

## **The Impact of Forensic Accounting in Fraud Detection and Prevention: Evidence from Nigerian Public Sector**

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**ABSTRACT :***The growing level of fraud in Nigeria and the world at large makes the need for use of forensic accounting in fraud investigation very apt especially in Nigeria which has led to mismanagement and inefficiency in corporate and public fund management. There has been offensive increase in fraud in the corporate world and the Government agencies in Nigeria. Thus, this study is aimed at investigating how forensic accounting has abetted the detection and prevention of fraud in Nigeria. The study is a survey research which used primary data collected with the aid of questionnaire administered to 92 sampled professional accountants in Nigerian public sector. The data collected was analyzed using chi-square. The findings of the study suggest that forensic accounting have a significant role to play in fraud detection and prevention in Nigeria. We therefore, recommend that there should be more forensic accountants involvement in fraud detection in order to reduce the rate of financial crime in Nigeria.*

**Keywords:***Fraud, fraud awareness, fraud detection, fraud prevention*

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### **I. Introduction**

The growing level of fraud in Nigeria and the world at large makes the need for use of forensic accounting in fraud investigation very apt especially in Nigeria. There has been offensive increase in financial fraud in the corporate world and Government agencies in Nigeria. From the politicians to the bank directors/executives, from the legal officers to the law enforcement personnel, from the civil servants to the school teacher, from the trader in the market to the hawkers on the street, the tendency for fraud and fraud related crimes is endless (Mukoro, Yamusa & Faboyede 2013). This has increased the need for forensic accounting services to detect and prevent the continuous perpetuation of fraud. The detection and prevention of fraud may be effectively achieved with adequate application of forensic accounting. Forensic accounting have been described by Association of Certified Fraud Examiners (ACFE) as the use of professional accounting skills in matters involving potential or actual civil or criminal litigation, including, but not limited to, generally acceptable accounting and audit principles; the determination of lost profits, income, assets, or damages; evaluation of internal controls; fraud; and any other matter involving accounting expertise in the legal system. Forensic accounting also called investigative accounting involves the application of accounting concepts and auditing techniques in resolving legal matters.

Currently, forensic accountants or investigators have been engaged in detecting frauds in different financial crimes. Krstic (2009) suggest the forensic accountants are engaged by the management, owner or other users of financial statements to investigate and document financial frauds or inaccurate materially significant financial information in view of the alarming rate of financial fraud.

For effective performance of forensic accounting duty (fraud detection and prevention) a solid knowledge and understanding of accounting and auditing, good communication ability and suitable information technology knowledge is needed. It is in this light; this paper analyzed the impact of forensic accounting in fraud detection and prevention in Nigerian public sector.

### **Statement of Problems**

There have been continuous increase in financial crime, mismanagement and misappropriation of public funds in the Nigerian polity. The primacy of the Buhari led administration is the fight against corruption. Many arrests have been made, however, the number of prosecution cannot be viewed in the same manner. Can this be attributed to lack of application of forensic accounting skills in the investigation process or is it that

the awareness of the use and application of forensic accounting in litigation process is limited. It is because of this that this study intend to answer the following questions:

- a. What is the place of forensic accounting in fraud detection and prevention in Nigeria?
- b. How much awareness has been created on the use of forensic accounting in fraud detection?

### **1.3 Research Objective**

To provide answers to the questions asked the following objectives are achieved:

- a. To investigate the use and application of forensic accounting in fraud detection and prevention in Nigeria.
- b. To ascertain the level of awareness of the use of forensic accounting for fraud detection and prevention among professional accountants in Nigeria.

### **1.4 Research Hypothesis**

In order to achieve the set objectives the following hypotheses stated in there null format are considered.

**H<sub>0</sub>:** Forensic accounting has no significant impact in fraud detection and prevention in Nigeria

**H<sub>0</sub>:** there has not been significant awareness of Forensic accounting as a tool for fraud prevention and detection in Nigeria.

## **II. Literature Review**

### **2.1 Fraud and Forensic Accounting**

Forensic accounting services have not been so much in demand in the previous decades due to the relatively low level rate of fraud. But in growing spate of corporate scandals and collapse of corporate organizations (Izedonmi&Ibadin 2012), instigated mainly by fraudulent activities of the management and people in position of managing and public funds have made the relevance of forensic accounting in building credibility and reliance on the operations more important. The importance of forensic accounting in cupping fraud is inevitable specifically in the Nigerian public sector where most management of the institutions are involved in one form of financial scandal or the other.

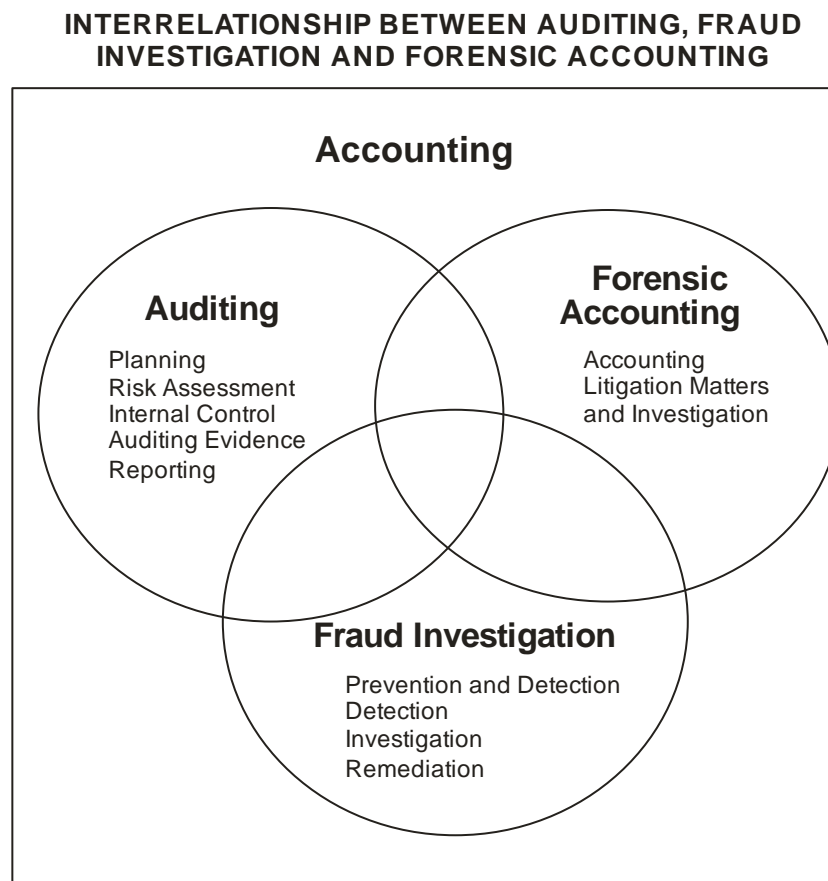
Fraud is a factor of human desire to get rich quick. This criminality called fraud has eaten into the Nigerian system so deep that, it is now seen as regular behaviour in Nigeria. The Institute of Turkish History explains the word fraud as “a deceptive trick, scam, game, artifice, cabal which is committed to cheat, mislead someone” and “contributing something useless to something in order to gain advantage” (Institute of Turkish History 1998 ). According to another definition, fraud is “to create a misjudgment or maintain an existing misjudgment to induce somebody to make a contract” (Arzova 2003). Fraud has no definite definition. Fraud can simply be put as an intentional act by an individual to deceive another individual in order to take possession of his/her financial or non-financial belongings for his/ benefit.

The word “forensic” is defined by Black’s Law Dictionary as “used in or suitable to courts of law or public debate.” Therefore, “forensic accounting” is actually litigation support involving accounting. National Institute of Justice (NIJ) of United States Special Report (2007) defines forensic accounting as the application of accounting principles, theories, and disciplines to facts or hypotheses at issue in a legal dispute, and encompasses every branch of accounting knowledge. Also Bhasin (2007) say the integration of accounting, auditing and investigative skills creates the specialty known as forensic accounting.

Forensic accounting have been defined by Association of Certified Fraud Examiners (ACFE) as Forensic accounting is the use of professional accounting skills in matters involving potential or actual civil or criminal litigation, including, but not limited to, generally acceptable accounting and audit principles; the determination of lost profits, income, assets, or damages; evaluation of internal controls; fraud; and any other matter involving accounting expertise in the legal system. O’ zkul&Pamukc (2012), states, forensic accounting uses accounting, auditing, and investigative skills to conduct investigations into theft and fraud. Hence, forensic accounting is basically knowledge that encompasses the understanding of accounting, auditing, investigation, legal, psychology, computer and criminology in providing evidence needed in a litigation process.

## 2.2 The interrelationship between Auditing, Fraud Investigation and Forensic Accounting

Figure 2.1



**Source:**National Institute of Justice Special Report 2007

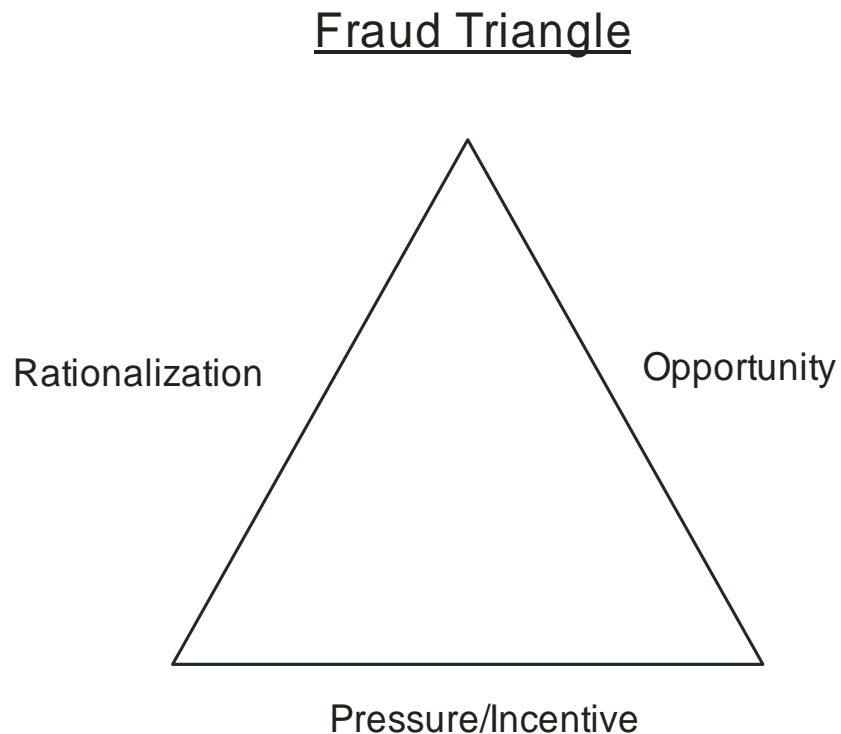
The diagram above shows the knowledge and skills of traditional accounting, auditing, fraud, and forensic accounting interrelationship is articulated. Traditional auditing procedures address fraud to the extent as prescribed by Statement on Auditing Standards; however, auditors have no responsibility to plan and perform auditing procedures to detect misstatements that are not judged to be material (including those caused by error as well as fraud). Where fraud issue is reported, the required action is investigation into the subject matter. This is because it is a more in-depth fact finding in specific area of concern than the regular audit. Fraud detection and prevention is a specific search to ascertain whether fraud took place or not to determine the extent of fraud perpetuated. Even though, allegations of fraud are often resolved through court action that may include calculated estimates of losses (damages), it suggests that fraud investigation and forensic accounting often overlap. However, both encompasses activities unrelated to the other: fraud professionals often assist in fraud prevention and deterrence efforts that do not directly interface with the legal system, and forensic accountants work with damage claims, valuations, and legal issues that do not involve allegations of fraud. The interrelationship among auditing, fraud, and forensic accounting is dynamic, changing over time due to political, social, and cultural events. In addition, the level of overlap between forensic accounting and fraud may be larger than depicted here. It is expected that forensic accountants have a minimum, adequate knowledge and skills in the area of fraud and forensic accounting. In addition, auditing, fraud, and forensic accounting professionals often have skills set in multiple areas and are able to leverage their skills and abilities from one area when working in others.

## 2.3 Fraud Triangle

The fraud triangle is what the forensic accountant rely on to identify suspected fraud, the causes and the weakness in the system that prompted the fraud. Based on the fraud triangle concept the three (3) factors that

cumulate into the triangle are; incentive, opportunity, and rationalization. For any individual to be involved in a fraud he/she must have the incentive

Figure 2.2



Source: Kassem and Higson, 2012

**OPPORTUNITY:** Employees use their position to commit fraud when internal controls are weak, or where there is poor management oversight on internal control implementation. Most Employees who commit fraud do so, because they have the opportunity to access assets and information that allows them obscure their fraudulent deeds. It is true that employees need access to certain platform to perform their jobs. The same access can provide the employee with opportunity to commit fraud.

**PRESSURE/INCENTIVE:** Pressure can make a staff commit fraud. Pressure does not only mean financial pressure. Lister (2007), state that there are three types of motivation or pressure: Personal pressure to pay for lifestyle, employment pressure from continuous compensation structures, or management's financial interest, and external pressure such as threats to the business financial stability, financier covenants, and market expectations. The identified matters are the motivation that can influence fraud.

**RATIONALIZATION:** Rationalization is an attempt by an employee to justify why they commit fraud. For instance an employee who is about to be evicted from his/her home, can be used to justify fraudulent act. The employee may say "I deserve to have a place to call my home." So also an employee who feels he/she is underpaid may say it is a way of augmenting the payment due to him/her. As such the rationalization is an act of employee who commits fraud to give reasons for his action. It is a way of covering up for the wrong done to the employer. By making the employers feel guilty of the circumstance.

Forensic accounting relies on the fraud triangle to identify weak points in the business systems and find 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. Recent analysis has suggested adding a fourth concept to make a diamond capability. Just because someone has the opportunity or incentive to steal does not necessarily mean that they have the capability to do so. For example, if someone does not understand how to make journal or ledger entries in the books of accounts, they would not know how to manipulate numbers no matter what the incentive or opportunity is (Rasey 2009).

#### **2.4 Requisite Knowledge for Forensic Accountants**

For an accountant to be an efficient forensic accountant DiGabriele, (2009) has outlined the following knowledge as essential:

(a) **Deductive analysis:**

This is the accountant's capability to figure out actions that contradict the regular practice in a given subject matter. This knowledge allows the investigator to uncover areas of irregularity in any accounting system or financial transaction. Without this acquaintance of deductive analysis it will be difficult if not impossible for the accountant to uncover misstatements in a financial system.

(b) **Creative thinking:** The investigator should be able to deduce what is evidence form information collected in the course of his duties. This is mostly applicable where testimonial information is collected. This is because most people only express their own opinion and not fact. As such it is important for the accountant to distinguish between relevant evidence from the people's opinion. As this inform the investigator's opinion.

(c) **Unstructured problem solving:** each subject matter of investigation is unique, given the circumstance surrounding them. The accountant must be able to treat each investigation differently in relation to facts of the case. This is also includes ability to resolve complex unstructured issues in an investigation.

(d) **Investigative flexibility:** this is the investigator's ability to change in line with changes that occur in the course of investigation. There are situations where the true position in the investigation is different from what is expected as planned. The investigator should be flexible enough to incorporate the change into his plans.

(e) **Analytical proficiency:** The ability to look out for what should be provided rather than what was provided. Considering the post financial fraud regulatory environment, solving a financial puzzle with less than a complete set of pieces appears to be the direction the current business environment is heading

(f) **Oral communication:** The ability to effectively communicate in speech via expert testimony and general explanation of the bases of opinion.

(g) **Written communication:** The ability to effectively communicate in writing via reports, charts, graphs and schedules the bases of opinion.

(h) **Specific legal knowledge:** The ability to understand basic legal processes and legal issues including the rule of evidence.

(a) **Composure:** The ability to maintain a calm attitude when under pressure. The most prevalent area where this is necessary is expert testimony in either deposition or court. The composure of an expert can be an integral component in the ultimate outcome of the case.

### III.

#### IV. 2.5 Empirical Review

There have been researches in relation to forensic accounting both within and outside Nigeria. Izedonmi&Ibadin (2012), examined forensic accounting and financial Crimes; looking at some basic and common financial crimes in corporate organizations, resting the focus on Nigeria, and by extension, the developing world. They revealed that the motivations for financial crimes are built around some risk factors, such as incentive (or pressure), opportunity and rationalization surrounding the financial criminals.

Efiong, (2012), investigated the awareness of Forensic accounting among the Nigerian undergraduates. The study found that there is a very low level of awareness of forensic accounting among undergraduate students. And recommend increased awareness can be achieved via adoption of forensic accounting into the universities accounting curriculum to enhance students' skills and competencies.

Eiyal, Otor&Awili, (2013) explore how forensic accounting can be employed in fighting financial crime in Nigeria. And concluded forensic accounting assignment is more comprehensive in nature than financial audit. This is because forensic accounting looks beyond the transactions and audit trail instead focus on substances of the transactions.

Akhidime&Uagbale-Ekatak (2014) in there exploration of the relevance of forensic accounting in Nigeria, found that though forensic have helped in fraud detection, it is lacking statutory backup. Hence it has no significant impact in tackling corruption in Nigeria.

O' zkul&Pamukc (2012) in their investigation into fraud detection and forensic accounting concluded that forensic accounting will be one of the best careers in the future and urge companies and government around the world to make material and moral investments for this profession, in order to ensure better world economy free of fraud.

Bressler (n/d) researched on the role of attorney and judges' understanding of forensic accounting data as aid to litigation services. Stating that the judges' perception of Accounting Information Systems (AIS) is key in a judicial process, as it affects the jurors' position.

This research is a deviance from the above stated researches. The focus is on how the use of forensic accounting has contributed to fraud detection and prevention and the level awareness on use of forensic accounting among professional accountants in Nigeria

**V.**

**VI. Methodology**

The study is a survey research carried out using primary data collected through the use of questionnaire. The sample size was drawn from a population of 1250 professional accountants in Nigerian public sector. The sample size was calculated using a statistical sampling tool known as Slovin’s formula. The questionnaire was administered to 92 practicing accountants and auditors in Nigeria. Out of the 92 administered questionnaire 85 were fully completed and returned while the remaining 7 are among the once that are either not fully completed or not returned.

The data are presented in tabular form using simple percentage to compute the responses, while the analysis is done using chi-square statistical analytical tool.

**Sample Size Computation**

$$n = N / (1 + N e^2)$$

Where n = Number of samples, N = Total population and e = Error tolerance

$$1,250 / (1 + 1250 * 0.1^2) = 92$$

**Analysis**

**Ho1:** Forensic accounting has no significant impact in fraud detection and prevention in Nigeria.

$$X^2 = \frac{(Fo - Fe)^2}{Fe}$$

Where Fo= observed frequency  
Fe= expected frequency

**Computation of Contingency table for Hypothesis I**

Response	Yes	No	Total
Question 3	21	64	85
Question 4	51	34	85
Question 5	49	36	85
Question 7	47	38	85
Question 11	55	30	85
Total	223	202	425

The level of significant used is 5% and the statistical test used is chi-square denoted by  $\chi^2$

$$Fe = \frac{RT \times CT}{N}$$

Where RT = Row Total  
CT = Column Total  
N = Total Response

**Chi-square ( $\chi^2$ ) Computation**

Groups	Fo	Fe	Fo-Fe	(Fo-Fe) <sup>2</sup>	$\frac{(Fo-Fe)^2}{Fe}$
A	21	38.4	-17.4	302.76	7.884375
B	64	46.6	17.4	302.76	6.496995708
C	51	38.4	12.6	158.76	4.134375
D	34	46.6	-12.6	158.76	3.406866953
E	49	38.4	10.6	112.36	2.926041667
F	36	46.6	-10.6	112.36	2.411158798

<b>G</b>	47	38.4	8.6	73.96	1.926041667
<b>H</b>	38	46.6	-8.6	73.96	1.587124464
<b>I</b>	55	38.4	16.6	275.56	7.176041667
<b>J</b>	30	46.6	-16.6	275.56	5.913304721
	<b>Total</b>			<b>X<sup>2</sup></b>	<b>43.86232564</b>

The value of X<sup>2</sup> calculated is

$$\frac{\sum(\text{Fo}-\text{Fe})^2}{\text{Fe}} = 43.8623$$

Fe

The degree of freedom (DF) is calculated thus (r-1) (c-1)

Where r = number of rows  
 C = number of columns  
 1 = is constant

Therefore: Calculation for degree of freedom

$$\begin{aligned} (R-1) (C-1) &= \\ (5-1) (2-1) &= 4 \end{aligned}$$

The theoretical value of X<sup>2</sup> read off the X<sup>2</sup> table under 4 degree of freedom at 0.05 level of significant is 9.49. Since X<sup>2</sup><sub>cal</sub> (**43.8623**) is greater than that of X<sup>2</sup><sub>tab</sub> (9.491) therefore, H<sub>0</sub> is rejected while H<sub>1</sub> is accepted which means that, forensic accounting has significant impact in fraud detection and prevention in Nigeria.

**Ho2:** there has not been significant awareness of Forensic accounting as a tool for fraud prevention and detection in Nigeria.

$$X^2 = \frac{(\text{Fo} - \text{Fe})^2}{\text{Fe}}$$

Where Fo= observed frequency  
 Fe= expected frequency

**Computation of Contingency table for Hypothesis I**

Response	Question 1	Question 2	Total
Yes	39	46	85
No	42	43	85
<b>Total</b>	81	89	170

The level of significant used is 5% and the statistical test used is chi-square denoted by x<sup>2</sup>

**Chi-square (x<sup>2</sup>) Computation**

Groups	Fo	Fe	Fo-Fe	(Fo-Fe) <sup>2</sup>	$\frac{(\text{Fo}-\text{Fe})^2}{\text{Fe}}$
<b>A</b>	35	40.5	-5.5	30.25	0.74691358
<b>B</b>	50	44.5	5.5	30.25	0.679775281
<b>C</b>	49	40.5	8.5	72.25	1.783950617
<b>D</b>	36	44.5	-8.5	72.25	1.623595506
	<b>Total</b>			<b>X<sup>2</sup></b>	<b>4.834234984</b>

The value of X<sup>2</sup> calculated is

$$\sum(\text{Fo}-\text{Fe})^2 = 4.8342$$

Fe

Therefore: Calculation for degree of freedom

$$(R-1) (C-1) = \\ (2-1) (2-1) = 1$$

The theoretical value of  $X^2$  read off the  $X^2$  table under 1 degree of freedom at 0.05 level of significant is 3.84. Since  $X^2_{cal}$  (**4.8342**) is greater than that of  $X^2_{tab}$  which is 3.841 therefore,  $H_0$  is rejected while  $H_1$  is accepted which means that there has been significant awareness of Forensic accounting as a tool for fraud prevention and detection among professional accountants in Nigeria.

## VII. Conclusion

Considering the statistical analyses on the significance of forensic accounting and its impact on fraud detection and prevention in Nigeria computed, we can conclude that forensic accounting has a significant role to play in fraud detection and prevention in Nigeria. The use of forensic accounting knowledge is vital in fighting against financial irregularities both in the public and private sectors of Nigeria. The awareness also has been on the increase among the professional accountants in Nigeria. Therefore forensic accounting is a strong tool for fraud detection and prevention in Nigeria.

It is therefore recommended that:

1. There should be more forensic accountants' involvement in fraud detection in order to reduce the rate of financial crime in Nigeria.
2. The Nigerian universities should introduce forensic accounting courses to increase the quality of accountants graduating from the universities.

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