

# Forensic Accounting Techniques: Tools for Preventing Revenue Leakages in Nigerian Federal Universities

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**Abstract:-** Forensic accounting reflects the application of investigative and analytical techniques for the purpose of resolving fraudulent practices. The objective 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. Primary data were used in this study and collected with the aid of research questionnaire, and the sample size was 238. This study applied the Regression analysis. Regression analysis described and evaluated the relationships between Forensic accounting techniques and revenue leakages. In using the analytical tool, important assumptions for a valid regression was elaborated and tested and this ensured that the final regression model was not flawed. From the analysis, it shows that Forensic 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. Therefore, it was concluded that the application of forensic accounting data analysis techniques helps in preventing revenue leakages. Again, it was also found that forensic accounting technologies help in preventing revenue leakages in Nigerian Federal Universities. The implication is that when these technologies are applied, there would be drastic reduction in revenue leakages. On the basis of these findings, it was recommended that forensic accounting data analysis techniques should be employed in Nigerian Federal Universities to help curbed revenue leakages in the system. Relevant authorities can help to ensure that this is done and also forensic accounting technologies should be deployed and applied to prevent revenue leakages.

**Keywords:-** Forensic Accounting, Forensic Accounting Technology, Forensic Accounting Data Analysis, Forensic Accounting Investigation Techniques.

## I. INTRODUCTION

The requirement for forensic accounting to tackle the international issue of fraud facing businesses, company organisations as well as public sector entities has return to fore. These frauds and deceitful acts area unit incontestable among others by the popular cases of Enron and World.com, Tyco and Cadbury African country restricted. The year 2001 witnessed a series of monetary frauds involving giant companies like Enron, Arthur Andersen, World.Com, Qwest and light beam, among different well-known companies. In some cases, management manipulated the figures shown in monetary reports to point a higher economic performance.

The incidence of fraud continues to extend across personal and public sector organizations and across nations. Fraud may be a universal downside as no nation is immune, though developing countries and their varied states suffer the foremost pain. Forensic accounting may be a quickly growing field of accounting that describes the engagement which ends from actual or anticipated dispute or litigations. It necessary to notice that skilled forensic accountants may go for public business firm. Although, forensic accounting has been alive for many decades, it's evolved over time to incorporate many sorts of monetary info scrutiny.

Forensic accounting includes the utilization of accounting auditing, and inquiring skills to help in legal matters. It consists of 2 major elements. judicial proceeding services that recognized the role of associate degree businessperson as associate degree knowledgeable advisor, and inquiring service that uses rhetorical accountant's skills and will need attainable court area testimony. The widespread of frauds in trendy organisations have created ancient auditing and investigation inefficient and ineffective within the detection and hindrance of the varied sorts of frauds try business organisations and also the public sectors (Onuorah& Appah,2012). The speed at those company organisations expertise failures has placed bigger responsibility and performance on accountants to equip themselves with requisite skills and touch indicators of poor

governance, direction, frauds and different wrong conduct. It's become imperative for accountants in any respect levels to possess the requisite skills and data for distinctive, grouping similarly as protective relevant proof in respect of suspected frauds and monetary irregularities that area unit occasioned in most organisations (Okunbor& Obaretin,2009).

Accountants and Auditors area unit expected to report monetary irregularities within the annual reports of organisations thus on enhance transparency and responsibility. The auditor will meet this company expectation once applicable techniques area unit developed for fraud detection and hindrance. The requirement for rhetorical accountants has been ascribed to the actual fact that the audit system in associate degree organisation had not sight sure errors and fraud within the social control system (Wilhelm, 2004). Failure of internal audit and audit committee to unearth hidden aspects of frauds, block revenue leakages and maintain their independence area unit a number of the items that have inspired this study. These are unit factors and determinants answerable for the expansion of rhetorical accounting researches and practices within the globe.

Financial fraud has become a convention and a severe downside of worldwide concern, with developing nations having their own giant proportion of it. It rampant and is bit by bit changing into a norm and the way of life. The degree of boldness to commit fraud on a daily is thus high to the extent that several folks commit fraud with very little or no concern of being caught, starting from the general public sector to the personal sector. The rich, the poor, the young and aged, males and female's area unit currently deeply concerned in fraud and fraud connected activities (Adedire, 2016). Aduwo (2016) argued that the increasing sophistication of monetary fraud is necessitating the inclusive of rhetorical accounting, public observe which is able to bring the successful investigation and prosecution of any people concerned in perpetrating these criminal activities in each public and personal organizations.

Ojaide (2000) indicated that there's associate degree mendacious increase within the variety of fraud and deceitful activities committed in African country, as such; there's the requirement for the services of rhetorical 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 replacement class of accountants, specifically the forensic accountants area unit necessary for this purpose. Okunbor and Obaretin (2010) noted that it's become imperative for accountants in any respect levels to possess the requisite skills and data for distinctive, grouping similarly as protective relevant proof in respect of suspected frauds and monetary 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 main determinants to blame for the expansion of forensic accounting. The failure of ancient accounting and auditing to stop revenue leakages and establish dishonourable activities in company organizations had necessitate the necessity for rhetorical accounting techniques and skills like essential thinking, moral behaviour, laptop ability, analytical technique ability to notice and investigate fraud and gather proof appropriate to be used in court of law (Ahadiat, 2010).

In the university system, internally generated revenue may be an essential issue to the extent that no administrator would condon any revenue run. Revenue run happens whenever monies collected area unit collected and don't totally get to the proper account or enter the organisation. It happens once a part of the accruable revenue is removed fraudulently by personally or cluster of people for his or her private functions (Oyededeji,2015). Fraudsters commit their wicked act either by manipulating expenditure or skimming revenue (Okoye, Maimako, Jugu & Jat, 2014). Forensic accounting techniques, if used, can considerably facilitate in preventing revenue leakages in University's system in Nigeria. Forensic accounting attracts it skills from several disciples and has some distinctive inquiring and proof gathering techniques that area unit acceptable in any competent court ( Okoye, Maimako, Jugu&Jat, 2014).

Oyededeji(2015) opined that each organisation, that by implication a university should establish and install economical, strong, reliable and effective control system so as to shield its assets from potential losses ensuing from misapplication of funds; misuse and falsification of economic and alternative assets. However, these management units within the University system will effectively deliver on their mandate if they use the talents and techniques of a rhetorical bourgeois, since it's been well-tried supported incidences of revenue leakages and alternative malpractices within the system that this control system has not been able to address and combat of course (Oyededeji,2015).

Hariharan (2009) noted that revenue run has been a universal development that has hampered service delivery publically organizations, that by implication embrace Universities. In fact, the degree of boldness to that these illicit parts used their wicked act is somewhat discouraging. the number of fraud that's being committed on a day after day is thus massive to the extent that one has begun to surprise if those saddled with the responsibility of accounting for finances in Universities commit fraud with very little or no concern of being caught. Although there are a unit other ways within which revenue will leak in institutions that of the University system leaks by e-payments and remittances. Revenue leakages in Universities' channels but ranges from money felony, money skimming, system obstruction, pretend invoicing, forgery, and manipulation of economic records among alternative things.

Forensic accounting, auditing and news skills that embrace deductive, inquiring, essential thinking, communication and analytic skills among others build rhetorical bourgeois a lot of refined within the approach to dishonourable cases. Thus, to confirm that every one potential avenues for revenue leakages in Universities area unit adequately blocked, Universities ought to leverage on these skills of rhetorical accountants that area unit completely different from those of the normal accountants. grey (2008) analyzed rhetorical accountants as a mixture of associate auditor and personal investigators which the data and skills needed embrace inquiring skills, research, law, quantitative strategies, finance, auditing, accounting and enforcement officer insights.

It's instructive to notice that while not an efficient method of accounting, the endemic downside of revenue leakages that would paralytic tutorial activities in universities that has place the system to public scrutiny could persist. Wells (2012) explicit that rhetorical accountants have skills and competencies to notice and forestall monetary fraud in organizations and by extension universities. Onodi, Okafor and Ayali (2015) noted that rhetorical inquiring skills area unit needed to uncover and establish the incidence of economic crimes. the overall expectation is that rhetorical accounting supply reliefs to the present vulnerability of ancient accounting and auditing systems to monetary fraud, particularly currently that the difficulty of revenue leakages in Universities area unit quick changing into serious threats to the operation of those establishments.

It is patently clear from offered literature reviewed that rhetorical accounting remains a replacement field within the accounting profession, and one cannot denied the actual fact that studies are conducted on its relevant and application in fraud detection and hindrance in organizations specifically, the requirement for rhetorical accounting techniques in preventing revenue leakages in universities specially has not been explored, and also the would like for this study thus on crammed this existing gap. The widespread criticism of the method and manner revenues and alternative money resources accruable to Universities in Nigeria square measure being embezzled despite the presence of control mechanisms in these establishments. This menace has been a serious challenge to management of those establishments and government. These deceitful acts within the University system are attributed to the lack of accounting and auditing techniques to tackle them, the requirement to undertake rhetorical accounting techniques. this is often in line with the read of Krstic (2009) World Health Organization opined that rhetorical accountants square measure engaged by the management of organizations to deploy their techniques and skills to research and document money frauds or alternative deceitful activities. Universities everywhere the planet square measure thought to be engines of economic and property national development in each nation. They contribute to the economic, social and political growth of any nation.

In Nigeria, the colleges square measure veritable tools for the conclusion of national development; the event of refined voters and also the promotion of basic analysis and innovation. University education is so, the foremost powerful and important success issue for people and also the society at massive (Aina, 2007). The Nigerian university system has full-grown in size and has undergone deep transformation since its beginning over 60years ago. For universities to effectively perform their roles; there should be adequate funding and adequate internally generated revenue. This will be achieved through sound control system found out by the management and governing councils of universities (Bamiro & Adedeji, 2010).

The Nigerian universities square measure appeared to be witnessing money crises thanks to direction of monetary and alternative resources within the universities. These money crises may be derived to either non-observance of laid-down rules, procedures and policies (internal managements) that square measure established by the management and governing councils (the regulative authorities) of the several universities or non-existence of sound control systems in those universities (Oyedeji,2015). Oyedeji more declared that each organisation should establish and install economical, strong, reliable and effective control system so as to safeguard its assets from attainable losses ensuing from misapplication of funds, misuse and falsification of monetary and alternative assets. According Anwar (2017) a minimum of 958 students of the Modibbo Adama University of Technology (MAUTECH) have fallen victims of registration scam involving the total of N30 million. The report alleged that out of concerning ten, thousand students that registered for the 2016/2017 school term, the registration fees from 958 students failed to hit the Treasury Single Account. This signifies that a big quantity of revenue was leaked out through deceitful means that.

Evidences of the high rate of revenue leakages in Universities echo to the actual fact that the interior management systems of those public establishments haven't incorporated rhetorical 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, workers morale and quality outputs. However the most drawback that prompted this study is: To what extent will rhetorical accounting techniques facilitate in distinctive the revenue leakages, quantifying the degree of revenue loss and supply acceptable measures for preventing revenue leakages in Federal universities within the Nigeria? This so forms the principle for this study.

## RESEARCH QUESTIONS

- i. How will forensic accounting data analysis techniques facilitate in preventing revenue leakages within the Nigerian federal universities?
- ii. How will forensic accounting technology facilitate in preventing revenue leakages within the Nigerian federal universities?

- iii. How will forensic accounting investigation techniques facilitate in preventing revenue leakages within the Nigerian federal universities?

### OBJECTIVES OF THE STUDY

The main objective of this study is to look at the extent to which forensic accounting techniques can be used for preventing revenue leakages. Specifically, the study has the following specific objectives:

- i. To examine how Forensic accounting data analysis techniques can be used to prevent revenue leakages within the Nigerian federal universities.
- ii. To examine how forensic accounting technology can be used to prevent revenue leakages within the Nigerian Federal Universities.
- iii. To examine how forensic accounting investigation techniques can be used to prevent revenue leakages within the Nigerian federal universities.

### HYPOTHESES

The following hypotheses are going to be tested at five-hitter level of significance:

H<sub>01</sub>: Forensic accounting data analysis techniques significant effect in preventing revenue leakages in Nigerian federal universities.

H<sub>02</sub>: Forensic accounting technology has no significant effect in preventing revenue leakages in Nigerian federal universities

H<sub>03</sub>: Forensic accounting investigation techniques have no significant effect in preventing revenue leakages in Nigerian federal universities.

## II. LITERATURE REVIEW

### Concept of Forensic Accounting

There's immense literature on the conception of forensic accounting and its application in dishonest acts detection and bar. Crumbley, Heitger, and Smith (2005) opined that forensic implies proof gathering that's appropriate to be used in a very court of law as a result of the outcomes of the investigations area unit commonplace and reliable. Dahli (2008) connected the word rhetorical to the appliance of data to legal issues like crimes. This definition traces the history of forensic auditing and its application in proceeding support. Forensic is as previous as history however its usage got very little attention within the past. Forensic accounting contains 2 words – forensic and accounting. rhetorical accounting isn't fully new, it began to achieve prominence thanks to the growing wave of crime over the previous few years (Coenen, 2005) and therefore would like for bar and detection of such crimes (Zkul & Pamuku, 2012). it's currently changing into outstanding thanks to increase in monetary scandals. Forensic auditing is associate degree activity that consists of gathering, verifying, processing, analyzing, and reportage on information so as to get facts and proof in a very 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 law-breaking of fraud in numerous organisations. Akintoye (2008) declared that forensic accounting is accounting that's appropriate for legal review, giving the best level of assurance, and as well as the new usually accepted connotation of getting been fell upon in a very scientific fashion and providing the required findings in subsidence disputes. Crumbley (2009) indicated forensic accounting because the action of distinctive, recording, settling, extracting, sorting, reportage and verifying past monetary information or different accounting activities for subsidence current or prospective legal disputes or mistreatment such past monetary information for protrusive future monetary information to settle legal disputes.

Forensic accounting is that the application of accounting information and investigatory skills to spot and resolve legal problems. It's the science of mistreatment accounting as a tool to spot and develop proof of cash flow. These tools and/or techniques, skills and information may be valuable for fraud and forensic accounting investigators. Forensic accounting is that the integration of accounting, auditing and investigatory skills (Dada, Owlabi & Okwu, 2013). Okoye and Gbegi (2013) declared that forensic accounting is additionally referred to as investigatory accounting or fraud audit which it's a merger of rhetorical science and accounting. On what represent rhetorical science, Crumbley (2003) had opined that forensic science focuses on the appliance of the laws of nature to the laws of man. Crumbley refers to forensic scientists as examiners and interpreters of proof and facts in legal cases that additionally needs knowledgeable opinions concerning their findings in court of law. The implication of those views is that forensic science entails the systematic and objective approach to proof gathering by rhetorical accountants for usage within the court of law whenever the requirement arises.

### Forensic Accounting Investigation Techniques

Forensic accounting investigation involves things wherever there are unit prospects that (1) dishonest accounting and reportage has occurred, and (2) there are unit misappropriation of assets (Ranallo 2006.).Forensic accounting investigation tries to spot dishonest transactions by reviewing transactions mistreatment document reviews, interviews, and examination of electronic media. Forensic accounting investigation area unit typically time intense and since the results could also be employed in court reviews, there's a really high proof commonplace that has to be maintained once forensic accounting investigations area unit created.

Forensic accounting investigation typically use interview techniques designed to get associate degree admission of guilt by the person(s) involved the fraud theme (Golden, 2006). The investigations additionally involve elaborate document reviews (Clayton 2006.). It's vital that forensic accountants properly structure the interview method as a result of the results of the interview could also be employed in court and judgment processes. As a result of



the result of the interview could enter a legal method it's vital that the interview method be coordinated with associate degree professional from the auditing organization. The auditors should work at intervals the foundations of the interview method however there area unit areas that they ought to attempt to management to form the interview method work (Golden and skilled worker 2006).

### Forensic Accounting Data Analysis Techniques

Data processing is another key component in rhetorical data analysis techniques (Clayton et al. 2006). {Data mining, data methoding} may be a process wherever the forensic bourgeois appearance for trends, patterns, and anomalies in an information set. If uncommon transactions are in a unit information set they ought to be investigated. Another side of information mining issues the conception of information. Information is information concerning the pc program and file employed in a company. Specific aspects of information can show sure aspects of the pc file including:

- The name of the pc file
- The date the file was created and changed.
- The scale of the file.
- The situation wherever the file was hold on or modified.
- The name of the one that modified the file.

When operating with files the rhetorical bourgeois understands that there's a path of knowledge that's related to a laptop file. For example, for a ledger in AN accounting organization there'll be data to point out the name of the one who modified the ledger. Each amendment to the ledger ought to have the date and time recorded for group action changes. Data also will be gift for different processed systems like e-mail accounts (Clayton et al. 2006).

Metadata review use the pc system to investigate information, it's necessary that rhetorical accountants work with a computer user from their organization to make sure that the review is correctly conducted (Miller & Marston 2006). This permits the rhetorical audit team to review the processed controls within the ADPS. Also, the utilization of a data specialist can avoid issues with accessing information and even destroying the info or creating it useless for the investigation. Additionally to examining the data related to a file like AN accounting ledger, rhetorical accountants review the particular information within the file.

There are an oversized range of systems in organization that contain information that may be helpful to the audit team. Examples embrace personal computers, network servers, phone system information, responsive machines, pagers, known as identification devices, digital cameras, fax machines, printers, scanners, and copiers, security cameras, parking system devices, GPS systems and plenty of others (Miller & Marston 2006).

### Benford's Law

Benford's Law is made by Frank Benford, AN applied scientist performing at the electrical company. Benford's Law claims that the sequence of numbers is usually none uniformly distributed. Frank Benford created Benford's Law by victimisation real information. Daily sales volume,

money disbursements, assets and collectable reports, invoice listings ar expected to follow Benford's Law (Nigrini, 2012). Benford's Law states that the chance of digit one as a primary digit is thirty.10%, the chance of the two, 3, and four used as a primary digit is roughly Revolutionary Organization 17 November, twelve-tone system and 11th of September severally. Consistent with the frequency of leading digit, nine is that the least used range. Benford's Law might not perform well once the sample size isn't giant enough. rhetorical accountants primarily use Benford's Law to examine whether or not sample information are unnaturally created.

### Beneish Model

Beneish Model is one among the foremost outstanding tools within the rhetorical accounting investigations. Beneish model was created by Messod Daniel Beneish, AN accounting academic in Indiana University. The variables employed in this model ar derived from the record and profit and loss statement of the business entity (Beneish, 1999). Beneish Model allows rhetorical accountants to investigate monetary statements of corporations from totally different views.

Beneish Model states that the subsequent variables have important potential to find monetary data manipulation perpetrated by business entities; days' sales in assets index, quality quality index, total accruals to total assets, leverage index, sales, general and body expenses index, sales growth index, depreciation index, and margin of profit index. Beneish Model reveals that larger will increase in days' sales in assets, larger accruals, larger decreases in gross margins and quality indicators of economic data manipulation.

### Forensic Accounting Technology

Forensic accounting technology like OCR (Optical Character Recognition) helps the forensic accountants to go looking documents for keywords and kind documents by date ranges (Chris,2020). He any states that AI (Artificial Intelligence) technology may also analyse information quicker than people in general might ever do. It makes the work of the rhetorical bourgeois a lot of economical, price effective and additionally allows the forensic bourgeois to go looking for relevant documents even quicker. Cloud adoption has additionally facilitate the forensic bourgeois performs the work easier and economical. It permits documents to be shared remotely to save lots of time among colleagues and purchasers (Chris, 2020). Cloud adoption could be a model for facultative convenient, on-demand network access to share pool of configurable computing resources that may be quickly provisioned and free with smallest management effort or service supplier interaction (Mell & Grance, 2009). Cloud adoption is perceived as a rising technology and new paradigm for conducting the business activities (Lyer & Henderson, 2010). The service model in cloud adoption ar classified supported the user needs, namely

(1) Infrastructure as a service (IaaS), wherever users have management over the in operation systems, storage, network and applications among the organisation

(2) Platform as a service (Paas), wherever user have the management over applications however not over the Infrastructure

(3) And computer code as a service (SaaS), wherever users solely access services from the service supplier and no management over the applications or infrastructure. the kind of cloud readying are divided into either public cloud (non-exclusive) and personal cloud (exclusive) (Mell&Grance, 2009). The applications cowl a good vary of areas comprehensive of data processing, social media, project management, email, internet development, information storage, accounting, file hosting, and note taking (Shimba, 2010).

### Concept of Revenue Leakages

Generally, revenue leakages are the foremost common kind of frauds in Nigerian universities, and that they occur once A worker uses his position of employment to cause a payment for a few inappropriate purpose or make sure that monies collected don't get to the proper account or aren't recorded properly. Consistent with Hariharan (2009) revenue discharge has been a universal development, gnawing up the profit margins of service of organizations and establishments that by extension embrace Universities. Service suppliers in industries like telecommunication have effective revenue assurance solutions to counter this threat. Though university management could acknowledge the prevalence of revenue discharge, most times they're powerless to pinpoint its supply or amount. specialists like rhetorical accountants thus ar required to assist in characteristic the sources or points of discharge, quantifying the amount of revenue leaked out and additionally offer ways that of interference them.

Revenue leakages might also result from the utilization of incorrect rejection rating or charge systems (Sithole, 2015). The amount of rating or charge accuracy, or the dearth thence, determines the amount of revenue losses. Choson Institute of Public Finance (2005) ascertained that revenue leak happens once there area unit discrepancies between the number of things shipped, and also the amount of things that revenue is being recognized. The auditor ought to make sure that management is playacting a reconciliation of things with to the revenue being recognized therefore on avoid multiple. Revenue leak could be a vital drawback, with Brobdingnagian amounts of compensation lost daily because of in correct valuation, charging, and committal to writing of patient care services and provides. Most organizations have completed that they're missing revenue, however area unit unable to discover the sources of leak and so don't notice the extent of that leak (Eade, 2011). whereas it's obvious that the menace of revenue leakages in universities is a sign that the standard or convention register is deficient and also the control mechanisms of such established area unit faulty to some extent, the involvement of rhetorical accountants is so a positive thanks to addressing these evitable challenges.

### White Collar Crime Theory

The white collar crime was developed by Dame Joan Sutherland (1947), wherever he explicit that a criminal offense committed by an individual of respectable character and high rank within the course of his occupation is mostly not acceptable. He discovered the definition of white collar crime as a criminal offense solely committed by a person associate degreeed was solely committed by people who had an occupation. Criminologists have come back to the agreement that there are 3 ideas to white collar crime:

- a. It happens in a very legitimate activity context.
- b. motivated by the target of economic gain or activity success.
- c. Not defined by direct, intentional violence.

Sutherland's approach to the thought of company crime was completely different from what was norm at that point. He rejected ancient ideas of crime that darned lower socio-economic class and insane personalities, instead of persons of the higher socio economic category (Sutherland, 1983). The white collar crime is understood as a criminal offense committed by an individual of respectable character and conjointly an extremely placed, rank within the course of the person occupation. During this context honourableness defies exactitude of use. The necessity that a criminal offense cannot be a white collar crime unless perpetrated by an individual of high rank is associate degreee unfortunate rationalization, particularly once Sutherian (1983) used the widespread nature of white collar crime to refute class-based theories of crime. He went to notice that a lot of these companies criminal's area unit affluent higher socio-economic class people. He argues that if it are often shown that white collar crimes area unit frequent, a general theory that crime is because of financial condition and its connected pathologists is shown to be invalid. Dame Joan Sutherland revelation of extent of white collar crime created some serious issues for ancient specialiser theories.

Among the assorted theories of causing of crime, Dame Joan Sutherland theory of differential association is exclusive. The speculation states that criminal behaviour is learned through interaction with others or associations, which suggests criminal behaviour is learned through influence instead of inheritance. that's to mention an individual while not 1st being trained to commit a criminal offense isn't capable of inventing criminal behaviour, it suggests that an individual cannot become a criminal while not being influence by others.

The theory of differential association, one among Sutherland's arguments was designed to elucidate criminal and none criminal behaviours, notably individual behaviour. This is often stark distinction to different theories that specify the criticalness of society together with his theory of social structure. He continues by specifying the particular technique and business observe that's being learned as results of differential association. Sutherland's theory of differential association in white collar crime was a general theory of all crime, one who's typically borders on a corny statement of social learning (Albanese, 1995). Fredrichs (2007) opined that the sole means one crime differs from

another is that the background and characteristics of its perpetrators. Most white collar offender’s area unit distinguished by lives of privilege, a lot of it with origins in school difference. It’s calculable that majority of white collar crimes is unseen or if detected, it's not rumoured. this is often attributable to the status of the perpetrators of those crimes, which needs extremely trained and knowledgeable about examiner or investigator just like the skilled forensic accountant to forestall the incidence of such status fraud (Blessing, 2015). The forensic accountant is essential once it involves news criminal offences concerning fallacious practices in any setting.

**III. METHODOLOGY**

This analysis work adopted the survey analysis style that is predicated on the utilization of primary knowledge. The selection of survey analysis style methodology was supported the actual fact that it's wont to observe the population of study and also the reaction of that population to a selected development. The first supply of information of this study concerned the utilization of questionnaires.

**Population and Sample of the Study**

The target population for this study consists of rhetorical investigators of the Economic and monetary Crime Commission (EFCC) and internal audit workers of selected Federal Universities in North east Nigeria. The explanation for the selection of the target population is that they're in a very higher position to supply the relevant data on forensic accounting techniques because it relates to preventing revenue leakages.

**Sample and Sampling Techniques**

A sample could be a fraction of a quest population that has been statistically elect for associate degree in-depth study and on the idea of that the findings are going to be generalized on the complete population. In decisive the sample size; wherever the population is comparatively tiny, you used the entire population as sample size (Morris 2006). The population size of 238 was used because the sample for the study. The analysis adopted the sampling techniques.

**Sample Framework**

Finance and accounts	52
Internal audit	38
Administration	75
External audit/forensic Accounting	66
<b>Total</b>	<b>238</b>

**Source: Field survey, 2019**

**Method of Data Analysis**

This study applied the Regression analysis. Regression analysis describes and evaluates the relationships between a specified dependent variable and one or more independent variables. One can therefore assume that regression is an appropriate statistical method in order to accept or reject the chosen hypotheses. In regression analysis, important assumptions for a valid regression is elaborated and tested in order to ensure that the final regression model is not flawed.

**Model Specification**

The model is specified as follows:

$$PRL_i = \beta_0 + \beta_1FAT_i + \beta_2FADAT_i + \beta_3FAIT_i + v_i \dots (1)$$

Where:

- PRL = Preventing Revenue Leakage
- $\beta_0$  = Intercept of the model
- $\beta_1, \beta_2,$  and  $\beta_3$  are the parameters
- FAT = Forensic Accounting Technology
- FADAT = Forensic Accounting Data Analysis Techniques
- FAIT = Forensic Accounting Investigation Techniques
- $v_i$  = error term

**IV. RESULTS AND DISCUSSION**

Correlations and multiple regression in this study, correlation and multiple regression were applied to check if there area unit excessive correlations between the variables within the model. The matrix are often scanned as a preliminary search for multiple regression. To avoid multiple regression within the sample, there ought to be no substantial correlations ( $R > zero.9$ ) between the predictors (Field, 2005).

**Table 1: Correlation Matrix**

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

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

The correlation result for dependent and independent variables in table 1 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 2: Multicollinearity**

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

From Table 2, 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 3: Model Fitness test**

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

a. Dependent Variable: PRL  
b. Predictors: (Constant), FAIT, FADAT, FAT

Table 3 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 4: Coefficient of Determination and Durbin-Watson Test**

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

a. Predictors: (Constant), FAIT, FADAT, FAT  
b. Dependent Variable: PRL

Table 4 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.

**Table 5: Regression Result**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.449	.206		2.179	.030
	FAT	.202	.057	.217	3.529	.001
	FADAT	.514	.060	.514	8.532	.000
	FAIT	.121	.058	.110	2.075	.039

Table five shows that Forensic accounting data Analysis Techniques (FADAT) includes a positive and important impact on Preventing Revenue Leakages (PRL). This implies that the lot of their area unit rhetorical data Analysis Techniques (FADAT), the lot of it'll result to Preventing Revenue Leakages (PRL). A tenth increase within the level of rhetorical data Analysis Techniques

(FADAT) can cause a fifty one.4% increase in Preventing Revenue escape (PRL).

Forensic Accounting Technology (FAT) includes a positive and important influence on Preventing Revenue Leakages (PRL). This implies increase within the use of forensic Accounting Techniques (FAT), can cause increase within the level of Preventing Revenue escape (PRL). A



tenth increase within the level of rhetorical Accounting Technology (FAT) can cause a twenty.2% increase in Preventing Revenue leakages (PRL).

The relationship between Forensic Accounting Investigation Techniques (FAIT) and Preventing Revenue escape (PRL) is positive and important with constant price of zero.121. It means Forensic Accounting Investigation Techniques (FAIT) brings concerning important increase in Preventing Revenue escape (PRL). a tenth increase within the level of Forensic Accounting Investigation Techniques (FAIT) can cause a twelve.1% increase in Preventing Revenue escape (PRL).

### Test of Hypothesis One

The hypothesis one is restated as follows:

Ho1: Forensic Accounting data analysis techniques cannot reveal the results of revenue leakages in Nigerian federal universities.

The results of the regression lead to Table five, shows that the p-value of forensic data Analysis Techniques (FADAT) is zero.000, the choice rule is that if the p-value is a smaller amount than the extent of significance of zero.05, the null hypothesis are rejected whereas the alternate hypothesis is accepted. However if the p-value is bigger than the extent of zero.05, settle for the null hypothesis and reject the alternate. Since the p-value (0.000) is a smaller amount than the numerous level of zero.05. The null hypothesis is so rejected final that forensic data analysis techniques do reveal the results of revenue leakages in Nigerian federal universities.

### Test of Hypothesis Two

The hypothesis two is restated as follows:

Ho2: Forensic accounting technology cannot stop revenue leakages in Nigerian federal universities. The results of the regression lead to Table five, shows that the p-value of Forensic Accounting Technology (FAT) is zero.001, the choice rule is that if the p-value is a smaller amount than the extent of significance of zero.05, the null hypothesis are rejected whereas the alternate hypothesis is accepted. However if the p-value is bigger than the extent of zero.05, settle for the null hypothesis and reject the alternate. Since the p-value (0.001) is a smaller amount than the numerous level of zero.05. The null hypothesis is so rejected, final that forensic accounting technology do facilitate in preventing revenue leakages in Nigerian federal universities.

### Test of Hypothesis Three

The hypothesis three is restated as follows:

Ho3: Forensic accounting investigation techniques cannot facilitate in preventing revenue leakages in Nigerian federal universities. The results of the regression lead to Table five, shows that the p-value of Forensic Accounting Investigation Techniques (FAIT) is zero.039, the choice rule is that if the p-value is a smaller amount than the extent of significance of zero.05, the null hypothesis are rejected whereas the alternate hypothesis is accepted. However if the p-value is bigger than the extent of zero.05, settle for the null hypothesis and reject the alternate. Since the p-value (0.000)

is a smaller amount than the numerous level of zero.05. The null hypothesis is rejected final that forensic accounting investigation techniques will facilitate in preventing revenue leakages in Nigerian federal universities.

## V. CONCLUSION AND RECOMMENDATION

In this study, empirical analysis was conducted to work out the impact of forensic accounting techniques in preventing revenue leakages in Nigerian Federal Universities. supported the findings of the analysis conclusion area unit drawn with specific regard to the Nigerian Federal Universities: that the applying of forensic accounting data analysis techniques by forensic consultants can facilitate within the interference of revenue leakages in Nigerian Federal Universities; that the applying of forensic accounting technology will forestall revenue leakages within the Nigerian Federal Universities; which forensic accounting investigation techniques also will facilitate in preventing revenue leakages in Nigerian Federal Universities.

### RECOMMENDATIONS

The following recommendations area unit created supported the findings of this study:

- i. Forensic accounting data analysis techniques are unit digital techniques use to look at structured data with regards to money crime. It helps to get and analyse patterns of dishonourable activities. Therefore, it's suggested that forensic accounting data analysis techniques ought to use within the Nigerian Federal Universities to assist checked revenue leakages within the system. Relevant regulative authorities will facilitate to make sure that this can be done.
- ii. The study suggested that forensic accounting technology ought to be deployed and applied in Nigerian Federal Universities to forestall revenue leakages. This can be as a result of forensic accounting technological tools that discovered to be terribly effective in detection of any dishonourable activities as a result of digital info. Conjointly it permits the forensic accountants to go looking for documents' key words and kind documents by date ranges mistreatment laptop. Nigerian Federal Universities will acquire or develop these types of digital tools that have found to be useful to find economic and money crimes.
- iii. The study suggested that forensic accounting investigation techniques will be used frequently wherever necessary to curb revenue leakages in Nigerian Federal Universities.

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