Journal of
Accounting
(JACC)

AN ASSESSMENT OF FORENSIC ACCOUNTING TECHNIQUES IN THE PREVENTION OF REVENUE LEAKAGES IN NIGERIAN FEDERAL UNIVERSITIES

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ABSTRACT

Purpose: Forensic accounting reflects the application of investigative and analytical techniques for the purpose of resolving fraudulent practices. The purpose of the research was to examine the extent at which Forensic Accounting Techniques serves as a panacea for preventing Revenue Leakages in Federal Universities in Nigeria.

Methodology: Primary data were collected with the aid of research questionnaire and used in this study. The sample size of 238 respondents was determined from a census of targeted EFCC, internal audit staff of selected Nigerian Federal Universities. This study applied a statistical tool, which described and evaluated the relationships between Forensic accounting techniques and revenue leakages.

Findings: The methodology shows that Forensic accounting data analysis techniques have positive effects on revenue leakages in Nigerian Federal Universities. This implies that a forensic data analysis technique can help in uncovering leakages of revenue in Nigerian Federal Universities. The implication is that when these technologies are applied, there would be drastic reduction in revenue leakages. From the findings, it was concluded that the application of forensic accounting techniques will help in preventing revenue leakages in Nigerian Federal Universities.

Unique Contribution to Theory, Practice and Policy: On the basis of these findings and conclusion, it was recommended that forensic accounting data analysis and technology techniques should be employed in Nigerian Federal Universities to help them curb revenue leakages in the system. That will help to discover and analyse patterns of fraudulent activities and develop sorts of digital tools that would be found helpful in fighting economic and financial crimes within the system.

Keywords: *Forensic Accounting, Revenue Leakages, Frauds, Forensic Accounting Technologies*

INTRODUCTION

The necessity for forensic accounting has become a worldwide issue as businesses, company, organisations together with those within the public sector square measure faced with monetary fraud. These deceitful acts square measure incontestable among others by the favored cases of Enron and World.com, Tyco and Cadbury African nation restricted. The year 2001 witnessed a series of economic frauds involving giant companies like Enron, Arthur Andersen, World.Com, Qwest and ray of light, among alternative well-known companies. In some cases, management manipulated the figures shown in monetary reports to point a far better economic performance. In others, tax and restrictive incentives inspired over-leveraging of firms and selections in contact extraordinary and unreasonable risk. These issues delivered to the fore the necessity to review the effectiveness of accounting standards, auditing rules and company governance principles (Ayala & Ibarguen, 2006).

They any argued that the Enron scandal junction rectifier to the event of latest rules like Sarbanes-Oxley (SOX) Act of 2002 that geared toward up the reliable of economic news. These new rules conjointly serve to lift public awareness concerning the importance of getting accounting standards that reveal the monetary reality of firms and therefore the sound judgment and independence of auditing corporations. Bratton (2002) asserted that the Enron scandal was the most important audit failure in America, resulting in the dissolution of Arthur Andersen, that at that point was one in every of the 5 largest accounting corporations within the world.

Following the collapse of Enron and alternative major firms, accountants have recently been subjected to terribly unpleasant promotional material (Litvak, 2007). One consequence of those events was the passage of Sarbanes-Oxley Act in 2002, as a results of the primary admissions of deceitful behavior created by Enron. The act considerably raises criminal penalties for securities fraud, for destroying, sterilization cheat organizations (Drew & thespian, 2007). There has been an inordinateness of accounting failures and accounting restatements of falsified earnings, with litigations and prosecutions going down a day. because the monetary Accounting Standards Board (FASB) struggles to tighten the loopholes in accounting, and Congress and Security and Exchange Commission (SEC) attempt to build safeguards for company governance, one cluster of accountants are quietly serving to companies and investors alike in reconstruction confidence in annual statements.

The incidence of fraud continues to extend across personal and public sector organizations and across nations. Fraud could be a universal downside as no nations is immuned, though developing countries and their numerous states suffer the foremost pain. Forensic accounting could be a speedily growing field of accounting that describes the engagement that results from actual or anticipated dispute or litigations. "Forensic" means that "suitable to be used in a very court of law", and it's to it commonplace rhetorical Accountants usually work. Forensic accounting is a fact-finding sort of accounting to verify whether or not a private or a company has engaged in any mismanagement of monetary activities. Skilled forensic controller may fit for presidency or public house. Although, forensic accounting has been alive for many decades, it's evolved over time to incorporate many sorts of monetary data scrutiny.

Forensic accounting includes the utilization of accounting auditing, and fact-finding skills to help in legal matters. It consists of 2 major parts, Litigations services that recognized the role of a controller as a professional adviser, and fact-finding service that uses a forensic accountant's skills and will need potential court area testimony. In line with the definition

developed by the Association of Institute of Certified Public Accountants (AICPA's) forensic and judicial proceeding services committee, forensic accounting could involve the applying of special skills in accounting, auditing, finance, quantitative strategies, the law and analysis. It conjointly involves quantitative talent to gather, analyze, and measure monetary proof, in addition because the ability to interpret and communicate findings.

Financial fraud has become a practice and a severe downside of worldwide concern, with developing nations having their own giant proportion of it. It's rampant that it's step by step turning into a norm and how of life. The degree of boldness to commit fraud on a usual is therefore high to the extent that several individuals commit fraud with very little or no worry of being caught, starting from the general public sector to the personal sector. The rich, the poor, the young and aged, male and female square measure currently deeply concerned in fraud and fraud connected activities (Adedire, 2016). Aduwo(2016) argued that the increasing sophistication of economic fraud is necessitating the comprehensive of forensic accounting, which is able to bring the no-hit investigation and prosecution of any people concerned in perpetrating these criminal activities in each public and personal organizations.

Ojaide (2000) indicated that there's a direful increase within the range of fraud and fallacious activities committed in Nigeria, as such; there is need for the services of forensic accountants to checkmate such activities. The implication of this assertion is that the interior management mechanisms in most institution and universities inclusive will now not safeguard them from fraud; instead, a brand-new class of accountants, specifically the rhetorical accountants area unit necessary for this purpose. Okunbor and Obaretin (2010) noted that it's become imperative for accountants in the slightest degree levels to possess the requisite skills and information for distinctive, grouping additionally as conserving relevant proof in respect of suspected frauds and money irregularities cases in most organizations.

Okoye and Akamobi (2009) indicated that the failure of control and auditing system to unearth hidden aspects of company fraud and additionally the apparent lack of independence of internal auditors area unit a number of the most important determinants accountable for the expansion of rhetorical accounting. The failure of ancient accounting and auditing to forestall and establish fallacious activities within the company organizations had necessitate the necessity for forensic accounting that needed technical ability that encompasses crucial thinking, moral behavior, competency, analytical and talent to notice and investigate fraud proof appropriate as proof in court of law (Ahadiat, 2010).

Oyedeji(2015) opined that each organisation, that by implication a university should establish and install economical, strong, reliable and effective control system so as to safeguard its assets from doable losses ensuing from misapplication of funds; misuse and falsification of economic and different assets. However, these management units within the University system will solely deliver on their mandate if provisions for forensic accountants is enclosed, since it's been proved supported incidences of revenue leakages within the system that the present control system has not been able to take cognizance of the important role of forensic accountants.

The Center for forensic Studies (2010) noted that the injection of forensic accounting techniques in auditing may be accustomed reverse the leakages that result to company failure. This so isn't unconnected to the very fact that proactive rhetorical accounting seeks out errors and deviant group action before they crystallize into fraud. Onuorah and Appah (2012) captured the necessity for forensic accounting in organizations, they argued that the speed at that company organizations area unit experiencing failures thanks to money leakages have

placed larger responsibility and performance on accountants to equip themselves with requisite skills to change them act against indicators of misdirection, revenue frauds and different wrong activity. Mehta and Mathur(2007) noted that the power to reply at once and to speak money data clearly and briefly in a very court setting is crucial to rhetorical accounting, whereas auditors might not be needed to report their findings within the court, it's equally crucial they are doing thus to those partaking their services.

Forensic accounting, auditing and news skills that embrace deductive, inquiring, crucial thinking, communication and analytic skills among others build rhetorical controller additional subtle within the approach to fallacious cases. Thus, to make sure that every one potential avenues for revenue leakages in Universities area unit adequately block, Universities ought to leverage on these skills of rhetorical accountants that area unit totally different from those of the normal accountants. grey (2008) analyzed forensic accountants as a mixture of Associate in Nursing auditor and personal investigators which the information and skills needed embrace inquiring skills, research, law, quantitative ways, finance, auditing, accounting and enforcement officer insights.

It's obviously clear from out there literature reviewed that forensic accounting remains a brand new field within the accounting profession, and one cannot denied the very fact that studies are conducted on its relevant and application in fraud detection and interference in organizations specifically, the necessity for rhetorical accounting techniques in preventing revenue leakages in universities specifically has not been explored, and therefore the would like for this study thus on crammed during this existing gap.

STATEMENT OF PROBLEM

The widespread criticism of the method and manner revenues and different money resources accruable to universities in Federal Republic of Nigeria square measure being illegal despites the presence of control mechanisms in these establishments has been a significant challenge to their effective management. These fallacious acts are attributed to their inability to effectively applied rhetorical accounting techniques. This is often in line with Krstic (2009) United Nations agency opined that forensic accountant square measure engaged by the management of organizations to research and document money frauds. Universities everywhere the globe square measure considered engines of economic and property national development in each nation. It contributes to the economic, social and political growth of any nation. the colleges transmit information and train individual minds in several segments of the state (Johnstone, 2005).

In Nigeria, the colleges square measure veritable tools for the belief of national development; the event of civilised voters and therefore the promotion of basic analysis and innovation. University education is so, the foremost powerful and important success issue for people and therefore the society at giant (Aina, 2007).The Nigerian university system has full-grown in size and has undergone deep transformation since its origin over 60years past. For universities to effectively perform their roles; there should be adequate funding and this should be achieved by the interior system set by the management and governing councils of the colleges (Bamiro&Adedeji, 2010).

The Nigerian universities are witnessing financial crises because of misdirection of monetary and different resources within the universities. These money crises may be copied to either non-observance of laid-down rules, procedures and policies (internal managements) that square

measure established by the management and governing councils (the restrictive authorities) of the individual universities or non-existence of such control systems in those universities (Oyedeji,2015). Oyedeji expressed that each organisation should establish and install economical, strong, reliable and effective control system so as to shield its assets from attainable losses ensuing from misapplication of funds, misuse and falsification of monetary and different assets.

Lawal (2018) mentioned that, the Human and Environmental Development Agenda Resource Centre (HEDA) demanded the prosecution of the administrator of the University of Uyo, over alleged forgery and regulatory offence. The rights organisation's agitation could be a confirmation of the findings within the report of the Socio-Economic Rights and answerability Project (SERAP) 2018. Within the report titled, Stealing the future: however federal universities in Federal Republic of Nigeria are stripped apart by corruption, SERAP claimed that a lot of allegations of corruption in federal universities – like unfair allocation of grades; contract inflation; truncation of staff's wage on the payroll; Examination malpractice; sexual harassment; and issue of results for expelled student to graduate haven't been completely investigated. Evidences of the high rate of revenue leakages in Universities authenticated to the very fact that the interior management systems of those public establishments haven't incorporated forensic accounting techniques in their operations. Thus, they realize it very tough in preventing probable avenues for revenue leakages and this has contributed to their dismal performance in terms of infrastructure, employees morale and quality outputs. However the most downside that prompted this study is: To what extent will forensic accounting techniques facilitate in characteristic the revenue leakages, quantifying the degree of revenue loss and supply applicable measures for preventing revenue leakages in Federal universities within the Nigeria? This so forms the explanation for this study.

OBJECTIVES OF THE STUDY

  i.   To examine how forensic accounting data analysis techniques may be accustomed stop revenue leakages within the Nigerian federal universities.
  ii. To examine how forensic accounting technologies will facilitate in preventing revenue leakages in Federal Universities.

RESEARCH QUESTION

1 How will forensic accounting data analysis techniques facilitate in preventing revenue leakages within the Nigerian federal universities?
2 However, will forensic accounting technologies facilitate in preventing revenue leakages within the Nigerian federal universities?

SIGNIFICANCE OF THE STUDY

This facet of the study concentrate on the utility of the findings of the study to management of the universities, accounting academics, control and auditing employees, forensic accountants, legal professionals, students and different researchers among others.

LITERATURE REVIEW

This is wherever numerous ideas regarding this study were reviewed and mentioned.

Concept of Forensic Accounting

There's huge literature on the idea of forensic accounting and its application in the acts detection and interference. Crumbley, Heitger, and Smith (2005) opined that forensic accounting implies proof gathering that's appropriate to be used in an exceedingly court of law as a result of the outcomes of the investigations square measure standard and reliable. Dahli (2008) connected the word forensic to the application of data to legal issues like crimes. This definition traces the history of forensic auditing and its application in proceeding support. Forensic is as recent as history however its usage got very little attention within the past. Forensic accounting contains 2 words – forensic and accounting. Hence, though forensic accounting isn't utterly new, it began to realize prominence as a result of the growing wave of crime over the previous few years (Coenen, 2005) therefore would like for interference and detection of such crimes (Zkul&Pamuku, 2012). It's currently turning into distinguished due to increase in monetary scandals. Forensic auditing is associated to activity that consists of gathering, verifying, processing, analyzing, and reportage on knowledge so as to get facts and proof in an exceedingly predefined context within the space of legal/financial disputes and/or irregularities and giving preventive recommendation (Mohd&Mazni, 2008).

Akenbor and Ironkwe (2014) and Zachariah, Masoyi, Ernest and Gabriel (2014) argued that the importance of forensic auditing can't be undermined as a results of world persistent commission of fraud in numerous organisations. Albrecht, Albrecht and Dunn (2001) delineated forensic investigation because the utilization of specialised fact-finding skills in finishing up a pursuit conducted in such a way that the result can have application to the court of law. Akintoye (2008) expressed that forensic accounting is accounting that's appropriate for legal review, providing the very best level of assurance, and together with the new usually accepted connotation of getting been came across in an exceedingly scientific fashion and providing the required findings in subsidence disputes. Crumbley (2009) indicated forensic accounting because the action of distinguishing, recording, settling, extracting, sorting, reportage and validating past monetary knowledge or different accounting activities for subsidence current or prospective legal disputes or exploitation such.
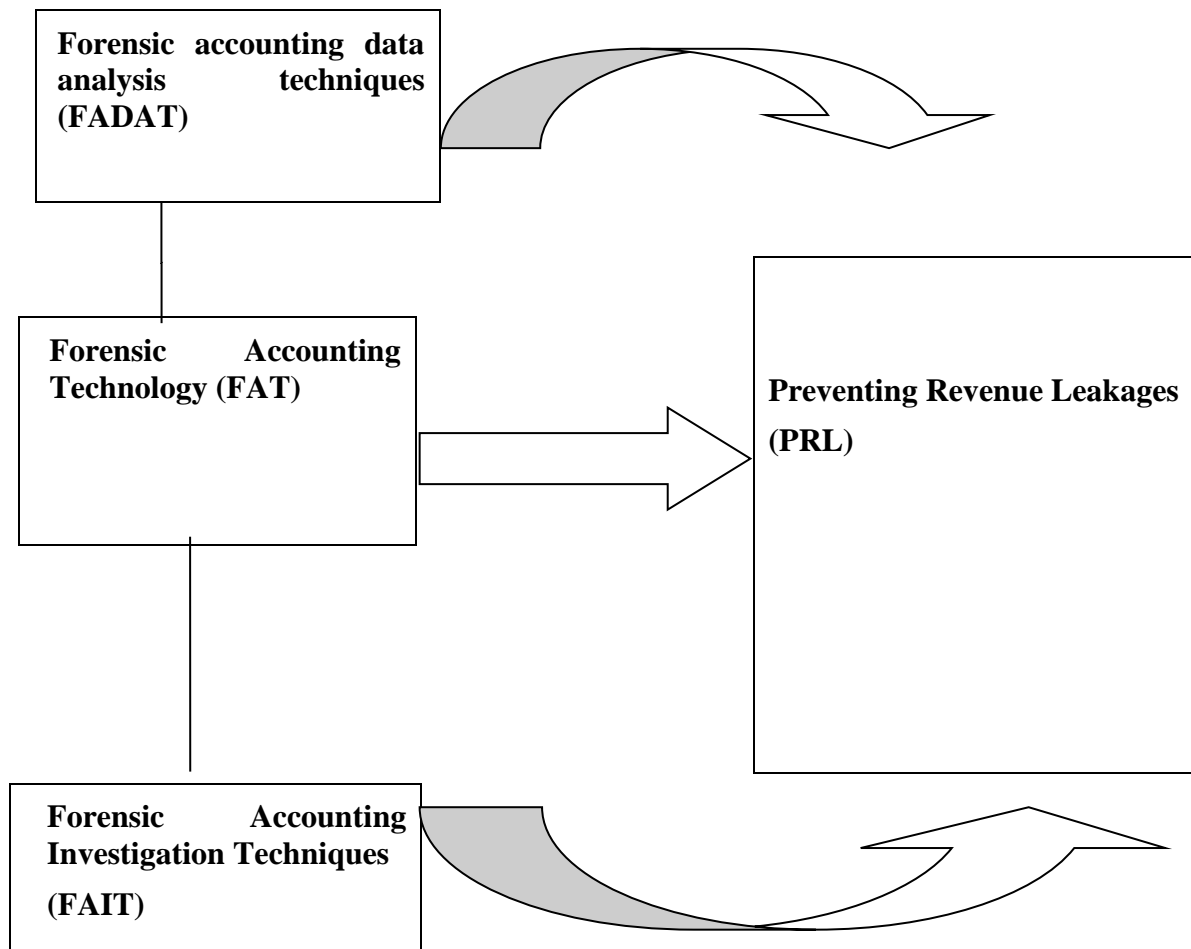
Figure 1: Research Framework

Source: Researcher 's Framework

Concept of Fraud

Fraud has been outlined in numerous ways in which by several researchers looking on their own understanding. Enofe, Okpako and Atube (2013) declared that fraud is an intentional false statement of the reality so as to control or deceive an establishment or individual of its assets, funds or the other material issue. Dada, Owolabi and Okwu (2013) viewed fraud as an act of dishonest, deceit, falsification and manipulations perpetrated to achieve financial and non-monetary advantages from an establishment. Fraud could be a preset difficult method or device dispensed by an individual or a gaggle of persons with the first objective of cheating another person or establishment to achieve undue advantage which might are absent if the deceptive act didn't surface (Nwaze, 2012).Fraud is fake or reckless disregard for truth may well be understood to mean that the person receiving the illustration has fairly and with reason relied thereon and also the receiving party has sustained money damages from the transactions (Enofe, Idemudia & Emmanuel, 2015). Mohite (2019) viewed fraud as deception within the kind of intentional deception that embrace lying and cheating that is that the opposite of truth, justice, fairness and equity. He also states that deception are often supposed to squeeze folks

to act against their own self-interest, and conjointly for one's own defence or survival. Ramamoorti (2007) opined that fraud could be a human issue that involves total deception, purposeful intent, intensity of need, risk of apprehension, violation of trust and rationalization. Ojaide (2000) opined that dishonorable practices cover fraud and different unlawful activities that involve acquisition of a plus to the disadvantage of another. It involves a dishonest, deceit, falsification and manipulation acts to achieve either financial or non-monetary advantages from a private or an establishment.

Izedonmi and Mgbame (2011) indicated that fraud is sometimes committed by the senior management of establishments. classes of those frauds embrace money statements fraud, anti-trust violation; securities frauds, evasion, false advertising, environmental crimes and also the production of unsafe product. Company frauds against an establishment deprives the institution of its assets; particularly once a senior management employees tries to deceive, conceal and misrepresent materially the records of the institution (Williams, 2005).

Fraud is an intentional act done by individuals through deception, trickery and false statement (Ramamoorti, 2008). This means that fraud may well be any deliberate actions or it could be a strategy to attain a private or organisational goal or to satisfy human desires. Fraud is any action, behaviour or oral expressions deliberately geared toward deception and /or information. The abuse of power by the fraud perpetrators includes deliberate misdirection, and false statement of structure resources (fixed and current assets) for private use. Manurung and Hadian (2013) declared that fraud is an act, expression, omission, or concealment calculated to deceive a private to his or her disadvantage, and conjointly a false statement with relevancy some truth material to a dealing that's created with data of its falsity.

Types of Fraud

There square measure alternative ways frauds are often perpetrated in organizations and within the university system specially. Generally, because the society becomes additional advanced and enlightened ways of perpetrating frauds becomes additional subtle (Pedneault, Sheetz&Rudewicz, 2012). This has been assisted by the enlargement in data technology that has conjointly created fraud international (Silverstone & Davia, 2005).

Udoayang and James (2004) have classified fraud into 2 varieties, namely: bite fraud and nibble fraud. Bite fraud in step with Udoayang and James happens once assets square measure taken and also the individual taking it disappears. This sort of fraud sometimes involves giant assets; thus it are often detected quickly. To avoid being tracked down, the bitter absconds to a protected colony. On the opposite hand, nibble fraud involves tiny assets, sometimes taken in piecemeal. Here, the likelihood of being detected at the first stage is sort of low; thus the fraud happens on several occasions. Revenue leakages in universities will take each forms, however, nibble fraud is that the most typical kind embarked upon by university employees who most time won't wish to fly from their places of official engagement however feel they will use such position to their own advantage albeit the system suffers. Similarly, Adewale (2008) classified fraud broadly speaking into 2 main teams, the interior and external frauds. once staff determine a chance to commit acts of fraud, it's classified as an interior fraud whereas once outsiders, like suppliers and repair suppliers are involved in acts of frauds against organisations, this is often classified as external fraud (Gray,2008).

Furthermore, there square measure different factors that square measure accountable for frauds. as an example, causes of fraud has been classified into 2, namely: the institutional factors and

also the environmental or social factors (Udoayang & James, 2004). Institutional factors square measure those who square measure traceable to the interior setting of organisations (Nwaze,2008). The common institutional causes of fraud that square measure known within the literature embrace, poor control and checks; inadequate coaching and re-training on each the technical and theoretical aspects of the task resulting in poor performance that breeds malpractice; inadequate data and knowledge of employees; use of subtle accounting machines by dishonest staff who might use it to deliberately omit entries or substitute improper figures and concern of negative substance.

Many establishments fail to report cases of fraud to the suitable authorities for concern of negative public image of their establishments. Once cases of revenue leakages in universities area unit discovered however don't seem to be rumored and wear down professionally, a repeat of such act is certain to happen once more. However, the extent to that the alleged dishonorable acts area unit proved on the far side cheap degree of doubts depends on the flexibility of the schools to involve the services of consultants like rhetorical accountants as a part of their control system. Others causes of revenue leakages and alternative dishonorable acts area unit poor security arrangement; employees negligence thanks to poor supervising, lack of technical information, apathy, pressure; dangerous management practices; poor remuneration significantly in things wherever remuneration don't adapt with the economic realities of the time; poor accounting and accounting; faulty personnel policies and employees unfaithfulness (Udoayang & James, 2004).

On the opposite hand, atmospheric /societal factors area unit people who area unit traceable to the immediate and remote environment of the organisation. These factors embody social values, wherever the possession of wealth determines the name and recognition ascribed to a person; trait, wherever there's minimum level of conformity, orderliness and moderate behaviour below that a personal or society isn't able to operate effectively is broken and temperament profile of fraudsters, wherever folks area unit dead set creating it by hook and crook.

Cyber Fraud

Cyber fraud is the form of fraud that involves the utilization of computers and network, wherever the computers facility might or might not have contend Associate in Nursing instrumental half within the commission (Luminita, Viorica & Adrian, 2011). Abu, Lateef and Echobu (2018) explicit that cyber fraudster knowing full well that it would be troublesome for the enforcement agents throughout course of investigation to return up with a proof linking a selected laptop or instrumental part or network facility employed by them in perpetrating the crime. Clough (2010) document that the thought of law-breaking fraud emanated from the information of computers and web became the thought of business transactions globally. This is often as a result of the applying of computers and web has promoted the business activities hugely significantly within the areas of procural, shopping, business collaboration, client services, recruitments, revenue generation, price and reduction. These applications (computers and internet) rather than utilising them for rising business transactions in Nigeria, practiced technologists, laptop and network service supplier and alternative laptop technologists in Nigeria used the chance for criminal advantages (Folashade & Abimbola, 2013).

In line with David and Karl (1995), laptop and web fraud are available completely different forms and area unit advanced thanks to varied forms of electronic transactions that create the

investigation method cumbersome for rhetorical and digital investigators to trace, sight and stop the prevalence of the crime. These completely different forms cause challenges to the enforcement agents. Cyber fraudsters will transmit fraud connected data victimization electronic gadgets from one person to a different, every rising or adapting it to his or her own wants and this becomes the right fraud business with no proof and no basis for the victim and offender to spot or confront one another (Curtis & Coplwel, 2000).

Revenue Generation in Nigerian Universities

Conceptualizing revenue leakages is important during this study. This could be a state of affairs during which capital, or income, exits a system instead of remaining among it. Awitta (2010) explicit that revenue is that the quantity of cash that an organization receives throughout a selected amount. Revenue assortment are often outlined as financial gain that an organization receives from its traditional business activities, typically from the sale of products and services to customers. Revenue is remarked as turnover. Some corporations receive revenue from interest, dividends or royalties paid to them by alternative corporations. Revenue refers to business financial gain generally, or it should consult with the quantity, during a unit of measurement, received throughout a period of time. Additionally, Hongreen (2002) delineate revenue as inflows of plus (almost perpetually money or accounts receivables) received for merchandise or services provided to customers. This revenue includes donations from people and firms, support from government agencies, financial gain from activities associated with the organization's mission, and financial gain from fundraising activities, membership dues, and monetary investment.

In line with Akinsanya(2007) not such a lot was far-famed of Internally Generated Revenue (IGR) within the Nigerian higher instructional circles regarding twenty years. For the age once there have been fewer universities within the country and also the oil revenue was massively accessible, the federal provided all the funding for operations and capital development wants of the schools. Again, given the large economic misfortunes facing the government, created worse by the recent world monetary crises, the challenge of inadequate funding of the schools has become critically revealing. The IGR thought implies that the federal ought to settle for responsibility for providing funding for all its universities on each expenditure heading. That way, the schools area unit, therefore, persuaded to hunt ways that of earning extra revenue domestically and to use constant during any areas of university wants that the government isn't able to offer for in a given budget amount. At the first stage of the introduction of the IGR thought, the federal had thought of centrally managing the IGR pool from all the federal universities, specified every university was needed to forward the yearly IGR inflows to the government, and to, thereafter, apply for unharness back to that the quantity required for native use. That directive didn't survive thanks to its obvious repugnance.

In a strange spontaneity, all university managers kicked against it until the government abrogated its directive. Every university, whether federal, state or private, is encouraged to engage in the development of critical access to IGR because of the essential support that comes from it. In Federal Universities, a minimum of 10% of total annual sources comes from IGR (Okojie, 2009). There are literatures indicating that some institutions have done greatly in the drive for substantial IGR contribution whereas a lot of others are yet to catch the vision or face negative environmental constraints (Wangenge-Ouma et al., 2008). Yusuf (2010) posited that the funding Gap in higher education and the place of IGR available literatures agreed that there

is a funding gap requires new creative means to fill if the students would not have to bear the full burden of the cost of education. This has given rise to the present high emphasis on IGR. Long list of IGR sources for the federal and state universities include consulting services, seminars and workshops, commercial activities for profit, patents and partnerships with industry (Sithole,2015). Private universities have leveraged on tuition fees, private fund raising initiatives and consulting to generate revenues to keep the universities running. As it becomes clearer that the government cannot fully fund education, the role of IGR, therefore, becomes more critical (Aina, 2002)

Relevance of Forensic Accounting Techniques in Preventing Revenue Leakages in the University System

In the University system, financial frauds case such as revenue leakages and mismanagement of finances are among disturbing issues that have impacted negatively management of the institutions. The implication of this is that a modernized internal control and auditing system that will incorporate the services of forensic accountants is needed in Universities. Thornhill (1995) stated that forensic audits require a clear and detailed audit plan that is designed to obtain information on how, when, and where a wrongdoing occurred and who committed such a wrongdoing. The importance of forensic accountants in organizations, universities inclusive can be clearly understood from the context of failure in statutory audits to detect and prevent fraud as summarized by Owojori and Asaolu (2009). Forensic evidence plays significant role in settling litigations in law courts since they are universally accepted. According to Eiya and Otalor(2013) a forensic accountant engages himself in criminal investigation on behalf of police force where his report is prepared with the objective of presenting evidence in a professional and concise manner. This implies that Universities can benefit significant from forensic evidence one issues relating for revenue leakages from the institutions becomes legal.

Similarly,forensic accountants help in improving the management accountability in an organization and institutions like Universities. Ramaswany(2009) stated that failure of corporate communication structure has made the financial community realize that there is a great need for skilled professionals that can identify, expose and prevent weaknesses in three key areas: poor corporate governance, flawed internal controls, and fraudulent financial statement. Forensic accounting skills are becoming increasingly relied upon within a corporate reporting system that emphasizes its accountability to stakeholders. From the above statement, a forensic accountant with his expert knowledge in crime will help to improve corporate reporting system designed by management which will expose and prevent poor governance, flawed internal control and fraudulent financial statement   .   Furthermore,   forensic accountant is indeed an effective tool for strengthening the independence of auditors in the university system considering the analytic approach and sophisticated approaches to investigation of fraudulent acts. Most times external auditors are afraid to report cases of fraud committed by management to the stakeholders even when such frauds are obvious. This impairs the independence of the auditor who is afraid of losing his job since most times they are appointed by management who prepares accounts that is being audited (Albrecht, Albrecht& Dunn, 2001). According to Albrecht (2005)improving financial reporting system with expertise knowledge and skill in both financial matters, the forensic financial reporting system through the use of proactive method of fraud detection have strengthened external auditor's independence. Thus, since it has been noted that the incidences of revenue leakages in universities have been attributed largely to the ineffectiveness of their internal control

system, forensic accounting skills therefore will significant help in identifying points of leakages and proffer remedies for avoid such accounting lapses that are detrimental to the effective management of universities.

More so, forensic auditing as an aspect of forensic accounting will provide reliable and accurate evidences that will enhance the effectiveness of audit committees in an organization and in the university system in particular. Forensic accountants will assist audit committee members in carrying out their oversight functions by providing better tools that ensures that quality assurance audit report on the financial position of universities are produced by the external auditor. This of course is not unconnected to the view of Adewale(2008) that a forensic accountant in carrying out his responsibilities of controlling fraudulent activities use data driven fraud detection tool which is proactive unlike the traditional approach which is reactive and is been adopted by the external auditor in carrying out statutory audit functions.

Another significant role of forensic accounting in the University system is that it is important tools that can be employ to detect frauds such as leakages in revenue accruable to the institutions scientifically and accurately. With the use of technological devices, a forensic accountant can easily detect financial fraud perpetrated by either, account staff, management and their associate thereby preventing corporate failure. Their interview technique to evidence gathering is a sure way to achieving this aim. This agreed with, Cleary and Thibodeous (2005) that the forensic accountant knows how to detect and prevent business fraud using Benford law which is a fraud analytical digital tools. Hence, it could be said that a forensic accountant in helping to detect and prevent fraudulent activities could be seen to have helped organizations in reducing financial fraud which most times had leads to corporate collapse. Thus, since universities in Nigeria are not immune of fraudulent acts and revenue leakages related frauds in particular, the application of forensic accounting skills and techniques as alternatives to the current internal control mechanism used in these institutions will significantly help in blocking eminent and hidden sources of revenue leakages.

White Collar Crime Theory

The white-collar crime was developed by Sutherland (1947), where he stated that a crime committed by a person of respectable character and high social status in the course of his occupation is generally not acceptable. He pointed out the definition of white-collar crime as a crime only committed by a man and was only committed by those who had an occupation. Criminologists have come to the agreement that there are three concepts to white collar crime:

a.   It occurs in a legitimate occupational context.

b.   Motivated by the objective of economic gain or occupational success.

c.   Not characterised by direct, intentional violence.

Sutherland's approach to the concept of corporate crime was different from what was norm at that time. He rejected traditional concepts of crime which blamed lower social class and mentally ill personalities, rather than persons of the upper socio-economic class (Sutherland,1983). The white-collar crime is known as a crime committed by a person of respectable character and also a highly placed, social status in the course of the person occupation. In this context respectability defies precision of use. The requirement that a crime cannot be a white-collar crime unless perpetrated by a person of high social status is an unfortunate explanation, especially when Sutherian (1983) used the widespread nature of white collar crime to refute class-based theories of criminality. He went further to note that many of

those corporate criminals are affluent upper social class individuals. He argues that if it can be shown that white collar crimes are frequent, a general theory that crime is due to poverty and its related pathologists is shown to be invalid. Sutherland revelation of extent of white collar crime created some serious problems for traditional criminologist theories.

Among the various theories of causation of crime, Sutherland theory of differential association is unique. The theory states that criminal behaviour is learned through interaction with others or associations, which means criminal behaviour is learned through influence rather than inheritance. That is to say a person without first being trained to commit a crime is not capable of inventing criminal behaviour, it means a person cannot become a criminal without being influence by others.

The theory of differential association, one of Sutherland's arguments was designed to explain criminal and none criminal behaviours, particularly individual behaviour. This is stark contrast to other theories that explain the criminality of society including his theory of social organisation. He continues by specifying the specific technique and business practice that is being learned as result of differential association. Sutherland's theory of differential association in white collar crime was a general theory of all crime, one whose generally borders on a platitudinous restatement of social learning (Albanese,1995). Fredrichs (2007) opined that the only way one crime differs from another is the background and characteristics of its perpetrators. Most white collar offenders are distinguished by lives of privilege, much of it with origins in class inequality. It is estimated that majority of white collar crimes is undetected or if detected, it is not reported. This is because of the high status of the perpetrators of these crimes, which requires highly trained and experienced examiner or investigator like the professional forensic accountant to forestall the occurrence of such high-profile fraud (Blessing, 2015). The forensic accountant is key when it comes to reporting criminal offences regarding fraudulent practices in any setting.

Theory of Crime and Corruption

Sociologist Gross (1963), has asserted that all organisations are inherently criminogenic (that is, prone to committing crime), though not necessarily criminal. Gross makes this assertion because of the reliance on "the bottom line." Without necessarily meaning to, organisations can invite fraud as a means of obtaining goals. It is believed by Shanikat and Khan (2013) that the rise in the white collar crimes, where evidences are comparatively more obscure and difficult to detect (Gottschalk, 2011), has necessitated equipping of auditors and investigators with forensic skills, particularly over the recent years (DiGabriele, 2009; Carnes and Gierlasinski, 2001). Criminologist Oliver Williamson noted that because of a department's concern with reaching its goals, managers might tend to maximise their department's own interests to the detriment of the organisation. (Fraud examiner manual, 2014)

As a strategy to control crime, deterrence is designed to detect law violations, determine who is responsible, and penalise offenders in order to deter future violations. Deterrence systems try to control the immediate behaviour of individuals, not the long-term behaviours targeted by compliance systems. Deterrence theory assumes that humans are rational in their behaviour patterns. Humans seek profit and pleasure while they try to avoid pain. Deterrence assumes that an individual's propensity towards law-breaking is in inverse proportion to the perceived probability of negative consequences (Fraud examiner manual, 2014).

METHODOLOGY

Research philosophy deals with the source, nature and development of knowledge in a particular area or field of study (Bajpai,2011). It is a belief about the ways in which data or information on a phenomenon should be collected, analysed and used.This work adopted the survey research design, which is based on the use of primary data. The choice of survey research design method was based on the fact that it is used to observe the population of study and the reaction of that population to a particular phenomenon. Enyi (2013) claimed that in any research work in social sciences and management science, the survey research is aimed mainly at creating a controlled relationship which can be used to take care of any social phenomenon. The primary source of data of this study involved the use of questionnaires. The population consists of forensic investigators of the Economic and Financial Crime Commission (EFCC) and internal audit staff of selected Federal Universities in North east Nigeria comprising of 238.

Model Specification

The model is specified as follows:

$$PRL_i = \beta_0 + \beta_1 FAT_i + \beta_2 FADAT_i + v_i \qquad \qquad \dots (1)$$

Where:

PRL = Preventing Revenue Leakage

β_0 = Intercept of the model

$\beta_1, \beta_2,$ and β_3 are the parameters

FAT = Forensic Accounting Technology

FADAT = Forensic Accounting Data Analysis Technique

v_i = error term

FINDINGS

Table 1: Out of Range values

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	207	1.00	2.00	1.3527	.47896
Q2	220	1.00	3.00	2.7909	.49832
	220	1.00	3.00	1.1727	.52096
Q4	221	1.00	3.00	2.4118	.63793
Q5	221	1.00	3.00	2.2308	.80688
FAT1	221	1.00	5.00	3.1991	1.20083
FAT2	221	1.00	5.00	3.3710	1.35776
FAT3	221	1.00	5.00	3.0498	1.32193
FAT4	221	1.00	5.00	3.1946	1.24066
FADAT1	221	1.00	5.00	3.8733	1.25128
FADAT2	221	1.00	5.00	3.4796	1.30586
FADAT3	221	1.00	5.00	3.3620	1.31606
FADAT4	221	1.00	5.00	3.2489	1.27085
FAIT1	221	1.00	5.00	3.4751	1.18151
FAIT2	221	1.00	5.00	3.4661	1.18513
FAIT3	221	1.00	5.00	3.4706	1.19670
FAIT4	221	1.00	5.00	3.6516	1.30762
PRL1	221	1.00	5.00	3.3891	1.16879
PRL2	221	1.00	5.00	3.2579	1.22530
PRL3	221	1.00	5.00	3.3348	1.27069
PRL4	221	1.00	5.00	3.1719	1.28888

Source: SPSS 25.0

Factor Analysis

Factor analysis attempts to identify underlying variables, or factors that explain the pattern of correlations within a set of observed variables. Factor analysis is also used in data reduction to identify a small number of factors that explain most of the variance that is observed in a much larger number of variables. The purpose of data reduction is to remove redundant (or highly correlated) variables from the data.

In this analysis, principal component analysis was used, which is a method of factor analysis that is more reliable and conceptually less complex. Principal component analysis is concerned with establishing what kind of linear components that exist in the data and how each variable might contribute to that component (Field, 2005). For simplicity, principal component analysis is used to be synonymous to factor analysis.

Choice of variables and sample size

Only variables that were subject to a perceptive opinion of the respondents were chosen to be included in the factor analysis such as Forensic Accounting Technology (FAT), Forensic Accounting Data Analysis Techniques (FADAT), and Preventing Revenue Leakage (PRL)

Table 2: Correlation Matrix

		PRL	FAT	FADAT	FAIT
PRL	Pearson Correlation	1	.583**	.693**	.422**
	Sig. (2-tailed)		.000	.000	.000
	N	221	221	221	221
FAT	Pearson Correlation	.583**	1	.616**	.453**
	Sig. (2-tailed)	.000		.000	.000
	N	221	221	221	221
FADAT	Pearson Correlation	.693**	.616**	1	.416**
	Sig. (2-tailed)	.000	.000		.000
	N	221	221	221	221
FAIT	Pearson Correlation	.422**	.453**	.416**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	221	221	221	221

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation result for dependent and independent variables in table 2 shows that all the variables have a positive relationship to Preventing Revenue Leakage (PRL). The result revealed that Forensic Accounting Technology (FAT), Forensic Accounting Data Analysis Techniques (FADAT) and Forensic Accounting Investigation Techniques (FAIT) correlate to Preventing Revenue Leakage (PRL) by 58.3% 69.3 and 42.2% respectively. This means that only Forensic Accounting Investigation Techniques correlated weakly to Preventing Revenue Leakage (PRL) by 42.2%.

Table 3: Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	FAT	.574	1.742
	FADAT	.597	1.674
	FAIT	.765	1.308

From Table 3, the variance inflation factor (VIF) for the predictors is used to test if there is a strong linear association among them. The result of the multicollinearity shows that there is no multicollinearity among the independent variables, since the values of the VIF are all less than 4 which is the benchmark.

Table 4: Model Fitness test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	120.252	3	40.084	81.419	.000[b]
	Residual	106.833	217	.492		
	Total	227.085	220			

a. Dependent Variable: PRL

b. Predictors: (Constant), FAIT, FADAT, FAT

Table 4 shows the result of the F-test. The F-statistic has a value of 81.419 and p-value of 0.000. It means that there is strong linear dependency existing among the variables and the model is a good fit statistically

Table 5: Coefficient of Determination and Durbin-Watson Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.728ᵃ	.530	.523	.70165	2.031

 a. Predictors: (Constant), FAIT, FADAT, FAT

 b. Dependent Variable: PRL

Table 5 shows the result of the summary of the correlation coefficient, *R*-Squared, adjusted R-squared standard error of estimated and the Durbin-Watson. In a multiple regression model, the R-squared shows the proportion of the total sample variation in the dependent variable that is explained by the independent variable. The coefficient of determination $r^2=0.530$ shows a 53.0% contribution of Forensic Accounting Technology (FAT), Forensic Accounting Data Analysis Techniques (FADAT) and Forensic Accounting Investigation Techniques (FAIT) to Preventing Revenue Leakages (PRL).The result also indicated that there are no auto-correlation since the Durbin-Watson value is approximately 2.

CONCLUSION

In this study, empirical analysis was conducted to determine the effect of forensic accounting techniques in preventing revenue leakages in Nigerian Federal Universities. Based on the findings of the research conclusion are drawn with specific reference to the Nigerian Federal Universities: that the application of forensic accounting data analysis techniques by forensic experts will help in the prevention of revenue leakages in Nigerian Federal Universities; that the application of forensic accounting technology can prevent revenue leakages in the Nigerian Federal Universities;

RECOMMENDATION

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

Forensic accounting data analysis techniques are digital techniques use to examine structured data with regards to financial crime. It helps to discover and analyse patterns of fraudulent activities. Therefore, it is recommended that forensic accounting data analysis techniques should be employed in the Nigerian Federal Universities to help curbed revenue leakages in the system. Relevant regulatory authorities can help to ensure that this is done.

The study recommended that forensic accounting technology should be deployed and applied in Nigerian Federal Universities to prevent revenue leakages. This is because forensic accounting technological tools have been discovered to be very effective in detecting any fraudulent activities as a result of digital information. Also it enables the forensic accountants to search for documents' key words and sort documents by date ranges using computer. Nigerian Federal Universities can acquire or develop these sorts of digital tools that have found to be helpful in fighting economic and financial crimes.

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