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# FORENSIC ACCOUNTING TECHNIQUES AND FINANCIAL CRIMES IN NIGERIA: EMPIRICAL INVESTIGATION FROM OIL AND GAS COMPANIES

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***ABSTRACT***

***This study investigated the effect of forensic accounting techniques on Financial Crimes in Nigeria's Oil and Gas sector. This study adopted a survey research design. The target population for this study was 206 staff of 8 major marketers in oil and gas company in Nigeria. The study collected primary data from the partakers through a structural questionnaire. The Primary data was obtained from the use of structured questionnaires. The population was two hundred and six (206) employees of the Audit and finance/Account department s from the 8 major marketers oil and gas company in Nigeria. The sample size was one hundred and thirty-six (136) respondents using stratified Sample technique with the use of Taro Yamane (1967) Model. Data were obtained through the use of a well-structured questionnaire. Descriptive and inferential (regression) statistics were used for data analysis. The findings revealed that there is a significant effect of forensic accounting techniques on misappropriation of assets in the oil & gas company in Nigeria with the Model fitting information telling how well model fit the data resulting in (P = 0.001) which is below the significant level. The Study concluded that forensic accounting techniques measured by forensic accounting technique knowledge (FATK), forensic accounting analytical technique (FAAT) and Forensic accounting technical knowledge (FATK) are significant factors***

***that affect financial crimes in Nigeria's oil and gas company in Nigeria should implement the conceptual framework of forensic accounting technique into organization management in order to prevent misappropriation of assets.***

***Keywords: Forensic Accounting Technique, Forensic accounting technical knowledge, Forensic accounting analytical technique, Financial Crime, Misappropriation of Assets***

**Word Count:** 244

## 1.0 Introduction

Financial crime has become a challenge to the world economy. Mukoro (2019) noted that corruption and other fraudulent activities remains a serious menace to the economy of any nation including the society where it exists. Essentially, literature was washed with the identification of corruption as the cause of economic retardation in developing economies from Africa, Asia to Latin America (Akinbowale, 2018).

Despite the stride of the government in curbing financial crimes in Nigeria by establishing EFCC (Economic and Financial Crimes Commission) and ICPC (Independent Corrupt Practices and Other Related Offences Commission), the menace continued unabated in an increased tempo. For example, in 2013, a former CBN Governor, Sanusi Lamido Sanusi pointed out a fraud of USD20 billion from oil sales under the Nigerian National Petroleum Corporation (NNPC) and when the case was investigated by the PwC, the report indicates a mismanagement of 294.5 billion naira (USD965 million then) under the management (EFCC, 2017). Another was the federal government's review of the subsidy regime. The government claimed the process was fraught with a lot of frauds, thus, it reviewed the subsidy and now petroleum is being sold at #165 per litre and there are indications that the price might still be upped in the near future when the government totally takes its hands off the subsidy (Wada & Crumbley, 2021).

Ehioghiren and Atu (2016), as well as Onodi, Okafor and Onyali (2015), posited that financial crimes comprise subsidy fraud, advance fee fraud, identity fraud, bank fraud, mortgage fraud, cheque fraud, embezzlement, credit card fraud, hedge fund fraud, consumer fraud, and occupational fraud. Gottschalk (2018) noted that financial crimes are categorized into four groups which comprise: theft, fraud, manipulation, and corruption while these crimes are perpetrated by individuals, organized persons as well as institutions (Ehioghiren & Atu, 2016).

Forensic accounting as a field in accounting is gradually attracting attention due to the persistent occurrence of frauds and other related financial crimes in both the private and public sectors of the economy. In the view of Shanikat and Khan (2020) forensic accounting is a specialized scientific approach, deemed as an efficient and effective institutionalized framework to be readily applied to radically tackle the ugly monster of fraudulent practices in the Nigerian Oil and Gas sector. Ozumba (2016) looked at forensic accounting as the utilization of accounting, auditing, and investigative skills to assist in a legal matter and apply the specialized body of knowledge to the evidence of economic transaction and reporting suitable for court proceeding and accountability.

Crumbley (2020) saw forensic accounting as an amalgam of forensic science and accounting which based on the application of accounting, auditing, investigative and analytical skills to resolve financial issues in a manner that meets standards required by the court of law. It was stated that forensic accounting involves the application of accounting concepts and techniques to a legal problem (Coenen, 2015). It demands reporting, where the accountability of the fraud is established and the report is considered as evidence in the court or the administrative proceeding.

**Statement of the Problem**

Financial crimes have severe consequential effects on the society, organisation as well as on the economy, the investors and Foreign Direct Investment (FDI) (Jain, 2020). At the society level, financial crimes lead to human cost, such as, prostitution, human trafficking and child labour as well as terrorist financing (a term which means the raising and processing of funds and assets to enhance terrorism) (Jain, 2020). On the organisational level, financial crimes does not only impacts brand reputation, value, goodwill and revenue negatively but also triggers monetary losses and litigation cost as a result of non-compliance with regulations (Jain, 2020). On the effects of financial crimes on FDI and investors, Afriyato (2017) noted that financial crimes have significant impact on FDI and thus, discourage investors. According to Afriyato (2017), for every ten percent (10%) increase in total financial crime rate by one hundred thousand (100,000) people, FDI decreases by approximately 0.95 percent (%).

**Objective**

The objective of the paper was to examine the effect of forensic accounting techniques on misappropriation of assets in the oil and gas companies in Nigeria.

**Hypothesis**

$H_0 1$: There is no significant effect of forensic accounting techniques on misappropriation of assets in the oil and gas companies in Nigeria.

**Literature Review**

**2.1 Conceptual Review**

**Financial Crime**

The term financial crime has no universally agreed definition but just a set of descriptions as viewed by different scholars (Akanni & Ogbeide, 2017). To Wada and Crumbley (2021), financial crime refers to a predetermined and planned tricky device or process pursued by a person or group of persons solely to cheat another person or organisation in order to get an ill-gotten advantage which might not be so if such dubious undertaking and deceptive procedures were not used. The term financial crimes incorporates actions such as, cronyism, bribery, corruption, kickbacks, political donations, artificial pricing as well as all kinds of frauds (Ekechukwu, Chidubem & Mbah, 2018). In organisations, financial crimes vary in character, nature, as well as in the method of operation. According to Efosa and Kingsley (2017), identification of frauds and the causes is very tedious in the present world as issues of frauds always involve a complex network of conspiracy and falsehood which hides the actual causes. Before a crime can be committed in an organisation, it does involve the knowledge of the staff (insiders) and that of the outsiders who connive to perpetrate the fraud (Akanni & Ogbeide, 2017).

**Misappropriation of Assets**

Kolawole, Salman, Durodola & Babalola (2018) defined asset misappropriation fraud as a form of internal fraud which happens when people entrusted to manage the assets of an organisation steal from it. Asset misappropriation fraud involves third parties or employees in an organisation who abuse their position to steal from it through fraudulent activity. It can also be known as insider fraud. This type of fraud can be committed by company directors, or its employees, or anyone else entrusted to hold and manage the assets and interests of an organisation (Nwaiwu & Aaron, 2018). According to Friedrich,Schoultz and Jordanoska (2018), the assets stolen are cash or cash equivalents, such as credit notes or vouchers and it can extend to include company data or intellectual property. At one end of the scale, asset misappropriation fraud may be limited to isolated cases of expense fiddling or an employee lying about his or her qualifications to get a job. At the other end, it might involve organised crime groups infiltrating organisations to take advantage of weak processes and inadequate internal systems and controls

**Forensic Accounting Techniques**

Oyedokun (2019) defined forensic accounting as a scientific method which uncovers, resolves, analyzes, and presents fraud matters in a manner acceptable in courts of law. Shanikat and Khan (2020) opined that forensic accounting, given its investigation peculiar stance, needs a special skill-set from on the part of the forensic accountant in order to incorporate investigative skills to his accounting and auditing skills.

Owolabi, Dada and Olaoye (2018) saw forensic accounting as suitable for legal reviews as it offers the highest level of assurance including newly acceptable connotation of arriving in a scientific fashion and providing the needed findings in settling financial disputes. Forensic accounting refers to the application of analytical and investigative skills for the purpose of resolving financial issues in a manner that meets standards required by court of law. Forensic accounting is also defined as the application of accounting concepts and techniques to legal problems (Abdulrahman, 2019).

**Forensic Accounting Technology Knowledge**

There is significant literature on forensic auditing. For instance, Honigsberg (2020) relates the word forensic to the application of knowledge to legal problems such as crimes. This definition traces the history of forensic auditing and its application in litigation support. Forensic is as old as history but its usage got little attention in the past. It is now becoming prominent because of increase in financial scandals. Forensic auditing according to Gbegi & Adebisi (2014) is an activity that consists of gathering, verifying, processing, analyzing, and reporting on data in order to obtain facts and evidence in a predefined context in the area of legal/financial disputes and/or irregularities and giving preventive advice (Mohd & Mazni, 2018).

**Forensic Accounting Analytical Technique**

Onodi, Okafor and Onyali (2015) are of the opinion that forensic accounting analytical skills are required to analyse the occurrence of financial crimes due to the incidence of fraud and misappropriation of funds. According to them, the analytical technique is required in recent time where there is a threat to traditional auditing as a branch of accounting profession. The analytical skill is concerned with the careful examination of evidence and nature of accounting data to perform risk assessment and detect financial misrepresentation as well as financial statement fraud (Rick & Iyer, 2015).

To enhance analytical technique, a forensic accountant must possess the following characteristics/qualities: curiosity, persistence, creativity, discretion, organization, confidence, and sound professional judgement (Onodi, Okafor & Onyali, 2015).

**Forensic Accounting Investigation Techniques**

Amahalu, Ekechukwu and Obi (2017) defined forensic investigation as the application of investigative and analytical skills for the purpose of resolving financial issues in a manner that meets standards required by courts of law. It is the integration of accounting, auditing and investigative skills (Dada, Owolabi & Okwu, 2013). According to Okoye, et al (2020), forensic investigation are essential to the legal system, providing expert services such as fake invoicing valuations, suspicious bankruptcy valuations, and analysis of financial documents in fraud schemes. Wada and Crumbley (2021) defined forensic science as the application of laws of nature to the laws of man. He described forensic scientists as examiners and interpreters of evidence and facts in legal cases that also offers expert opinions regarding their findings in court of law.

**Theoretical Framework**

**The Fraud Triangle Theory**

The Fraud Triangle Theory was propounded by Donald Cressey in 1953. The theory was premised on the provision of answers to the reasons for the violation of trust by engaging in financial crimes. Cressey- a criminologist argued that, there must be a reason for all human engagements. Dorminey, Fleming, Kranacher and Riley (2010) traced the origin of this theory to the work of Sutherland who coined the word "White Collar Crime" and Cressey as one of his disciples, improved on his work and propounded the Fraud Triangle. In the Fraud Triangle Theory, Cressey identified three key elements that led people to commiting fraud in any organisation. These are: (1) perceived pressure (2) opportunity and (3) rationalisation. On perceived pressure, Cressey (1953) stated that perceived pressure can be seen when people in a position of trust conceive themselves as having some financial obligations that must be satisfied any means possible- private or secret. Then, perceived opportunity occurs when such individuals see a way to use their position of trust to solve the financial obligations, with the knowledge that they are unlikely to be caught while for rationalisation, Cressey said such offenders now see themselves as honest individuals who are just caught in the act because they are first-time offenders with no such criminal records before. With this, they justify their actions in a way that makes it justifiable and acceptable. Explaining the three elements of the Fraud Triangle Theory, Albrecht (2008) likened them to oxygen, fuel and heat. To Albrecht, these three are needed for a fire to be made, the absence of them gives no fire. Thus, the presence of perceived pressure, perceived opportunity and rationalisation gives rise to financial crimes while the severity of such crime depends on strengths of each element.

**Empirical Review**

Aibieyi (2017) studied anti-corruption strategies and development in Nigeria, laying focus on the Independent Corrupt Practices Commission (ICPC) and Economic and Financial

Corruption Commission (EFCC). Employing the historical and observational method, the study found that the existing anti-corruption agencies are trying their best to curb corruption in Nigeria but that greediness and political instability are some of the primary causes of corruption while government's lack of will to indict some past and present public office holders, inadequate and ineffective legislation on corruption is responsible for the high level of corruption in Nigeria today. Akinbowale (2018) using parsimonious error correction mechanism in studying crowding out effects of corruption and its destabilizing implications on the economic growth of Nigeria, employed experimental research design approach for the data analysis, which combined theoretical consideration (a priori criteria) with empirical observations and extracted maximum information from the available data. Using Regression Analysis the study showed that there is a negative relationship between corruption and output growth in Nigeria. He recommended that the government should strengthen the previous efforts in programs like Code of Conduct Bureau, ICPC, EFCC, etc. in attempting to eradicate corruption. Noah (2019) evaluated financial fraud control in Nigerian Universities, using the University of Ilorin as a reference point; applying the two-tailed Z-test in testing the hypothesis, the study established that control measures have significant impact in curbing financial fraud in thea university system.

In a study titled: "Forensic Accounting; a Panacea to Alleviation of Fraudulent Practices in Nigeria", Dada, Owolabi, and Okwu (2013) employed Multiple Regression Technique in their analysis and ascertained that fraud reduction is significantly and positively related to fraud investigation and detection through forensic accounting. This implied that forensic accounting can be employed by fraud control agents (anti-graft agencies) in detecting and controlling frauds in the country.

In his study, Nwagwu (2018) carried out an appraisal of Economic and Financial Crimes Commission (EFCC) and the War against Corruption in Nigeria (1999 – 2007). The study which is predicated on structural functionalism as a theoretical framework, revealed that there is no genuine commitment of the government or its agencies to fight corruption. Undue influence of the government hindered the effectiveness and efficiency of the agency. The implication of this is that the anti-graft agency has not demonstrated outstanding effect in curbing corruption, which thus implies that its existence has not served any remarkable purpose in Nigeria economic development.

**Methodology**

This study employed survey research design. The Population of this study consisted of 206 employees of Finance and Audit departments of 8 major marketers (Mobil Oil, Total, Oando, Conoil, Capital Oil, Eternal Oil, Forte Oil, MRS Oil) in the oil and gas companies of downstream sector which were listed on the Nigeria Stock Exchange as at 31st December, 2021. The sample size consisted of 136 staff/employees of both Account and Audit departments of 8 major marketers of oil and gas company listed on Nigeria Stock Exchange operating at downstream sector using Taro Yamane Formula. Data was analyzed using inferential statistics.
Taro Yamane (1967) formula as:

n = $n = \dfrac{N}{\left(1 + N(e)^2\right)}$

where N = population size, n = the sample size, *e* is the margin error, which could be at 10%, 5% or 1%.

$$n = \frac{206}{\left(1 + 206(0.05)^2\right)}$$

$$n = \frac{206}{\left(1 + 206(0.0025)\right)}$$

$$n = \frac{206}{\left(1 + 0.515\right)}$$

$$n = \frac{206}{\left(1.515\right)}$$

$$n = 135.9$$

$$n \quad 136$$

**Model Specification**

MAA = $\beta_0 + \beta_1$ FAIT +$\beta_2$ FATK + $\beta_3$ FAAT + $\mu$

**Where**

$\beta_{0\,=}$ Constant

$\beta_{1,}\, \beta_{2,}\, \beta_{1\,=}$ Parameter estimates

MAA = Misappropriation of Assets

FAIT = Forensic Accounting Investigation Technique

FATK = Forensic Accounting Technical Knowledge

FAAT = Forensic Accounting Analytical Technique

$\mu$ = Error term

## 4.0 Results and Analysis

## Test of Hypothesis

| | **Ordinal Regression Analysis** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **Coefficients** | **Std. Error** | **Wald** | **df** | **Prob** | **95% Confidence Interval** | |
| | | | | | | | Lower Bound | Upper Bound |
| Location | FAIT | 0.023 | 0.036 | 0.397 | 1 | 0.529 | -0.048 | 0.094 |
| | FATK | 0.079 | 0.029 | 7.511 | 1 | 0.006 | 0.022 | 0.135 |
| | FAAT | 0.012 | 0.034 | 0.116 | 1 | 0.733 | -0.055 | 0.079 |

| **Diagnostic Tests** | Statistics | Prob |
|---|---|---|
| Model Fitting | 627.242 | 0.001 |
| Goodness of Fit | | |
| Deviance | 1834.945 | 0.991 |

| | | |
|---|---|---|
| Pearson | 627.242 | 1.000 |
| Pseudo R-Square | 0.134 | |
| Test of Parallel line | 62.389 | 0.391 |

Dependent variable: MAA ***significant at 5%**

**Source: Author's Computation (2024)**

**Interpretation**

MAA = $\beta_0 + \beta_1$ FAIT + $\beta_2$ FATK + $\beta 3\text{FAAT} + \mu$

MAA = $\beta_0$ + 0.023 FAIT + 0.079 FATK + 0.012 FAAT

The result of the analysis indicates that Forensic accounting techniques proxy by Forensic Accounting Technology Knowledge (FATK), Forensic Accounting Investigation Technique (FAIT) and Forensic Accounting Analytical Technique (FAAT) are positive predictors of misappropriation of assets in the oil and gas companies in Nigeria.

For every one unit increase in Forensic Accounting Investigation Technique (FAIT) there is a predicted increase of 0.023 in the log odds of falling at a higher level in the misappropriation of assets in the oil and gas companies in Nigeria. This indicate that Forensic Accounting Investigation Technique (FAIT) were likely to indicate greater prevention of misappropriation of assets. Although the probability of Wald statistic is 0.529, this indicates that Forensic Accounting Investigation Technique (FAIT) was not a significant predictor in the model.

The second Predictor variable is Forensic Accounting Technology Knowledge. The result indicates that for every one unit increase in Forensic Accounting Technology Knowledge (FATK) there is a predicted increase of 0.079 in the log odds of falling at a higher level in the misappropriation of assets in the oil and gas companies in Nigeria. This indicate that Forensic Accounting Technology Knowledge were likely to indicate greater prevention of misappropriation of assets. Also, the probability of Wald statistic is 0.006, this indicates that Forensic Accounting Technology Knowledge (FATK) was a significant predictor in the model.

Also, the third Predictor variable is Forensic Accounting Analytical Technique, for every one unit increase in Forensic Accounting Analytical Technique (FAAT) there is a predicted increase of 0.012 in the log odds of falling at a higher level in the misappropriation of assets in the oil and gas companies in Nigeria. This indicate that Forensic Accounting Analytical Technique (FAAT) were likely to indicate greater prevention of misappropriation of assets. Although the probability of Wald statistic is 0.733, this indicates that Forensic Accounting Analytical Technique (FAAT) was not a significant predictor in the model.

To determine how well the model fits the data, the parameter of the model fit information will be used. The model fitting information tells how well model fit the data. The result is 0.001 which is below the significant level. Significant value indicates that the model fit the data set. Hence, we accept the alternate hypothesis that state that there is significant effect of forensic accounting techniques on misappropriation of assets in the oil & gas companies in Nigeria.

**Findings**

Based on the position of previous empirical studies, it is observed that this result conforms with the evidence of Noah (2019) that evaluated financial fraud control in Nigerian Universities, using the University of Ilorin as a reference point. The application of the two-tailed Z-test in testing the hypothesis shows that control measures have significant impact in curbing financial fraud in the university system. Also, the result is in consonant with the findings of Dada, Owolabi, and Okwu (2013) that employed Multiple Regression Technique in their analysis and ascertained that fraud reduction is significantly and positively related to fraud investigation and detection through forensic accounting. This implied that forensic accounting can be employed by fraud control agents (anti-graft agencies) in detecting and controlling frauds in the country. However, the result deviates from the findings reported by Nna and Jacob (2012) and Inokoba and Ibegu (2018) shows that the institution of the anti-graft agency, EFCC, in tackling the evil of political corruption has even made the issue more complex.

**Conclusion and Recommendations**

Following the empirical findings, it is concluded that the only principal element of forensic accounting techniques that significantly reduces misappropriation of assets in the oil and gas companies, is forensic accounting technology knowledge. It is therefore recommended that it is imperative to enforce the implementation of the conceptual framework of forensic accounting technique into organization management in order to prevent the misappropriation of assets of the oil and gas companies in Nigeria. Hence, this approach will ensure adequate management of scarce resources of the organization to yield profitable returns in the industry.

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