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FORENSIC ACCOUNTING TOOLS AND QUALITY OF ECONOMIC AND FINANCIAL CRIMES INVESTIGATIONS IN NIGERIA

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Abstract

There has been an increase in the rate of economic and financial crimes in the country and this affects both the public and private sectors of the country. This study examined the effects of forensic accounting tools on the quality of economic and financial crimes investigation. This study adopted a survey research design with the Economic and Financial Crimes Commission in Nigeria (EFCC) For the purpose of this study, simple random sampling technique was employed and the sample size was fifty-two (52). Investigators and detective of the Economic and Financial Crimes Commission in Nigeria (EFCC). Data was obtained through the use of electronic questionnaires. The findings revealed that Forensic ToolKit significantly affects economic and financial crimes investigation quality (Adj.R^2= 0.290, $F_{(1,52)}$= 22.277, p=0.00); EnCase has a significant positive impact on economic and financial crimes investigation quality (Adj.R^2= 0.447, $F_{(1,52)}$= 43.019, p=0.00); fraud prevention, detection and deterrence skills have a significant impact on economic and financial crimes investigation quality (Adj.R^2= 0.709 $F_{(1,52)}$= 127.608, p=0.00); fraud audit, investigation and interviewing skills have a

significant impact on economic and financial crimes investigation quality (Adj.R^2= 0.625, $F_{(1,52)}$=87.848, p=0.00); litigation, mediation and arbitration skills have a significant impact on economic and financial crimes investigation quality (Adj.R^2= 0.736, $F_{(1,52)}$=145.721, p=0.00); computer assisted reviews and document reviews have a significant impact on economic and financial crimes investigation quality (Adj.R^2= 0.610, $F_{(1,52)}$=82.477, p=0.00) The study concluded that a significant relationship existed between forensic accounting tools and the investigation quality of economic and financial crimes. The study recommended that investigators should apply appropriate forensic accounting tools to generate credible and appropriate evidence for litigation and persecution.

Introduction

The increasing rate of fraud all over the world popularized the concept of forensic accounting. Fraud is not a foreign concept in Nigeria and it has become an endemic in the country alongside corruption. It is present in every aspect of life, and it is limiting the country's economy prosperity now more than ever. The phrase 'forensic accounting' was first conceived in print by a partner in a public accounting firm called Pogson, Peloubet & Co., New York City, U.S.A., who held that both public and industrial accountants had been involved in the practice of forensic accounting during the war (Peloubet, 1946). From 2000 to 2003, there was an alarming rate of financial and corporate accounting scandals that unnerved investors in which eventually cost individuals billions of dollars. The case in Nigeria is however perplexing where the county has scored high in many corruption indices (Abdullahi & Mansor, 2018).

Economic and financial crime ranges from political fraud, economic and financial fraud in public and private spaces, social/ internet fraud with global impacts, especially the upraising of internet fraud in Nigeria that have tinted the nation black in the global space, the crucial aspect of these is that many of these cases, incident or events goes undetected, undiscovered, untried and those tried where mostly unsuccessful in the law court as a result of poor evidence gathering which has resulted to loses of many fraud cases by the investigating/persecuting agencies (Sumartono, Urumsah & Hamdani, 2020).

Also, the speeds with which e-commerce and the internet are advancing have further compound the opportunities for financial and economic crimes; this is in addition of series of fraud that have been committed both in private and public sector of the economy. As new techniques of doing things are emerging, so also new ideas are developed for enacting fraud (Venkataraman & Kumar, 2019). Even with the presence of internal and external auditors, there is no doubt that fraud is still being committed. The development of forensic accounting has been attained through the training and experience of investigating officers and legal counsel. However, problems still arise from the fact that the concept of forensic accounting is still foreign to most businesses and to the public enterprises in Nigeria while some of the well informed accounting professionals have constantly used their expertise to conceal fraudulent practices (Sorunke, 2018).

There have been some efforts from the authority to curb all corrupt conducts such as legislation put in place as well as the election of special or appointed courts and judges to prosecute corrupt cases of fraud and corruption. Significant institutions like Independence Corrupt Practices Commission (ICPC) and Economic and Financial Crime Commission (EFCC) were established to fight corruption (Paul & Yunusa, 2018). However, these established investigating/persecuting agencies have not been able to persecute many of these economic and financial crimes cases in the country, whereas these cases when handled by other developed countries with advance investigation techniques, skills and tools are been brought to book. The question now is what is lacking, or what do these investigating/persecuting agencies in developed countries have that allowed them to try and bring to book financial and economic crimes.

Also, very few studies have been carried out to show the position of forensic accounting tools for investigating fraud. Therefore, the thrust of this study is to investigate how effectively forensic accounting tools can help in economic and financial crime investigation. The study hypothesized that forensic accounting tools does not exert significant impact on the quality of economic and financial crimes investigations in Nigeria.

Literature Review

Conceptual Review

Forensic Accounting

Forensic accounting means a range of things to different people. There is no single unanimous definition for the concept among scholars and practitioners. Forensic accounting is also known as investigative accounting or fraud audit, which is a merger of forensic science, auditing and accounting. Practitioners should have knowledge of investigative approaches and accounting practices and processes (Paul & Yunusa, 2018).

Sule, Ibrahim, and Sani (2019) emphasized that forensic accounting investigations require the preparation of a report for a court of law or management in order to assess specific facts, and that forensic accountants should be court experts. While in his study, Sukumal (2014) proposed that forensic accounting, also known as forensic accountancy or financial forensic, is a special field of accounting practice that describes engagements that are the result of real or anticipated litigation or conflict. According to Paul and Yunusa (2018), forensic accounting is described as an investigative style of accounting that is used to determine if a person or an entity has engaged in any financial practices that are considered illegal. In summary, forensic accounting can best be described as the implementation of accounting, auditing, economic, research and statistical techniques and concepts in conducting investigation with the main aim of providing a solution to legal problems or potential problems in the form of bribery, fraud, embezzlement, corruption or forgery that may occur from economic or financial activities.

Forensic ToolKit (FTK)

Access Data Group is the founder of FTK (Varsha & Mane, 2015). They are the leading provider of forensics tool certification and training. FTK is used by over 130,000 regulatory bodies and law firms around the world. It can analyze laptops, desktop computers, network communications, and mobile devices. FTK's filtering and scanning are quicker than any other method on the market. Some of the features of FTK as stated in the study of Kambiz, Deep, Krishna and Rohit, (2020) are highlighted below:

- It has the ability to obtain and store data over a network.
- It has the ability to collect data from 3,500 mobile devices.
- It is capable of detecting missing data, malicious activity, and data leakage with ease.
- If data is stored somewhere other than where it was originally stored, FTK will figure out how it got there, who moved

it, and even if any changes were made to the original.

- It will quickly determine if data has been transferred from the system or from a mobile device.
- It can collect data during static analysis.
- FTK can be started from a USB drive.
- It has the possibility of expert examination, which involves analyzing the evidence and comparing it to the witness's final judgment.
- It makes password recovery easy.
- Disk imaging is accomplished with the aid of FTK Imager.

ENCASE

`EnCase is designed by guidance software (EnCase, 2016). It is one of the world's most common forensic instruments. In fact, 90% of the world's consumer goods companies, 93% of the banks, 100% of the federal agencies, 75% of the distributors of energy, and 80% of the universities in the United States make use of Encase. Below are some of the functions of EnCase:

- ✓ Triage: EnCase enables you to quickly view and ask about possible confirmation to determine if a help test is necessary.
- ✓ Collect: By collecting data from a variety of file formats and operating systems, it aids in obtaining more evidence.
- ✓ Decrypt: Password recovery and decryption is performed using Tableau Hardware.
- ✓ Process: EnCase is designed for speed and performance, and it can automate even the most complex queries.

Fraud

To explain the concept of fraud, Ejoh (2017) defined fraud as sequential activities committed to acquire money, property or services in a bid to evade payment for such services or to procure personal or business advantages. Abdulrahman (2019) explains fraud as the act of doing unlawful things which portray the violation and concealment of trust. According to Kolawole, Salman, Durodola, Babatunde and Igbekoyi (2018), fraud is a premeditated, as well as organized process usually undertaken by a person or group of people with the major aim of gaining an advantage by means of cheating other people or organizations in a situation where such advantage would not have been eligible in the absence of such deceptive means.

Fraud Prevention, Detection and Deterrence Skills (FPDDS)

Fraud prevention is the start of an evaluation of fraud risk control that involves the implementation of sensible techniques to stop fraud in an organization. Fraud detection techniques cover every process, preparation, regulation, intervention and communication to deter fraud (Abdullahi & Mansor, 2018). In order to deter fraud in companies, the optimal way is to prevent fraud in businesses in which the core metrics for risk processes (i.e., market, organizational risk, and the climate of internal control), are primarily strengthened (Abdullahi & Mansor, 2018). To escape theft, steps must be taken that restrict the willingness of the perpetrator to commit fraud and minimize motivations (American Institute of Certified Public Accountants, (AICPA), 2009).

Various methods for fraud detection have been set in motion. For example, use of anti-fraud management systems such as duties segregation, restriction and approval authorities, customer inspection, access control, security mechanism installation and compliance and the method of physical security control are measures that have been put in place to detect fraud at an early stage (KPMG, 2012). Fraud identification applies to all procedures used by businesses to detect fraud after commitments. Fraud identification techniques are strategies applied to locate suspicious or deceptive practices that have bypassed prevention mechanisms in an appropriate and rapid manner so that an organization can take correct corrective steps. A variety of fraud prevention and reduction techniques have been developed by the financial institution.

The rationale behind any method of fraud detection is that suspected fraud is recognized or detected and any losses thereof minimized. Responses to fraud threats are steps taken to fix harm caused by fraud (Ross & Armstrong, 2016). Fraud response techniques have a significant effect on financial institution fraud and, therefore, the harder the strategies to respond to fraud, the less likely the fraud happens (Okoye & Gbegi, 2013). Depending on the size of a case, a successful fraud will adversely affect the longevity of the business (KPMG, 2012). Organizations should therefore plan, execute and regularly handle fraud risk (Gitau & Samson, 2016).

Forensic Audit, Investigation and Interviewing Skills (FAIIS)

Forensic audit is the evaluation of facts surrounding an argument in order to ascertain its correspondence with specified standards conducted in a court-appropriate manner. A forensic examination of sales documents will be an example of assessing a rent quantity in compliance with the leasing arrangement that is litigated (Association of Certified Fraud Examiners, (ACFE), 2014). There is no single definition of forensic audit since laws and standards differ by region. Forensic audit in Belgium is the operation of data collection, verification, treatment, analysis and reporting, in order to gather information and/or evidence in the field of legal or financial disputes and/or anomalies, including theft, in the predefined sense, and to provide preventive advice (ACFE, 2014).

In order to address financial problems objectively and in a way which satisfies the requirements of the courts of law, forensic accounting involves using investigative, auditing, procedure and analytical ability. Forensic transparency techniques are not limited to the use of financial inquiries that lead to judicial prosecution; however, if so, the investigation and review should be carried out according to the requirements of the courts having expertise (Oyedokun, 2014).

Two main forensic methods are interviews and interrogations. This is used to get the perpetrator or the accused to respond. It should be pointed out, however, that by pronouncing the defendant or the accused as guilty, the prosecutor (interviewer or questioner) cannot usurp the competence of the court of law. The job of the forensic officer is to collect facts to demonstrate or deny the act in question (Oyedokun, 2014). The prosecutor cannot convict even though he obviously has grounds to believe the defendant is complicit in the crime or has lied. When the detective fails to charge the suspect while questioning him, he will develop a much closer relationship with the suspect that can help him interview. Forensic inquiries consist of the use of advanced forensic skills in the execution of an inquiry such that the findings relate to the court (Oyedokun, 2018).

In order to determine its correlation with established requirements in a way that is appropriate for the Court, a forensic inquiry is the review of facts surrounding an argument. When explaining the methods for fraud, forensic auditors, and investigators Umeraziz (2014) states that all angles should investigate whether the fraud has occurred or not.

Litigation, Mediation and Arbitration Skills (LMAS)

Litigation is a concept that includes the use, in accordance with the rules in place in this area, of court proceedings to settle disputes (Dada & Jimoh, 2020). According to Harwood (2016), the prosecution processes include the planning of the lawsuit, and eventually the trial and enforcement before litigation begins. Prior to the commencement of proceedings, preliminary inquiry is adopted to investigate different forms of alternate dispute resolution (ADR). Parties are advised to look at possible ways of conflict settlement before presenting the case in a court of law. Alternate dispute resolution methods include:

Arbitration: is a private method of dispute settlement where one or two arbitrators decide a lawsuit. It is a method where both parties to a conflict come together and agree to adhere to and respect the judgment of the arbitrator. This is a better approach to conflict resolution than filing a lawsuit and going to court to resolve a dispute.

Mediation: is a process where the parties discuss their dispute and an impartial expert is assigned to conclude the matter by making a legally binding decision (Harwood, 2016). Types and details of claims by all sides are drawn up and shared accordingly in planning cases for legal lawsuits, which are typically accompanied by defense and counterclaims and responses from the parties concerned. The allocation and instructions for the case's future actions are given, records are presented, and testimonies, expert opinions and expert sessions are all part of the litigation cases planned. The conviction and compliance stage and appeals from the parties now follow this stage. This research focuses on the idea of conflict and market consulting as a way of minimizing or curbing financial crimes in public sector organizations by the perpetrators of these crimes, as well as the potential evasion of court processes as well as the outcome of the impartial and unbiased professional guidance as a methodology for forensic accounting (Harwood, 2016).

Economic and Financial Crimes Investigation Quality

Smuggling, money laundering, fraud, advance fee fraud, tax evasion, counterfeiting, identity theft, embezzlement, looting, terrorist financing, cybercrime, theft, forgery, bribery, nepotism, electronic crime and market abuse, insider dealing, and other types of corruption and illegal activities are included in the definition of economic and financial crimes. (Emeh & Obi, 2013). Although there are different definitions from various authors, the fact remains that the list of economic and financial crimes cannot be exhausted. People, companies, and organized crime gangs or syndicates commit economic and financial crimes in order to achieve criminal prosperity, and the victims are often individuals, governments, institutions, and the general economy. Economic and financial crimes, in general, are a global issue that affects the economy of every country as well as society as a whole. It is a hazard that needs to be avoided as well as addressed. It has wreaked havoc on the economies of many countries, including Nigeria, and it will continue to do so unless immediate efforts and measures are taken.

An investigation into fraud seeks to determine whether fraud has occurred, and to find signs of fraud. Fraud is known as deliberately misrepresenting. For example, if a firm makes particular guarantees on a product to market it, the corporation might be guilty of bribery if it learns that the product does not perform as advertised (Dada & Jimoh, 2020). Fraud in today's world is a real and expensive issue that causes not only cash loss but also death and extreme injury. Many inquiries of fraud begin with a meeting of the prosecutor with the customer. The forensic auditor explains to the prosecutors that they believe wrongdoing happened and provides the investigator with whatever information they need. This initial knowledge would be used by a good fraud investigator to find more evidence and facts. A fraud investigator may use tracking, scans of properties, background checks, audits of staff, company inquiries and other forms to get to the end of a case (Oyedokun, 2014). Fraud investigations are mainly white-collar crime investigations and they require monitoring of complicated financial reports and detailed consideration. Fraud includes misrepresentation with the intention of misleading. If an organization makes particular commitments, for example, to market the product, it could be liable for deception if it is aware that the product does not operate as announced (Oyedokun, 2018). Fraud is in today's world a real and costly concern, causing not only financial loss but also economic and societal hazards.

Theoretical Review

Fraud triangle theory

This theory was developed by American Criminologist Donald Cressey in 1950, who argued that every action carried out by humans has a reason. After questioning 250 offenders over the course of five months, he came to the conclusion that the criminals involved had assumed a position of confidence in good faith, only to betray it. Based on the fraud triangle context, the three factors are divided into the triangle are; opportunity, pressure and rationalization.

Opportunity - Employees are using their authority to conduct theft when internal controls are negligent or when internal regulation is poorly controlled. Many employees who commit fraud do so, as they have access to funds and information that allow them to perpetrate their criminal activities. Opportunity arises in a situation where the fraudster sees an avenue to use their position of trust to solve a financial problem without getting caught (Cressey, 1953). The less likely the chance of being caught in most situations, the more likely the fraud is to occur (Cressey, 1953). Various causes give rise to a chance to commit misconduct in an organization such as disregard of workers' discipline breaches and lack of corrective action.

Perceived pressure/Incentive - A worker will commit fraud by coercion. Albrecht et al. (2006) pointed out that the term "perceived pressure" means that the pressure does not have to be real; if the fraudsters believe they are under pressure, the illusion will lead to fraud. Perceived pressure can stem from a variety of factors, but it often includes a non-shareable financial need. Pressure is not just financial pressure. Albrecht et al. (2006) broke down pressure into four categories including economic, vice, job-related and other pressures.

As the heat source of the burn, Lister (2007) described the pressure to commit fraud. However, the strain does not make it a path for anyone to be dishonest and also argued that the financial, non-financial, political and social strain may be linked to that. Political and social tension arises in an environment where a person feels and believes that because of his image he cannot afford to lose. Rasha & Andrew (2012) have shared their view that the principal reason for theft was personal and corporate pressures. The interaction of the above elements caused a fraud (Rasha & Andrew, 2012). Six specific definitions of strain have been identified by Chen & Elder (2007) as a transgression of responsibilities, personal issues, reverse-corporation, and position accomplishment and employee relations.

Rationalization - This is an attempt by an employee to give a reason for committing fraud. Rationalization is presenting a reason for fraudulent act because of the worker's lack of personal integrity, or moral reasoning (Rae & Subramanian, 2008). The ability to commit fraud depends on ethical values as well as on their personal attitudes of individuals (Kenyon & Tilton, 2006).

Among the numerous supporters of the fraud triangle theory, a few have been mentioned to further explain the theory.

Kiprono & Ng'ang'a (2018) in their study adopted the theory because they were of the opinion that fraud occurs as a result of numerous financial difficulties that employees face, and that those employees have trouble discussing those difficulties with management or colleagues. The lack of integrity and moral reasoning in employees' of an organization leads to rationalization which justifies their fraudulent behavior. Eleng, Tafida & Bassey (2019) concluded that the theory reveals that the fraudulent acts of employees' are adequately captured in the three elements, and there is a need for a more investigative, insightful and sophisticated digital way of ensuring that finances in the public sector are properly monitored so as to reduce the occurrence of fraud to the barest minimum in public ministries and agencies.

While a lot of studies support the fraud triangle theory, there were some that were against the theory. In a study conducted by Trompeter, Carpenter, Desai, Jones and Riley (2013), there was criticism that the fraud triangle theory only takes into consideration and assumes that an individual acts alone while ignoring group dynamisms. Also, in a study conducted by Cieslewicz (2012), it was opined that the theory was not fully efficient in explaining forensic accounting and fraud investigation because it does not consider and explain cultural influences. Wolfe and Hermanson (2004) and Carcillo and Hermanson (2008) were of the opinion that one may have the incentive, pressure, opportunity and can rationalize but such an individual may not have the ability or capability to carry out a fraudulent activity.

Fraud diamond theory

Wolfe and Hermanson (2004) have expanded the version of the fraud triangle theory as the fraud diamond theory. A fourth element, known as capability, was introduced to the initial elements of the fraud triangle theory. In their belief, deception happens in most situations where individuals are used for fraud (Wolfe & Hermanson, 2004). Normally, these people will have the expertise and tricks to cheat. Wolfe and Hermanson (2004) found that perceived opportunity gives way to fraud, while perceived pressure and rationalization entice the individual into committing fraud. The skill, however, makes it possible for a person to analyze and use this opportunity. You assume that the fraud triangle could be approached with the fourth factor in mind to enhance both the prevention and identification of fraud.

In addition to dealing with motivations, resources and rationalizations, the four-sided fraud diamond by Wolf and Hermanson also explores the personal strengths and capabilities of an individual that play a role in ensuring that fraud ultimately happens in accordance with the other three. The capability is the mechanism for a person to commit deception in order to get the essential features or skills and abilities. This is where the fraudster understands and takes use of the opportunity to obtain the unique risk of fraud. The supportive elements of potential are location, intellect, ego, manipulation, deception and stress (Wolfe & Hermanson, 2004). Not all with incentive, potential and realization may be exposed to deception unless they were unable to do so or mask it. Mackevicius and Giriunas (2013) have thought that this aspect is relevant when a high value or long-term fraud is involved.

In a comprehensive study conducted by Kiprono & Ng'ang'a (2018), it is revealed that an employee perpetrates fraud due to the capacity, intellect and ability that such an employee possesses which enables them to uncover the weaknesses in the internal control of the organization in which they work. Oyedokun (2016) adopted this theory as a means of explaining the relevance of forensic accounting techniques in carrying out forensic engagements, and they discovered that the theory is all encompassing in exploring the hidden characteristics of a fraudster.

Among the many supporters of the theory were some critics, among which two have been singled out. Gbegi & Adebisi (2013) suggested that although the fraud diamond theory propounded by Wolfe and Hermanson (2004) has included a fourth element to the fraud triangle theory, hereby enhancing it, it is also an inadequate forensic accounting theory for investigating, deterring, preventing and detecting fraud. Mainoma & Oyedokun (2019) proposed that the presence of opportunity or the incentive to perpetrate fraud does not necessarily mean the capability to do carry it out.

Fraud scale theory

As an alternative to the fraud triangle theory, the fraud scale theory was introduced by Albrecht, W.S, in 1984. Albrecht's Fraud Scale helps single out organizations that may bring about fraud. Albrecht believed that some situations could be interpreted as motivational factors for fraudsters. Albrecht changed the rationalization element to personal honesty in order to observe it more. Individuals' personal honesty can be traced back to their past actions, while rationalization is more subjective to be understood by others. The Fraud Scale highlights organizations with high situational pressure, high opportunity to commit fraud, and employees who have low personal integrity as those that are more likely to suffer from fraud. The scale of fraud is similar to the triangle of fraud, but instead of streamlining the scale of fraud takes on the aspect known as personal honesty.

This aspect of professional honesty is connected to the personal code of conduct of each citizen. Oyedokun (2018) also argued that personal honesty, unlike streamlining in the fraud triangle principle, can be found both in the decision-making process of the organization and in that of an individual, which can help to assess the credibility and probability of an individual committing fraud. Experts claimed that a person's professional reputation or other ethical rationale frequently leads to bribery and other unethical behavior. A qualified investigation service such as the forensic auditor is thus highly important if such fraud is to stop.

While conducting their study, Kassem & Higson A (2012) argued that it is important for external auditors to consider the integrity of the perpetrator, the opportunities available to commit fraud and the pressures that cause an individual to commit fraud. Also, Ardi, Sulitsyo & Roziq (2019) opined that the three components of this theory are interconnected. If the presence of situational pressure and the opportunities to commit fraud are high, and the personal integrity of the individual is low, then the possibility of fraud will be high. Furthermore, if the presence of situational pressure and opportunities are low, and the personal integrity of the individual is high, then the possibility of fraud is low.

Moore (2020) was critical of the fraud scale theory. The complexity and advanced nature of workplace fraud, according to the researcher, makes it difficult to capture everything it involves in a single model. Because there are many different types and classes of economic and financial crimes, it would be misleading to use this theory to generalize the theory's impact on all of them.

Stewardship Theory

Donaldson and Davis offered a description of stewardship theory in 1989. They claim that most managers prefer to behave in the best interests of the business by stressing the common purpose of the enterprise rather than the alternative of self-service. They also say that most stewards are only driven by the correct judgment which is generally in the organization's best interests, given the clear belief that stewards also benefit from the right decision made in the long term. Similarly, Davis, Schoorman and Donaldson (1997) describe management theory as the mechanism by which stewards secure and optimize the resources of shareholders by enhancing the business' efficiency. This principle applies mostly to the boss and chief executive officer as the key person in charge of the management role in the company.

He also claimed that organizing and the role of the individual is conveniently accomplished by upholding the stewardship connection, and regards followers as owners and associates. Block (1996) said the management role is conveyed by service to the business over self-interest. In addition to this, Caldwell and Karri (1990) were of the opinion that all parties with a chance to consider the importance of stewardship and the circumstances of the community are obligated in an articulation of duties. Management can best be defined as the action which takes into account not the individual interests, but also the long-term interests of the company and its shareholders. Dada and Jimoh, (2020) found out that often, due to the over control and oversight of managers who are responsible for the organization's activity, this issue may lead to loss of motivation or discouragement and lead to unproductive results for both the business and the head. This philosophy establishes that the steward often acts in the best interest of the company, so any effort by the steward to influence or track the stewards always demotivates and will negatively affect the decision taken.

The philosophy avoids the individualism of stewardship position, but gives greater emphasis to the management and executive, for they once play the role of stewards by ensuring that the company's priorities are consistent. Public sector administration is responsible for tracking, identifying and stopping bribery and for public oversight through forensic accounting instruments and techniques.

Theoretical Framework

The study adopted the fraud diamond theory by Wolfe and Hermanson (2004). This theory explains fraud perpetration from an angle that captures the capability of such an individual to successfully carry out a fraudulent activity. It explores the hidden characteristics of a fraudster. When investigating a fraud case, the investigators have to analyze and take into consideration the necessary traits, abilities, or legitimate authority needed to carry out a crime, and also the three elements, which include opportunity, perceived pressure and rationalization, of the fraud triangle theory.

Empirical Review

In Pakistan, Iqbal and Aslam (2020) looked at the practical implications of forensic accounting for fraud detection and prevention. The data was gathered through telephonic and face-to-face interviews with forensic accounting academics and practitioners. The responses were analyzed using NVIVO software. The study indicates that forensic accounting scope is broad especially concerning increasing ratio of white-collar crimes and digital crimes.

Chukwu et al (2019) examined the impact of basic forensic accounting skills on financial reporting credibility among listed firms in Nigeria. Questionnaires were used to collect primary data, which was then analyzed using the chi-square statistical model. There was a strong positive association between technical and analytical skills and financial reporting credibility; a significant relationship between communication skills and financial reporting credibility; and a significant relationship between technical and analytical skills and financial reporting credibility; consistent and positive correlation between accounting and auditing skills and financial reporting credibility, as well as a strong and positive relationship between psycho-social skills and financial reporting credibility.

Edori (2018) investigated the effect of using technology in fighting Economic and Financial Crimes in Nigeria using Forensic Accounting. Questionnaires were used to collect primary data, which was then analyzed using the Pearson Product Moment Correlation Coefficient (PPMC) statistical tool. It was discovered that forensic accounting and economic and financial crimes have a significant relationship but a negative correlation; technology and forensic accounting have a significant relationship and a positive correlation; significant relationship and positive correlation between technology and economic and financial crimes.

Okoye, Nwoye & Okeke-Okonkwo (2019) investigated forensic accounting and performance management among non-governmental organizations in Anambra and Enugu States of Nigeria. Primary data was generated using questionnaires. Analysis was aided by mean, standard deviation and one sample t-test. The results showed that forensic accounting has effects on giver, beneficiary and marketer on performance management among non-governmental organization in Enugu States of Nigeria.

Bassey & Ahonkhai (2017) studied the effect of Forensic Accounting and Litigation Support on Fraud Detection of Banks in Nigeria. The study relied on primary data, which was gathered from a sample of 60 bank employees (Zenith Bank and Union Bank) using a 5-point likert scale questionnaire. The responses were analyzed using Analysis of Variance (ANOVA). The study shows that there is no significant effect of forensic accounting and litigation support on fraud detection, although it would have a positive effect on the detection of fraud.

Karuti, Mwaniki & King'oriah (2019) investigated the influence of forensic accounting policies on fraud control among the county governments in Kenya. Primary data was used and questionnaires were the derivative. Data analysis was done using SPSS. The study highlights a positive linear relationship between forensic accounting policies and fraud control.

Sorunke (2018) examined the potency of forensic accounting investigation techniques in corruption investigation and prosecution in Nigeria. Data was sourced for primarily using questionnaires. Analysis of data was done using descriptive and inferential statistical methods and Kolmogorov-Smirnov test. It was found that there is a significant and positive relationship between the adoption of forensic accounting investigation techniques in corruption investigation and successful prosecution of corruption cases in Nigeria.

In Ghana, Ocansey (2017) investigated forensic accounting and the fight against economic and financial crimes. Questionnaires were used to collect primary data, which was then analyzed using a basic linear regression model. According to the findings, the application of forensic accounting methods has an important effect on the prevention and reduction of economic and financial crimes (EFCs) in Ghana.

Venkataraman & Kumar (2019) examined the effectiveness of forensic accounting in the mitigation of corporate fraud. Primary data was used and it was derived by using 5 point likert scale questionnaires. Analysis of data was achieved by applying descriptive statistics and One-Sample T-Test using IBM SPSS. The study found that there is a positive approach towards forensic accounting as a tool for fraud management; forensic accounting strengthens the internal control system and ensures the delivery of quality financial reporting.

Wahinya & Ondigo (2017) examined the Effect of Forensic Accounting on Corporate Crime Mitigation among Listed Firms in the Nairobi Securities Exchange. Primary data was used and it was derived from questionnaires. The collected data was analyzed using SPSS. The findings showed that strong internal controls are positively and significantly related to corporate crime mitigation; management override controls are positively and significantly related to corporate crime mitigation; and division of duties is positively and significantly related to corporate crime mitigation.

Atul Bansal (2017) examined the impact of financial analysis and forensic accounting in averting and preventing corporate fraud. Primary data was used and it was derived by using questionnaires. Chi-square statistical software and OLS regression analysis were used to analyze the results. According to the findings, there is no statistically significant difference in preferences for forensic accounting instruments and testing processes among the five professional categories of accountants.

Paul & Yunusa (2018) investigated forensic accounting and economic stability in the Nigerian public sector: the role of economic and financial crimes commission. Data was obtained using both main and secondary methods. ANOVA was used to analyze the results. This research found that forensic accounting has a positive effect on Nigeria's economic stability and reduces financial crime in the public sector.

Methodology

Survey research design was adopted. The target population was the Economic and Financial Crimes Commission in Nigeria. A sample of fifty-two (52) investigators and detectives was drawn randomly. Primary data was obtained through the use of electronic questionnaires. The data obtained was analyzed using inferential and descriptive statistics.

Independent variable is made up of

FTK = Forensic ToolKit

EC = EnCase

FPDDS = Fraud Prevention, Detection and Deterrence Skills

FAIIS = Forensic Audit, Investigation and Interviewing Skills

LMAS = Litigation, Mediation and Arbitration Skills

CARDR = Computer Assisted Reviews and Document Reviews

Dependent variables
EFCIQ = Economic and Financial Crimes Investigation Quality

The model specification is as follows;

EFCIQ = α0 + β1FTK+ β2EC + β3FPDDS + β4 FAIIS + β5 LMAS + β6 CARDR + μ

where:

EFCIQ = Economic and Financial Crimes Investigation Quality
FTK = Forensic ToolKit
EC = EnCase
μ = error term
FPDDS = Fraud Prevention, Detection and Deterrence Skills
FAIIS = Forensic Audit, Investigation and Interviewing Skills
LMAS = Litigation, Mediation and Arbitration Skills
CARDR = Computer Assisted Reviews and Document Reviews
α = value of y where all the values of explanatory variables are zero intercept
β = average change in y that is associated with unit change in the variable x

Data analysis and interpretation

Regression Coefficient

Forensic Accounting tools and Quality of investigation of Economic and Financial Crime

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.162	2,483		-.468	.642
	FTK	.788	.122	.148	6.462	.000
	EC	1.242	.147	.239	8.464	.000
	FPDDS	1.466	.224	.211	6.549	.000
	FAIIS	.830	.125	.207	6.657	.000
	LMAS	1.096	.190	.202	5.759	.000
	CARDR	1.847	.208	.284	8.868	.000

Model Summary

Model	R	R Square	Adjusted R Square	F	Sig.
1	.992[a]	.983	.981	449.355	.000[b]

Source: Author's computation of Field Survey Data (2022) using SPSS version 23

The estimated model in the table above is given as:

EFCIQ = -1.162+0.788FTK+1.242EC+1.466FPDDS+0.830FAIIS+1.096LMAS+1.847CARDR+ μ

(6.462) (8.464) (6.549) (6.657) (5.759) (8.868)

The estimated model result above shows that Forensic ToolKit provided by FTK has a positive significant effect on Economic and Financial Crime Investigation Quality as shown by the coefficient of EFCIQ (0.788) and significant p-value of 0.000, which is less than 0.05. Furthermore, the size of the positive impact is 0.788, i.e., an increase of 1% in Forensic ToolKit would increase Economic and Financial Crime Investigation Quality by 0.788.

EnCase provided by EC has a positive significant effect on Economic and Financial Crime Investigation Quality as shown by the coefficient of EFCIQ (1.242) and significant p-value of 0.000, which is less than 0.05. Furthermore, the size of the positive impact is 1.242, i.e., an increase of 1% in EnCase would increase Economic and Financial Crime Investigation Quality by 1.242.

Fraud Prevention, Detection and Deterrence Skills provided by FPDDS has a positive significant effect on Economic and Financial Crime Investigation Quality as shown by the coefficient of EFCIQ (1.466) and significant p-value of 0.000, which is less than 0.05. Furthermore, the size of the positive impact is 1.466, i.e., an increase of 1% in Fraud Prevention, Detection and Deterrence Skills would increase Economic and Financial Crime Investigation Quality by 1.466.

Forensic Audit, Investigation and Interviewing Skills provided by FAIIS has a positive significant effect on Economic and Financial Crime Investigation Quality as shown by the coefficient of EFCIQ (0.830) and significant p-value of 0.000, which is less than 0.05. Furthermore, the size of the positive impact is 0.830, i.e., an increase of 1% in Forensic Audit, Investigation and Interviewing Skills would increase Economic and Financial Crime Investigation Quality by 0.83.

Litigation, Mediation and Arbitration Skills provided by LMAS has a positive significant effect on Economic and Financial Crime Investigation Quality as shown by the coefficient of EFCIQ (1.096) and significant p-value of 0.000, which is less than 0.05. Furthermore, the size of the positive impact is 1.096, i.e., an increase of 1% in Litigation, Mediation and Arbitration Skills would increase Economic and Financial Crime Investigation Quality by 1.096.

Computer Assisted Reviews and Document Reviews provided by CARDR has a positive significant effect on Economic and Financial Crime Investigation Quality as shown by the coefficient of EFCIQ (1.847) and significant p-value of 0.000, which is less than 0.05. Furthermore, the size of the positive impact is 1.847, i.e., an increase of 1% in Computer Assisted Reviews and Document Reviews would increase Economic and Financial Crime Investigation Quality by 1.847.

Coefficient of Multiple Determinations

Other than forensic accounting tool, Economic and Financial Crime Investigation Quality is predicted by other factors which represent 2%. The result of the adjusted R^2 explains that about 98% of shifts in Economic and Financial Crime Investigation Quality is caused by Forensic accounting tool. The model is therefore of a good fit.

F-Test

Furthermore, this model is significant in explaining that forensic accounting tool have a significant impact on Economic and Financial Crime Investigation Quality in Nigeria as depicted by the F-Statistic value of 449.355 and with a significant p-value of 0.000 which is less than 0.05.

Test Conclusion

From the results therefore, the conclusion is that forensic accounting tool has a significant impact on the quality of economic and financial crime investigation.

Discussion of Findings

One of the important aspects of forensic is gathering of evidence in such a way that is acceptable in the law court for persecution. A successful outcome of any charges of economic and financial crimes will be convicted based on the evidence available and presented to the court of law, this evidence must be carefully, and skillfully collected, collated, persevered and presented with modern tool, means and instrument.

The result of this study suggest that about 98% of variations in the quality of economic and financial crimes investigation are resultant of tools and skills for such investigation and could be suggested that investigative and persecution agencies losses economic and financial crimes charges in court for lack of evidence which may be traced to lack of an appropriate tools and skills to collect, collate, preserve and present such in the law court to persecute offenders.

Implication of Findings

The implications of the findings of this study are:

To the investigators: This will allow investigators to know that forensic accounting tools have a significant impact on the economic and financial crime investigation quality. These findings will assist investigators employ appropriate accounting tools in providing credible and appropriate evidence.

Insurers: The study will assist them to know that forensic accounting tools have a significant impact on the economic and financial crime investigation quality. This will also help them evaluate the integrity of the amount involved in a claim.

Government agents: The implication of this study to government agents is that, it will help them identify the forensic tools that will be used to reveal whether companies comply with relevant laws and regulations

Further researchers: The results of the study would contribute to knowledge and provide an avenue for them to conduct research using other variables and factors that influence the use of forensic accounting tools in the quality of economic and financial crime investigation, according to them.

Recommendations

The following recommendations are made based on the findings of this study:

1. Investigators should employ appropriate accounting tools in providing credible and appropriate evidence.
2. Insurers should employ the use of appropriate forensic accounting tools to evaluate the integrity of the amount involved in a claim.
3. Government agents should identify the forensic tools that will be used to reveal whether companies comply with relevant laws and regulations.

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