



## Forensic Accounting Techniques and Corruption Detection in Nigeria

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### Abstract

*This study evaluated the relationship between forensic accounting techniques and corruption detection in Nigeria. A cross-sectional research design with a survey strategy was adopted with a well-structured questionnaire distributed to respondents of the study. Given a sample of (n = 269), a total number of 257 copies of questionnaire were retrieved and effectively used for the analysis. Both descriptive and inferential statistics were employed to analyse the data of the study. While the descriptive statistics presented the eligibility of the respondents and a summary of data, the inferential statistics was used to test the hypothesis of the study with the aid of e-views statistical tools. The study revealed a significant relationship between forensic accounting techniques and corruption detection in Nigeria. Specifically, the analysis showed a positive and significant relationship between data analysis techniques and corruption detection; a positive and significant effect of asset tracing techniques on corruption detection; and a positive and significant influence of lifestyle audit techniques on corruption detection. Based on the findings, it was recommended amongst others that forensic accounting techniques be integrated into the standard procedures for conducting corruption investigation in Nigeria. Furthermore, future research and exploration should be conducted to enhance researchers understanding of corruption detection techniques in order to develop more robust strategies for combating corruption effectively.*

**Keywords:** Forensic Accounting, Corruption, Detection, Data Analysis, Asset tracing, Lifestyle Audit.

## 1.1 Introduction

Corruption in Nigeria has become a pandemic and a serious social problem that has held the nation down politically and economically. Although corruption is not pertinent to Nigeria alone, its magnitude has put Nigeria at the forefront amongst other countries. In 2012, Nigeria was estimated to have lost over \$400 billion to corruption between 1960 and 1990 and about USD182 billion has been lost to illicit flow between 2005 to 2014 (Okoye, 2012; Waziri-Azi, 2018). Given these measures, Nigeria continues to be positioned as one of the most corrupt nations in the world – a feature mirrored by several indices and indicators such as the Corruption Perception Index (CPI) of Transparency International (TI) and the Mo'Ibrahim's Index of Good Governance.

According to TI (2023), corruption seems to be thriving around the world with over two-thirds of the surveyed countries scoring below 50 out of 100 which strongly indicates the severity of corruption. In its 2023 report, Nigeria had a CPI of 25 points and was ranked 145<sup>th</sup> position among 180 countries in the Index (TI, 2023). This score is not significantly different from Nigeria's 2022 CPI and 2021 CPI which stood at 24. These scores not only showcase Nigeria as being corrupt but also put a dent in the country's justice system for accountability, transparency, and good governance as most corrupt officials are hardly brought to book.

There is no gainsaying that Nigeria is littered with several corrupt practices ranging from bribery, fraud, kickback, extortion, influence peddling, nepotism, and embezzlement. In other dimensions, asset misappropriation, diversion of the nation's economic resources and outright theft are grossly manifested both in the public and private sectors of the economy. In the words of Arzard (2017), these acts are perpetrated by corrupt officials for the sole purpose of enriching themselves.

They abuse entrusted power or positions for their private gains thereby affecting their stewardship and in turn, impoverishing the nation at large. Without a doubt, it was on this basis that a call was made for the fight against corruption in Nigeria. In response, two anti-graft agencies were established under the administration of previous Nigerian Government to cater for the menace of corruption in the country.

The two key anti-graft agencies – the Independent Corrupt Practices and Other Related Offenses Commission (ICPC) and Economic and Financial Crimes Commission (EFCC) were established alongside their enabling Acts in 2002 and 2004 respectively to drive the government's anti-corruption campaign to fight corruption in the nation (Waziri-Azi, 2018). It is on records that ICPC and the EFCC have prosecuted several corrupt kingpins including private individuals, past Governors as well as other public service officers who were found wanting for embezzlement of public funds, fraudulent practices, money laundering, bribery, terrorist financing and other related corrupt practices. Likewise, available reports show that EFCC secured 3785 (three thousand eight hundred and five) cases in 2022 representing a 98.93% success rate given that the commission only lost 41 cases representing 1.07% ([www.efcc.gov.ng](http://www.efcc.gov.ng)). In the same vein, the ICPC has also been applauded for securing over 90 convictions and recovering about N454b in the last four years (Bamigbola, 2023). As laudable as this may seem, these agencies have been alleged to be ineffective in justice delivery. Osamor (2022) acknowledged that even with the rise in convictions of corrupt officials, these increases are only in quantity and not quality.

A major drawback with services of the anti-graft agencies has been their method of investigating crime cases. Nsirim and Onyige (2020) lamented over the investigative methods applied by EFCC officials which more or less encourages poor prosecution, delay of justice, and long adjournment of cases thereby fostering corruption. Their submission corroborated the findings of Warizi-Azi (2018) which indicated that the EFCC and the ICPC are lagging in the areas of advanced techniques needed to match the methods applied by corrupt officials, as such, there is a need for more training and collaboration with experts to effectively detect and fight corruption in Nigeria. It is worth noting that most corrupt practices are currently achieved through sophisticated means and require highly technical investigators to unravel and effectively recover the proceeds of corruption. Hence, the consideration of forensic accounting has been widely publicized to come to the rescue given that it applies unique skills and techniques in investigating and unravelling fraud, corruption, and other financial crime cases for effective prosecution.

Forensic accounting techniques transcend beyond traditional audit techniques to reveal the who, what, why, where, and how of a crime. The forensic accountant applies investigation techniques such as data analysis and lifestyle analysis to critically understand the *modus operandi applied* by corrupt officials and to determine the extent and magnitude of corrupt practices perpetrated by officials. As per Jaiyeola (2023), while the data analysis techniques identify areas indicative of fraud, Olaoye and Olaoye (2021) disclosed that lifestyle analysis seeks to establish the existence of unearned income that may suggest illicit flows and other corrupt practices. In addition, Literature also reveals that in detecting corruption, forensic accountants may employ other techniques capable of tracing and recovering the proceeds of corruption. Aremu and Olayinka (2023) as well as Dada et al. (2013) affirmed this position and opined that the use of forensic accounting techniques will enhance investigation and anti-corruption agencies' ability to investigate and prosecute those involved in corrupt acts, thereby facilitating the recovery of ill-gotten gains.

Despite the foregoing, forensic accounting techniques are yet to be fully implemented by the EFCC and other anti-corruption agencies in Nigeria. There is minimal involvement of forensic accountants in investigating corruption and financial crimes even with the technological-based investigation techniques that they offer which can harness most of the traditional methods of investigation employed by anti-corruption agencies (Suleiman & Othman, 2021). Alao et al. (2023) investigated forensic accounting techniques and corruption in the public sector of South-West, Nigeria, Aremu and Olayinka (2023) investigated the relationship between forensic accounting techniques and output maximization in selected federal government parastatals in Nigeria. Likewise, Dada et al. (2013), Mert (2022), Tapang and Ihendinihu (2020) studied forensic accounting as a relevant tool for effective investigation of bribery and other unethical practices. In their study, Ijere and Osho (2020) confirmed the effectiveness of lifestyle audit on white collar crimes in Deposit Money Banks in Port Harcourt, Nigeria while the study of Ibadin and Embele (2023) showed the efficacy of Data analysis techniques on tax fraud. Moreover, Adegbite and Fakile (2012) and Dada and Jimoh (2021) provided evidence to the effectiveness of forensic accounting techniques without demystifying the concept into specific techniques. Despite the studies recounted, there appears to be paucity of empirics to adequately support the use of specific forensic accounting techniques such as data analytics, asset tracing, and lifestyle audit for corruption detection, especially in relation to findings from Bayelsa State to the best of the researcher's knowledge. A gap therefore exist in this domain and this study intends to fill this gap by posing the following questions:

- i. What is the relationship between data analysis techniques and corruption detection in Nigeria?
- ii. What is the effect of asset tracing techniques on corruption detection in Nigeria?
- iii. How does lifestyle audit techniques influence corruption detection in Nigeria?

## 1.2 Objectives of the Study

The broad objective of this study is to evaluate the relationship between forensic accounting techniques and corruption detection in Nigeria. However, the sub objectives are to:

- i. Determine the relationship between data analysis techniques and corruption detection in Nigeria;
- ii. Ascertain the effects of asset tracing techniques on corruption detection in Nigeria; and
- iii. Examine the influence of lifestyle audit techniques on corruption detection.

## 1.3 Hypotheses

Ho1: There is no significant relationship between data analysis techniques and corruption detection.

Ho2: There is no significant effect of asset tracing techniques on corruption detection.

Ho3: There is no significant influence of lifestyle audit techniques on corruption detection.

## 2.1 Corruption Detection

Corruption in Nigeria is a kind of social virus that has eaten deep into the moral fabric of the nation. There is no gain in saying that the pervasiveness of corruption in Nigeria earned the country the title – one of the most corrupt nations in the world. According to the Independent Corrupt Practices and Other Related Offences (ICPC) in its establishment Act (section 18, ICPC Act 2000) describes corruption as bribery, fraud, and other related offences. Joda (2011) emphasized that corruption is not limited to stealing or extorting public funds, but includes any form of behaviour that deviates from ethics, morality, tradition, law, and civic virtue by any individual irrespective of their position in society.

Lawal (2019) put forward several corrupt practices in Nigeria. According to the author corrupt practices in Nigeria include but are not limited to diversion of public funds, bribery, fraud, embezzlement, abuse of power, perversion of integrity, and deviation from morality, ethics and civic virtues. Extensively, Ene and Ene (2019) noted that corruption expresses among others, illegal use of public assets for private gains, purchase of goods at inflated prices, over and under-invoicing, misappropriation of assets, court judgment awarding excessive damages, removal of file case, patronage, and nepotism. The scale of these corrupt practices have increased in magnitude and mode such that the sophisticated skills applied in the perpetration of these act defile the traditional auditing methods and investigation. As a result, detection of corruption has increasingly become a herculean task.

According to Sen (2014) detection entails extraction of relevant information from large stream of information without the cooperation of the originator of the information. It is the act of discovering or noticing something, especially something that is not easy to see or hear. The necessity of detecting corruption stems from the need to gather sufficient and appropriate evidence that can be measured. These shred of evidence makes it possible to effectively prosecute corrupt cases and deter corrupt officials from further acts. Adegbite and Fakile (2012) submitted that the non-availability of appropriate investigative evidence and litigation support services in the court has led to misjudgment and incorrect submission by lawyers and judges especially in corruption cases. There is little or no evidence to tender before the court resulting in inadequate punishment being awarded to corrupt officials. As a result, most high-profile corruption cases in Nigeria have not been effectively prosecuted with cases either being protracted or ending up in plea bargain arrangements.

Nsirim and Onyige (2020) and Waziri-Azi (2018) decried on the level of investigation conducted and its inability to provide sufficient and adequate evidence needed for effective prosecution. To that end, several authors (Dada et al., 2013; Ibadin & Embele, 2023; Suleiman & Othman, 2021) have recommended the engagement of forensic accountants who possess technical capabilities to unearth the *modus operandi* of corrupt officials to effectively detect corrupt practices using various skills and techniques for effective prosecution.

## 2.2 Forensic Accounting Techniques

Forensic accounting techniques connote the application of specialized methods and procedures in forensic accounting engagements. It is a method that involves an exhaustive and detailed effort to penetrate and expose concealment, fraud, and other financial malpractices (Krell, 2012). In detecting the occurrence of financial malfeasance, forensic accounting investigative techniques are basically utilised. As Odeyemi (2024) rightly puts, the forensic accountant during forensic investigation uses specialized techniques to extract pertinent information and uncover details that might even be beyond financial documents alone. These techniques allow the forensic accountant to effectively detect financial malpractices to provide evidence needed for subsequent prosecution. Thus, the following sub-section conceptualizes selected forensic accounting techniques pertinent in detection of corruption.

### 2.2.1 Data Analysis Techniques

Forensic data analysis refers to a process that involves analyzing substantial data to identify patterns of activities in order to highlight areas of concern. This technique makes use of structured and unstructured data in arriving at a conclusion on

changes that occur in a set of financial information. Data analysis techniques range from traditional methods to more sophisticated analytical methods, and advanced models.

With regards to the traditional methods, Crumbley et al. (2015) and Silverstone et al. (2012) identified vertical analysis, horizontal analysis, and financial ratio analysis as common analytical techniques that help find unusual trends, relationships, errors or fraud in given financial information. The basic assumption behind these methods is that relationships and trends in financial information are expected to follow a historical and logical pattern and where there is a deviation, evidence must be gathered to support the reasonableness of such deviations. Many professionals, including financial analysts, investors, business owners and accountants have relied on this method of analysis to gain a better understanding of changes in business conditions and detect red flags that will prompt an investigation (Albrecht et al., 2012; Kenyon & Tilton, 2011). For instance, a change in the historical or logical pattern of liquidity ratios (current, quick or working capital) or profitability ratios (return on asset and return on equity) may not only suggest that a business is improving or getting worse but can also indicate management intention to be creative with their financial statement (Ibadin & Embele, 2023). Spotting such irregular patterns may call for an investigation to examine its true cause.

It is worth noting that singular ratios and trends alone may not always reflect a true test for reliability and can be an indication for a more sophisticated test. In that vein, more sophisticated analytical techniques are applied to uncover fraudulent and corrupt practices (Ibadin & Embele, 2023). The Beneish M Score and Altman Z Score models have been applied to test the reasonableness of changes in financial statements. These models combine a range of ratios used in the detection of earnings manipulation and financial distress respectively. Somayyeh (2015) recognised that the extent of the likelihood of fraudulent reporting could be measured by combining the Beneish model and Altman Z-score model. According to the author, the outcome of the analysis could be an early warning sign for a potential collapse that can prompt manipulation of fraud in a financial statement. Other authors (Akinadewo & Akinkoye, 2020; Nikola et al., 2021) have found other advanced models such as the Benfords' Law and data mining for analysing big data to spot irregularities. These techniques sift through large data sets of structured and unstructured data to uncover hidden patterns, trends, and relationships indicative of fraud and further extract actionable insights (Odeyemi et al., 2024). More so, a shift is also currently made towards artificial intelligence where techniques such as neural networks, decision aids, deep learning, and machine learning are being applied towards uncovering fraudulent activities. These advanced technologies also enable the processing of large data volume sets at unprecedented speed. While machine learning can be applied to historical data recognition and prompt real-time alerts to investigators when deviation is detected, natural language processing can extract relevant information from unstructured texts such as emails and documents to support the investigative process (Sangeetha & Harshitha, 2023). In like manner, predictive analysis was highlighted by Odeyemi et al. (2024) as having the capability of developing proactive strategies, allowing organisations to pre-empt their vulnerabilities and prevent irregularities. These techniques tend to minimise human errors and provide an appreciable level of reliability and accuracy. Nonetheless, the effectiveness of these methods depends on the data quality. If data are incomplete or inaccurate, the analysis may fail to detect fraud and other malfeasance.

### 2.2.2 Asset Tracing Techniques

Lawant (2023) noted that the term – asset tracing is a legal concept that is used to examine a chain of transmission, especially in fraud cases. The chain of transmission as it pertains to assets are assets that have moved from their source location to other destinations or have changed from one form to another. An asset is anything thing with future economic value and it can be tangible or non-tangible – owned, sold or transferred for cash. It includes financial securities, companies, real estate, motor vehicles, jewellery, artwork, gold, silver, and even digital assets such as cryptocurrencies.

Lawant (2023) pointed out that asset tracing is often used interchangeably with asset tracking and asset recovery, however, they are distinct concepts but can also be harmonized as one event leads to another. In essence, there cannot be a recovery of assets where no tracking or tracing has been done. Fagbure (2015) suggested that the process of asset recovery often starts with tracing followed by freezing and subsequently seizure of assets either in onshore or offshore locations. Nonetheless, asset tracking is tied mostly to keeping a trail of debtors. The Center for Advancement of Public Integrity (2016) referred to asset tracing as a catch term that describes the process and techniques investigators use to locate assets that may have been stolen or misappropriated. Oyedokun (2015) identified asset tracing as a phase in forensic accounting engagement approach that involves an in-depth review of transactions, documents, and verification of findings from third parties. It is the process by which investigators follow the money and recover the proceeds of crime through freezing, confiscation, mutual legal assistance, and repatriation of assets (Ehi, 2018).

According to Deloitte (2015), forensic asset tracing involves the following steps: identification of assets; verification of asset ownership; mapping related owners; and mapping types of assets. In another dimension, Ehi (2018) identified that successful asset tracing involves: tracing and identification; freezing and seizure; civil recovery; management of frozen, seized and confiscated property; and repatriating the proceeds of corruption. Asset tracing aims to ensure that investigative evidence linking the fraudster to the illegal or hidden assets is well preserved and can be admissible in court (Lasich, 2009

as cited in Pacini et al., 2016). The technique also has the objective of ensuring that traced assets result in forfeiture and proceeds returned to victims.

Ehi (2018) identified several methods applied in asset tracing including the use of interception equipment that reveals the content of a communication which can assist in tracing illegal assets; the use of blockchain technology where the database of companies and their transactions can be assessed; and the use of suspicious activity reports filed by Bureau De Change Operators and real estate agents to trace illicit flows. The Center for the Advancement of Public Integrity (2016) recognized timeline analysis, link analysis, and money flow analysis as asset tracing techniques applied by investigators. According to the author, timeline analysis organizes the assets of a suspected fraudster chronologically to show when they are acquired and sold. On the other hand, the link analysis focuses on creating a relationship between the individual and identified assets while the money flow analysis seeks to determine the flow of money from the moment it enters a financial institution and continues to trace it as it moves from one entity to another. The challenge with these methods according to Deloitte (2015) is establishing the proof that assets represent the proceeds of crimes, understanding the local laws and regulations in international jurisdictions, challenges of data protection, secrecy laws and treaties, and the use of trust and offshore companies by international criminals.

### 2.2.3 Lifestyle Analysis Techniques

Lifestyle analysis is an assessment of an individual's earnings against the resources he controls. Put differently, it is an analysis of an individual's source of income and expenses. Lowers Forensic International (2020) opined that lifestyle analysis involves spotting a gap or inconsistencies between a person's preliminary financial information and their asset and liability profile. These inconsistencies may point to the possibility of unreported income sources that may have been concealed. Lifestyle analysis is a technique applied during a lifestyle audit to determine if a person's standard of living is commensurate with his known source of income streams (Ngumbi, 2019)

Lifestyle analyses are frequently used in divorce settlements (Lowers Forensic International, 2020), however, they are also applied in other forensic accounting engagements such as tax fraud and corruption. Albrecht et al. (2012) noted that lifestyle changes are often the easiest to detect when it comes to fraud and corruption symptoms. The underlying theory of lifestyle analysis is based on a factual recreation of the crime. In this case, the investigator applies scientific procedures to arrive at an *a priori* conclusion that will satisfy the court as to proof beyond a reasonable doubt, the who, how, what, where, when, and why of a crime (Pasco, 2013). The objective is to identify cases of unreported income, explain enrichment, and prevent the likely occurrence of corrupt behaviours (Munjeyi & Munjuru, 2018).

The Center for the Advancement of Public Integrity (2016) provided a close link between asset tracing and lifestyle analysis. According to the author, as a part of the asset tracing technique, investigators may perform a lifestyle spreadsheet/graph to track incoming and outgoing funds in relevant years and see how they have been expended. This technique is also obtainable in the indirect method of proof used by forensic accountants where evidence that supports hidden assets is revealed. Mert (2022) and Pasco (2013) noted that there are three methods of proof generally accepted in forensic accounting investigations. These methods or techniques include specific item analysis, net worth analysis, and bank deposit analysis and cash expenditure analysis. Each method relies on a detailed investigation of facts using both deductive and inductive reasoning in the analysis of available circumstantial evidence (Pasco, 2013). These techniques provide documented evidence to show that lifestyle changes can be indicative of fraud. As suggested by Albrecht et al. (2012) while lifestyle changes may provide only circumstantial evidence of fraud, these shreds of evidence can easily be corroborated with existing findings to establish the occurrence of fraud and other financial malfeasance (Albrecht et al., 2012).

According to Pasco (2013), the specific item method of proof is the simplest way to conduct a forensic accounting investigation and the easiest to present to a prosecutor and a jury. The investigation focuses on specific illegal or unreported transactions and shows the financial gain received by the perpetrator from the alleged illegal activity. The specific item method is used primarily in cases where the financial crime involves a single type of fraud or when the evidence of financial gains from the crime is sufficiently complete for presentation to a jury. With regards to the net-worth method, the networth (total assets less total liabilities) of the individual is obtained for several periods and compared for some level of consistency (Mert, 2022). Where there is an unexplained level of inconsistency, the forensic accountant probes to find the cause of the inconsistency. Usually, in conducting a networth analysis, the forensic accountant identifies the base year, that is, the year before the illicit activities started and he works his way through the proceeding years to identify any inconsistencies (Olaoye & Olaoye, 2021). Likewise, with the bank deposit and expenditure method, the techniques analyse the total deposit made over a year against the expenses made in the same year to establish the likelihood of unexplained income (Ibrahim, 2022).

## 2.3 Empirical Review

Alao et al. (2023) examined the effect of forensic accounting techniques on corruption in the public sector of South-West, Nigeria. The study adopted a survey research design with the use of a self-administered questionnaire. The data for the

study was analysed using both descriptive and inferential statistics. The study found that forensic accounting techniques affected corruption in the public sector of South-West, Nigeria. It was recommended that the anti-graft agencies and Ministry and departmental agencies should integrate forensic accounting techniques into their processes in order to achieve transparency and accountability in the management of public funds. moreover, the governments of South-West, Nigeria must ensure to establish forensic accounting unit where trained expert are employed to enhance effective prosecution of corruption cases.

Aremu and Paul (2023) examined forensic accounting techniques and output maximization in Federal Government parastatals in Nigeria. The study adopted survey research design. The target population of the study was 131 accountants in the two agencies chosen (Nigeria Port Authority and Nigeria Civil Aviation Authority). A validated and structured questionnaire was administered and 126 copies were retrieved which represented 96%. The data were analyzed using descriptive and inferential (multiple regression) statistics at 5% level of significant. The result revealed that forensic accounting techniques had significant effect on output maximization in public sector of Nigeria. As such, the study recommended that government should train and develop their staff on the use of forensic accounting techniques to achieve output maximization and attainment of results in government parastatals.

Fatie et al. (2023) examined the feasibility of implementing forensic accounting in fraud detection and prevention in the public sector in Borno State. The study used primary data obtained through a structured questionnaire and secondary data obtained from the record of Borno State Ministry of Finance. A total of 250 samples were examine from the sample population which consist of Borno State Public Accountants and Auditors, members of Institute of chartered Accountants of Nigeria (ICAN), Association of National Accountants of Nigeria (ANAN), Accounting Academicians and Nigerian Bar Association (NBA). Descriptive statistics, Analysis of Variance and Kendels W were used to test the hypotheses. Among the findings were the accountants in the State Civil Service are knowledgeable of forensic accounting. Moreover, conventional auditing is not sufficient in detecting fraudulent practices in the State. The research therefore recommends that forensic accounting should be adopted in Borno State and proper training and retraining on forensic accounting should be adopted in Borno State.

Ibadin and Embele (2023) examined Forensic Audit Services and Tax Fraud in South-South Nigeria. The study adopted a cross-sectional research design with a survey research strategy. Copies of questionnaire, reflecting the research questions, were distributed to a sample size of 228 staff in the Nigerian Federal Inland Revenue Service in the South-South States. To assess the study's hypotheses, the Robust Least Squares Estimation technique was used. Findings revealed that forensic audit investigation services disaggregated into background Investigation, investigative interview, and analytical procedures exert a negative and significant relationship with Tax Fraud. It was also revealed that the explanatory power of litigation support services in the form of pre-trial support and expert witnessing mirrored a negative relationship with tax fraud. The implications of these findings suggest that forensic audit services mitigate the occurrence of tax fraud in Nigeria, thereby improving compliance and tax revenue generation. Amongst others, the study recommended that tax officials should be well trained on the usefulness and application of analytical procedures, ranging from simple ratio analysis, data mining techniques, Bedford's Law, and Beneish model during an investigation, to help in their audit and investigative efficiency.

Ijere and Osho (2023) examined the relationship between lifestyle audits and white-collar crimes in Deposit Money Banks (DMBs) in Port Harcourt. The research design is a survey/cross-sectional research design. The population of the study consists of all the staff of the 21 deposit money banks in Port Harcourt. The hypotheses were tested through the Pearson product-moment correlation analysis with the aid of the Statistical Packages for the Social Sciences (SPSS) version 21. It was revealed that fraud in Deposit money banks is strongly against the development of deposit money banks in Port Harcourt, Nigeria as lifestyle audit showed a positive correlation with white-collar crimes. The study recommended that DMBs should embark on proper lifestyle audits to enhance their action against bank fraud normally perpetrated by the bank staff.

Amos et al. (2022) studied on Forensic accounting: a means to fraud control in Nigerian economy. The study examined if there is significant agreement amongst stakeholders on the effectiveness of forensic accounting in financial fraud control, financial reporting and internal control quality. The survey design was used in the study with a sample size of 45 respondents consisting of accountants, management staffs, practicing auditors and shareholders. The simple random technique was utilized in selecting the sample size, while the binomial test was employed in the data analysis. The findings of the study indicate that there is significant agreement amongst stakeholders on the effectiveness of forensic accounting in fraud control, financial reporting and internal control quality.

Olaoye et al (2021) in his study, Lifestyle Audit and Fighting against Corruption: Evidence from Nigeria examined lifestyle audits (LSAs) and fighting against corruption (FAC) by adopting a survey research study approach and employed primary data. A purposive sampling technique was used to draw the samples of 241. The study further used bar chart, general linear and regression models to analyze the data gathered. Findings from the study showed that the estimated P-value of 000 >

0.01 significant level. The study also revealed a complete demand for the application of LSAs in Nigeria for FAC. The study therefore recommended that government of any country including Nigeria that may wish to apply LSAs for FAC should amend their existing legal frameworks to permit full operation of LSAs during the investigation, arrest and trials of any corrupt suspect. The outcomes of this study also appealed to government, educational regulators and the accounting professional bodies world-wide on the need to incorporate the studies of lifestyle auditing into their curricula.

Taiya et al. (2021) investigated forensic accounting techniques as a tool for preventing revenue leakages in Nigerian federal universities. 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 to evaluate 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.

Dada and Jimoh (2020) carried out a research on Forensic accounting and financial crimes in Nigerian public sector. The study adopted survey research design and linear regression technique to analyze the empirical data collected through questionnaire and oral interview and the hypothesis formulated was also tested. The results of the hypothesis tested at 5% level of significance revealed that litigation support service had significant but negative effect (reduction) on financial crimes in the Nigerian public sector. It was recommended that forensic accounting experts be employed to carry out more litigation support services to serve as expert witness that will assist the court to reach a conclusion on issues which the court may not ordinarily have the knowledge to decide.

Ngumbi (2019) investigated the viability of LSA as an anticorruption strategy in Kenya: a critical assessment of the policy, legal and administrative framework". A descriptive approach was adopted and secondary data was collected and analyzed using content analysis. The study found that "provisions relating to LSAs under the laws of Kenya are too weak to make LSAs an effective tool against the runaway corruption in the country. The study concluded that Kenya's legal and administrative frameworks for LSAs are insufficient and not proportional to the nature and extent of corruption in Kenya.

Kola (2018) examined lifestyle audit (LSA) as a proactive mechanism to root out corruption: the case of South Africa". The study adopted an exploratory research design, and employed content analysis and logistic regression to analyze data gathered. The study concluded that LSA is an anti-corruption tool that can root out corruption before it turns to endemic. Kolawole (2018) examined forensic accounting and the alleviation of fraudulent practices in Nigerian deposit money banks. The study employed primary data obtained through questionnaire administration to staff of selected banks in Lagos State. With the aid of ordered logit regression, results of the study revealed that forensic accounting reduces asset misappropriation in Nigerian deposit money banks. The study concluded that there is a strong relationship between forensic accounting and alleviation of fraud practices in deposit money banks of Nigeria. The study therefore recommends that management of Nigerian banking sector should train auditors on the dynamic and scope of financial crimes, the legal environment, fraud prevention, and ethical issues.

Ojuye (2018) carried out a study on the impact of forensic accounting in the investigation of corrupt practices in Nigeria. The study adopted the survey research design and multiple regression analysis using Statistical Package for Social Sciences (SPSS) was employed in analyzing the data collected with questionnaire and oral interviews conducted. The result showed positive values of the coefficients of corruption investigation and detection with the application of forensic accounting technique. The implication of this is that though forensic accounting is not presently being fully employed to carryout investigation and detection of corrupt practices by the EFCC, however, it is clear that if applied fully, it will positively assist in effective detection and investigation of cases of corrupt practices. The study recommended that anti-corruption agents should employ fully the forensic accounting technique for effective investigation of cases of corrupt practices.

Ebere and Ibanichuka (2016) carried out a study on Money laundering and forensic accounting skills in Nigeria banks with the purpose of finding if the extent placement, layering and integration money laundering methods are affected by forensic accounting skills. The instrument used to gather data was money laundering crime and forensic accounting skills questionnaire (MLCA-FASO) of 120 respondents. Frequency counts and descriptive statistics were used to answer the research questions and correlation was used for all the hypotheses with the aid of special package for social sciences package (SPSS). The findings reveal that those who are involved in forensic accounting practice possess good accounting qualification, sufficient skills in forensic accounting, and all the dimension of money laundering methods correlated significantly with accounting skills. Based on the findings was recommended among forensic accountants are recruited to manage accounting sections.

Eneisik (2016) sought to ascertain the relationship between forensic accounting and fraud detection in federal government parastatals in Nigeria. The study employed Pearson Product Moment Correlation Coefficient statistical tools with the aid

of SPSS Version 20 to test the formulated hypothesis. The findings show that investigative accounting significantly influences payroll fraud detection. Likewise, there is a significant and positive relationship between investigative accounting and asset misappropriation detection and there is a positive and significant relationship between litigation support services and payroll fraud detection in federal government parastatals in Nigeria. The study concluded that forensic accounting is a strategic and dynamic tool for fraud detection in federal government parastatals in Nigeria.

Ujah and Adejoro (2016) examined Big Data Mining and Analytics for National Security in Nigeria, The study sought to highlight how big data analytics can be leveraged to generate investigative lead and electronically gather intelligence for combating terrorism and other forms of security threats in Nigeria. The study recommended Big Data collaborative framework for proper intelligence gathering, data analysis and information sharing amongst the security operatives for the purpose of efficient situational awareness and preparedness towards ensuring national security in Nigeria. This will enhance transcending from reactive approach to insecurity to evidence-based proactive approach aimed at nipping the act of insecurity on the bud.

Dada et al. (2013) researched on Forensic accounting: A relevant tool for effective investigation of bribery cases in Nigeria. This study adopted the survey research design to ensure that reliable data is obtained empirically to assist in testing the relationship that exist between forensic accounting and investigation of cases of bribery. To assess the effect of forensic accounting in the investigation and detection of bribery in Nigeria, multiple regression analysis using Statistical Package for Social Sciences (SPSS) was employed in analyzing the data collected with questionnaire and oral interviews conducted. The result showed positive values of the coefficients of bribery investigation and detection with the application of forensic accounting technique. The study recommends that anticorruption agents should employ forensic accounting technique for effective investigation of cases of bribery and personnel involved in investigation should be trained in the application of forensic accounting techniques.

Modugu and Anyaduba (2013) examined forensic accounting and financial fraud in Nigeria. The study employed survey design in a sample size of 143 consisting of accountants, management staff, practicing auditors and stakeholders. The authors employed a binomial test for data analysis and found that there is significant agreement amongst stakeholders on the effectiveness of forensic accounting in fraud control, financial reporting and internal control quality.

Adegbie and Fakile (2012) conducted an evaluation of forensic accounting as an antidote to economic and financial crime in Nigeria. The paper was on empirical testing of Economic and Financial Crime in Nigeria: Forensic Accounting as an Antidote. Questionnaires were administered to the sampled population. The statistical model applied was Chi-Square and the Statistical Package for Social Statistics (SPSS) was applied to compute the data. The results show that Forensic Accounting is a financial strategy to curb and resolve economic and financial crimes in the Nigerian economy.

Kasum (2007) studied the relevance of forensic accounting to financial crimes in private and public Sectors of third world economies with particular reference to Nigeria. The work specifically evaluated the extent of financial crimes in developing countries and compared the private and public sector with a view to determining the sector where the services of forensic accountants are more required. The results of their reviews are that fraud and corruption are fundamental problems of third world countries. Empirically, they found that investigative or forensic accountants have a role to play, generally, but more in the public sector.

### 3. Methodology

#### 3.1 Theoretical Framework and Model Specification

This study was anchored on the Broken Window Theory. The theory was proposed by Wilson and Kelling in 1982 who posited the notion that the presence of a minimal disorder (a broken window) has the potential to create a chain reaction of community decline, should it remain unaddressed (Gau & Pratt, 2010). This postulation suggests that the neglect of repairing one broken window may ultimately lead to the deterioration of all windows within a given vicinity. This line of reasoning has been extended to all criminal acts. As suggested by Baris (2021), the theory underscores the principle that no crime, regardless of how seemingly inconsequential, should be overlooked or left without consequences. The application of this theory to detecting corruption emphasizes the imperative for anti-graft agencies to be resolute in their efforts to combat such malfeasance. Unfortunately, despite the implementation of a multitude of legislative measures and the establishment of dedicated agencies aimed at combating corruption, Nigeria still finds herself ensnared in the pervasive grip of corrupt practices. The broken window theory, therefore advocates for the adoption of techniques that can effectively investigate and detect corruption for effective prosecution and justice delivery. Consequently, this study proposed the model:



$$CORD = f(FAT) \text{-----(i)}$$

Where:

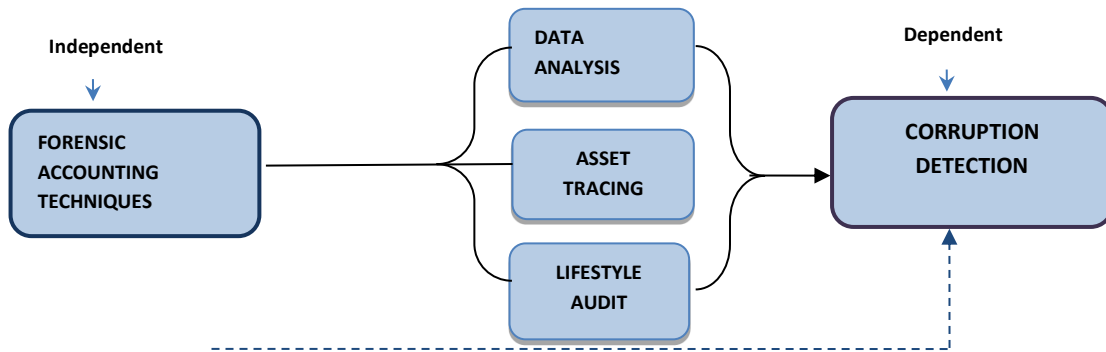
CORD = Corruption Detection

FAT = Forensic Accounting Techniques

The schematic representation of the relationship proposed by our model is given below:

**Figure 1**

*Conceptual framework on the relationship between forensic accounting technique and corruption detection*



Source: Author’s Conceptualization (2024)

Against the backdrop of the above framework, we demystified forensic accounting techniques and modify our model as thus:

$$CORD = f(DAT, ATT, LAT) \text{-----(ii)}$$

Expressing equation (ii) in its econometric form, the model is thus adjusted below:

$$CORD_i = \beta_0 + \beta_1 DAT_i + \beta_2 ATT_i + \beta_3 LAT_i + \mu_i \text{-----(iii)}$$

Where:

$\beta_0$  = Intercept

CORD = Corruption Detection

DAT = Data Analysis Techniques

ATT = Asset Tracing Techniques

LAT = Lifestyle Audit Techniques

i = Cross section

$\beta_1$  to  $\beta_3$  = Unknown coefficients

$\mu$  = Error term

Based on extant theory and empirical literature, this study presumptively expects forensic accounting technique to improve corruption detection. Thus,  $\beta_1, \beta_2, \beta_3 > 0$

### 3.2 Research Design

This study adopted a cross-sectional research design with a survey strategy using a self-administered questionnaire to collect data primarily from respondents. The population of the study was made of 823 professional accountants who are members of the Institute of Chartered Accountants of Nigeria and Association of National Accountants in Nigeria resident in Yenagoa, Bayelsa State. However, a sample size of 269 was obtained using the Taro Yamane’s (1967) of which 269 copies of questionnaire were distributed to respondents. Effectively, 259 copies of questionnaire representing 95.5% of the sample size was deemed usable.

### 3.3 Reliability of Research Instrument

This study employed the internal consistency approach using Cronbach's alpha statistic to measure the reliability of the research instrument. A pilot test was conducted using twenty-five respondents with a scale of nine items. The result of the analysis revealed an overall Cronbach's alpha statistics of .771 (Appendix A). According to Saunders et al. (2016), a Cronbach's alpha coefficient value of 0.7 or above indicates that statements in the questionnaire are all consistent and have captured the information about the variables, thus, having a high level of internal consistency.

## 4. Data Analysis and Discussion of Findings

Both descriptive and inferential statistics were employed to analyse our data.

### 4.1 Descriptive Analysis

**Table 1**

Descriptive Statistics Variables	Mean	Max	Min	Std. Dev.	Skewness	Kurtosis	JB (prob)
<b>CORD</b>	4.41	5.00	2.00	0.55	-0.88	3.64	37.83 (0.00)
<b>DAT</b>	4.09	5.00	2.00	0.56	-1.00	5.37	104.15 (0.00)
<b>ATT</b>	4.30	5.00	2.00	0.49	-0.83	4.20	45.05 (0.00)
<b>LAT</b>	4.10	5.00	2.00	0.66	-1.12	4.53	78.95 (0.00)

Source: Author's Computation, 2024

From Table 1, CORD had a mean value of 4.41 indicating that on average, respondents agreed on indicators that suggest the effectiveness of forensic accounting techniques in the detection of corruption. The maximum and minimum value stood at 5.00 and 2.00 indicating that responses ranged from strongly agree of 5point to disagree of 2point. The standard deviation ( $SD = .55$ ) appeared to be very narrow suggesting that responses provided cluster around the mean value. It was also observed that CORD does not mirror a normal distribution given that it is negatively skewed ( $s = 3.17$ ) and slightly leptokurtic ( $k = 3.64$ ). The jarque-Bera statistic appears to be significant ( $p < .05$ ), thus, confirming that CORD is not normally distributed.

As regards DAT, ATT, and LAT, the mean value of these variables are approximately 4 suggesting that on average, respondents strongly agreed that these variables can affect corruption detection. The maximum and minimum value of the variables stood at 5.00 and 2.00 respectively indicating that responses to each variable ranged on a scale of 5point of strongly agree to 2point of disagree. Likewise, the standard deviation appeared to be very narrow indicating that responses provided cluster around the mean values. It was also observed that DAT, ATT, and LAT are negatively skewed and leptokurtic having a skewness value of less than 0 and Kurtosis value above 3, thus, suggesting that the data set is not normally distributed. The Jarque Bera- statistics displayed appears to be significant ( $p < .05$ ), thus, clearly confirming DAT, ATT, and LAT are not normally distributed.

### 4.2 Inferential Analysis

#### 4.2.1 Correlation Analysis

This study employed Cohen's (1998) guideline,  $r = 0.10$  to  $0.29$  for a weak correlation,  $r = 0.30$  to  $0.49$  for a moderate correlation,  $r = 0.50$  to  $1.0$  for a strong correlation for interpreting the result of the analysis.

**Table 2**

Correlation Matrix

Variables	CORD	DAT	ATT	LAT
<b>CORD</b>	1.00			
<b>DAT</b>	.268	1.00		
<b>ATT</b>	.229	.401	1.00	
<b>LAT</b>	.381	.463	.354	1.00

Source: Author's Computation, 2024

From Table 2, CORD exhibited a weak and positive correlation with DAT ( $r = 0.268$ ), ATT showed a weak and positive correlation with CORD ( $r = 0.229$ ), LAT displayed a moderate and positive correlation with CORD ( $r = 0.381$ ). The implication of this result suggests that all explanatory variables are positively associated with CORD.

### 4.2.2 Regression Analysis and Hypothesis Testing

To estimate the nature and extent of the relationship between the dependent and independent variables, this study employed the Robust Least Square estimation following the unfavourable outcome of some properties of OLS otherwise referred to as the classical assumption of OLS.

**Table 3**

*Classical Assumption Summary*

Diagnostics	Test	Probability	Remark
Normality	Histogram Plot	JB = 32.851 ( $p < 0.05$ )	Not Fulfilled
Multicollinearity	Variance Inflation Factor	Centered VIF less than 10	Fulfilled
Heteroskedasticity	Breusch-Pagan-Godfrey	$F(3,252)=1.122,(p> 0.05)$	Fulfilled
Serial Correlation	Breusch-Godfrey	$F(2,251)=0.603,(p> 0.05)$	Fulfilled
Model Misspecification	Ramsey-Rest test	$F(1,252)=2.764,(p< 0.05)$	Not Fulfilled

Source: Author's Computation, 2024

Table 3 revealed that the residual diagnostics (Appendix B – F) performed on the data of this study. The data set does not mirror a normal distribution and the model appears to be miss-specified leaving other diagnostic test fulfilled. Although normality is not a strict property to OLS, the fulfillment of this assumption makes OLS Blue in the entire class of unbiased estimators whether linear or not (Ergün & Göksu, 2013). More so, Ergün and Göksu (2013) noted that when linearity does not hold, OLS estimators are biased and inconsistent. Renaud and Victoria-Fester (2010) also noted that not fulfilling these basic assumptions may lead to coefficient estimates that do not reflect the underlying statistical relationship and consequently a spurious result. Hence, the Robust Least Square estimation tool was adopted as it is incentive to outliers and problems associated with departures from normality in the error distribution.

**Table 4**

*Regression Output*

Dependent Variable: CORD

Method: Robust Least Squares

Included Observation: 257

Variable	Coefficient	Std. Error	z-Statistic	Prob.
<b>C</b>	2.300685	0.371231	6.197447	0.0000
<b>DAT</b>	0.117902	0.058636	2.010730	0.0444
<b>AAT</b>	0.175937	0.071318	2.466924	0.0136
<b>LAT</b>	0.222605	0.057795	3.851617	0.0001
Robust Statistics				
<b>R-squared</b>	0.101849	Adjusted R-squared		0.091199
<b>Rw-squared</b>	0.159016	Adjust Rw-squared		0.159016
<b>Akaike info criterion</b>	241.6398	Schwarz criterion		257.3512
<b>Deviance</b>	57.43115	Scale		0.494193
<b>Rn-squared statistic</b>	8.92294	Prob (Rn-squared stat.)		0.000000
Non-robust Statistics				
<b>Mean dependent var</b>	4.408560	S.D. dependent var		0.549191
<b>S.E. of regression</b>	0.522391	Sum squared resid		69.04182

Source: Eviews Output (2024)

Table 4 (Appendix F) revealed that there is positive relationship between forensic accounting techniques and corruption detection in Nigeria. Specifically, there is positive and significant relationship between data analysis techniques and corruption detection,  $z = 2.010730$ ,  $\beta_1 = 0.117902$ ,  $p = 0.0444 < 0.05$ . This implies that an increase in analysis technique will lead to 11.7% per cent increase in corruption detection. Thus, we fail to accept the hypothesis that there is no significant relationship between data analysis techniques on corruption detection.

Similarly, the result show that there is positive and significant relationship between asset tracing techniques and corruption detection,  $z = 2.466924$ ,  $\beta_1 = 0.175937$ ,  $p = 0.0136 < 0.05$  suggesting that an increase in asset tracing techniques will result to a 17.6% increase in corruption detection. Accordingly, the hypothesis that there is no significant effect of asset tracing techniques on corruption detection was rejected.

Equally, the study found that there is positive and significant relationship between lifestyle audit techniques and corruption detection,  $z = 3.851617$ ,  $\beta_1 = 0.222605$ ,  $p = 0.0001 < 0.05$ . This indicates that an increase in lifestyle audit techniques will bring about a 22.2% increase in corruption detection. Hence, the conclusion on  $H_{03}$  is that there is positive and significant influence of lifestyle audit techniques on corruption detection.

Table 8 also showed that the coefficient of multiple determinations stood at  $R = 10.18\%$  and  $R^2_w = 15.90\%$ , implying that about 10.18% - 15.90% of the systematic variations in the dependent variable can be accounted for by the explanatory variables while about 89.2% of the variation is attributable to variables not depicted in the model. Similarly, the Adjusted coefficient of multiple determination stood at  $R = 9.11\%$  and  $R^2_w = 15.9\%$ , suggesting that approximately 15.9% of the systematic variations in the dependent variable can be explained by the independent variables, while about 84.1% is attributable to variables not captured in the model but by the standard error of the regression ( $S.E = 0.522391$ ). The overall  $Rn$ -squared statistic (goodness-of-fit test) capable of prediction which stood at  $Rn = 8.92$  with a corresponding  $p$ -value  $< .05$  indicating a strong rejection of the null hypothesis that all non-intercept coefficient are equal to zero. This implies that the independent variables jointly account for the variation in corruption detection.

### 4.3 Discussion of Findings

#### 4.3.1 Data Analysis Techniques and Corruption Detection in Nigeria

It is no longer news that the traditional methods for detecting corrupt practices are falling short in the face of increasingly sophisticated schemes, hence, our study found a significant positive relationship between data analysis techniques and corruption detection. Consistent with our findings, previous studies (Alao et al., 2023; Babatunde, 2021; Eneisik, 2016; Ewa, 2022; Friday & Micah, 2019; Taiya et al., 2021) revealed that data analysis techniques including ratio analysis, trend analysis, Beneish model and data mining significantly uncover fraud and other corrupt practices in Nigeria. Ajia (2024) citing Adesokan Ayodeji acknowledged that the presence of data analytics and artificial intelligence presents a promising solution to enhancing transparency and corruption detection in Nigeria by providing insights into patterns, anomalies, and suspicious activities. Also, in tandem with our findings, Jaiyeola (2023) alluded that in Nigeria's public procurement, corrupt intent in payments or transactions can be identified through intelligent mining. This submission agrees with the findings of Nikola et al. (2021) that revealed that despite procurement data being very large and unstructured, data mining techniques can uncover indicators of corruption including bribery and kickbacks, collusive bidding, and shell at various stages of the public procurement process.

Adesoken Ayodeji quoted in Ajia (2024) agreed with our findings stating that machine algorithms can analyze vast amounts of data to identify patterns that are indicative of fraud enabling proactive detection and prevention. Similarly, our analysis supports the study of Odeyemi et al (2024) who exposed that with natural language processing, unstructured data sources such as emails and documents can be parsed to uncover hidden insights while predictive analysis can forecast potential areas of fraud and corruption thereby mitigating corrupt practices before they materialize. As such, the study of Ujah and Adejoro (2016) concluded that tracking of terrorist groups can be achieved by analyzing the data extracted from terrorists' phones, emails, and logs from various networks and telecommunication facilities.

#### 4.3.2 Asset Tracing Techniques and Corruption Detection in Nigeria

Globalization has facilitated the movement and transfer of assets in a seamless manner. Today, criminals have taken advantage of the ease that comes with globalization and have deployed financial vehicles to conceal the source and location of misappropriated and illegitimate funds (Deloitte, 2015). In Nigeria, assets are constantly stolen, converted, diverted and even embezzled which has called for the need for the tracing and recovery of such assets. As such, our study found a significant positive effect of asset tracing techniques on corruption detection.

Our findings suggest that the forensic accountant can apply several asset tracing techniques to reveal stolen funds. Consistent with our findings, Odeyemi et al. (2024) opined that by unravelling complex financial webs, forensic accountants can identify instances of embezzlement, money laundering, and other illicit activities. The Center for the Advancement of Public Integrity (2016) also referred to timeline analysis, link analysis, and money flow analysis as asset tracing techniques applied by investigators that can reveal organized crimes, including fictitious companies where funds are laundered, overpayment of subcontractors and employees, and other unlawful income. Supporting the foregoing, Eber and Ibanichuka (2016) provided empirical evidence indicating that investigative skills and techniques applied by forensic accountants can uncover cases of money laundering at various stages. Suffice to state that the case of Abacha's loot is illustrative in this regard as it shows how special investigators and investigative procedures were applied to track, trace and recover looted funds by Abacha several years after his demise (Abbah, 2022).

In another strand, the immediate past administration of President Muhamadu Buhari instituted several policies for tracing and recovery of stolen assets among which is the whistleblowing programme that allows individuals to provide reliable and credible information concerning hidden and misappropriated assets. Whereas the study of Adetula and Amupitan (2018) exposed the potency of whistleblowing as a forensic accounting tool capable of addressing fraud, forgery and

corruption in Nigeria, the findings of our study provide evidence illustrative of whistleblowing being a viable tool for exposing stolen and hidden assets. Our findings appear to be in consonance with Adegbe and Fakile (2012) and Dada et al. (2013) who found a significant effect of forensic accounting techniques in the detection of economic and financial crimes as well as bribery cases in Nigeria. The implication of their findings suggests that with adequate machineries in place, citizens can effectively report issues of financial crime and expose cases of bribery to appropriate authorities.

Furthermore, Odeyemi et al. (2024) acknowledged that forensic accountants leverage blockchain to trace, and verify transactions, and ensure the integrity of financial transactions. With the application of blockchain technology, ledger tempering is prevented and a more secure and transparent trail of government financial transactions can be achieved. In his study, Jaiyeola (2023) referred to crowdsourcing techniques that can enhance whistleblowing practices in Nigeria and how blockchain can be applied by the government for tracking budget spending, saving records, and monitoring payment systems. Nonetheless, Jaiyeola (2023) maintained that maintaining the privacy and security of sensitive information stored on blockchain may present potential risks as the platform can still be used to perform illicit activities.

### 4.3.3 Lifestyle Analysis and Corruption Detection in Nigeria

Corrupt officials usually live beyond their means as their lifestyle appears to be inconsistent with their income. According to Ngumbi (2019), there are obvious lifestyle changes that can be indicative of fraud which can be found consistent with politicians and big money spenders among top government officials in Nigeria. Thus, our study established a significant positive influence of lifestyle audit on corruption detection.

In his study, Dandison (2020) quoted a respondent who alleged that when top government officials or politicians adopt an exorbitant lifestyle while in office, they are keen to maintain that standard of life after office, hence, the relationship between luxurious lifestyle and political corruption. Our findings reinforce this submission and held that with net worth analysis, evidence of inconsistency between income and expenditure can be established. Giving a similar deduction, the executive chairman of the EFCC, Mr Ola Olukoyede made a call for a legislation against unexplained wealth which is currently obtainable in other countries including the United Kingdom, Mauritius, Kenya, and Zimbabwe ([www.efcc.gov.ng](http://www.efcc.gov.ng)). If implemented, the specific item analysis, networth analysis, and bank deposit and expenditure analysis can be instrumental in uncovering unexplained wealth amongst corrupt officials in Nigeria. These techniques can demonstrate that a mismatch between a person's known income and asset compared to their spending pattern and lifestyle could indicate a likelihood that such a person is deriving other incomes from sources that may constitute a conflict of interest or illegal activities including bribery and embezzlement (France, 2021).

Animashaun and Chitinira (2021) emphasized that surveillance and lifestyle questionnaires (employed by the Code of Conduct Bureau) are currently in use in Nigeria, however, these techniques have not been effective in deterring corruption. Nonetheless, they argued that lifestyle analysis can serve as a justifiable measurement for the extent of corruption in Nigerian public service. In support, Eisenberg (2018) practically demonstrated the efficacy of networth method in the case of unreported income. Likewise, Ijere and Osho (2020) applied a survey research design and found a positive relationship between lifestyle audits and white-collar crimes in Nigeria. The authors remarked that in most cases, the only clue to illicit activities can be a sudden unexplained change in an official's lifestyle. Olaoye and Olaoye (2021) also provided empirical evidence on networth analysis and bank deposit analysis. The findings of their study revealed that networth analysis and bank deposit analysis are viable tools for detecting and fighting corruption. They further recommended that lifestyle audit should be embraced by the government at all levels and incorporated into the anti-corruption framework in Nigeria.

## 5.1 Conclusion

The application of forensic accounting techniques is crucial for the detection of corruption. This study demonstrated the effectiveness of data analysis, asset tracing, and lifestyle analysis techniques for corruption detection in Nigeria. These techniques have the capacity to identify unusually patterns and discrepancies in financial information, trace, confiscate and recover proceeds of corruption, as well establish a relation between a person's lifestyle and corrupt practices. The institution of these techniques will not only provide sufficient and adequate evidence for effective prosecution, but will also deter corruption as corrupt officials will be forced to weigh the cost and benefits before engaging in corrupt acts.

## 5.3 Recommendations

Based on the foregoing, the following recommendations are put forward:

- advanced data analysis techniques such as machine learning, neural language, and data mining with artificial intelligence should be integrated into the standard procedures for conducting corruption investigation and detecting instances of corruption in Nigeria;
- anti-graft agencies should receive regular trainings and updates to ensure that they are equipped to navigate the increasingly complexity of corrupt practices and international collaboration should be encouraged to facilitate the tracing and repatriation of Nigerian's stolen wealth; and
- constant examination and appraisals using several lifestyle audit techniques showed be encouraged in both private and public practices and especially with those entrusted with public funds.

## 5.4 Suggestions for Further Research

Further research should consider a more holistic approach. The mean difference between the responses of staff of anti-corruption agencies, accountants, and lawyers will be necessary to provide a more robust insight and generalization to the study. More so, further research and exploration should be conducted by demystifying forensic accounting techniques to enhance the development of more robust strategies for combating corruption effectively.

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## APPENDICES

### Appendix A

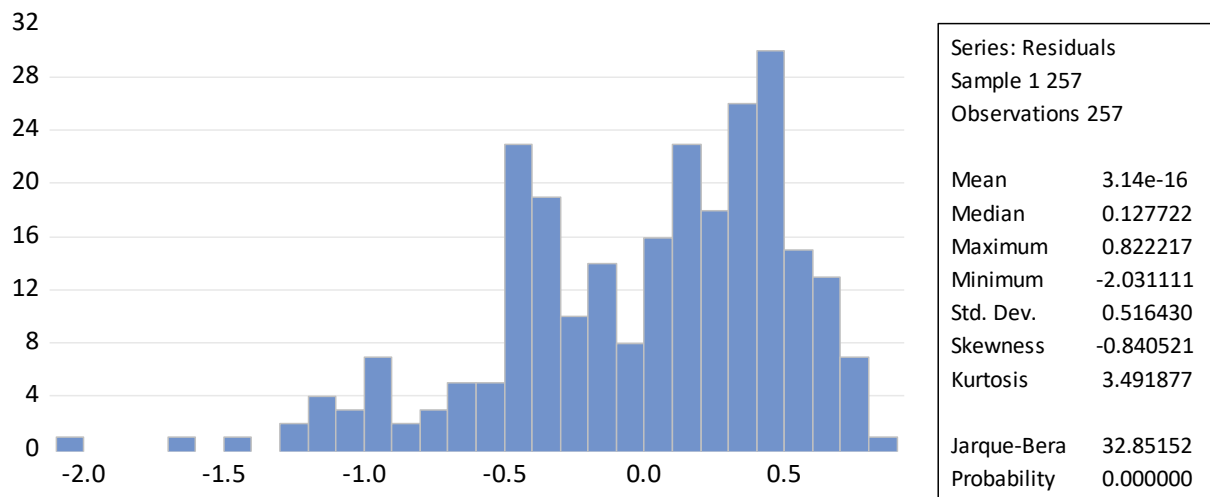
Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.771	12

### Appendix B

#### Normality

Histogram Plot



### Appendix C

#### Multicollinearity

Variance Inflation Factor

Variance Inflation Factors

Date: 11/17/24 Time: 05:43

Sample: 1 257

Included observations: 257

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.137685	131.1224	NA
DAT	0.003435	55.94308	1.025535
ATT	0.005082	90.33137	1.136644
LAT	0.003337	54.66420	1.141948

**Appendix D**

## Heteroskedasticity

Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

F-statistic	1.122286	Prob. F(3,253)	0.3406
Obs*R-squared	3.375173	Prob. Chi-Square(3)	0.3373
Scaled explained SS	4.075374	Prob. Chi-Square(3)	0.2534

**Appendix E**

Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.602645	Prob. F(2,251)	0.5482
Obs*R-squared	1.228204	Prob. Chi-Square(2)	0.5411

**Appendix F**

## Model Misspecification

Ramsey-Rest test

Ramsey RESET Test

Equation: UNTITLED

Omitted Variables: Squares of fitted values

Specification: CORD C DAT ATT LAT

	Value	df	Probability
t-statistic	2.764104	252	0.0061
F-statistic	7.640270	(1, 252)	0.0061
Likelihood ratio	7.676078	1	0.0056

## Appendix G

### Robust Least Square

Dependent Variable: CORD  
 Method: Robust Least Squares  
 Date: 11/17/24 Time: 05:45  
 Sample: 1 257  
 Included observations: 257  
 Method: M-estimation  
 M settings: weight=Bisquare, tuning=4.685, scale=MAD (median centered)  
 Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	2.300685	0.371231	6.197447	0.0000
DAT	0.117902	0.058636	2.010730	0.0444
ATT	0.175937	0.071318	2.466924	0.0136
LAT	0.222605	0.057795	3.851617	0.0001

#### Robust Statistics

R-squared	0.101849	Adjusted R-squared	0.091199
Rw-squared	0.159016	Adjust Rw-squared	0.159016
Akaike info criterion	241.6398	Schwarz criterion	257.3512
Deviance	57.43115	Scale	0.494193
Rn-squared statistic	38.92294	Prob(Rn-squared stat.)	0.000000

#### Non-robust Statistics

Mean dependent var	4.408560	S.D. dependent var	0.549191
S.E. of regression	0.522391	Sum squared resid	69.04182