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Forensic Accounting Techniques and Procurement Practices in Federal Government Parastatals of Nigeria

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Abstract

Purpose: The application of forensic accounting techniques in public procurement practices helps to maintain value for money. Loss attributable to fraud in the public sector environment due to leakages in procurement practices, which in turn affected the economic growth and development of the nation. Evidence from literature showed that many public sector of Nigeria have not deployed forensic accounting techniques in deriving maximum value from government spending. Hence, the study investigated the effect of forensic accounting techniques on procurement practices in public sector of Nigeria. This study therefore examines the effect of forensic accounting techniques on procurement practices in Federal Government parastatals in Nigeria. The study adopted survey research design.

Methodology: The population of the study was 5 federal government agencies. Purposive sampling technique was used to select 2 agencies. The target population of the study was 131 accountants in the two agencies chosen- Nigeria Port Authority and Nigeria Civil Aviation Authority. Total enumeration was adopted. A validated and structured questionnaire was used to administer 131 copies of the questionnaire to

the respondents. 126 copies were retrieved which represented 96% retrieval rate. The Cronbach alpha reliability coefficients ranged from 0.740 – 0.892. The data were analyzed using descriptive and inferential (multiple regression) statistics at 5% level of significant.

Findings: The result found that forensic accounting techniques had significant effect on value for money practice in public sector of Nigeria (Adj. $R^2 = 0.299$; $F(6, 125) = 14.352, p < 0.05$).

The result also found that forensic accounting techniques had positive significant effect on procurement practices (Adj. $R^2 = 0.270, F(6, 125) = 12.562, p < 0.05$). The study concluded that forensic accounting techniques influenced value for money practices (measured by procurement practices) in federal public sector of Nigeria.

Recommendations: The study therefore recommended that government should formulate policy that will mandate the use of forensic accounting techniques in order to avoid leakages and achieve value for money in government businesses.

Keywords: *Forensic Accounting Techniques, Procurement Practices, Public Sector, Value for Money Practices*

1.0 INTRODUCTION

It is often said that beauty is indeed in the eyes of the beholder, this can be the situation of value too. This is based on the fact that we see things differently and from different perspective, this therefore makes value for money especially in the public sector and fraud practices a contemporary issue for discussion. Dada and Jimoh, (2020) opined that fraudulent diversion of public funds has been in existence for along time in Nigeria and if not curbed, might result to worse state of the economy than one we are currently experiencing. Eze and Okoye, (2019) posited that different measures have been implemented by the federal government to lessen, if possible eliminate series of fraudulent activities, but still its existence keeps extending which makes the general public lose confidence in the government and even the country. Esu and Inyang, (2019) opined that public sector in Nigeria has suffered setbacks largely due to ineffective and inefficient management, adding that there is a general opinion that most of the public enterprises have failed to deliver on the purposes for which they were established. This supports the assertion of Tokunboh, (1990) that management ineffectiveness and inefficiency have been found to be the bane of the Nigerian public sector.

Forensic accounting according to Crumbley, Heitger and Smith (2015) is the specialty practice area of accounting that describes engagements that result from actual or anticipated disputes or litigation. Forensic means suitable for use in a court of law and it is with that standard and potential outcome that forensic accountants generally have to work. It further explained that forensic accounting and fraud investigation methodologies are different from internal auditing. Sule, Ibrahim and Sani (2019), reiterates that forensic means relating to, used in or appropriate for courts of law or for public discussion or argumentation while accounting means a system that provides quantitative information about finances. Forensic accounting therefore is the application of accounting skills to provide quantitative financial information about matters before the courts (Mclaren & Trefanenk, 2012).

Evidence from Nigeria as reported in the study of Azih and Okoli (2019) shows that forensic accounting practice is an important tool used for fraud detection in public sectors in Nigeria. The administrative competence of performance of some public sectors in Nigeria has been faulted by poor credibility of some of these ministries/departments/agencies. There are over estimation of government projects, cases of abandoned projects, payment of salaries to ghost workers amongst others. Some of these projects mobilization fees have been paid for and yet to be executed. Achua (2009) explained that serious consideration is being given to the need to be more accountable for the vast amount of investment in resources at the command of government, which exercises administrative and political authority over the actions and affairs of political units of people.

Blessing, (2015) stated that major financial frauds from the past and the beginning of this century have made compulsory the need for deeper investigation of irregularities in the area of financial reporting. In many quarters, forensic accounting/investigation is equated to financial audit but they appear to be miles apart. Forensic accounting arises from the effect and cause of fraud and technical errors made by human and it is usually described as the integration of accounting and auditing skills with investigative techniques and professional skepticism. According to Nosiri, Uwakwe, Nnenna and Mary-fidelis (2020), forensic accounting can be described as the application of financial skills and investigative mentality to unsettled issues relating to poor practice of value for money, conducted within the context of rules of evidence. As a result of this foregoing, the present study seeks to determine the relevance of forensic accounting techniques to

value for money practices in federal government ministries/departments/agencies of Nigeria.

Statement of the Problem

In recent times, several incidences of fraud have been experienced both in the public sector and private sector of the economy. These in no doubt are committed under the watch of the internal auditors of those organizations either privately owned or public. It suffices to say that the independent of the internal auditor is not guaranteed because he works as an employee of the government or organization. Then come the idea of external auditors, yet frauds are still being committed on a daily basis. The scenario mentioned indicates that fraudulent practices become inevitable where necessary measures are not put in place.

Asusu, (2019) observe that incidence of fraudulent activities in Nigeria is increasing especially in the public sector and they argued that these activities are mostly perpetrated through the procurement process. This suggest that the principle of value for money as opined by PwC, (2021) with regards to economy which ensure the least purchase price for goods and services at good quality is in jeopardy. This is one of the reasons Kasum, (2009) also said the continuation of financial irregularities through procurement are becoming the specialty of both private and public sector in Nigeria as individual perpetrates fraud and corrupt practice according to the capacity of their office.

Adegbie and Fakile, (2012) posited that forensic accounting technique is a financial strategy to curb and resolve economic and financial crimes in Nigerian economy. Mukoro, Yamusa and Faboyede (2013) observed that forensic accountants play significant role in curbing crime and corrupt practices with regards to economy in any public sector since they provide the mechanism to hold people accountable, such that those who manage resources in a fiduciary capacity do not easily abuse that trust without detection. It now become pertinent based on the problems identified above for this study to investigate the relevance of forensic accounting techniques on value for money practices (measured by procurement practices) in federal government ministries/departments/agencies of Nigeria.

The main objective of this study was to investigate the effect of forensic accounting techniques on value for money practices in the public sector of Nigeria. The specific objective was to investigate the effect of forensic accounting techniques on procurement practices in federal government parastatals in Nigeria. Fraud and fraudulent activities are becoming more common in Nigeria. This study addressed two issues which exist as gap in literature sited above. Firstly, it was found that forensic accounting practice measures used in literature (Eze & Okoye, 2019; Olowolaju, 2018 and Safiyanu, Saifullahi, Armaya'u, 2019) include only three major proxies which are investigation of fraud, expert witnessing and litigation. However, the present study included surprise cash count audit as another proxy which is adjudged in literature to be a veritable technique in curbing fraud in organizations. Secondly, the present study focus on investigation of the effect of forensic accounting techniques on value for money practices in the public parastatals (federal level) of Nigeria, this differs from what has been done in prior studies as their focus was on either private sector or state parastatals of the public sector of Nigeria, hence the need for this study.

2.0 LITERATURE REVIEW

Forensic Accounting Techniques

Forensic accounting is the application of accounting, auditing, and investigation abilities to produce a thorough report on a fraud case that may be used as evidence in a court of law or an administrative process. According to Taiya, Mbasiti, Yohanna and Ojaide (2021) forensic accounting is a specialty field of accounting that deals with the detection of financial wrongdoing and the preparation of reports suitable for use in a court of law.

Singleton and Singleton (2010), are of the opinion that in performing tasks, forensic accountants use economic theories, business information, financial reporting systems, accounting and auditing standards and procedures, data management and electronic discovery, data analysis techniques for fraud detection, evidence gathering and investigative techniques, and litigation processes and procedures (Erasmus, 2021).

Forensic accounting technique is appropriate for legal examination because it provides the highest level of certainty, as well as the newly accepted connotation of having been arrived at in a scientific manner and delivering the necessary conclusions in resolving disputes (Akintoye, 2008). According to Jafaru, (2011) forensic and investigative accounting should be viewed as the application of financial abilities and an investigative attitude to address unsolved difficulties within the context of the rules of evidence. Forensic accounting is a combination of financial abilities and a sharp investigative mindset that allows you to assess the data you have at your disposal and come up with an explanation. From the perspective of an economist, Mukoro, Yamusa, and Faboyede (2013) believe they are particularly effective at estimating economic loss, damage, and social harm because they are familiar with the assumptions, algorithms, and calculations in econometric models and opportunity cost scenarios, and can measure and quantify things like loss of goodwill and reputation.

Procurement Practices (Economy)

Economy in a simple manner is spending less. It is concerned with minimizing the cost of inputs used for an activity having regard to appropriate quality. That is, it has to do with the acquisition of resources in appropriate quality and quantity at minimum cost. Kalubanga & Kakwezi (2013), Nwosu and Mshelia (2015), stated that the term "economy" refers to the terms and conditions under which the government obtains suitable quality and quantity financial, human, and physical resources at the lowest possible cost.

The term "economy" refers to acquiring the correct amount of something at the right time, in the right place, for the right price. Due to a lack of efficiency in collecting resources, the cost of products or services of adequate quality, quantity, or timeliness may be greater than necessary. VfM is now a fundamental criterion against which procuring and disposing entities must defend procurement outcomes in the context of public procurement. Public service providers must also show their communities that they are providing greater value for money by addressing not only efficiency but also effectiveness in delivery Kalubanga & Kakwezi (2013). Public fund or financial management is the process of planning, organizing, procurement and utilization of government financial resources and also formulation suitable policies in order to achieve the expectations of the public. It is a link between community's expectation and actual results (Ugwu 2021).

Theoretical Framework

This study was anchored on two of theories reviewed which are Fraud diamond and Fraud star. The concept of Value for Money practice: procurement practices (economy) in public sector organisations advocates that public funds should be put to the best possible use and that those who conduct public business should be accountable to the economical, efficient and effective management of the resources entrusted to them. The value for money practice in the public sector can be impaired by fraud and corruption.

Fraud diamond and Fraud star are framework commonly used in auditing to explain the motivation behind an individual's decision to commit fraud and it outlines four components (opportunity, pressure, capacity and rationalization) that contribute to increasing the risk of fraud. In which a fraudster who understands and is capable of exploiting internal control weaknesses and using the position; function or authorized access to the greatest advantage. Fraud star concept is an expansion of fraud diamond theory, in which an appropriate punishment is seen as a factor that can affect fraudster's decision of committing the crime or not especially in the public sector.

3.0 METHODOLOGY

The research design adopted for this study was survey research design where qualitative method of data collection and analysis was used to investigate the effect of forensic accounting techniques (represented by Investigation of Fraud, Expert Witness, Litigation Services and Surprised Cash Count) on value for money practices (represented by Procurement Practices in public sector of Nigeria. Similar studies (Ugwu, 2021; Okoye, Adeniyi & James, 2019; Eze & Okoye, 2019) have adopted this design in literature. The population of this study comprised of all Accountants above level 8 in the Ministries, Department and Agencies (MDAs) of Nigeria that are federally owned with their office in Lagos state. These were choosing due to its large size of the target population and because the study was constrained by time to investigate all federally owned MDAs in all states. In selecting the respondents, purposive sampling techniques was used. The purposive sampling was used to pick only those agencies that gave audience and access to the researcher for the purpose of gathering data that gave the best information in order to satisfy the research objectives in question. Therefore, only Nigeria Port Authority (NPA) and Nigeria Civil Aviation Authority (NCAA) were used as the sample frame for the study due to possibility of accessibility. The accountants in these two agencies that are in Lagos are 94 and 37 respectively. As a result, total enumeration was used, hence the sample size of 131 accountants. This study used primary source of data (questionnaire) to explore the relevance of forensic accounting techniques on value for money in federal public sector organization in Lagos state. The result of the Cronbach Alpha for each of the variable is presented and evidenced from the table below; it is safe to conclude that the instrument reliably and consistently measures what it intends to measure. The instrument used in this study was considered reliable if the Cronbach's alpha of its scales are or above 0.7.

Table 1: Reliability of Variables' Measurements

Variables of Study	Cronbach's Alpha	Number of Questions
Investigation of fraud	0.868	6
Expert Witnessing	0.892	5
Litigation Services	0.790	5
Surprise Cash Count Audit	0.845	5
Procurement practices	0.813	5

Source: Researcher's Pilot Study (2022)

The study employed quantitative method of analysis with the aid of SPSS software. The study employed survey research design to examine the effect of forensic accounting techniques on value for money practices. For hypotheses tested in this study, simple, multiple regression method of analysis was employed and the tests was conducted at 5% significance level.

A Priori Expectation

It was expected that the measures of forensic accounting techniques would have positive effects on value for money practices in the public sector organization of Nigeria. Thus, $\beta_{1-4} > 0$

Table 2: A-Priori Expectation

Variables	Coefficients Sign
Investigation of fraud	$\beta_1 > 0$
Expert Witnessing	$\beta_2 > 0$
Litigation Services	$\beta_3 > 0$
Surprise Cash Count Audit	$\beta_4 > 0$

Source: Researcher's Pilot Study (2022)

4.0 FINDINGS

Research Hypothesis

Forensic accounting techniques have no significant effect on procurement practices in federal government parastatals in Nigeria.

Table 3: Regression Analysis for Model

	Multiple Regression Analysis						
	Coefficients		Std. Error	T	prob	Collinearity Statistics	
						Tolerance	VIF
Predictors	(Constant)	0.780	0.594	1.312	0.192		
	IF	0.691	0.142	4.872	0.000	0.807	1.239
	LS	0.009	0.114	0.080	0.936	0.766	1.306
	EW	-0.069	0.159	-0.438	0.662	0.689	1.451
	SSC	0.312	0.096	3.248	0.002	0.735	1.361
R	0.542						
R ²	0.293						
Adjusted R ²	0.270						
F-statistics	12.562						
Probability	0.000						

Dependent variable: Procurement practices (PP) *significant at 5%

Source: Researcher's Study (2022)

$$PP_i = \alpha_0 + \beta_1 IF_i + \beta_2 EW_i + \beta_3 LS_i + \beta_4 SCC_i + \varepsilon_i \dots \dots \dots \text{Model 1}$$

$$PP_i = 0.780 + 0.691 IF_i + 0.009 LS_i - 0.069 EW_i + 0.312 SCC_i + \varepsilon_i \dots \dots \dots$$

Interpretation

Table 3 represents the regression model 1 hypothesis testing the effect of forensic accounting techniques on procurement practices in federal government parastatals in Nigeria. The multicollinearity test showed that data set does not have disturbance that can affect the statistical inference of the study. The result indicates that Investigation of Fraud (IF), Litigation services (LS), Surprise Cash Count Audit (SCC) had positive effect on procurement practices in federal government parastatals in Nigeria. This is indicated by the parameters of the coefficients which are $\beta_1 = 0.691$ and $\beta_2 = 0.009$ and $\beta_4 = 0.312$. This is consistent with a prior expectation of the study which states that Forensic accounting techniques will exert a positive effect on procurement practices in federal government parastatals in Nigeria. Although Expert witnessing (EW) negatively affected procurement practice and this is also indicated by the coefficient $\beta_3 = -0.069$, this is not in line with the prior expectation of the study.

The direction of the coefficient indicates that, for every deployment of Investigation of Fraud (IF) technique, there is a predicted increase of 0.691 at a higher level in the procurement practices in federal government parastatals in Nigeria. This indicates that deployment of Investigation of Fraud Technique was likely to indicate greater Procurement practices. The probability of t- statistic is 0.000 indicating that Investigation of Fraud (IF) was a significant predictor in the model. Also, Litigation services (LS) technique predicted increase of 0.009 at a higher level in the procurement practices in federal government parastatals in Nigeria. This indicates that deployment of Litigation services (LS) technique was likely to indicate greater Procurement practices. The probability of t- statistic is 0.936. Although, the result indicate that Litigation services (LS) technique was not a significant predictor in the model.

Furthermore, Expert witnessing will bring about 0.069 decrease in procurement practices in federal government parastatals in Nigeria. This indicates that deployment of Expert witnessing (EW) technique was likely to indicate lesser good Procurement practices. The probability of t- statistic is 0.662. Although, the result revealed that Litigation services (LS) technique was not a significant predictor in the model. However, a change in Surprise Cash Count Audit (SCC) will lead to an increase of 0.312 in procurement practice. This indicates that deployment of Surprise Cash Count Audit (SCC) technique was likely to indicate greater Procurement practices. The probability of t- statistic is 0.002 indicated that Surprise Cash Count Audit technique was a significant predictor in the model.

The adjusted R^2 which is the coefficient of determination is 0.270 (27%), this suggest that 27% variation in procurement practices in federal government parastatals in Nigeria can be explained by Forensic accounting techniques proxied by Investigation of Fraud (IF), Litigation services (LS), Surprise Cash Count Audit (SCC) and Expert witnessing (EW) while the remaining 73 % is caused by other variables not captured in the model. This is a moderate effect and evidence of causality. The result is further confirmed by the probability of the F-statistics which measured the effect of the model. The probability stood at 0.000 which is less than 0.05 level of significance adopted for this study.

Decision Rule

At the 0.05 level of significance, the F-statistics is 12.562, where the p-value is 0.000 which is less than 0.05 level of significance adopted for this study. This implies that null hypothesis one that Forensic accounting techniques have no significant effect on procurement practices in federal government parastatals in Nigeria was not accepted. Therefore, from the regression estimates, Investigation of Fraud (IF), Litigation services (LS), Surprise Cash Count Audit (SCC) and Expert witnessing (EW) significantly affects procurement practices in federal government parastatals in Nigeria.

Discussion of Findings

The objective was set out to investigate the effect of forensic accounting techniques measured by Investigation of Fraud (IF), Litigation services (LS), Surprise Cash Count Audit (SCCA) and Expert witnessing (EW) on procurement practices in federal government parastatals in Nigeria. From the result of the regression analysis carried out in model one, it was discovered that overall, forensic accounting techniques have significant effect on procurement practices in federal government parastatals in Nigeria. Furthermore, forensic accounting techniques measured by Investigation of Fraud (IF), Litigation services (LS), Surprise Cash Count Audit (SCC) have positive significant effect on procurement practices in federal government parastatals in Nigeria.

The finding of the study aligns with the studies of Bassey 2018; Erasmus 2021; Gbegi and Adebisi 2015, Tapang and Ihendinihu, 2020; the study of Tapang and Ihendinihu, (2020) revealed that forensic accounting services have a major impact on check fraud, credit card fraud, and mortgage fraud, according to the findings, a bank that wants to thrive while minimizing unethical practices must provide adequate resources to appropriately perform forensic accounting services throughout its many departments. The finding however does not align with the study of Akhidime and Uagbale-Ekatah 2014; Nwosu and Mshelia 2015. However, Expert witnessing has a negative impact on procurement practices in federal government parastatals. This is not in line with the *a priori* expectation that all of forensic accounting technique will have positive effect on

procurement practices in federal government parastatals.

This findings does not align with Erasmus 2021; Gbegi and Adebisi 2015, Tapang and Ihendinihu, 2020; the negative effect of expert witnessing on procurement practices in federal government parastatals can be traceable to the opinion of some of the respondents who in their opinion believe that although value for money practice can guarantee economic procurements of goods in public agencies, however, the Involvement of expert witnessing in fraud cases has minimal effect in reducing financial misappropriation in the Nigerian public sector. The finding aligns with the findings of Akhidime and Uagbale-Ekatah 2014; Nwosu and Mshelia 2015, Akhidime and Uagbale-Ekatah (2014) opined that Forensic accounting in Nigeria is at its infancy stage and lacking statutory support and although its relevance in unraveling complex official corruption is on the increase in Nigeria, it nevertheless has no statutory backing and has no significant impact against corruption, fraud and financial crime in Nigeria. The greediness of high-profile government officials and poor standard of living for the lower rank officers are the major factors linked to fraudulent practices in the Nigerian public sector, this in turn affect the effectiveness of good procurement practices in Nigerian Public Sector.

The finding of the study is supported by the fraud start theory which advocates appropriate punishment for any form of fraudulent activity perpetrated by procurement officials in the public sector as this will likely discourage fraud and increase good procurement practices, transparency and accountability in the public sector. Erasmus and Ibezim, (2021) noted that as an expert witness, forensic accountants present complex business issues, analyze, and summarize financial transactions in a logical and understandable manner, supported by cogent and verifiable evidence, in order to assist attorneys in prosecuting financial and economic fraudsters or resolving civil disputes.

Although the adjusted r square indicates that the measures of forensic accounting techniques are not strong enough to explain the variations in procurement practices in federal government parastatals in Nigeria this might be due to the fact that there are other factors and determinants of procurement practice in public sector not captured by the model. Some of these include corruption, poor standard of living, and poor internal control in the public sector. However, the probability of the F statistics has shown that despite the fact that forensic accounting technique might not be sufficient enough to explain the variations in procurement practice in public sector; forensic accounting technique exerts a significant effect on procurement practices in federal government parastatals in Nigeria. This implies that forensic accounting technique is an important determinant of good procurement practices in federal government parastatals in Nigeria. From the findings, the increase in the measures of forensic accounting technique should lead to improvement in procurement practices in federal government parastatals in Nigeria. procurement practices which represents economy in value for money (VFM) practice is concerned with acquiring resources of suitable quality and quantity at the lowest possible cost (buying resources at the right time at the favourable price, in the right quality and quantity (Nwosu & Mshelia 2015) VFM is now a fundamental criterion against which procuring and disposing entities must defend procurement outcomes in the context of public procurement. Public service providers must also show their communities that they are providing greater value for money by addressing not only efficiency but also effectiveness in delivery (Kalubanga & Kakwezi 2013)

5.0 CONCLUSION AND RECOMMENDATIONS

The study had examined the effect of forensic accounting techniques on value for money practices in federal government parastatals in Nigeria. All the independent variables together, which were Investigation of Fraud (IF), Litigation services (LS), Surprise Cash Count Audit (SCC) and Expert Witness have statistical significance on the dependent variable which was procurement practices (economy).

Findings of this study therefore provided insight into the effect of forensic accounting techniques on value for money practices. It further provided an insight as to the extent to which all independent variables together affects the dependent variable and also provided affirmation of the extent of variations on the dependent variable caused by independent variables all together covered, as depicted by the Adjusted R square. The study concluded that forensic accounting techniques had a significant positive effect on value for money practices.

The study thus recommends that Government should formulate policy that will mandate the use of forensic accounting techniques in verifying government business transactions. This will signal the beginning of stopping loss of value for money in government businesses and expenditure.

The study further recommended government should engage the use of professionals with prerequisite forensic accounting techniques knowledge in tracking procurement processes to eradicate the fraudulent practices in government business thereby reduces waste and ensures attainment of value for money practices

REFERENCES

- Abdulrahman M. H. A, Yajid M. S. A, Khatibi A., & Azam S. M. F. (2020). Forensic accounting on fraud detection in the UAE Banking Sector. *European Journal of Management, Marketing Studies*, 5(2), 13-37.
- Abebe, G. (2016.). *Efficiency, accountability and transparency in public procurement: The level of compliance in Africa (Ethiopian Case)* -5th International Public Procurement Conference (IPPC5) Dublin, Ireland. Retrieved from www.ippa.org/ippc5_proceedings6.html on 26th January, 2016.
- Abuorabi, Y. (2019). *Skills of forensic accountants as expert witnesses and admissibility of expert testimony*. A PhD Thesis Submitted to the Western Sydney University. Retrieved on 01/04/2022 from <https://researchdirect.westernsydney.edu.au/islandora/object/uws:56773/>
- Achua, J. K. (2009). Reinventing governmental accounting for accountability assurance in Nigeria. *Nigeria Research Journal of Accountancy*, 1(1), 1-16.
- Adams, J. A. (2001). Political corruption and national economic decline: an assessment of the impact of political corruption on the Nigerian economy. *Calabar Journal of Politics and Administration*. 1(2), 105-119.
- Adegbe F. F., Dada S. O., Owoeye K. & Siyanbola T. T. (2020). Application of forensic accounting techniques as antidote for curbing fraud in Nigeria Budget Implementation. *International Journal of Research Science & Management*, 7(8), 12-22.
- Adegbe, F. F. & Fakile, A.S. (2012). Economic and financial crime in Nigeria: Forensic accounting as antidote. *British Journal of Arts and Social Sciences*, 6(1), 37-50
- Adegite, E. O. (2010). Accounting, accountability and national development. *Nigerian Accountant*, 43(1), 56-64.
- Adesina K, Erin O, Ajetunmobi O, Ilogho S., & Asiriwa O. (2020). Does forensic audit influence fraud control? Evidence from Nigerian deposit money banks. *Banks and Bank Systems*, 15(2), 214-229.
- Akhidime, A. E. & Uagbale-Ekatah, R. E. (2014). The growing relevance of forensic accounting as a tool for combating fraud and corruption: Nigeria Experience. *Research journal of finance and accounting*, 5(2).
- Akinadewo I.S., & Akinkoye E.Y. (2019). *Application of forensic accounting on fraud detection in Nigerian Deposit Money Banks (DMBs)*. Proceedings of the 15th RSEP International Conference on Economics, Finance & Social Sciences, 26-28 November, 2019, University of Washington Rome Center, Rome, Italy, ISBN: 978-605-80676-8-4/December 2019.
- Akinadewo I.S., Akinkoye E.Y., Oyedokun G.E., & Asaolu T.O. (2019). Tax audit and direct tax revenue in lottery industry in Nigeria: Can forensic accounting bridge the gap? *Fountain University Osogbo Journal of Management (FUOJM)*, 4(2), 73-92.
- Akinadewo, I. S. & Akinkoye, E.Y. (2020). Application of forensic accounting and domestic debt management on government revenue in Nigeria. *Issues in Business Management and Economics*, 8 (3), 25-32.

- Akintoye, I. R. (2008). *The basics of environmental and forensic accounting*. Akoka-Yaba: Unique Educational Publishers.
- Albrecht, S., Howe, K. & Romney, M. (1984). *Deterring fraud: The internal auditor's perspective*. Altamonte Springs, Fla: Institute of Internal Auditors Research Foundation.
- Ali, A. B. & Mohamed I., (2017). Perception of forensic accounting education as a tool for anti-fraud in Libya. *International Journal of Managerial Studies and Research*, 5(11), 83-89.
- Alshurafat, H., Al Shbail, M.O., & Mansour, E. (2021). Strengths and weaknesses of forensic accounting: an implication on the socio-economic development. *Journal of Business and Socio-economic Developmen.*, 1(2), 135-148.
- Alwardat, Y. & Benamraoui, A. (2014) Value for money and audit practice: Lessons and facts from the literature. *Life Science Journal*, 11(2), 14-17.
- Anyanwu, J. C., 1997. *Nigerian Public Finance*. Onitsha: Joanne Educational Publishers.
- Appah, E. (2009). Value for money audit: A viable tool for promoting accountability in the
- Appah, Ebimobowei & Inini, Wilfred Joseph (2021). Forensic investigation and mitigation of occupational fraud in the Nigerian public sector. *Journal of Accounting and Financial Management*, 7(1), 26-44.
- Ariali D. L. & Crumbley, D. L., (2019). PwC and the colonial bank fraud: A perfect storm. *Journal of Forensic and Investigative Accounting*. 11(3), 440-458.
- Association of Certified Fraud Examiners. (2003). *Higher Education Initiative*. Retrieved from <http://www.cfenet.com>
- Asusu U. P. (2019). Effect of forensic auditing on reducing fraud cases in Nigeria money deposit banks. *An African Journal of Arts and Humanities*. 5(2). 15-35.
- Azih, N. & Okoli, B. E. (2015). Forensic accounting as a veritable tool for efficient management of state owned public sectors in Ebonyi state: The Accountants Perspective. *British Journal of Education*, 3(8), 55-62.
- Bakare, A. S. (2011). The crowding effects of corruption in Nigeria: An empirical study. *Journal of Accounting and Financial Management*, 3(1), 23-33.
- Bamett, C., Barr, J., Christie, A., Duff, B. & Hext, S. (2010). Measuring the impact and valuefor money of governance and conflict programmes. *Journal of Business Management and economics*, 2(2), 059-068
- Bangura A.B. (2020). Forensic accounting techniques and fraud prevention in Sierra Leonean deposit Money banks. *Asian Journal Economics., Business and Accounting*, 14(2), 20-50.
- Barnett T. (2010). Measuring the impact and VfM of Governance & conflict programmes. *Journal of Business Management and economics*, 2(2), 059-068
- Bassey, E. B. (2018). Effect of forensic accounting on the management of fraud in microfinance institutions in Cross River state. *Journal of Economics and Finance*, 9(4), 79-89.
- Blessing, I. N. (2015). Empirical analysis on the use of forensic accounting techniques in curbing creative accounting. *International Journal of Economics, Commerce and Management*, 3(1), 1-16.

- Bologna, G. J. & Lindquistn, R. J. (1987). *Fraud auditing and forensic accounting: New tools and techniques*. New York: Wiley and Sons.
- Bologna, J. & Linquist, R. (1995). *Fraud auditing and forensic accounting*. New York: Wiley and Sons.
- Bragy, O. T. (2010). The relevance of forensic accounting in fraud investigation. *Asian Journal of Business Management* 4(2), 124-134.
- Carlson, R. L., Imwinkelried, E. J. & Kionka, E. J. (1991). *Evidence in the nineties: cases, materials, and problems for an age of science and statutes*(3rd ed.). Charlottesville VA: Michie company Law Publishers.
- Centre for Forensic Studies (2010). *Nigerian institute of advanced legal studies Lagos, Nigeria roundtable on the role of forensic and investigative accounting: challenges for the banking industry on the 19th July, 2010*. Retrieved from [Communique on Forensic and Investigative Account \(nials-nigeria.org\)](http://Communique on Forensic and Investigative Account (nials-nigeria.org))
- Clement A. C. M, & Adzor I. (2017). Accounting frauds: A review of literature. *Journal of Humanities and Social Science*, 22(4), 38-47.
- Clement, O.O and Comfort, T.O (2018). Impact of forensic accounting and investigation on corporate governance in Ekiti state. *Journal of Accounting, Business and Finance Research*, 4(1), 28-36.
- Coker, O. (2010). Accountability in third sector organizations: What role for accounting?
- Collins, J. H., Shackelford, D. A., & Wahlen, J. M. (1995). Bank differences in the coordination of regulatory capital, earnings, and taxes. *Journal of accounting research*, 33(2), 263-291.
- Cressey, D.R. (1973). *Other people's money-a study in the social psychology of embezzlement* New York: Paterson Smith Publishing Company NJ.
- Crumbley, D. L. (2012). Forensic accounting older than you think. *Journal of Forensic Accounting*, 4(3), 132-141
- Crumbley, D. L., Heitger, L. E., & Smith, G. S. (2015). *Forensic and investigative accounting*. Chicago, IL: CCH Group,
- Dada, S. O & Jimoh F.B. (2020). Forensic accounting and financial crimes in Nigeria public sector. *Journal of Accounting and Taxation*, 12(4), 118-125.
- Dada, S. O., (2014). Forensic accounting technique: a means of successful eradication of corruption through fraud prevention, bribery prevention and embezzlement prevention in Nigeria. *Arabian Journal of business and management review*, 4(1), 176-186.
- Dada, S. O., Owolabi, S. A. & Okwu, A. T. (2013). Forensic accounting a panacea to alleviation of fraudulent practices in Nigeria. *International journal business management economic resources*, 4(5), 787-792.
- Dandago, K. I. (2008). The constitutional fight against corruption in Nigeria: Is it enough? *International Journal on Governmental Financial Management*, 3(1). 61-69.
- Dhar, P., & Sakar, A. (2010). Forensic accountants: An accountant vision. *Vidyasagar University Journal of Commerce*, 15(3), 93-104.

- Dorminey, J., Fleming S., Kranacher, M. & Riley R. (2010). *The evaluation of fraud theory*. Denver: American Accounting Association Annual Meeting.
- Economic Financial Crimes Commission (2004). *Economic and financial crimes commission establishment act, 2004* retrieved from <https://www.nfiu.gov.ng/images/Downloads/downloads/efcc.pdf>
- Eden District Council (2019). *Efficiency and value for money policy*. Retrieved on 01/04/2022 from <https://www.eden.gov.uk/media/3813/efficiency-and-value-for-money-policy.pdf>.
- Ene, E. (2000). *Value for money in the public sector*. Lagos: Institute of Chartered Accountant of Nigeria.
- Erasmus, E. G. & Ibezim, O. F. (2021). Forensic accountants as an expert witness in Nigeria: A literature reflection. *International Journal of Economics and Financial Management*, 6(2), 64-78.
- Esu, B.B. & Inyang B.J. (2019). A case for performance management in the public sector in Nigeria. *International Journal of Business and Management*, 4(4), 98-105.
- Eze, E.P., & Okoye, E.I. (2019). Forensic accounting and fraud detection and prevention in Imo state public sector. *Accounting and Taxation Review*, 3(1), 12-26.
- Firas H. (2021). The role of forensic accounting techniques in reducing cloud based accounting risks in the Jordanian five stars hotels. *WSEAS Transactions on Business and Economics*, 18(1), 434-443.
- Firas. H. D. (2020). The role of forensic accounting techniques in detecting non numerical fraud risk factors in manufacturing corporations in Amman stock exchange. *International journal of scientific & technology research*. 9(12), 71-76.
- Friday W., & Crumbley, D. L., (2021). Integrating forensic accounting technique for successful investigation and prosecution of economic and financial crime in Nigeria. *Oil, Gas & Energy Quarterly*. 461- 473.
- Gbegi, D. O., & Adebisi, J. F. (2013). The New Fraud Diamond Model -How can it help forensic accountants in fraud investigation in Nigeria? *European Journal of Accounting Auditing and Fiancé Research* 1(4). 129-138.
- Gire, J. T. (1999). A psychological analysis of corruption in Nigeria. *Journal of Sustainable Development*, 1(2), 1-15.
- Golden, T. W., Skalak, S. L. & Clayon, M.M (2000). *A guide to forensic accounting investigation*. Hoboken New Jersey: John Wiley & Sons, Inc.
- Haziel M., T., Yohanna G., J., & Fransis, O. (2021). An assessment of forensic accounting techniques in the prevention of revenue leakages in Nigerian federal universities. *Journal of Accounting*, 4(1), 1–21.
- Henry, A. W., & Ganiyu, A. B. (2017). Effect of forensic accounting services on fraud reduction in the Nigerian banking industry. *Advances in Social Sciences Research Journal*, 4(12). 112- 130. <https://doi.org/10.14738/assrj.412.3342>
- Howard S. & Sheetz, M. (2006): *Forensic accounting and fraud investigation for non- experts*, New Jersey: John Wiley and Sons Inc.

- Huber, W. D. (2017). Forensic accounting, fraud theory, and the end of the fraud triangle. *Journal of Theoretical Accounting Research*, 12(2). 28-49.
- Institute of Chartered Accountant of Nigeria (2021). *Performance management study pack*. Lagos, Nigeria: Institute of Chartered Accountant of Nigeria
- Institute of Forensic Accountants of Nigeria (2016). *Handbook for forensic accountings services for members' use*. Kaduna: Institute of Forensic Accountants of Nigeria
- Islam, J., Rahman, H. & Hossan, T. (2011). Forensic accounting as a tool for detecting fraud and corruption: An empirical study in Bangladesh. *ASA University review*, 5(2), 77- 85.
- Ismail, K., Takim, R., & Nawawi, A. H. (2012). A public sector comparator (PSC) for value for money (VFM) assessment tools. *Asian Social Science*, 8(7), 192-210.
- Jafaru, J. (2011). Forensic accounting practice in Nigeria: A new paradigm for stakeholders. *International Journal of finance and accountancy*, 16(2), 14-22.
- Johnson, I. E. (1996) *Public Sector Accounting and Financial Control*, Financial Training Nigeria, Lagos
- Jones, T. & Prowle M. (2008). *Health service finance* London: Certified Accountants Education Trust.
- Kalubanga M. & Kakwezi P. (2013). Value for Money Auditing and Audit Evidence from a Procurement Perspective -A Conceptual Paper. *International Journal of Advances in Management and Economics*, 2(5), 115-124.
- Kasum,, A. S. (2009). *The relevance of forensic accounting to financial crimes in private and Public sectors of third world economies: A study from Nigeria*. Proceedings of the 1st International conference on governance fraud ethics and social responsibility, June 11-13, 2009. Retrieved from <http://ssrn.com/abstract=1384242> on 15/01/2016.
- Konie, G. (2003, July 23). National reconciliation, the post. *A Zambian Newspaper*, No. 2471, pp 11.
- Koo, A. (2018). The role of the English courts in alternative dispute resolution. *Legal Studies*, 38(04), 666–683.
- Kristic, J. (2009). The role of forensic accounting in detecting frauds in financial statements. *Facta Universitatis Series Economic and organization*, 6(3), 295-302.
- Kurakaew, N., Kokkaew, N., & Suksuwan, N. (2016). The analysis of value-for-money (VfM) for public private partnership infrastructure: A public sector comparator approach. *WMS Journal of Management*, 5(1), 26-39.
- Langseth, Petter J. P. & Rick S. (1997). *The role of a national integrity system in fighting corruption*. Washington, D.C.: The World Bank.
- Law Reform Commission. (2010). *Alternative dispute resolution: Mediation and conciliation*. Retrieved from https://www.lawreform.ie/_fileupload/reports/r98adr.pdf on 1/04/2022
- Mathew R. E., Obasaju, B., Lawal, A., & Ise-olorunkanmi, J. (2013). Analysis of corruption and economic growth in Nigeria. *Afro Asian Journal of Social Sciences*, 4(2). 1-19.

- Mclaren, P. & Trefanenk, M. (2012). Forensic accounting and fraud examination Retrieved from <https://www.wiley.com/en-us/Forensic+Accounting+and+Fraud+Examination%2C+2nd+Edition-p-9781119494171>
- Milaham, N., & Milaham, M. (2020). Use of forensic accounting in prevention of frauds in bursary department, University of Jos, Nigeria. *Journal of Educational Research in Developing Areas*, 1(1), 80-87. <https://doi.org/10.47434/JEREDA.1.1.2020.80>
- Moore-Bick, M. J. (2018). Service of Process: Documents Required in English Proceedings *International Lawyer*, 9(4), 699-715.
- Mukoro, D. Yamusa, O & Faboyede, S. (2013). The Role of Forensic Accountants in Fraud Detection and National Security in Nigeria. *BJMR*, 6(1).
- Mukoro, O. D., Faboyede, O. S. & Eziamaka, C. B. (2014). The effectiveness of forensic accountants in strengthening internal control of business organizations in Nigeria.
- Nageri, K. I., Gunu U. & Abdul, F.A. (2013). Corruption and Economic Development: Evidence from Nigeria. *Journal of Business and Management Review*, 3(2):
- Naser, K. (2003). *Creative financial accounting – Its nature and use*. London: Prentice Hall.
- Nosiri, Hilary; Uwakwe, Theresa; Nnenna, Abiahu, & Mary-Fidelis Chidoziem (2020). *Forensic accounting and tax fraud detection in the Nigerian public sector. Taxation and Social Contract and Economic Development*. Conference proceedings.
- Nwankwo, B. C. (2002). Strengthening local government administration in Nigeria: The expected role of Nigerian Union of Local Government Employees (NULGE). *Journal of Public Administration and Local Government*. 10(2), 82-96.
- Nwosu, M. E. (2015). Value for money audit: An accountability tool in the Nigeria public sector. *International Journal of Economics, Commerce and Management*, 3(6), 1537- 1544
- Nwosu, M.E. & Mshelia, M.I. (2015). Value for money audit: A veritable tool for expenditure management. *International Journal of Financial Research*. 6(3), 150-162.
- Nye, J. (1978). Corruption and political development: A cost-benefit analysis. *American political science review*, 61(2), 417-427.
- Obuah, E. (2010). Combating corruption in a failed state: The Nigerian economic and financial crime commission. *Journal of Sustainable development in Africa* 12(1), 27- 47.
- Ocansey, E. O. N. D. (2017). Forensic accounting and the combating of economic and financial crimes in Ghana. *European Scientific Journal*, 13(31), 379.
- Ofurum, Darlington, Falope, Femi J, & Clement Ikwuochi G. (2020). Effect of forensic accounting on accountability evidence from ministry of finance, Awka. *International Journal of Trend in Scientific Research and Development*, 4(2), 707–714. <https://doi.org/10.5281/zenodo.3842987>.
- Ogundele, O.K. & Opeifa A.Z. (2004). Emerging patterns of workplace fraud. In: S Fajana (Ed.): *Global trends in industrial relations in Nigeria*. Lagos: University of Lagos Press.
- Ojaide, F. (2000). Frauds detection and prevention: the case of pension accounts. *Nigerian Academic Forum*, 10(2), 8-15.

- Okey, O. O. & Eduno, E. B. (2014). Corruption, governance and public spending in Nigeria: Implication for economic growth. *British Journal of Economic, Management and Trade*, 4(1), 1680-1699.
- Okoye, E. I. & Gbegi, D. O. (2013). Forensic accounting: a tool for fraud detection and prevention in the public sector. A study of selected ministries in Kogi State. *International Journal of Academic Research in Business and Social Sciences*, 3(3), 1-19.
- Okoye, E. I., Adeniyi S. I. & James O. N. (2019). Effect of forensic accounting on fraud management on selected firms in Nigeria. *International Journal of Economics, Business and Management Research*, 3(12). 149-168.
- Okunbor, J.A., & Obaretin, O. (2010). Effectiveness of the application of forensic accounting services in Nigeria organizations. *AAU Journal of management science*, 1(1) 171-18.
- Olayinka, I.M., Ogundajo, G.O. & Adegbe, F.F. (2021). An epistemological review of fraud theories in the Nigeria context: A myth or reality. *West African Journal of Business and Management Sciences*, 10(2) 56-69.
- Onuorah, A. C. & Appah, E. (2012). Accountability and public sector financial management in Nigeria. *Arabian Journal of Business and Management Review*, 1(6). 1-17.
- Oseni, A. I. (2017). Forensic accounting and financial fraud in Nigeria: problems and prospects. *Journal of Accounting and Financial Management*, 3(1), 23-33.
- Osie-Hwedie, B. Z. & Osie-Hwedie, K. (2000). The political, economic and cultural bases of corruption in Africa in Hope K.R and B.C. Chikulo eds. (2000), *Corruption and Development in Africa*. London: Macmillan Press Ltd.
- Osisoma, B. C. (2013). *Combating fraud & white collar crimes: Lessons from Nigeria*. Paper Presented at 2nd Annual Fraud & Corruption Africa Summit, Held at Zanzibar Beach Resort, Zanzibar Republic of Tanzania.
- Otalor, J. I. & Eiya, O. (2013). Combating corruption in Nigeria: The role of the public sector Auditor, *Research Journal of Finance and Accounting*, 4(4).
- Owojori, A.A & Asaolu T. O. (2009). The role of forensic accounting in solving the vexed problem of corporate world. *European Journal of Scientific Research*, 29(2), 183-187.
- Owolabi, S. A., Dada, S. O. & Olaoye, S. A. (2013). Application of forensic accounting technique in effective investigation and detection of embezzlement to combat corruption in Nigeria. *Unique Journal of Business Management Research*, 1(4), 065- 070.
- Popoola, O. J., Che-ahmad, A. & Samsudin, R. S. (2015). Forensic accountant and auditor knowledge and skills requirements for task performance fraud risk assessment in the Nigerian public sector. *Accounting Research Journal*, 2(8), 78-97.
- Premchand, A. (1999). Public Financial management: Getting the basics right”, in Schviavo-Campo, S. (ed). *Governance, corruption and public financial management*. Manila, Philippines: Asian Development Bank.
- Puspasari, N. (2015). Fraud theory evolution and its relevance to fraud prevention in the village government in Indonesia. *Asia Pacific Fraud Journal*, 1(2), 177-188.

- PwC, (2021). Value for Money in the Public Sector. *PwC Rwanda Insight and Publication*. February 5, 2021.
- Rae, K. & Subramaniam, N. (2008). Quality of internal control procedures: Antecedents and moderating effect on organizational justice and employee fraud. *Managerial Auditing Journal*, 23(2), 104-124.
- Razee, Z., Crumbley, L. & Elmore, R. C. (2009). Forensic accounting education: a survey of academicians and practitioners. *Teaching and Curriculum Innovations*, 6(1), 193-232.
- Safiyanu, S. Saifullahi S. I., & Armaya'U. A. S. (2019). The effect of forensic accounting investigation in detecting financial fraud: A study in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 9(2), 545-553.
- Sharman, C. & Partner, O. B. (1984). *Value for money auditing in the public sector*. Dutch- British workshop in Amsterdam.
- Skousen, C. J. & Wright, C. J. (2008). Contemporaneous risk factors and the prediction of financial statement fraud. *Journal of Forensic Accounting*, 9(1), 37-62.
- Sorunke, O. A. (2016). Personal ethics and fraudster motivation: The missing link in fraud triangle and fraud diamond theories. *International Journal of Academic Research in Business and Social Sciences*, 6(2), 159-165.
- Sule, S., Ibrahim, S. S., & Sani, A. A. (2019). The effect of forensic accounting investigation in detecting financial fraud: a study in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 9(2), 545–553.
- Sutherland, E. H. (1949). *White collar crimes*. New York: Dryden Press.
- Taiya H. M., Jugu Y. G., & Ojaide F.. (2021), Forensic accounting techniques: tools for preventing revenue leakages in Nigerian federal universities. *International Journal of Innovative Science and Research Technology*. 6(5), 1384-1393.
- Tang, J. (2008) Value for money audit and improvements in project planning. Retrieved from <https://www.slideserve.com/colby/value-for-money-audit-and-improvements-in-project-planning>
- Tapang A.T., & Ihendinihu J.U. (2020). Effect of forensic accounting services on unethical practices in Nigerian banking industry. *Journal of Accounting and Management*, 10(1), 35-49.
- Telpner, Z., & Mostek, M. (2013). *Expert witnessing in forensic accounting; A handbook for lawyer and accountant*. Boca Raton London: CRC press,
- Tokunboh, M. A. (1990). *Public enterprise: The Nigeria experience*. Lagos: Lantern Books.
- Udeh, F N. P. (2014). Effectiveness for the value of money on capital expenditure in Nigerian public sector. *Research Journal of Finance and Accounting*, 10(10) 92- 112.
- Ugwu, J.I. (2021). Forensic accounting and fraud control in Nigeria: A critical review. *Research Journal of Finance and Accounting*. 12(10), 112-120.

- UK H.M. Treasury (2020). *The green book: central government guidance on appraisal and evaluation*. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf,
- US LEGAL. (2016). *Expert witness and legal law*. Retrieved from <http://definitions.uslegal.com/e/expert-witness/>.
- Wahlen, M (1995). Bank differences in the coordination of regulatory capital, earnings and taxes. *Journal of Accounting Research*, 33(2), 263–291.
- Wamalwa, W. N. (1993). Causes and consequences of ethical crisis in Africa's public services. *Ethics in Accountability in African Public Services Addis-Ababa: UNICA and AAPAM*.
- Wolf, D. T. & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *CPA Journal* 7, 038-042.
- Zhao, J., Greenwood, D., Thurairajah, N., Liu, H. J. & Haigh, R. (2022). Value for money in transport infrastructure investment: An enhanced model for better procurement decisions. *Transport Policy*, 118(1), 68-78.
- Zinyama, T. (2013). Efficiency and effectiveness in public sector auditing: An evaluation of the comptroller and auditor general's performance in Zimbabwe from 1999 to 2012. *International Journal of Humanities and Social Science*, 3(7), 1-15.
- Zysman, A. (2004), *Forensic accounting demystified, world investigators network standard practice for investigative and forensic accounting engagements*. Ontario, Canada: Canadian Institute of Chartered Accountant.

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