically significant at $\alpha = 0.05$. This indicated that Persuasive accounting has significant effect on fraud detection in the public sector of MDAs in Nigeria, meaning that Persuasive skill positively influence fraud detection in the public sector in Nigeria.

Also, the standardized regression Beta-value and t- statistics for investigative accounting on fraud detection is 0.045 and 1.276 suggesting that this path is statistically significant at $\alpha = 0.05$. This indicated that investigative accounting has significant effect on fraud detection in the public sector of MDAs in Nigeria, meaning that investigative skill positively influences fraud detection in the public sector in Nigeria.

Again, the standardized regression Beta-value and t- statistics for litigation support on fraud detection is 0.232 and 1.533 suggesting that this path is statistically insignificant at $\alpha = 0.05$. This indicated that litigation support has no significant effect on fraud detection in the public sector of MDAs in Nigeria, meaning that litigation support does not influences fraud detection in the public sector in Nigeria.

4.2 Discussion of Findings

The test of hypothesis 1 shows that persuasive accounting has significant relationship with fraud detection in the public sector in Nigeria. This means that staff are being influenced to reveal reliable financial information relating to fraud in the MDAs, Staff involved in fraud releases information out of will for fear of court proceedings in the MDAs, For the concern of public interest, adequate measures are put in place for vital information leading to fraud detection in the MDAs by forensic accountants, Staff in the MDAs provides relevant information for audit and received reward. Persuasive accounting skills therefore serves as a strong tool in detection fraud in the public sector. This finding corroborated the findings of Ademola and Ajibola (2019).

The test of hypothesis 2 indicates that investigative accounting skills has significant relationship with fraud detection in the public sector in Nigeria. This shows Investigative accountants have full knowledge of forensic accounting in detecting fraud in the MDAs, Investigative accountants equipped with accounting skills are involved in all category of fraud detection in the MDAs, Proposal made by the MDAs for investigative accountants in the course of doing their job are duly realized and Fraudulent activities are properly investigated in detecting possible sign of fraud in the MDAs. This finding is in line with the finding of Eze and Okoye (2019) who assert that investigative accounting skill has significant relationship with fraud detection and prevention the public sector.

The test of hypothesis 3 revealed that there is no significant relationship between litigation support and fraud detection in the public sector in Nigeria. This suggests that forensic accountants does not utilized the services of litigation consultant in prosecuting fraud cases involving staff of the MDAs, the MDAs has no well-staffed and funded litigation unit within the accounting and legal departments, recommendations on fraud detection strategies proposed by forensic accountants does not led to red

flagging of some fraudulent behavior by staff in the MDAs and the MDAs do not recorded appreciable recovery of funds lost to fraud since the implementation of forensic litigation measures. This finding corroborated the finding of Bassey and Ohimai (2017) who observed that litigation supports do not have significant relationship with fraud detection in Nigerian public institutions. Again, this finding is in line with the findings of Okoye, Adeniyi and James (2019) who position that forensic litigation has no significant positive effect on recovery of funds lost to fraud. This finding is in contrast to the finding of Nader, et al. (2020) who opined that there an impact of the litigation support, which is one of the forensic accounting domains, on curbing financial corruption in Lebanon.

5.0 CONCLUSION, RECOMMENDATIONS AND IMPLICATIONS

5.1 Conclusion

The main objective of the study was to examine the relationship between forensic accounting skills and fraud detection in the public sector in Nigeria. Specifically, the study examines the relationship between persuasive skills, investigative skills, litigation support and fraud detection in the public sector in Nigeria. From the findings, the study concludes a significant positive relationship between persuasive skills, investigative skills and fraud detection in the public sector in Nigeria. Also, the study concludes litigation support has no significant relationship with fraud detection.

5.2 Recommendations

The following recommendations are drawn from the findings and conclusion of the study;

- i. Training and development programs should be conducted to enhance the persuasive and investigative skills of the auditors and investigators in the public sector to enable them detect fraud more effectively.
- ii. The public sector should consider increasing the budget allocation for the anti- fraud department to acquire advanced technology and equipment that will help in the detection and prevention of fraud.
- iii. The public sector should consider implementing a more rigorous selection process for auditors and investigators to ensure that only professionals with relevant skills, experience, and expertise are employed.

5.3 Implications

The findings of this study have significant implications for the public sector in Nigeria. The effective detection and prevention of fraud required a combination of different skills, including persuasive and investigative skills, in addition to the use of technology and equipment. The findings also show that the litigation support has no significant positive relationship with fraud detection, which implies that the public sector should re-evaluate its approach to litigation support and explore other options to address fraud. Therefore, the implementation of the recommended measures will help the public sector in Nigeria to enhance its fraud detection and fraud prevention efforts.

5.4 Limitation of the study

The study uses field survey that is cross sectional. This means that it was unable to capture changes overtime as is the case if a longitudinal study was carried out. Also, the study focuses on the Public Sector; the findings may not entirely explain fraud detection in the Private sector.

5.5 Suggestions for Further Studies

There is need for a longitudinal field survey to be carried out in order to capture variation overtime and the study should be extended to Private sector such as banks, old and gas and manufacturing companies to find out if the results will support the current study.

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